PROCEEDING

56th

November 4-7

APACPH2025

The 56th Asia Pacific Academic Consortium for Public Health Conference

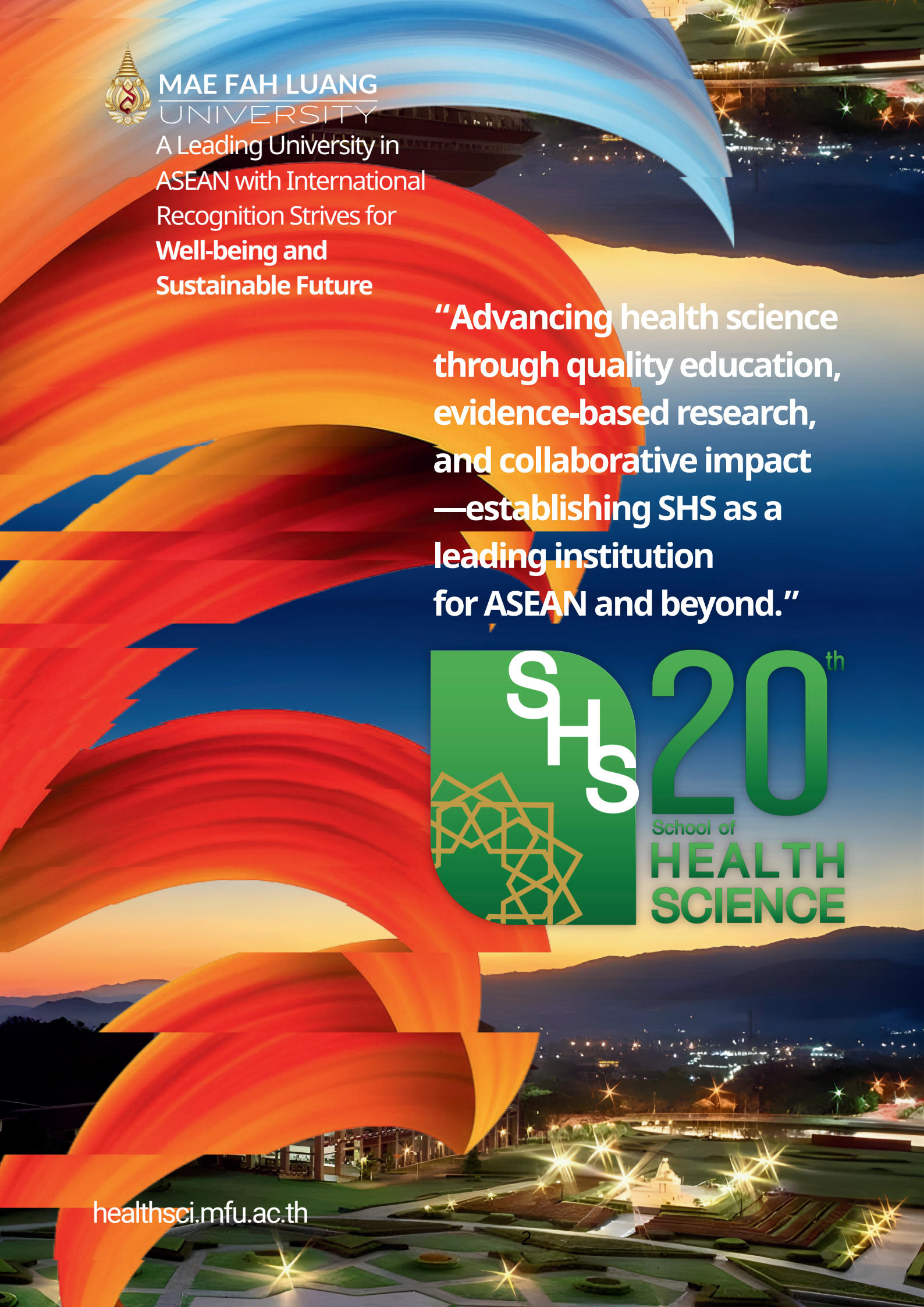
MAE FAH LUANG UNIVERSITY CHIANG RAI, THAILAND

Host & Organizer

Sponsors

"PUBLIC HEALTH CHALLENGES IN A DISRUPTIVE WORLD"




MAE FAH LUANG
UNIVERSITY
A Leading University in ASEAN with International Recognition Strives for
Well-being and Sustainable Future
"Advancing health science through quality education, evidence-based research, and collaborative impact —establishing SHS as a leading institution for ASEAN and beyond."
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HEALTH SCIENCE
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PROCEEDING

56th APACPH2025

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The 56th Asia Pacific Academic Consortium for Public Health Conference

MAE FAH LUANG UNIVERSITY CHIANG RAI, THAILAND

"PUBLIC HEALTH CHALLENGES IN A DISRUPTIVE WORLD"

Host & Organizer

School of Health Science,
Mae Fah Luang University

Co-host

World Health Organization

International Organization of Migration, UN Migration

Ministry of Public Health, Thailand

Health Systems Research Institute (HSRI), Thailand

Contents

Welcome Message 5
Committees 8
Sponsor & Venue 10
General Information
- Venue 11
- Floor Plan 13
- Registration Information 16

Program at a Glance 19
Program as a Date 20
Presentation Oral and Poster Guideline 24
Awards
- Awards 27
- YITA 29
- presentation awards 31

Opening and Closing Ceremony 33
Academic Program
- Pre-Conference Workshop 34
- Plenary Speech 45
- Talk Concert 50
- Panel Session 52

Oral and Poster Presentation Schedule
- Oral presentation 74
- Poster presentation 513





Matchima Naradisorn

Assistant Professor
President, Mae Fah Luang University

Dear Colleagues,

In an era of rapid change and global uncertainty, public health faces new and complex challenges. From emerging diseases to climate change and technological disruptions, these issues demand innovative solutions and international collaboration. The 56th Asia Pacific Academic Consortium for Public Health Conference (APACPH Conference 2025) serves as a vital platform to exchange knowledge, share experiences, and foster partnerships among researchers, public health professionals, and policymakers worldwide.

As the President of Mae Fah Luang University, Thailand, I am honored to support and host this important conference under the theme "Public Health Challenges in a Disruptive World." This event will bring together leading experts from diverse disciplines to explore strategies for building resilient health systems and addressing public health crises effectively.

On behalf of the organizing committee, I am pleased to invite you to participate in APACPH Conference 2025, which will be held in Chiang Rai, Thailand. The conference will offer valuable opportunities for learning, networking, and collaboration, all in the beautiful and culturally rich setting of Northern Thailand.

We look forward to welcoming you to this inspiring and impactful event.

Matchima Naradisorn



So Yoon Kim

Professor
President of APACPH

Hello, distinguished colleagues and public health professionals,

It is my pleasure to extend a warm welcome to all of you to the 56th Asia-Pacific Academic Consortium for Public Health (APACPH) 2025 Conference here in Chiang Rai, Thailand.

First and foremost, I would like to express my deepest gratitude to our esteemed hosts, Mae Fah Luang University, and the dedicated organizing team for their commitment to making this gathering possible.

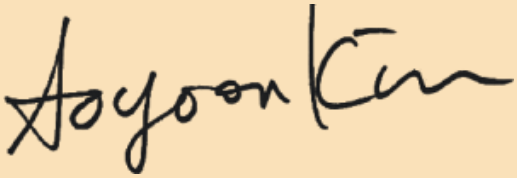
The focus of public health has always been people—protecting lives, upholding dignity, and building a healthier future for all. But today, we find ourselves in a world where disruption is no longer an exception; it is the new reality. We are not only facing emerging infectious diseases but also the escalating impact of climate change, humanitarian crises, and the rapid transformation of healthcare through artificial intelligence (AI) and digital technology. These changes challenge us in ways we have never experienced before.

Yet, disruption also brings opportunity. It forces us to rethink, adapt, and lead with both knowledge and compassion. In this evolving landscape, I hope that APACPH will continue to serve as a leading platform for discussion, collaboration, and bold action—guiding us toward solutions that are ethical, inclusive, and sustainable.

This vision aligns closely with this year's theme: "Public Health Challenges in a Disruptive World."

I encourage each of you to share your insights openly, challenge ideas bravely, and collaborate actively in order to shape a more resilient future for public health.

I look forward to meeting you all in Thailand for an inspiring and impactful experience.



THEME

Public Health Challenges in a Disruptive World

Purpose

The APACPH Conference 2025 aims to bring together public health professionals, researchers, educators, and policymakers to critically examine and address the emerging and persistent public health challenges in an increasingly disruptive world. As societies face rapid technological change, environmental crises, geopolitical instability, pandemics, and widening health inequities, this conference serves as a vital platform for sharing evidence-based solutions, innovative strategies, and collaborative models to strengthen public health systems and resilience across the Asia-Pacific region and beyond.

Through interdisciplinary dialogue and regional collaboration, the conference seeks to inspire actionable insights and foster partnerships that drive forward-thinking public health leadership in times of uncertainty and transformation.

Committees

Executive Committee

President	Asst. Prof. Dr. Matchima Naradisorn	Mae Fah Luang University (MFU)
Vice President	Assoc. Prof. Dr. Darunee Wattanasiriwech	Mae Fah Luang University (MFU)
Dean	Asst.Prof. Dr. Wipob Suttana	School of Health Science, Mae Fah Luang University (MFU)
Exclusive Director	Dr. Supakit Sirilak	Health Systems Research Institute (HSRI)
President	Prof. Dr. So Yoon Kim	Asia Pacific Academic Consortium for Public Health (APACPH)
Vice President-1	Prof. Dr. Betty Ya-Wen Chiu	Asia Pacific Academic Consortium for Public Health (APACPH)
Vice President-2	Prof. Dr. Elahe Nezami	Asia Pacific Academic Consortium for Public Health (APACPH)
Secretary - Generral	Prof. Dr. Indika Mahesh Karunathilake	Asia Pacific Academic Consortium for Public Health (APACPH)

Organizing Committee

President	Asst. Prof. Dr. Matchima Naradisorn	Mae Fah Luang University (MFU)
Vice President	Assoc. Prof. Dr. Darunee Wattanasiriwech	Mae Fah Luang University (MFU)
Dean	Asst.Prof. Dr. Wipob Suttana	School of Health Science, Mae Fah Luang University (MFU)
President	Prof. Dr. So Yoon Kim	Asia Pacific Academic Consortium for Public Health (APACPH)
Vice Dean	Panupong Patarachao	School of Health Science, Mae Fah Luang University (MFU)
Vice Dean	Asst.Prof.Dr. Woottichai Nachaiwieng	School of Health Science, Mae Fah Luang University (MFU)
Vice Dean	Dr.Saharat Arreeras	School of Health Science, Mae Fah Luang University (MFU)
Assistant Dean	Dr. Onn Laingoen	School of Health Science, Mae Fah Luang University (MFU)
Liaison officer	Prof Dr. Maznah Dahlui	Asia Pacific Academic Consortium for Public Health (APACPH)
Liaison officer	Dr. Syazmi Mohd	Asia Pacific Academic Consortium for Public Health (APACPH)

Academic Committee

Prof. So Yoon Kim, Ph.D.	Yonsei University, Korea
Prof. Hung Yi Chiou, Ph.D.	Taipei Medical University, Taiwan
Prof. Indika Mahesh Karunathilake, Ph.D.	University of Colombo, Sri Lanka
Prof. Betty Ya-Wen Chiu, Ph.D.	National Health Research Institutes, Taiwa
Prof. Elahe Nezami, Ph.D.	University of Miami, Taiwan
Prof. Maznah Dahlui, Ph.D.	University of Malaya, Malaysia
Prof. Hung Yi Chiou, Ph.D.	Taipei Medical University, Taiwan
Prof. Philip Baker, Ph.D.	Queensland University of Technology, Australia
Prof. Agustin Kusumayati, Ph.D.	University of Indonesia, Indonesia
Prof. Yuanan Lu, Ph.D.	University of Hawaii, China
Prof. Maznah Dahlui, Ph.D.	University of Malaya, Malaysia
Prof. Masamine Jimba, Ph.D.	University of Tokyo, Japan
Prof. Indika Mahesh Karunathilake, Ph.D.	University of Colombo, Sri Lanka
Prof. Elahe Nezami, Ph.D.	University of Miami, USA
Assoc. Prof. Sarawut Theparanond, Ph.D.	Mahidol University, Thailand
Prof. Mary choi, Ph.D.	Yonsei University, Korea
Assoc. Prof. Naruemon Auemaneekul, Ph.D.	Mahidol University, Thailand
Prof. Hung Yi Chiou, Ph.D.	Taipei Medical University, Taiwan
Prof. Victor Hoe Chee Wai, Ph.D.	University of Malaya, Malaysia
Prof. Low Wah Yun, Ph.D.	University of Malaya, Malaysia
Wei Cheng Lo, Ph.D.	Taipei Medical University, Taiwan

Sponsor

LactaHub

MDPI Publication

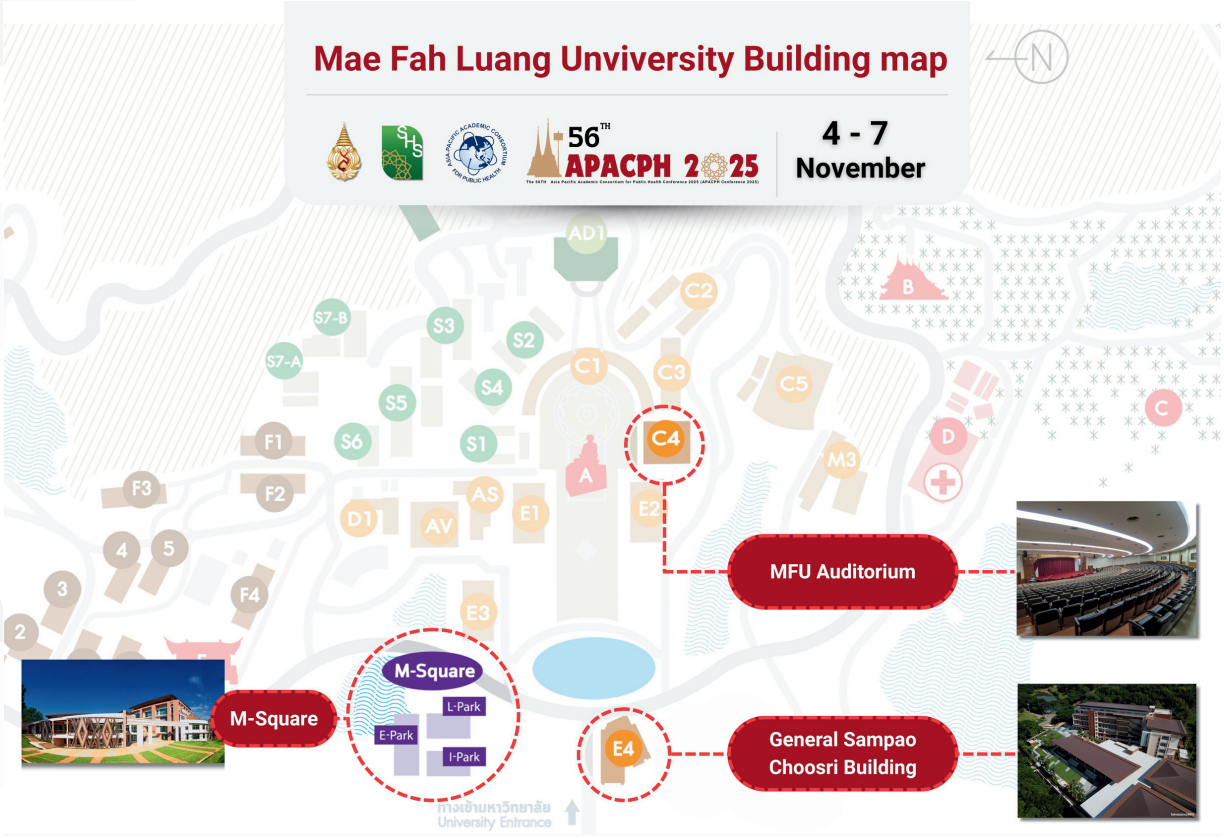
The Thailand Convention & Exhibition Bureau (TCEB)

S.K. Powerable co., ltd.

JIA LUCK SA Co.,Ltd.

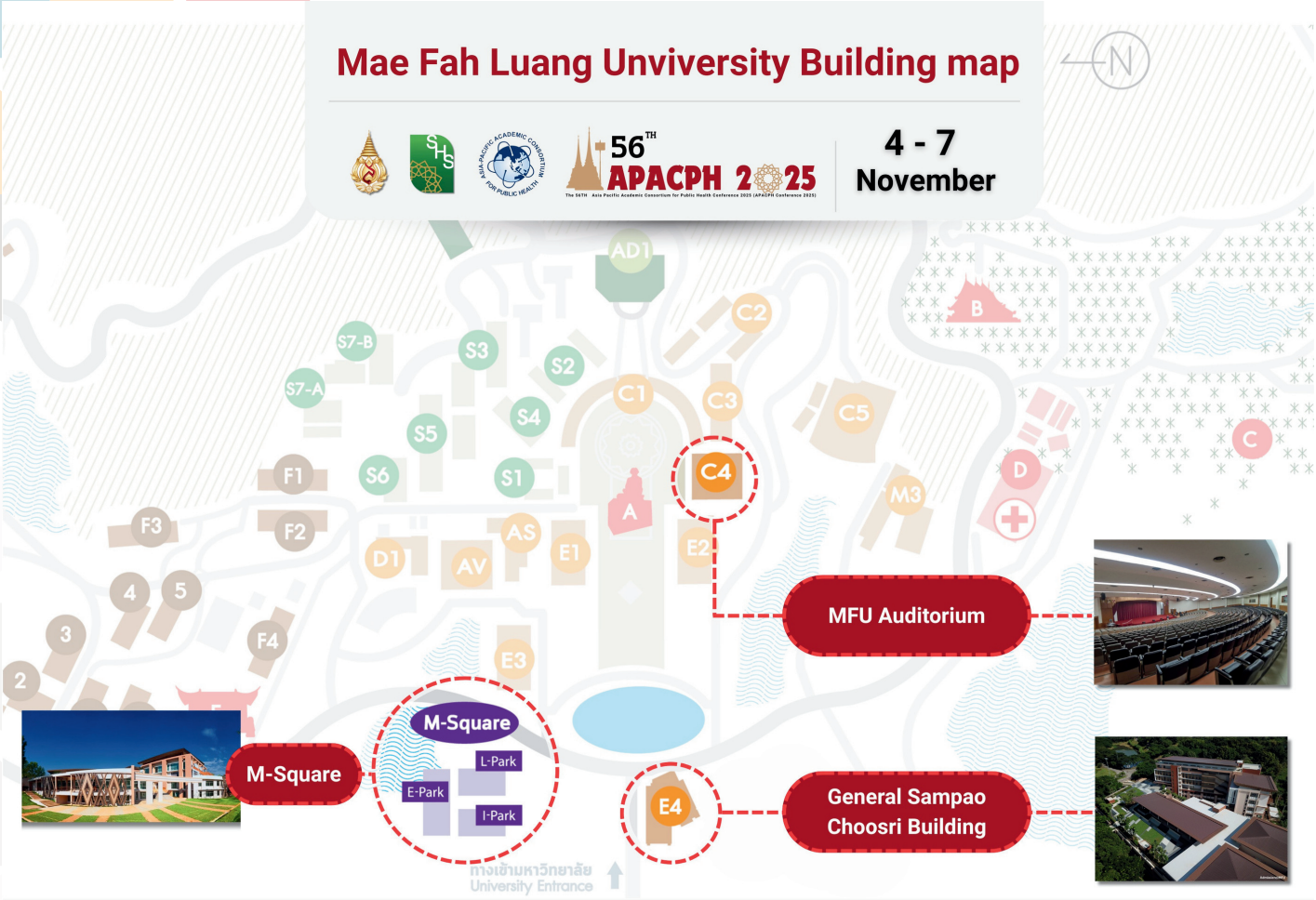
Fitness Expert (Thai) Co., Ltd.

Venue



Address: School of Health Science, Mae Fah Luang University E3B Building 6,7 Floor 333 Moo 1 Tasud Sub District, Muang District, Chiang Rai 57100
Tel: +66(0)-5391-6821
Fax: +66(0)-5391-6821
Email: apacph2025@mfu.ac.th

Venue



Address: School of Health Science, Mae Fah Luang University
E3B Building 6,7 Floor 333 Moo 1 Tasud Sub District, Muang District, Chiang Rai 57100
Tel: +66(0)-5391-6821
Fax: +66(0)-5391-6821
Email: apacph2025@mfu.ac.th

Venue



MFU Auditorium

- Opening Ceremony



M-Square

- GA Meeting

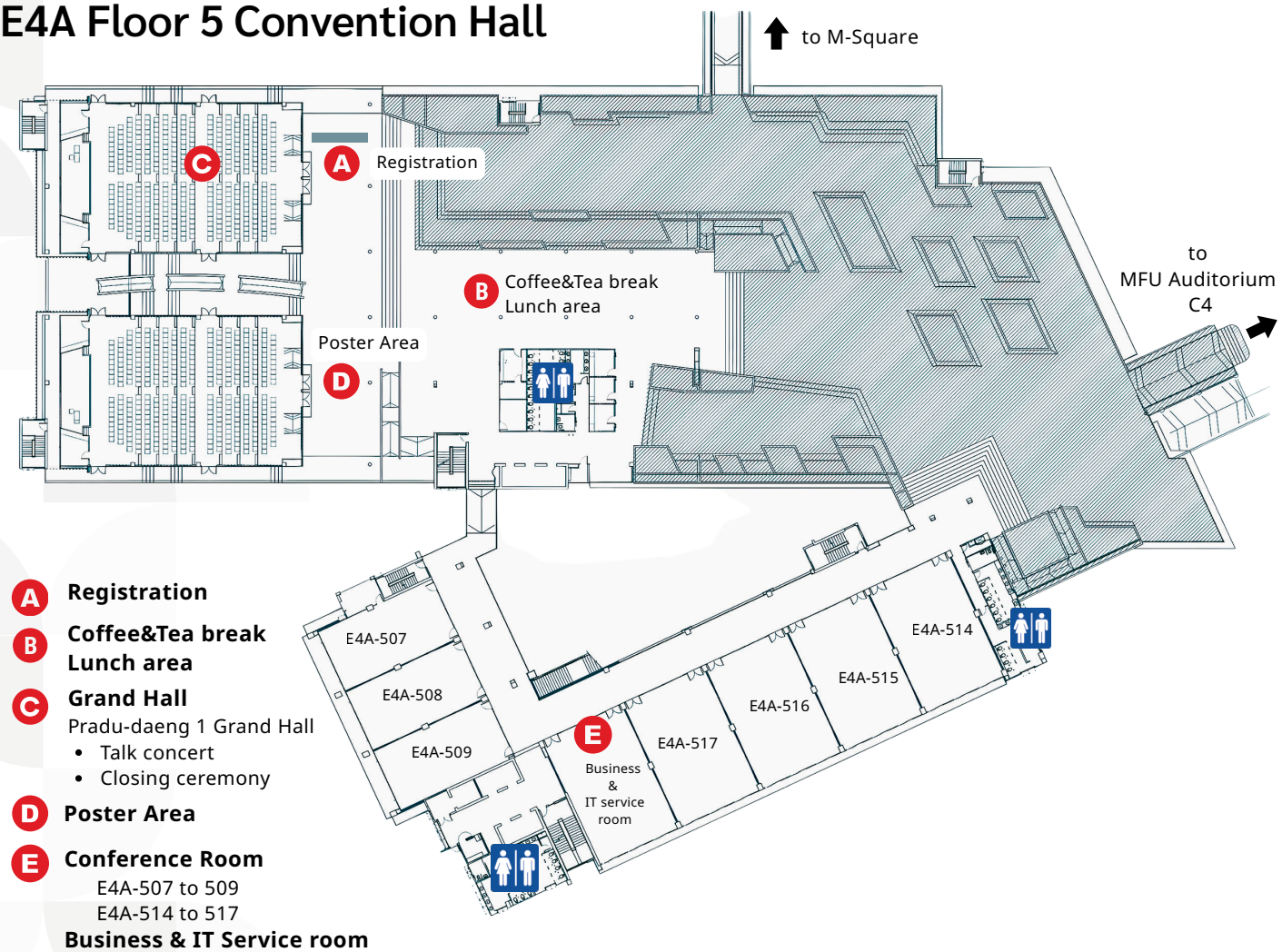
Venue



General Sampao Choosri Building (E4)

- Talk concert
- Oral Presentation
- Poster Presentation
- Closing Ceremony

E4A Floor 5 Convention Hall



A **Registration**

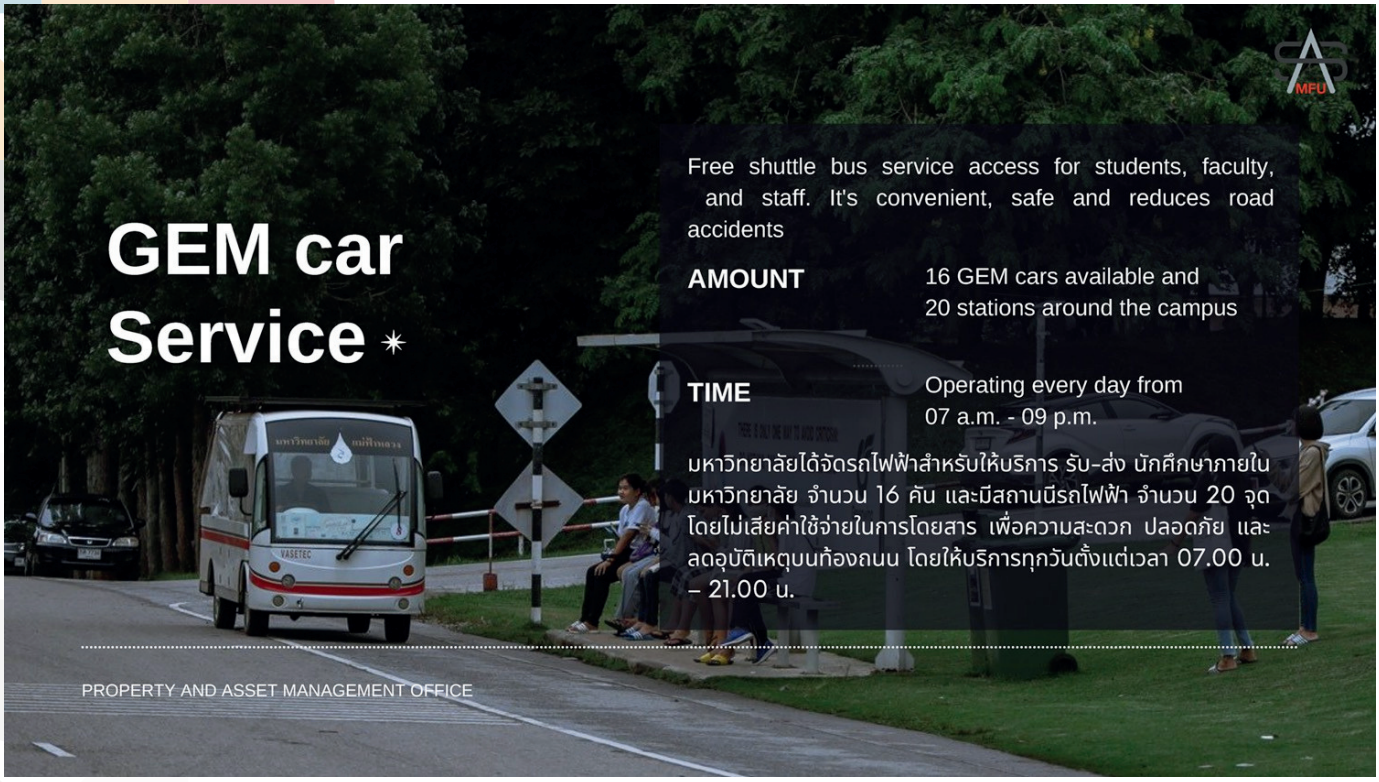
B **Coffee&Tea break**
Lunch area

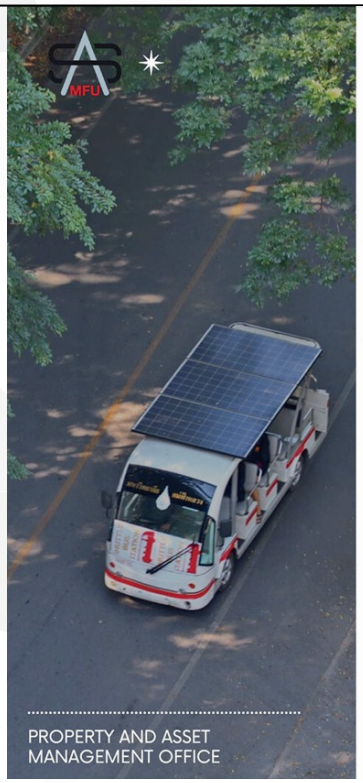
C **Grand Hall**
Pradu-daeng 1 Grand Hall
- Talk concert
- Closing ceremony

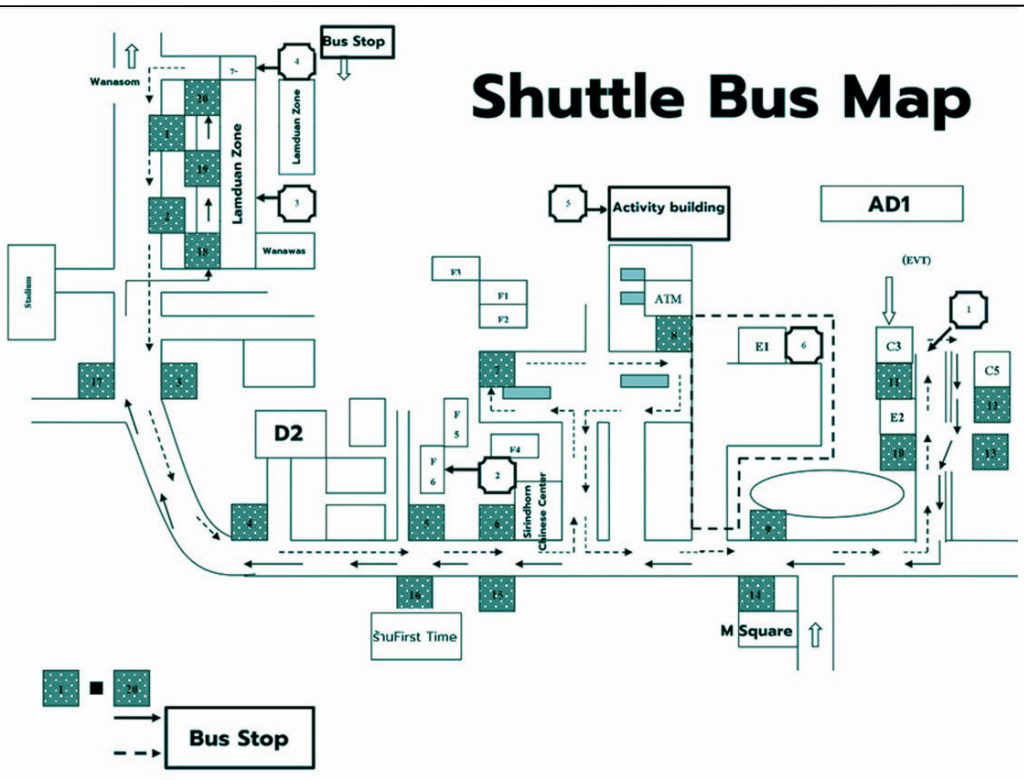
D **Poster Area**

E **Conference Room**
E4A-507 to 509
E4A-514 to 517
Business & IT Service room

University Transportation







University Transportation



Registration Information

All participants of APACPH 2025 are required to pay the correct registration fees suggested as below.

International

*Registration fees DO NOT include transaction fees, such as bank or credit card processing fees.

Category	Early-bird (Apr. 25 - Sep. 15)	On-site Registration (Sep. 16 - Oct. 15)
Student	150 USD	200 USD
Member (APACPH-Active)	250 USD	300 USD
Non-Member	300 USD	350 USD

Domestic

*Registration fees DO NOT include transaction fees, such as bank or credit card processing fees.

Category	Early-bird (Apr. 25 - Sep. 15)	On-site Registration (Sep. 16 - Oct. 15)
Student	4,500 THB	5,000 THB
Member (APACPH-Active)	5,500 THB	6,000 THB
Non-Member	6,500 THB	7,000 THB

Note:
APACPH-Active members are defined as those who have paid their membership fees to APACPH by the end of June 2025. Only APACPH-Active members can register for the APACPH 2025 conference as **"Member"**

Conference Registration Fee Includes:

- Access to All Sessions and Poster Viewing Areas
- Welcome Dinner (Nov. 5), Lunch box and Coffee Break (Nov. 5-7)

Additional Items

Item	Fee
Pre-conference Workshop (Nov. 4)	50 USD/ 1,000 THB

Registration Desk Operation Hour

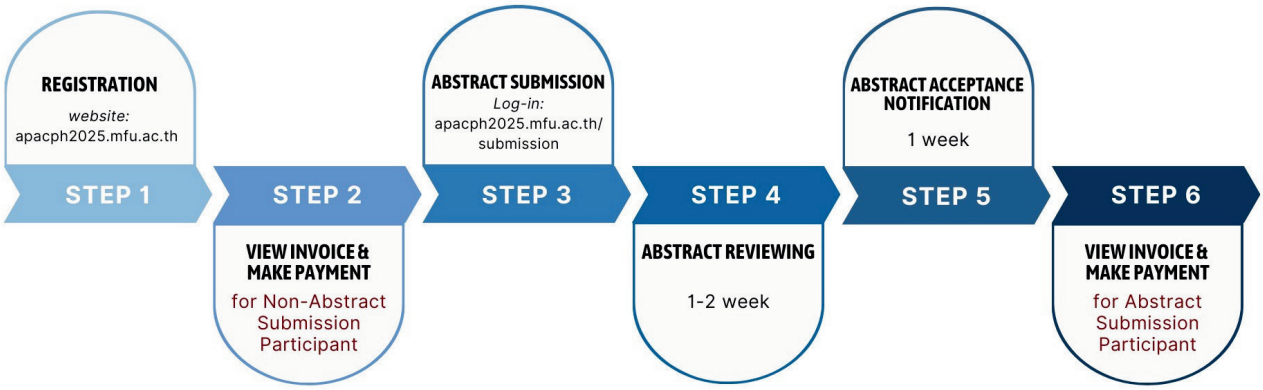
Nov. 4, Tuesday	13:00-16:00
Nov. 5, Wednesday	8:00-17:00
Nov.6, Thursday	8:00-17:00
Nov.7, Friday	8:00-15:00

Note:
Registration on Nov 4 (Tue) will take place in front of Pradu-deang 1 Grand Hall at E4 Building.

Registration Process
If you wish to present your abstract, please refer to the registration process provided below and complete your registration.

1. Sign up & Log in
2. Fill out the online registration form
3. Pay the registration fee (Credit Card/ Bank Transfer*)
4. Check the payment status on 'My page' (You can also receive a confirmation letter via email after you complete the registration)

* If you have paid the registration fee via bank transfer, please submit the receipt to the secretariat (apacph2025@mfu.ac.th) after payment.



Registration Information

Cancellation and Refund Policy

- The application fee, once submitted, is non-refundable for all applicants. This policy remains in effect even if a cancellation occurs after the completion of the registration payment.

Program at a Glance

at Conference Venue, E4 Building

Time	Nov.3 (Mon)	Nov.4 (Tue)	Nov.5 (Wed)	Nov.6 (Thu)		Nov.7 (Fri)
08:00 - 08:30		**Registration (to 16:00)**	**Registration (to 16:00)**	**Registration (to 16:00)**		**Registration (to 12:00)**
08:30 - 09:00						
09:00 - 09:30		**GA Meeting**	**Opening Ceremony** 1. Opening Remarks by the Presidentif MFU 2.APACPH2 Awards	**Talk Concert** **Topic:** Migrants and Vulnerable Population Health	**Poster Presentation Set-up**	**Panel Session 3 (Penal 3.1-3.5)**
09:30 - 10:00						
10:00 - 10:30			**Plenary Session** 1. Keynote speaker from SEAO-WHO 2.Keynote speaker from Prof.Dr.Joia Mukherjee, Harvard Medical School			
10:30 - 11:00				Coffee Break		Coffee Break
11:00 - 11:30			Coffee Break	**Talk Concert** **Topic:** Migrants and Vulnerable Population Health		**Oral Presentation 3 (Room 01-07)**
11:30 - 12:00			**Plenary Session** 3. Keynote speaker rom MOPH-Thailand 4.Keynote speaker from Dr. Supakit Sirilak, HSRI			
12:00 - 12:30	**ECM Lunch Discussion**	**GA Lunch**		Lunch		Lunch
12:30 - 13:00			Lunch			
13:00 - 13:30				**Panel Session 2 (Penal 2.1-2.5)**	**Poster Presentation Judging**	Oral Presentation 4 (Room 01-07)
13:30 - 14:00			**Panel Session 1 (Penal 1.1-1.6)**			
14:00 - 14:30	**ECM Meeting**	**Pre-Conference Workshops**		Coffee Break		Coffee Break
14:30 - 15:00						
15:00 - 15:30			Coffee Break	**Oral Presentation 2 (Room 01-07)**		**Closing Ceremony** at Pradu-daeng 1 hall
15:30 - 16:00			**Oral Presentation 1 (Room 01-07)**			
16:00 - 16:30						
16:30 - 17:00						
17:00 - 17:30						
17:30 - 18:00						
18:00 - 18:30	**ECM Dinner**		**Welcome Dinner at MFU main statium (Thai Traditional dance and musicperformance)**			
18:30 - 19:00						
19:00 - 19:30						
19:30 - 20:00						

ECM (November 3, 2025)

Time	Program
12:00 - 14:00	**ECM Lunch Discussion**
14:00 - 17:00	**ECM Meeting**
18:00 - 20:00	**ECM Dinner** at Heritage Grand Hotel

Pre-Conference Workshop (November 4, 2025)

Time	M-SQUARE	E4A-508	E4A-509	E4A-514	E4A-515	E4A-516	E4A-517
08:00 - 09:00	**Registration (to 16:00)**						
09:00 - 12:00	**GA Meeting**						
12:00 - 14:00	**GA Lunch**						
14:00 - 17:00		**Workshop 1** Lessons from the Thai–Myanmar Border Health	**Workshop 2** APACPH Early Career Network	**Workshop 3** Scientific writing in public health	**Workshop 4** Innovative Strategies for Learning and Teaching Public Health	**Workshop 5** Research Ethics	**Workshop 6** Systems thinking model building
18:00 - 20:00	**GA Dinner**						

Note: All workshop run from 14:00-17:00. Please register at the Pre-conference Workshop registration dest (13:30-14:00)

CONFERENCE DAY1 (November 5, 2025)

Time	E4A-507	E4A-508	E4A-509	E4A-514	E4A-515	E4A-516	E4A-517
08:00 - 09:00	**Registration (to 16:00)**						
09:00 - 10:00	**Opening Ceremony at MFU Main Auditorium C4** 1. Opening Remarks by the President of MFU 2.APACPH2 Awards						
09:00 - 11:00	**Plenary Session at MFU Main Auditorium C4** 1. Keynote speaker from SEAO-WHO 2.Keynote speaker from Prof.Dr.Joia Mukherjee, Harvard Medical School						
11:00 - 11:30	**Coffee Break**						
11:30 - 12:30	**Plenary Session at MFU Main Auditorium C4** 3. Keynote speaker rom MOPH-Thailand 4.Keynote speaker from Dr. Supakit Sirilak, HSRI						
12:30 - 13:30	**Lunch**						
13:30 - 15:00	**Panel 1.5** Health Policy and Systems	**Panel 1.6** Future Society and Health		**Panel 1.4** Environmental & Occupational Health	**Panel 1.3** Disease Control & Health Education	**Panel 1.2** Disease Control & Health Education	**Panel 1.1** Life Cycle and Health (LactaHub)
15:00 - 15:30	**Coffee Break**						
15:30 - 17:40	**O-T05A** **O-T05B** **O-T05D**	**O-T07C** **O-T07D** **O-T07F** **O-T07G**	**O-T03A** **O-T03B**	**O-T04A**	**O-T07A**	**O-T01A** **O-T01B** **O-T01D**	**O-T02B** **O-T02D**
18:00 - 20:00	**Welcome Dinner** at MFU main Stadium						

O-T01A-NCD Pandemic and Injury Prevention
O-T01B-Emerging and Re-emerging Diseases
O-T01D-Behavioral Health and Health Literacy

O-T02B-Childhood Health and Early Intervention
O-T02D-Aging Populations and Chronic Disease

O-T03A-Health Equity for Minority, Elderly, and Vulnerable Populations
O-T03B-Gender Equity in Health Systems

O-T04A-Climate Change and Environmental Health

O-T05A-Health System Strengthening and Determinants of Health
O-T05B-Health Promotion and Literacy
O-T05D-Health Insurance and Public Health Financing

O-T07A-Epidemiology
O-T07C-Behavioral Science and Leadership
O-T07D-Mental Health and Environmental Stress
O-T07F-Resilient Health Communities
O-T07G-Public Health Education and Training

CONFERENCE DAY2 (November 6, 2025)

Time	E4A-507	E4A-508	E4A-509	E4A-514	E4A-515	E4A-516	E4A-517	Poster Area
08:00 - 09:00	**Registration (to 16:00)**							
09:00 - 10:30	**Talk Concert** **Topic:** Migrants and Vulnerable Population Health							**Poster Presentation Set-up**
10:30 - 11:00	**Coffee Break**							
11:00 - 12:00	**Talk Concert** **Topic:** Migrants and Vulnerable Population Health							
12:00 - 13:00	**Lunch**							
13:00 - 14:30	**Panel 2.5** Future Society and Health			**Panel 2.4** Health Policy and Systems	**Panel 2.3** Environmental & Occupational Health	**Panel 2.2** Community & Equity	**Panel 2.1** Life Cycle and Health	**Poster Presentation Judging**
14:30 - 15:00	**Coffee Break**							
15:00 - 17:40	**O-T07B** **O-T07C**	**O-T01B** **O-T01D**	**O-T05A** **O-T05B** **O-T05C**	**O-T01C** **O-T01D** **O-T03A** **O-T05B**	**O-T04A** **O-T04B** **O-T04D**	**O-T03A** **O-T03B** **O-T03C**	**O-T02A** **O-T02B** **O-T02C** **O-T02D**	

O-T01B-Emerging and Re-emerging Diseases
O-T01C-Vaccination Strategies and Community Engagement
O-T01D-Behavioral Health and Health Literacy

O-T02A-Physical Activity, Exercise, and Nutrition
O-T02B-Childhood Health and Early Intervention
O-T02C-Aging Populations and Chronic Disease
O-T02D-Aging Populations and Chronic Disease

O-T03A-Health Equity for Minority, Elderly, and Vulnerable Populations
O-T03B-Gender Equity in Health Systems
O-T03C-Violence Prevention and Community Safety

O-T04A-Climate Change and Environmental Health
O-T04B-Occupational Health in Evolving Work Environments
O-T04D-Urbanization and Pollution Control

O-T05A-Health System Strengthening and Determinants of Health
O-T05B-Health Promotion and Literacy
O-T05C-Global Health Security and Pandemic Preparedness

O-T07B-Statistics
O-T07C-Behavioral Science and Leadership

CONFERENCE DAY3 (November 7, 2025)

Time	E4A-507	E4A-508	E4A-509	E4A-514	E4A-515	E4A-516	E4A-517
08:00 - 09:00	**Registration (to 16:00)**						
12:00 - 13:00	**Lunch**						
09:00 - 10:30	**Panel 3.5** Future Society and Health			**Panel 2.4** Community & Equity (GNAPH)	**Panel 3.3** Life Cycle and Health	**Panel 3.2** Life Cycle and Health	**Panel 3.1** Life Cycle and Health
10:30 - 11:00	**Coffee Break**						
11:00 - 12:00	**O-T06B** **O-T06C**	**O-T04A** **O-T04B** **O-T04D**	**O-T05A** **O-T05B** **O-T05C** **O-T05D**	**O-T03A**	**O-T07A** **O-T07B** **O-T07D** **O-T07G**	**O-T01A** **O-T01B** **O-T01D**	**O-T02A** **O-T02C** **O-T02D**
12:00 - 13:00	**Lunch**						
13:00 - 14:30	**O-T06B** **O-T06C**	**O-T04A** **O-T04B** **O-T04D**	**O-T05A** **O-T05B** **O-T05C** **O-T05D**	**O-T03A**	**O-T07A** **O-T07B** **O-T07D** **O-T07G**	**O-T01A** **O-T01B** **O-T01D**	**O-T02A** **O-T02C** **O-T02D**
14:30 - 15:00	**Coffee Break**						
15:00 - 16:00	**Closing Ceremony at Pradu-daeng 1 hall**						

O-T01A-NCD Pandemic and Injury Prevention
O-T01B-Emerging and Re-emerging Diseases
O-T01D-Behavioral Health and Health Literacy

O-T02A-Physical Activity, Exercise, and Nutrition
O-T02C-Aging Populations and Chronic Disease
O-T02D-Aging Populations and Chronic Disease

O-T03A-Health Equity for Minority, Elderly, and Vulnerable Populations

O-T04A-Climate Change and Environmental Health
O-T04B-Occupational Health in Evolving Work Environments
O-T04D-Urbanization and Pollution Control

O-T05A-Health System Strengthening and Determinants of Health
O-T05B-Health Promotion and Literacy
O-T05C-Global Health Security and Pandemic Preparedness
O-T05D-Health Insurance and Public Health Financing

O-T06B-Medical Technology and Artificial Intelligence in Health Care
O-T06C-Health Informatics, Telehealth, and Smart Health Care

O-T07A-Epidemiology
O-T07B-Statistics
O-T07D-Mental Health and Environmental Stress
O-T07G-Public Health Education and Training

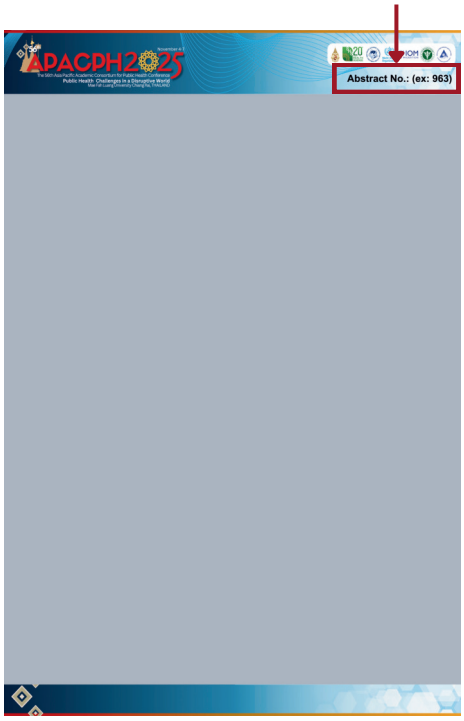
All abstracts accepted for the conference will be presented in oral or poster sessions, and all presentations must be in English. The presenter of the abstract, including invited speakers, must be a registered participant. If the presenter has not completed their registration by (August 31, 2025), the abstract will be withdrawn from the conference program.

Oral Presentation

- Each contributed oral presentation shall last for 8 minutes. You shall arrange your talk from 5 minutes, leaving 3 minutes available to answer questions.
- All presenters are advised to use venue facilities for the presentation due to system limitations. The session rooms are equipped with projector, laptop, laser pointer, and screen. Please provide the staff with your presentation materials in the session room at least 30 min. before the session starts.
- If you wish to use your own laptop for the presentation, you must bring all the necessary adapters yourself. Please note that the time required for setup and takedown will be included in your 8-minute presentation time.
- The window for oral presentation file preparation will open on **25 November 2025** for all presenters to upload their files. Please ensure you use the official oral presentation template and submit your file exclusively in **PDF format**.
- The presenter can receive the presentation certificate right after the session in the session room.
- Best Oral Presentation will be awarded during the Closing Ceremony (November 7, 2025)
- Please make sure that you should arrive in the session room at least 30 min. before your session begins.

Poster Presentation

Abstract Code



- The displayable area is approximately 90cm(W) x 120cm(H)
- A0 size poster - 841 x 1189 millimeters (84.1 x 118.9 cm or approximately 33.1 x 46.8 inches) is recommended.
- The abstract title, authors and affiliation should be noticeable on your poster.
- Your Abstract code. (ex: P-T01A-001) will be positioned in the upper right-hand corner of your poster board. You may check your abstract number at "My Page".
- The Secretariat will provide the board numbers through the website to help locate your poster easily before the presentation.
- Poster presenters should prepare and bring their posters in advance, as the Secretariat does not provide printing services.
- Posters must be displayed during the entire poster session, and if not, it will be considered a “no-show.” Since poster evaluations will take place during the session, presenters are expected to be available to answer questions and discuss with attendees.
- If you have more than one poster and they are not placed side by side, please ensure that each poster is attached to its correct designated location.
- It is NOT acceptable to merely post a copy of your paper. Such papers will be marked as a “no-show” presentation.
- The presenter can receive the presentation certificate during the poster presentation.

- Best Poster Presentation will be awarded during the Closing Ceremony (November 7, 2025).
- APACPH 2025 accepts no responsibility for any materials that may be left behind, lost, stolen, or damaged.

Poster Presentation Schedule

- Poster presenters must setup or tear down their poster presentation as follows.
- Please note that any posters not taken down during the designated tear-down time will be removed without notice.

Set-up	Presentation	Tear-down
Nov. 5, 15:00-17:00	**Nov. 6, 9:00 - 17:00**	Nov. 6, 17:00 - 18:00

Awards

The APACPH confers four different awards categories to outstanding organizations, groups, and individuals who have contributed to the development of public health in the region.

» The Professor Kazue K. McLaren Leadership Achievement Award

Dr. Shou-Hsia Cheng

Distinguished Professor, Health Policy and Economics & Dean, College of Public Health, National Taiwan University, Taiwan

Expertise:

Health policy analysis, health economics, national health insurance reform, healthcare quality and performance evaluation.

Outstanding Contributions:

Dr. Cheng has played a leading role in strengthening Taiwan's health system and advancing evidence-based health financing reforms. His leadership as Deputy Minister of Health and Director-General of the National Health Insurance Administration significantly improved healthcare accessibility and quality. His academic work continues to influence regional policy-making and capacity building across Asia.

» The APACPH Public Health Recognition Award

Assistant Professor Dr. Phitsanuruk Kanthawee

School of Health Science, Mae Fah Luang University, Thailand

Expertise:

Cross-border health, community health systems, One Health, zoonotic diseases, migrant and ethnic health, participatory research, community risk management, and policy implementation in border regions.

Outstanding Contributions:

Dr. Phitsanuruk has over 20 years of leadership in strengthening community health systems along the Mekong border. His establishment of the Border Health Research Institute and the UBRIC-HC unit has advanced regional cooperation between Thailand, Laos, Myanmar, and China. His work has enhanced disease surveillance, migrant health services, and evidence-based policymaking for vulnerable and mobile populations, making significant impact on public health capacity in the region.

» The APACPH Excellence in Leadership Medallion

Dr. Sopon Iamsirithaworn

Chief Inspector General & Inspector General of Health Region 6, Ministry of Public Health, Thailand

Expertise:
Communicable disease control, epidemiology, outbreak response, emergency operations, infectious disease modeling, and cross-border disease surveillance.

Outstanding Contributions:
Dr. Sopon led Thailand's national COVID-19 Emergency Operations Center and coordinated the rapid rollout of over 100 million vaccine doses for both Thai and non-Thai populations. His leadership strengthened national and regional disease surveillance systems, including the Joint Information and Coordination Center (JICC) at the Tak border. His work has improved outbreak preparedness, cross-border cooperation, and health security in Southeast Asia.

» The APACPH Medal of Merit

Professor Philip Robert Arthur Baker

Professor of Innovation in Epidemiology, Queensland University of Technology (QUT), Australia, Visiting & Adjunct Professor roles in Malaysia and South Korea; APACPH Regional Director (Australia)

Expertise:
Epidemiology, evidence-based practice, population health research, learning and teaching innovation, systematic review methodology, and public health education.

Outstanding Contributions:
Professor Baker has strengthened public health education across the Asia-Pacific through decades of academic leadership, high-impact research, and capacity-building workshops. His highly cited Cochrane reviews and training programs in epidemiology and evidence-based practice have shaped policy and professional development across multiple countries. As APACPH Regional Director, he has played a pivotal role in advancing regional collaboration and elevating academic standards in public health training.

We are pleased to announce the winners of the Young Investigator Travel Award, 2025. The 56th APACPH Conference received many applications from young researchers in Public Health. Following the shortlisting process, each application was independently reviewed by an expert panel nominated by APACPH, after which, the final selections were made. We congratulate the winners and look forward to their presentation at the Conference, and to their continued support towards APACPH and the field of Public Health.

List of APACPH YITA Awardees – 2025

Name	Abstract No.	Institution	Country
Francis Sarial Ganancial	O-T05A-0573	China Medical University	Taiwan (R.O.C.)
	Abstract title: Maternal Health Coverage and Its Effect on Maternal Mortality in Low- and Middle-Income Countries: An Ecological Panel Study from 2015 to 2023		
MD Mahfuzur Rahman	O-T07B-0441	Graduate School of Public Health, St. Luke's International University	Japan
	Abstract title: The incidence of child marriage in Bangladesh: A demographic assessment and regional comparison across South Asia		
Friscilla Hermayurisca	O-T07A-0471	The College of Public Health Sciences, Chulalongkorn University	Thailand
	Abstract title: Short-term Exposure to PM2.5 and Acute Lower Respiratory Infections (ALRIs) Mortality Among Adults in Thailand: Regional, Demographic, and Seasonal Analysis		
Khalilullah Arsyi	P-T01A-0214	Faculty of Medicine, Chulalongkorn University	Indonesia
	Abstract title: Global Mapping of Early Diagnostic Tools for Alzheimer's Disease: Integrating Bibliometric Analysis, SWOT Strategy, and a Novel Relative Effectiveness Index		
Niketh Rochan Preethika Karunaratne	O-T03A-0223	Faculty of Medicine, University of Colombo	Sri Lanka
	Abstract title: The quality of home-based non-pharmacological dementia care and its associated factors in Sri Lanka		

ASIA-PACIFIC ACADEMIC CONSORTIUM FOR PUBLIC HEALTH

56th APACPH Conference
APACPH-ECN
Young Investigator Traveler Award (YITA)

Winners 2025

Congratulations!

We wish to congratulate you for winning the Young Investigator Travel Award (YITA) 2025. This award will entitle you to complimentary registration at the Asia Pacific Academic Consortium for Public Health (APACPH) Conference 2025 in School of Health Science, Mae Fah Luang University, Chiang Rai, Thailand, from 4-7 November 2025.

Recipients:

- **Francis Sarial Ganancial**, China Medical University,Taiwan (R.O.C.)
- **MD Mahfuzur Rahman,** Graduate School of Public Health , St. Luke's International University, Japan.
- **Friscilla Hermayurisca,** The College of Public Health Sciences, Chulalongkorn University, Thailand.
- **Khalilullah Arsyi,** Faculty of Medicine, Chulalongkorn University, Thailand.
- **Niketh Rochan Preethika Karunaratne**, Faculty of Medicine, University of Colombo, Sri Lanka.

This time,the reimbursement of the expenses for accommodation and airfare will be up to 1000 USD.

We wish you all the very best in your career.

Presentation Awards

The APACPH 2025 Conference features seven thematic tracks, and for each track, two honors will be presented: the Best Oral Presentation Award and the Best Poster Presentation Award.

List of APACPH Best Oral Presentation Awardees

DiseaseDisease Control & Health Education

Su-Ann GOH	**O-T01A-0343**	**Yong Loo Lin School of Medicine, National University of Singapore and National University Health Systems**	**Singapore**

Abstract title: Culturally responsive mosque-based health promotion intervention increased self-reported mammogram uptake among Malay-Muslim women in Singapore

Life Cycle & Health

Charani Ga-mach-chige	**O-T02A-0372**	**Faculty of Medicine, University of Colombo**	**Sri Lanka**

Abstract title: Determinants of Food Choices and Dietary Habits among Adolescents in Urban Sri Lanka

Community & Equity

Amogha Savithri N	**O-T03C-0161**	**Department of Community Medicine, Government Medical College Surat**	**India**

Abstract title: Exploring Intimate Partner Violence Among Women registered in Government Support Centres at Urban Area of South Gujarat, India

Environmental & Occupational Health

I Hung Ho	**O-T04B-0427**	**National Cheng Kung University**	**Taiwan**

Abstract title: Investigation of Bisphenol A content in the total diet of Taiwan and health risk assessment

Health Policy & Systems

Hathaichon Inchai	**O-T05A-0211**	**Department of Epidemiology, Faculty of Public Health, Mahidol University**	**Thailand**

Abstract title: Pediatric emergency medical services mortality patterns and system performance in Thailand: a nationwide analysis

Future Society & Health

Tiong Wen Ning	**O-T06B-0748**	**Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia**	**Malaysia**

Abstract title: Digital Surveillance of Indirect E- Cigarette Promotion on Social Media: Insights from TikTok Video Content Analysis and Engagement Metric

Core of Public Health and Other Issues

Nurul Firdaus Binti Salahul Ahamed	**O-T07D-0678**	**Department of Public Health, Universiti Malaya Medical Centre, Kuala Lumpur, Malaysia**	**Malaysia**

Abstract title: Factors Associated With Stress, Anxiety And Depression Among Medical Officers And House Officers In Universiti Malaya Medical Centre (UMMC)

Presentation Awards

The APACPH 2025 Conference features seven thematic tracks, and for each track, two honors will be presented: the Best Oral Presentation Award and the Best Poster Presentation Award.

List of APACPH Best Poster Presentation Awardees

DiseaseDisease Control & Health Education

Wei-Lun Change	**P-T01B-0160**	**Center for Big Data Analytics and Statistics, Chang Gung Memorial Hospital**	**Taiwan**
	Abstract title: Accuracy of ICD-10-CM Diagnosis Codes for Identifying COVID-19 Cases Using Administrative Claims Data in Taiwan		

Life Cycle & Health

Wen-Chen Tsai	**P-T02C-0293**	**China Medical University**	**Taiwan**
	Abstract title: Association of the pattern of hemoglobin A1C trajectories with risk of stroke, acute myocardial infarction, and dialysis in patients with type 2 diabetes mellitus in Taiwan		

Community & Equity

Charles Daniel Medina	**P-T03A-0544**	**Department of Medical Technology, Wesleyan University-Philippines**	**Philippines**
	Abstract title: Food Insecurity and Diabetes Self-Management in Unserved and Underserved Rural Households in General Mamerto Natividad, Nueva Ecija, Philippines		

Environmental & Occupational Health

Rina Miyawaki	**P-T04B-0290**	**Meiji University**	**Japan**
	Abstract title: Associations of occupational sedentary behavior with individual and organizational perceptions among Japanese office workers		

Health Policy & Systems

Phatpitcha Taemkhornburee	**P-T06A-0749**	**The Newton Sixth Form, SiamScape**	**Thailand**
	Abstract title: Toward Reusable EGFR DNA Biosensors: A Feasibility Study of Probe Reutilization for Lung Cancer Staging Diagnostics		

Future Society & Health

Chuan De Foo	**P-T05B-0519**	**Duke NUS Medical School**	**Singapore**
	Abstract title: A Needs Assessment of Colorectal Cancer Care Delivery in Bhutan from a Health Systems Lens		

Core of Public Health and Other Issues

Simy Mathew	**P-T07A-0578**	**Institute of Public Health, College of Medicine and Health Sciences, United Arab Emirates University, Al Ain**	**United Arab Emirates**
	Abstract title: Burden of Disease Studies in the Middle East and North Africa Region: A Systematic Review		

Opening Ceremony

Date & Time: 9:00-10:00, November 5, 2025
Place: MFU Auditorium C4

Program
- Opening Declaration
- Opening Remark
- APACPH Awards

Closing Ceremony

Date & Time: 14:30-16:00, November 7, 2025
Place: Grand Hall (Pradu-daeng1), E4 Building

Program
- Best Oral and Poster Presentation Awards
- Young Investigator Traveller Awards (YITA)
- Grant Program Awards
- Photo Competition
- Summary of 56th APACPH
- Introduction of 57th APACPH
- Closing Address

PRE-CONFERENCE
Workshop

Date : November 4, 2025
Place : Main Conference Venue E4

PRE-CONFERENCE WORKSHOP 1

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 508

Lessons from the Thai–Myanmar Border for the Asia-Pacific: Towards Resilient and Self-Reliant Systems for Health

Host: Asian Network for the Inclusion and Integration of Migrants and other Vulnerable Populations in Health Security Preparedness and Achieving UHC (ANISE)

Border regions are often at the frontlines of health system challenges and innovation. The Thai–Myanmar border represents one of the most complex and dynamic health landscapes in the Asia-Pacific, shaped by decades of cross-border mobility, protracted displacement, statelessness, infectious disease risks, and under-resourced services. Yet, this region has also been crucible of innovation in community-based health systems, migrant-inclusive services, and multisectoral collaboration. This 3-hour pre-conference workshop brings together leading public health professionals, researchers, and practitioners who have worked extensively in the Thai–Myanmar border region. The aim is to distill actionable lessons and practices from this unique setting that can inform resilient, self-reliant, and inclusive systems for health across the Asia-Pacific region, especially in the context of border health, fragile settings, and migrant integration.

Chairs:

- Ms. Watinee Kunpeuk (ASEAN Institute for Health Development, Mahidol University)
- Dr. Kyoko Sudo (National College of Nursing, Japan Institute for Health Security)

Speakers and Presentations:

- **Dr Surasak Thanaisawanyangkoon,** Senior Advisor, Health Systems Research Institute (HSRI) Thailand Policy, Partnership, and Practice: Evolution of Thailand's Approach to Migration Health along the Myanmar-Border
- **Dr. Phitsanurak Kanthawee** (Head of Border Health Research Unit, Institute of Research and Development, Mae Fah Luang University): Border-Based Public Health Research and Local Innovation: Bridging National and Community Health
- **Dr. Hein Thu** (Researcher, Digital Transformations For Health Lab)
- Navigating access to health services overcoming barriers in Thai-Myanmar border areas
- **Dr. Patrick Almeida** (Regional Migration Health Thematic Specialist, IOM Regional Office for Asia and the Pacific)

PRE-CONFERENCE WORKSHOP 2

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 509

Topic: Nurturing Leadership Through Mentorship in Public Health

Moderator: Assoc Prof Dr.Naruemon Auemaneekul, Faculty of Public Health, Mahidol University, Director of APACPH Early Career Network

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You are cordially invited to participate in the Early Career Network Pre-Workshop. This pre-workshop is complimentary for YITA award recipients, postgraduate and graduate students, as well as early-career staff members. Participation is limited to 50 seats, which will be allocated on a first-come, first-served basis. We encourage you to reserve your seat at the earliest convenience, and we look forward to welcoming you at the even

Workshop Summary

The next generation of public health leaders is greatly influenced by mentoring, which provides direction, skill development, and chances for teamwork. The structured mentor-mentee program presented at this APACPH Early Career Network (ECN) pre-conference workshop on mentoring is intended to promote leadership, information sharing, and professional growth in the public health workforce. Participants will have the chance to learn from mentees themselves, which covers topics including mentee engagement, mentor recruiting, and effective relationship tactics. Selected mentees will present their applied projects that tackle urgent public health issues, including data-driven policy solutions, health equality programs, and community health promotion. These case studies will demonstrate the observable results of mentoring while igniting discussion on innovations, difficulties, and best practices. In addition to being inspired by the practical effects of mentee-led projects, workshop attendees will go with practical tools for establishing or enhancing mentorship programs in their own institution.

1st Topic “APACPH Mentoring Programme”

Professor Indika Karunathilake, Vice Chancellor, University of Colombo, Sri Lanka, APACPH Secretary-General and Early Career Network Consultant

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PRE-CONFERENCE WORKSHOP 2

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 509

Topic: Nurturing Leadership Through Mentorship in Public Health

Moderator: Assoc Prof Dr.Naruemon Auemaneekul, Faculty of Public Health, Mahidol University, Director of APACPH Early Career Network

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2nd Topic "Bridging cultures, shaping care: empowering professionals to deliver inclusive, respectful, and globally informed healthcare."

Mentee: Dr. Lalita Kaewwilai, Department of Public Health Nursing, Faculty of Public Health, Mahidol Univetsity Thailand
Mentor: Prof. Dr. Ellie Nezami, University of Miami, USA. APACPH Regional Director for American Region

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3rd Topic "A Dual Benefit: Enhancing Journal Impact and Supporting Early-Career Researchers"

Mentee: Dr. Puchong Inchai, Department of Epidemiology, Faculty of Public Health, Mahidol University
Mentor: Prof. Dr. Low Wah Yun, Honorary Professor at Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya, Editor-in-Chief of the Asia Pacific Journal of Public Health (APJPH)

4th Topic "Mentorship as a Catalyst: Redefining Diets, Sustaining Futures"

- Mentee: Dr Ng Ai Kah, Faculty of Medicine, Universiti Malaya
- Mentor: Prof Indika Karunathilake, Vice Chancellor, University of Colombo, Sri Lanka APACPH Secretary-General and Early Career Network Consultant

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5th Topic "Building an Academic Voice Through Mentorship"

- Mentee: Dr Ashwini de Abrew, Faculty of Medicine, University of Colombo
- Mentor: Professor Low Wah Yun, Honorary Professor at Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya, Editor-in-Chief of the Asia Pacific Journal of Public Health (APJPH)

PRE-CONFERENCE WORKSHOP 3

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 514

Topic: Scientific writing in public health: Navigating AI tools, biases, limitations and ethics

Host: Asia Pacific Journal of Public Health (APJPH)

Workshop Information

- **Date & Time:** 4 November 2025 (Tuesday), 14:00 - 17:00
- **Venue:** School of Health Science, Mae Fah Luang University, Chiang Rai, Thailand
- **Host:** Asia Pacific Journal of Public Health (APJPH)
- **Chair:** Helen Guat Hiong Tee, Editorial Officer, APJPH, c/o Faculty of Medicine, Universiti Malaya, Malaysia
- **Target Audience:** Researchers, Academic Staff, Reviewers, Journal Staff, Students

Workshop Summary

This workshop is organized by the Asia-Pacific Journal of Public Health (APJPH) in conjunction with the 56th Asia-Pacific Academic Consortium for Public Health (APACPH) Conference. The aim is for participants to acquire essentials and skills of scientific writing, and publishing quality scientific manuscripts. We will provide a guide to structuring each section of an academic paper that contributes to the overall narrative and scientific rigor, and presenting it in a way that editors will accept your paper for publication.

Artificial Intelligence (AI) is increasingly being used in scientific writing , offering several benefits which are attractive to researchers and students alike. However, using AI in scientific writing is not without its challenges in respect to biases and notable ethical issues. This Workshop will include using AI in writing an academic paper, its biases and limitations , as well as ethical issues associated with its use. The target audience for this half day workshop are researchers, academic staff, reviewers, journal staff and students, who conduct research and need to develop successful scientific writing skills.

A Certificate of Attendance will be given to all participants.

PRE-CONFERENCE WORKSHOP 3

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 514

Topic: Scientific writing in public health: Navigating AI tools, biases, limitations and ethics

Host: Asia Pacific Journal of Public Health (APJPH)

Program

Time	Topic	Speaker / Moderator
13:45 - 14:00	Registration	
14:00 - 14:05	Welcome Speech	Ms. Helen Guat Hiong Tee
14:05 - 14:20	Introduction to Asia Pacific Journal of Public Health (APJPH)	Ms. Bairave Shunnmugam
14:20 - 15:00	Writing and Publishing a Public Health Paper	Prof Dr.Wah Yun Low
15:00 - 15:15	**Short Break**	
15:15 - 16:00	Using AI in Writing an Academic Paper	Prof Dr. Victor Chee Wai Hoe Abdullah
16:00 - 16:15	Biases and Limitations in AI-Generated Contents	Prof Dr.Claire Choo Wan Yuen
16:15 - 16:40	Ethical Issues of Using AI in Scientific Writing	Dr.Noor Ani Ahmad
16:40 - 17:00	Q & A Session	Ms.Helen Guat Hiong Tee & Ms.Bairave Shunnmugam (Moderators)
17:00	Photography Session & Workshop Ends	

PRE-CONFERENCE WORKSHOP 4

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 515

Topic: Innovative Strategies for Learning and Teaching Public Health: From Evidence to Practice

Facilitators: Prof. Philip R. A. Baker and Dr. Julie-Anne Carroll

Australian Centre for Health Law Research and School of Public Health and Social Work, Queensland University of Technology, Brisbane, Australia.

Workshop Overview

This interactive workshop will explore innovative, evidence-based strategies for transforming public health education in the Asia-Pacific region. Drawing on recent research and practical experience, participants will engage with pedagogical models such as peer-assisted learning (PAL), experiential learning, and technology-enhanced approaches including AI-guided learning and collaborative digital platforms. The session will emphasise hands-on activities, collaborative problem-solving, and real-world applications to equip educators and practitioners with tools to enhance learning outcomes and address emerging public health challenges.

Learning Objectives

- By the end of the workshop, participants will be able to:
- 1. Identify key pedagogical innovations relevant to public health education in the Asia-Pacific.
- 2. Apply active and experiential learning strategies.
- 3. Integrate digital tools (e.g., Padlet, polling platforms into blended learning environments.
- 4. Recognize barriers to innovation and explore strategies to foster institutional support and academic integrity.

Target Audience

- Public health educators and trainers
- Curriculum designers
- Academic leaders and administrators
- Graduate and postgraduate public health program coordinators

PRE-CONFERENCE WORKSHOP 5

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 516

Topic: WHO's Work to Promote Research Ethics in the Western Pacific Region

Host: Asian Institute for Bioethics and Health Law (AIBHL), Yonsei University

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- Theme: WHO’s Work to Promote Research Ethics in the Western Pacific Region
- Date: 04 November 2025
- Venue: Mae Fah Luang University, Chiang Rai, Thailand
- Hosts: Asian Institute for Bioethics and Health Law (AIBHL), Yonsei University

Session Overview

The APACPH 2025 Pre-Conference Workshop of the Asian Institute for Bioethics and Health Law (AIBHL) explores the efforts of the World Health Organization (WHO) in enhancing ethical standards and governance in health research across the Western Pacific Region. With a focus on both regional strategy and country-specific challenges, the session highlights WHO’s work in promoting ethical, responsible, and locally relevant research practices. Special attention will be given to strengthening research ethics governance in Pacific Island Countries (PICs), where infrastructure and capacity constraints remain significant challenges.

Session Chair/Moderator

- **Dr. AHN, Myoung-Ock,** MD, PhD, DrPH, MPH, Co-Chairperson of the National Museum of Women’s History Construction Committee with the Deputy Minister of Gender Equality and Family Affairs of Korea, and Chief Project Officer of Korea Women Parliamentarian Network (KWPN).
- **So Yoon Kim, M.D., M.Sc., Ph.D.,** Director, Center for Health and Unification of Korea, and Professor, Dept. of Medical Humanities and Social Sciences, Yonsei University College of Medicine

PRE-CONFERENCE WORKSHOP 5

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 516

Topic: WHO's Work to Promote Research Ethics in the Western Pacific Region

Host: Asian Institute for Bioethics and Health Law (AIBHL), Yonsei University

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Session Objectives

1.Ethics in international research for health : Work of WHO in the Western Pacific

This theme presents WHO's multi-faceted strategy to scale up science, research, and innovation capacity by:

- Strengthening the research ecosystem and evidence-based policymaking,
- Embedding ethics, responsibility, and accountability in health research,
- Building innovation ecosystems to support transformative solutions.

Key initiatives include the Selangor Consensus, which promotes equitable clinical trials by:

- Centering equity in trial design and implementation,
- Fostering local capacity and international partnerships,
- Integrating trials into public health systems,
- Enhancing data governance through registries.

Additionally, WHO emphasizes ethical, legal, and social implications (ELSI) of emerging fields like human genomics and AI, advocating for locally aligned, trust-based, and multisectoral approaches to innovation.

2.Strengthening Research Ethics Governance in Pacific Island Countries (PICs)

This theme focuses on the unique ethical challenges and governance needs of PICs, illustrated by the Oceanian Genome Variation Project (OGVP). Though the OGVP aimed to advance population health by collecting over 10,000 blood samples, concerns emerged regarding:

- Informed consent processes,
- Lack of local REC and Ministry of Health engagement,
- Oversight of secondary uses.

The case highlights the need for:

- Stronger local ethics governance and benefit-sharing frameworks,
- Enhanced dialogue on data sovereignty and community engagement,
- Forward-looking mechanisms to manage the ethical implications of large-scale genomic, biobanking, and digital health research in the region.

PRE-CONFERENCE WORKSHOP 5

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 516

Topic: WHO's Work to Promote Research Ethics in the Western Pacific Region

Host: Asian Institute for Bioethics and Health Law (AIBHL), Yonsei University

Session Objectives

Time	Topic	Speaker / Moderator
10 minutes	Opening Remarks	**So Yoon Kim**
5 minutes	Group Photo	
40 minutes	Ethics in International Research for Health : WHO's Work in the Western Pacific	**Kidong Park**
10 minutes	Break Time	
40 minutes	Strengthening Research Ethics Governance in Pacific Island Countries (PICs) (Tentative)	**Hannah Kim**
35 minutes	Discussion	**So Yoon Kim | Yuri Lee**
20 minutes	Panel Discussion & Q&A	
10 minutes	Closing Remarks	**AHN, Myoung Ock**

PRE-CONFERENCE WORKSHOP 6

November 4, 2025 Time: 14.00-17.00
E4 Building 5 Floor, Room 517

Topic: Systems thinking model building

Speaker: Prof. NISHI Nobuo, Graduate School of Public Health,
St. Luke's International University

Session Objectives

Systems thinking is one of the foundational competencies in public health. This workshop introduces its concept, types of models and systems archetypes. Participants will learn how to build models in this introductory hands-on workshop. Please bring your PC with Vensim Personal Learning Edition (PLE) (Ventana Systems) installed.

Program Agenda

Time	Topic
13:00-13:45	Introduction of systems thinking
13:45-14:30	Building of stock and flow diagrams
14:30-15:15	Building of casual loop diagrams
15:15-16:00	Building of systems archetype models

PLENARY SESSION

Date : November 5, 2025
Place : MFU Main Auditorium (C4)

Wednesday, 5 November 2025 (Time 10.00-12.30)

MC: Assoc.Prof.Dr.Kowit Nambunmee and Asst.Prof.Dr.Siwarak Kitchanapaiboon, School of Health Science, Mae Fah University

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Speaker 1

Dr.Richard (Rick) Brown

Program Manager for Health Emergencies, IPC and AMR in WHO Thailand.

Time: 10.00-10.45
Topic: Health security in the Asia-Pacific

Speaker 2

Associate Professor Joia S. Mukherjee

Harvard Medical School, USA

Time: 10.45-11.30
Topic: Understanding global history and politics in addressing global health equity: perspectives of global health professionals.

Speaker 3

Dr. Charay Vichathai

Research Manager, Health Systems Research Institute (HSRI), Thailand

Time: 11.30-12.10
Topic: Strategy and mechanism of research funders in reinforcement of national health and health system improvements.

Plenary Speaker 1

Health security in the Asia-Pacific

Dr.Richard (Rick) Brown
Program Manager for Health Emergencies, IPC and AMR in WHO Thailand.

Summary: Health Security in the Asia Pacific

Dr. Richard (Rick) Brown delivered a forward-looking keynote emphasizing the critical importance of health security across the Asia-Pacific—a region home to more than 60% of the world's population and one of the most dynamic yet risk-prone areas globally. He highlighted how demographic shifts, increasing mobility, rapid urbanization, and climate change have collectively intensified vulnerability to infectious disease outbreaks, zoonotic spillovers, and public health emergencies.

Reflecting on the lessons of COVID-19, Dr. Brown explained how shortcomings in surveillance, coordination, and equitable access to countermeasures prompted global reforms. He outlined key developments such as the Pandemic Agreement, revisions to the International Health Regulations (IHR 2005), and the establishment of the Pathogen Access and Benefit-Sharing (PABS) System—a groundbreaking mechanism to ensure rapid, fair, and transparent global sharing of pathogen materials and benefits.

Regionally, Dr. Brown underscored the significance of the Asia Pacific Health Security Action Framework (APHSAF) in strengthening preparedness through multisectoral collaboration. He also highlighted the expansion of the Global Health Emergency Corps (GHEC) and the ongoing investment in regional workforce capacities through Field Epidemiology Training Programmes (FETP) and Emergency Medical Teams (EMTs).

The keynote emphasized that resilient health systems must be anchored in strong Primary Health Care (PHC), which he described through the "3S Framework":

- Speed – the ability to detect and respond to threats early;
- Safety – protecting health workers and maintaining trust during crises;
- Surge – maintaining continuity of essential health services even during emergencies.
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His address concluded with a call for strengthened solidarity, cross-border cooperation, and sustained political commitment to ensure that the region remains better prepared for future health threats while safeguarding its populations.

Plenary Speaker 2

Understanding global history and politics in addressing global health equity: perspectives of global health professionals.

Associate Professor Joia S. Mukherjee
Harvard Medical School, USA

Summary: Health Equity and the Moral Basis of Care

Associate Professor Joia S. Mukherjee's keynote offered a compelling exploration of the moral, historical, and political foundations of global health equity, arguing that meaningful progress in global health requires addressing the deep-rooted social and structural injustices that shape health outcomes.

She began by revisiting the origins of social medicine, a field that examines how living conditions, socioeconomic inequality, and political power structures influence disease patterns. She stressed that health cannot be understood solely through biological mechanisms but must be viewed in the context of structural violence—the social, economic, and political arrangements that place certain groups at disproportionate risk of illness.

Using historical cases such as the 1989–1990 Minnesota measles outbreak among Hmong children, Dr. Mukherjee illustrated how misconceptions and cultural blaming obscure the true barriers to care: lack of transportation, poverty, language barriers, and insufficient community support. She emphasized that equity-centered healthcare requires systems to understand and address these real-world obstacles.

Dr. Mukherjee also presented a powerful case study of "Emmanuel," a tuberculosis patient whose recovery required far more than medication. Through food packages, stable housing, and psychosocial support, health workers demonstrated that health interventions must integrate social and economic support to be successful. This example underscored her argument that equity-focused healthcare is inherently an act of solidarity, compassion, and justice.
Central to her message was the role of Community Health Workers (CHWs) as essential connectors between health systems and marginalized populations. She described CHWs as "agents of equity," able to bridge cultural divides, rebuild trust, and provide longitudinal support far beyond clinical encounters.

Her keynote concluded with a call to global health professionals to embrace a moral commitment to dismantling the structural inequities that perpetuate disease—arguing that health equity is not only a policy goal but a profound ethical obligation.

Plenary Speaker 3

Strategy and mechanism of research funders in reinforcement of national health and health system improvements

Dr. Charay Vichathai
Research Manager, Health Systems Research Institute (HSRI), Thailand

Summary

Dr. Charay Vichathai presented a comprehensive overview of Thailand's evolving research and innovation landscape, highlighting the strategic role of the Health Systems Research Institute (HSRI) in shaping health system transformation through evidence-based policymaking.

Beginning with the national context, Dr. Charay explained how HSRI functions within Thailand Science, Research and Innovation (TSRI), alongside key agencies such as the National Research Council of Thailand (NRCT), the National Innovation Agency (NIA), ARDA, TCELS, the National Vaccine Institute, and a wide network of Program Management Units (PMUs). Together, these bodies coordinate national research agendas across health, agriculture, life sciences, and technology.

Dr. Charay identified systemic challenges affecting Thailand's research ecosystem, including:

- fragmented funding structures,
- insufficient alignment between research output and national priorities,
- limited translation of research into scalable practices or policies, and
- resource constraints that limit the number of proposals that can be supported.

He emphasized that research should not end at publication but must lead to measurable system improvement, such as changes in clinical practice, adoption into national policy, or development of long-term monitoring systems. HSRI therefore prioritizes research proposals that clearly articulate pathways to real-world impact, including who will use the findings, how they will be implemented, and how their benefits will be sustained.

A key portion of the keynote highlighted HSRI's commitment to building a more collaborative, data-driven, and capacity-strengthening research environment. This includes promoting shared data platforms, inter-institutional collaboration, community participation, and open-data practices. HSRI also supports long-term strategic projects that build infrastructure—such as registries, surveillance systems, and digital health platforms—that continue to benefit the health system beyond the lifespan of individual studies.

Dr. Charay concluded by discussing emerging funding mechanisms that integrate research with implementation and scale-up activities, enabling Thailand to bridge the gap between knowledge generation and practical reform. These innovative mechanisms are intended to create a more efficient, coordinated, and impactful research ecosystem capable of driving sustainable improvements in national health outcomes.

TALK CONCERT

Date : November 6, 2025
Place : Pradu-deang 1 Grand Hall (E4 Building)

Wednesday, 6 November 2025 (Time 9.00-12.00)

In an era of rapid mobility, climate change, and complex emergencies, the health of migrants and other vulnerable populations has become a central challenge for the Asia-Pacific region. Migration today reflects deep connections between health, equity, security, and human dignity. Yet millions of migrant workers, refugees, ethnic minorities, and border communities continue to face barriers in accessing essential services—barriers that are often intensified by pandemics, disasters, and social or economic instability. Protecting their health is therefore not only a humanitarian responsibility but a foundation for regional health security and sustainable development.

The panel brings together experts whose combined perspectives illuminate this complexity.
Dr. Masami Fujita offers a health security lens, showing how migrant inclusion in surveillance, preparedness, and emergency response strengthens community resilience. Dr. Myoung-Ock Ahn highlights how gender, policy, and social determinants shape vulnerability, especially for women and marginalized groups. From the field, Asst. Prof. Phitsanurak Kanthawee provides insights from border communities, demonstrating the importance of culturally grounded, community-driven approaches to overcoming access barriers. Meanwhile, Dr. Patrick Almeida brings humanitarian and migration health experience from multiple crisis settings, emphasizing the need for coordinated systems that protect the health of people on the move.

Together, these leaders represent a continuum from global policy to local action. Their perspectives reinforce a shared message: achieving health equity for migrants and vulnerable populations requires bridging systems, strengthening cooperation, and ensuring that no one is left behind as societies face increasing uncertainty and change.

Moderator: Dr. Betty Ya-Wen Chiu, Principal Investigator & Deputy Director, Institute of Population Health Sciences, NHRI, Taiwan
Vice-President-1, APACPH

Chairs: Prof. So Yoon Kim, M.D., M.Sc., Ph.D. – Chair 1
Director, Center for Health and Unification of Korea
Professor, Yonsei University College of Medicine, South Korea

Panelists:

- **Dr. Masami Fujita**, M.D., Ph.D. (Deputy Director General, Bureau of Global Health Cooperation, Japan Institute for Health Security (JIHS))
- **Dr. Myoung-Ock Ahn**, MD, PhD, DrPH, MPH (Co-Chairperson, National Museum of Women's History Construction Committee, Ministry of Gender Equality & Family, Korea, and Chief Project Officer, Korea Women Parliamentarian Network (KWPN))
- **Asst. Prof. Phitsanurak Kanthawee**, Ph.D. (Head, Border Health Research Institute, Mae Fah Luang University, Thailand)
- **Dr. Patrick Almeida** (Regional Thematic Specialist for Asia and the Pacific, International Organization for Migration (IOM–UN Migration))

PANEL SESSIONS

Date : November 5-7, 2025
Place : Conference rooms
(E4 Building)

Panel Session

November 5, 2025

Panel 1.1: Life Cycle and Health

Topic: Strengthening Breastfeeding Systems - Supporting Mothers from Hospital to Community

November 5, 2025
Time: 13.30-15.30 Room: E4 Room 1 (517)

Host: LactaHub **LactaHub**

Moderator & Chair	**Dr. Sutantri, RN., M.Sc., Ph.D. (Session Chair)** Vice Dean for Academic and Student Affairs, Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta; Associate Professor in Nursing, Universitas Muhammadiyah Yogyakarta	Indonesia
Speaker Panel 1.1 a.	**Dr. Areta Idarto, Sp.A., MARS., MM.** Pediatrician, Breastfeeding Counselor; Vice Head of Medicine Study Program, School of Medicine, Universitas Ciputra, Surabaya; Research Division Head, Indonesian Breastfeeding Counselors Association; Member of the Education and Research Division, Board of the Indonesian Association of Child & Adolescent Mental Health, East Java – Bali Branch	Indonesia
Speaker Panel 1.1 b.	**Dr. Ferika Indarwati,RN, BSN, MNg., Ph.D.** Lecturer and Researcher in Pediatric Nursing, Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta	Indonesia
Speaker Panel 1.1 c.	**Dr. Saraiorn Thonginnetra,M.D.** Lecturer and Pediatric Cardiologist, Princess Srisavangavadhana Faculty of Medicine, Chulabhorn Royal Academy	Thailand

Panel 1.2: Disease Control and Health Education

Topic: Collaborative Action on NCDs: Insights from Taiwan with a Regional Focus on Asia-Pacific

November 5, 2025
Time: 13.30-15.30 Room: E4 Room 2 (516)

Moderator & Chairperson Panel 1.2	**Dr. Betty Ya-Wen** Vice President I and Taiwan Regional Director, APACPH, CEO, Collaborating Centres for Health Promotion (CCHP), APACPH, and Deputy Director & Principal Investigator, Institute of Population Health Sciences, National Health Research Institutes, Taiwan	Taiwan
Co-Chair	**Dr. Wei-Cheng LO** Deputy CEO, CCHP Associate Professor, Master Program in Applied Epidemiology, Taipei Medical University, Taiwan	Taiwan
Speaker Panel 1.2 a.	**Dr. Elahe NEZAMI** Professor, Department of Public Health Sciences, Miller School of Medicine, University of Miami, United States	USA
Speaker Panel 1.2 b	**Dr. Hung-Yi CHIOU** Director, CCHP & President-Elect, APACPH Director & Distinguished Investigator, Institute of Population Health Sciences, National Health Research Institutes, Taiwan	Taiwan
Speaker Panel 1.2 c.	**Prof. Takahiro HIGASHI** Professor, Department of Public Health and Health Policy, Graduate School of Medicine, University of Tokyo, Japan	Japan
Speaker Panel 1.2 d.	**Dr. Utoomporn WONGSIN** Lecturer, Department of Public Health Administration, Faculty of Public Health, Mahidol University, Thailand	Thailand

Panel 1.3: Disease Control and Health Education

Topic: Communicable Diseases and Preparing for the Coming Pandemic

November 5, 2025
Time: 13.30-15.30 Room: E4 Room 3 (515)

Moderator & Chair	**Professor Rajendra Surenthirakumaran** University of Jaffna, Sri Lanka	Sri Lanka
Speaker Panel 1.3 a.	**Assoc. Prof. Dr. Syed Sharizman Syed Abdul Rahim** Faculty of Medicine and Health Sciences, Universiti Malaysia Sabah.	Malaysia
Speaker Panel 1.3 b.	**Professor Dr. Mahalul Azam** Department of Public Health, Faculty of Medicine, Universitas Negeri Semarang	Indonesia

Panel 1.4: Environmental and Occupational Health

Topic: Environmental Health

November 5, 2025
Time: 13.30-15.30 Room: E4 Room 4 (514)

Moderator & Chair Panel 1.4	**Dr.Noppharit Sutthasil** Mae Fah Luang University, Thailand	Thailand
Speaker Panel 1.4 a.	**Dr.Tomonori Ishigaki** National Institute for Environmental Studies, Japan	Japan
Speaker Panel 1.4 b.	**Dr. Ai Kah NG** Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya	Malaysia
Speaker Panel 1.4 c.	**Asst.Prof. Dr.Annaletchumy Loganathan** Department of Allied Health Sciences, Universiti Tunku Abdul Rahman (UTAR), Kampar, Perak	Malaysia

Panel 1.5: Health Policy and Systems

Topic: Implementing Social Health Insurance, experiences by ASEAN countries

November 5, 2025
Time: 13.30-15.30 Room: E4 Room 5 (507)

Moderator & Chair Panel 1.5	**Prof. Maznah Duhlui** Univsity of Malaya	Malaysia
Speaker Panel 1.5 a.	**Assoc Prof Dr. Hafiz Jaafar** University Sains Islam Malaysia	Malaysia
Speaker Panel 1.5 b.	**Dr. Amirah Azzeri** University Sains Islam Malaysia	Malaysia

Panel 1.6: Future Society and Health

Topic: Digital Health Transformation: Challenges and Opportunities

November 5, 2025
Time: 13.30-15.30 Room: E4 Room 6 (508)

Moderator & Chair Panel1.6	**Yuri Lee** Bataan Peninsula State University (Philippines), Myongji College (Korea)	Republic of Korea
Moderator & Chair Panel1.6	**Sunjoo Kang** Bataan Peninsula State University (Philippines), Myongji College (Korea)	Republic of Korea
Speaker Panel 1.6 a.	**Emmanuel C. Macaraeg, PhD, CESe** Bataan Peninsula State University (Philippines), Myongji College (Korea)	Republic of Korea
Speaker Panel 1.6 b	**Rachel D. Castillo** Bataan Peninsula State University (Philippines), Myongji College (Korea)	Republic of Korea
Speaker Panel 1.6 c.	**Lydia A. Pinili** Bataan Peninsula State University (Philippines), Myongji College (Korea)	Republic of Korea
Speaker Panel 1.6 d.	**Marissa B. Ramos** Bataan Peninsula State University (Philippines), Myongji College (Korea)	Republic of Korea

Panel Session

November 6, 2025

Panel 2.1: Life Cycle and Health

Topic: Prenatal Environmental Stressors in Shaping Offspring Health

November 6, 2025
Time: 13.00-15.00 Room: E4 Room 1 (517)

Moderator & Chair Panel 2.1	**Prof. Masahiro Umezaki** Department of Human Ecology, School of International Health, The University of Tokyo, Japan	Japan
Speaker Panel 2.1 a.	**Assistant Professor,Dr. Kyi Mar Wai** School of International Health, Department of Human Ecology, The University of Tokyo, Japan	Japan
Speaker Panel 2.1 b.	**Dr. Thant Sin Aye** Graduate Student, Department of Social and Environmental Medicine, Faculty of Tropical Medicine, Mahidol University, Thailand	Thailand
Speaker Panel 2.1 c.	**Sae Sekiya** School of International Health, Department of Human Ecology, The University of Tokyo, Japan	Japan
Speaker Panel 2.1 d.	**Muhammad Fahmi Aziz** Graduate Student, Department of Human Ecology, School of International Health, The University of Tokyo, Japan	Japan
Speaker Panel 2.1 e.	**Dr. Rajendra Parajuli** Research Associate, Herbert Wertheim School of Public Health and Human Longevity Science, University of California San Diego (UCSD), USA; Associate Professor, Central Department of Zoology, Tribhuvan University, Nepal	Nepal
Speaker Panel 2.1 f.	**Dr. Makiko Sekiyama** Section Head, Environmental Epidemiology Section, Health and Environmental Risk Division, National Institute for Environmental Studies, Japan	Japn

Panel 2.2: Community & Equity

Topic: What Health Professionals Need to Know About Multi-Sectoral Actions for Migrant Integration in a Disruptive World

November 6, 2025
Time: 13.00-15.00 Room: E4 Room 2 (516)

Chair 1	**Dr. Masami Fujita** Japan Institute for Health Security, Migrants Neighbor Network and Action	Japan
Chair 2	**Dr. Betty Ya-Wen Chiu** National Health Research Institutes, Taiwan	Taiwan
Speaker Panel 2.2 a.	**Dr. Aiko Kaji** IOM Vietnam Office	Vietnam
Speaker Panel 2.2 b.	**Ms. Watinee Kunpeuk** ASEAN Institute for Health Development, Mahidol University	Thailand
Speaker Panel 2.2 c.	**Dr. Takahiko Ueno** Tsuru University	Japan
Commentator	**Azusa Iwamoto** Japan Institute for Health Security, Migrants Neighbor Network and Action	Japan

Panel 2.3: Environmental and Occupational Health

Topic: Occupational Health

November 6, 2025
Time: 13.00-15.00 Room: E4 Room 3 (515)

Moderator & Chair Panel 2.3	**Assoc. Prof. Dr. Sarawut Thepanondh** APACPH EC (Mahidol University)	Thailand
Speaker Panel 2.3 a.	**Professor associated JinHa Yoon** College of Medicine, Department of Preventive Medicine, Yonsei University	Republic of Korea
Speaker Panel 2.3 b.	**Dr. Aiko Kaji** School of Health Science, Mae Fah Luang University	Thailand

Panel 2.4: Health Policy and Systems

Topic: Substance abuse

November 6, 2025
Time: 13.00-15.00 Room: E4 Room 4 (514)

Chair 1	**Associate Prof. Dr. Naruemon Auemaneekul** Mahidol University, Bangkok, Thailand	Thailand
Moderator	**Associate Prof. Dr. Ashwini de Abrew** Faculty of Medicine, University of Colombo, Sri Lanka.	Sri Lanka
Speaker Panel 2.4 a.	**Prof. Wah Yun LOW** Dean's Office, Faculty of Medicine, Universiti Malaya	Malaysia
Speaker Panel 2.4 b.	**Dr. Wen Ting TONG** Department of Primary Care Medicine, Faculty of Medicine, Universiti Malaya	Malaysia

Panel 2.5: Future Society and Health

Topic: Experience in operating cyber education

November 6, 2025
Time: 13.00-15.00 Room: E4 Room 5 (507)

Moderator & Chair	**Prof. So Yoon Kim** APACPH-affiliated Health Cyber University (ICUH)	Republic of Korea
Speaker Panel 2.5 a.	**Prof. Mary Youngsoon Choi** APACPH-affiliated Health Cyber University (ICUH)	Republic of Korea
Discussion	**Simon Dzkoto** APACPH-affiliated Health Cyber University (ICUH)	Republic of Korea
	Hyung Ho Kim APACPH-affiliated Health Cyber University (ICUH)	Republic of Korea
	Dong Hyun Lee APACPH-affiliated Health Cyber University (ICUH)	Republic of Korea

Panel Session

November 7, 2025

Panel 3.1: Life Cycle and Health

Topic: A Happy Life for Old Age

November 7, 2025
Time: 9.00-11.00 Room: E4 Room 1 (517)

Moderator & Chair	**AHN, Myoung Ock and Prof. So Yoon Kim** Korean Society of Medical Law, Research Society of Aged Life, Asian Institute for Bioethics and Health Law	Republic of Korea
Speaker Panel 3.1 a.	**Mary Youngsoon Choi** Korean Society of Medical Law, Research Society of Aged Life, Asian Institute for Bioethics and Health Law	Republic of Korea
Speaker Panel 3.1 b.	**Lee Seul Kwon** Korean Society of Medical Law, Research Society of Aged Life, Asian Institute for Bioethics and Health Law	Republic of Korea

Panel 3.2: Life Cycle and Health

Topic: Life health

November 7, 2025
Time: 9.00-11.00 Room: E4 Room 2 (516)

Moderator & Chair	**Assoc Prof Dr. Hafiz Jaafar** Islamic Science University of Malaysia	Malaysia
Speaker Panel 3.2 a.	**Prof. Noran Hairi** Deputy Dean (Research), Faculty of Medicine, Universiti Malaya	Malaysia
Speaker Panel 3.2 b.	**Assoc. Prof. Naruemon Auemaneekul** Mahidol University	Thailand

Panel 3.3: Life Cycle and Health

Topic: Exercise and Health challenge

November 7, 2025
Time: 9.00-11.00 Room: E4 Room 3 (515)

Moderator & Chair	**Asst.Prof. Dr.Annaletchumy Loganathan** Department of Allied Health Sciences, Universiti Tunku Abdul Rahman (UTAR)	Malaysia
Speaker Panel 3.3 a.	**Dr. Mohamed Nashrudin bin Naharudin** University of Malaya, KualaLumpur, Malaysia.	Malaysia
Speaker Panel 3.3 b.	**Prof. Dr. Zulkarnain** University of Malaya, KualaLumpur, Malaysia.	Malaysia

Panel 3.4: Community and Equity

Topic: Migrant and Health (GNAPH)

November 7, 2025
Time: 9.00-11.00 Room: E4 Room 4 (514)

Moderator & Chair	**Prof. Wah Yun LOW** Vice President of the Global Network for Academic Public Health (GNAPH)	Malaysia
Speaker Panel 3.4 a.	**Prof Dr John Middleton** President of the Global Network for Academic Public Health (GNAPH)	United Kingdom
Speaker Panel 3.4 b.	**Prof Dr Jane Zhao** Hong Kong University	Hong kong (SAR)
Speaker Panel 3.4 c.	**Prof Dr Prof. R.Surenthirakumaran** Dean of Faculty of Medicine, University of Jaffna	Malaysia

Panel 3.5: Future Society and Health

Topic: Future Society and Health and AI in Public Health

November 7, 2025
Time: 9.00-11.00 Room: E4 Room 5 (507)

Moderator & Chair Panel 3.5	**Professor Dr Victor Hoe Chee Wai** Malaysian Digital Health Division, University of Malaya	Malaysia
Speaker Panel 3.5 a.	**Prof. Dr. Wim Vanden Berghe** University Antwerp, Belgium	Belgium

ORAL
Presentation

November 5 (Wed), 2025
November 6 (Thu), 2025
November 7 (Fri), 2025

ORAL

Presentation List

Oral Presentation Day: November 5 (Wed), 2025

Time: 15:30-17:38

1.Disease Control & Health Education — Nov-5, 15:30-17:38

1.1-NCD Pandemic and Injury Prevention / 1.2-Emerging and Re-emerging Diseases / 1.4-Behavioral Health and Health Literacy

Chair: Betty Ya-Wen Chiu, (Professor, Principal Investigator and Deputy Director, Institute of Population Health Sciences, National Health Research Institutes, Taiwan)
Pamornsri Inchon, (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-516

15:30 - 15:38 O-T01A-0101 **The Effectiveness Of Culture-Based Diabetes Management Education (Dsme) On Glycemic Control In T2dm Patients: A Literature Review**
Ratnasari Iskandar
Faculty of Public Health, Hasanuddin University, Indonesia, Indonesia

15:38 - 15:46 O-T01A-0138 **Changes in Diabetes Self-Management Before and After COVID-19 in Indonesia:An Analysis of National Health Surveys 2018 and 2023**
Edy Sud
Faculty of Public Health, Hasanuddin University, Indonesia

15:46 - 15:54 O-T01A-0245 **Optimised anthropometric cut-off points for early obesity screening in young Japanese females**
Mutiara Wijanarko
Institute of Nutrition Sciences, Kagawa Nutrition University, Japan

15:54 - 16:02 O-T01A-0341 **Diabetes Health Literacy Scale: Translated for Malaysian Diabetic Patients**
Muhammad Solehuddin Ishak
Department of Community Medicine, Universiti Sains Malaysia, Malaysia

16:02 - 16:10 O-T01A-0527 **A Cross-sectional study on prevalence of Metabolic Syndrome and associated risk factors in Women in an Urban Field area of Hyderabad, India.**
Jesse Enoch
Department of Community Medicine, Osmania Medical College, India

16:10 - 16:18 O-T01A-0566 **Risk Factors and Spatial Distribution of Prediabetes in Indonesia (Analysis of the Indonesian Health Survey 2023)**
Chandrayani Simanjorang

Faculty of Health Sciences, University of Pembangunan Nasional "Veteran" Jakarta, Indonesia

16:18 - 16:26 O-T01A-0121 **The Combined Effect of Visceral Fat Index and Physical Activity on Insulin Resistance in Nondiabetic Population in China**

Shengfei LIU
School of public health, Wuhan university, China

16:26 - 16:34 O-T01A-0123 **Associations between Dynapenic Obesity and Cognitive Disorder: Mediating Role of Physical Activity and Depressive Disorders**

Quanman Li
Zhengzhou University, China

16:34 - 16:42 O-T01A-0332 **Prediction of kidney function decline by gut microbiota and metabolome in kidney patients**

Qiao-Zhu Fang
Department of Environmental and Occupational Health, College of Medicine, National Cheng Kung University, Taiwan

16:42 - 16:50 O-T01A-0366 **Assessing Hypercalciuria through Demographic and Biochemical Determinants: Public Health Implications for the Meitei Population of Manipur, Northeast India: A cross-sectional study.**

Robertson Aheibam
Manipur University, India

16:50 - 16:58 O-T01A-0241 **Medication Adherence In Patients With Hypertension: A Systematic Review**

La Ode Alifariki
Faculty of Public Health, Hasanuddin University, Indonesia

16:58 - 17:06 O-T01A-0343 **Culturally responsive mosque-based health promotion intervention increased self-reported mammogram uptake among Malay-Muslim women in Singapore**

Su-Ann Goh
Yong Loo Lin School of Medicine, National University of Singapore and National University Health Systems, Singapore

17:06 - 17:14 O-T01A-0355 **Diverse Terminologies and Definitions of Metabolically Unhealthy Normal Weight (MUNW): A Global Systematic Review**

Ghopy Kandasamy
Faculty of Medicine and Health Sciences, University Putra Malaysia, Malaysia

17:14 - 17:22 O-T01B-0104 **Polymorphism of HLA-DQA1 Gene and Zinc Status in Susceptibility to Tuberculosis: A Literature Review**

Bellytra Talarima
Faculty of Public Health, Hasanuddin University, Indonesia

17:22 - 17:30 O-T01B-0148 **Household Contacts of Drug-Resistant Tuberculosis Patients: A Phenomenological Study**
Novrika Silalahi
Universitas Sumatera Utara, Indonesia

17:30 - 17:38 O-T01D-0628 **Physical Activity, Sedentary Behavior, and Coronary Heart Disease in Hypertensive Adults: The Mediating Effect of Blood Pressure and Body Mass Index**
Saiyi Wang
Department of Health management, College of Public Health, Zhengzhou University, China

2.Life Cycle & Health

Nov-5, 15:30-17:38

2.2-Childhood Health and Early Intervention / 2.3-Aging Populations and Chronic Disease

Chair: Mohamed Nashrudin bin Naharudin, (Dr., Faculty of Sports and Exercise Science,University of Malaya, Malaysia)
Suphaphorn Utsaha, (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-517

15:30 - 15:38 O-T02B-0196 **Association between parenting styles and Internet gaming disorder in children in Tokyo, Japan: cross-sectional study**
Daisuke Takahara
Graduate School of Health Sciences, University of the Ryukyus, Japan

15:38 - 15:46 O-T02B-0237 **Strengthening Climate Literacy Through School-Based Education: A Cross-Country Intervention Study in Malaysia and Indonesia**
Zulkhairul Naim Bin Sidek Ahmad
Department of Public Health Medicine, Faculty of Medicine and Health Sciences, Universiti Malayia Sabah, Malaysia

15:46 - 15:54 O-T02B-0152 **Complementary Feeding Practices in the Bonai Tribe Community: A Phenomenological Study in Rokan Hulu District, Riau Province, Indonesia**
Rifa Rahmi
Universitas Sumatera Utara, Indonesia

15:54 - 16:02 O-T02B-0154 **The Practice of Bengkung Use among Postpartum Mothers of Malay Ethnicity in Tanjung Balai City: A Phenomenological Study**

Heni Triana
Universitas Sumatera Utara, Indonesia

16:02 - 16:10 O-T02B-0242 **Intervention Local Food For Malnutrition In Under Five Children: Systematic Literature Review**

Sri Zeineke Ibrahim
Faculty of Public Health, Hasanuddin University, Indonesia

16:10 - 16:18 O-T02B-0112 **Understanding mental health literacy through the dynamic interaction of personal factors, behavioural patterns, and environmental influences among the late adolescent's population in Malaysia: A mixed methods study protocol**

Aziezah Norul Anhar
Department of Community Health, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia, Malaysia

16:18 - 16:26 O-T02B-0295 **The total amount of screen time, quality of sleep, and associated factors amongst undergraduate medical and dental students at a selected university in Sri Lanka.**

Tehan Siriwardana
Faculty of Medicine, University of Colombo, Sri Lanka

16:26 - 16:34 O-T02B-0493 **Using Systems Thinking to Explore the Drivers of Childhood Gastroenteritis in Queensland**

Megbaru Abate
School of Public Health, The University of Queensland, Australia

16:34 - 16:42 O-T02B-0383 **Effects of Classroom Lighting Renovation on Primary and Middle School Students' Eyesight — A Case Study of Southeastern Jiangxi Province**

Jingjing Li
School of Public Health, Jiangxi Medical College, Nanchang University, China

16:42 - 16:50 O-T02B-0609 **Association between Subjective Sleep Sufficiency and Social Jetlag among Korean Adolescents: A Comparative study of Middle School and High School**

Gaeun Park
Department of Health Administration, Yonsei University Graduate School, Republic of Korea

16:50 - 16:58 O-T02B-0591 **Impact of Incident Chronic Disease Diagnoses on Catastrophic Health Expenditure: A Panel Analysis of KLoSA 2020–2022**

YoungJin Kim
Department of Health Administration, Yonsei University Graduate School, Republic of Korea

16:58 - 17:06 O-T02B-0334 **Galactogogues Consumption, Effectiveness And Side Effects: A Review**

Aza Sherin Mohamad Yusuff
Public Health Unit, Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Malaysia

17:06 - 17:14 O-T02B-0358 **Academic Performance in Children of Mothers with Perinatal Depressive Disorder: A Population-Based Linked Data Cohort Study**

Biruk Shalmeno Tusa
School of Population Health, Curtin University, Australia

17:14 - 17:22 O-T02B-0665 **The Effect of Multiple Micronutrient Supplementation on Serum Vitamin D and Serum Interleukin-12 in Early Pregnancy: A randomized double blind control trial**

Sri Sumarmi
Department of Nutrition, Faculty of Public Health, Universitas Airlangga, Indonesia

17:22 - 17:30 O-T02B-0744 **Hands-On Breastfeeding Education for Adolescent Girls: Pre- and Post-Gain in Knowledge at a Private Islamic High School in Surabaya**

Areta Idarto
School of Medicine, Universitas Ciputra Surabaya, Indonesia

17:30 - 17:38 O-T02C-0650 **Bidirectional Associations Between Loneliness and Cognitive Function among Chinese Middle-aged and Older Adults: A National Longitudinal Study**

Yijing Zhang
Department of Health management, College of Public Health, Zhengzhou University, China

3.Community, Health Equity and Migrant Health

Nov-5, 15:30-17:38

3.1-Health Equity for Minority, Elderly, and Vulnerable Populations

Chair: Elahe Nezami, (Professor, Professor, University of Miami, USA)
Chakree Chumvisoot Wattanasiri, (Assistant Professor, Schoo of Integrative Medicine, Mae Fah Luang University)

Room: E4A-509

15:30 - 15:38 O-T03A-0118 **Transforming Vulnerability into Resilience: A Constructive Grounded Theory Approach to Supporting Internally Displaced Populations in Myanmar**
Hein Minn Tun
Universiti Brunei Darussalam, Brunei Darussalam

15:38 - 15:46 O-T03A-0145 **Barriers to Barriers to accessing preventive care for chronic diseases among Bangladeshi and Nepalese migrants in Sydneyaccessing preventive care for chronic diseases among Bangladeshi and Nepalese migrants in Sydney**
Sabuj Kanti Mistry
School of Population Health, University of New South Wales, Australia

15:46 - 15:54 O-T03A-0084 **No Limb, No Limits: A Mixed-Methods Study of mHealth-Based Exercise to Prevent Low Back Pain in Amputees**
Muh Syaiful Akbar
Doctoral program of Public Health, Faculty of Public Health, Hasanuddin University, Indonesia

15:54 - 16:02 O-T03A-0093 **HIV/AIDS Prevention Interventions For Msm: A Decade Of Literature Review And Its Implications In Indonesia**
Sri Hertati Endang
Faculty of Public Health, Hasanuddin University, Indonesia

16:02 - 16:10 O-T03A-0167 **Socioeconomic and Geographic Disparities in Healthcare Facilities Utilization in Indonesia: Assessing Horizontal Inequities**
Yudi Adnan
Faculty of Public Health, Hasanuddin University, Indonesia

16:10 - 16:18 O-T03A-0223 **The quality of home-based non-pharmacological dementia care and its associated factors in Sri Lanka**
Niketh Karunaratne
Faculty of Medicine University of Colombo, Siri Lanka

16:18 - 16:26 O-T03A-0273 **Unspoken Struggles and Relationship Dynamics in Cross-Cultural Caregiving: Experiences of Live-in Indonesian Migrant Caregivers and Older Stroke Survivors in Taiwan**

Yosika S. Mauludina
Graduate Institute of Injury Prevention and Control, College of Public Health, Taipei Medical University, Taiwan

16:26 - 16:34 O-T03A-0276 **Income Inequality and Health Disparities in Korean Society: The Role of Social Capital and Global Citizenship Education**

Hyunseo Chu
Graduate student in the Master of Public Health program at the Institute of Science Tokyo, Japan

16:34 - 16:42 O-T03A-0283 **Association Between Household WASH Facilities and Menstrual Hygiene Management Among Filipino Women of Reproductive Age**

Juan Gabriel Subido
College of Public Health, University of the Philippines Manila, Philippines

16:42 - 16:50 O-T03A-0298 **Health communication needs of Southeast Asian migrant children in Aotearoa New Zealand: Parents' perspectives**

Jutarat Kongpet
School of Nursing, Faculty of Medical and Health Science, University of Auckland, New Zealand

16:50 - 16:58 O-T03A-0315 **A study on disparities of access to dental care for the elderly in regional cities, Japan**

Kurumi TAKEZAWA
Utsunomiya University, Japan

16:58 - 17:06 O-T03A-0257 **'I Was Given the Card, but No One Told Me How to Use It': Barriers and Enablers for People with Disabilities Accessing Indonesia's National Health Insurance (JKN)**

Luthfi Azizatunnisa'
London School of Hygiene and Tropical Medicine, United Kingdom

17:06 - 17:14 O-T03A-0326 **From Disease Burden to Age-Friendly Cities: Developing Indicators for Healthy Ageing in Makassar, Indonesia**

Sukri Palutturi
Faculty of Public Health, Hasanuddin University, Indonesia

17:14 - 17:22 O-T03A-0575 **Association of insomnia symptoms with mental well-being among general population in Yaese, Japan: a cross-sectional study**

Daisuke Nonaka
School of Health Sciences, University of the Ryukyus, Japan

17:22 - 17:30 O-T03A-0381 **Inequalities in Translation of IYCF Knowledge into Practice among Mothers of Under Two Years Old Children in Karen State, Myanmar**

Aye Nyein Ei
Community Partners International, Thailand

17:30 - 17:38 O-T03B-0200 **Understanding Barriers to Breast Cancer Screening Participation Among Low Socioeconomic Status Women in Hong Kong: A Critical Medical Anthropology Analysis**

Bonnie Po Ting Tseng
Faculty of Health and Social Sciences, The Hong Kong Polytechnic University, Hong Kong SAR, China

4.Environmental & Occupational Health

Nov-5, 15:30-17:38

4.1-Climate Change and Environmental Health

Chair: Tomonori Ishigaki, (Dr., Prime Senior Researcher, National Institute for Environmental Studies (NIES), Japan)
Noppharit Sutthasil , (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-514

15:30 - 15:38 O-T04A-0125 **Human Vulnerability To Heatwave In Australia: A Countrywide Suburb-Level Longitudinal Study**

Patrick Amoatey
School of Public Health, The University of Queensland, Australia

15:38 - 15:46 O-T04A-0081 **A Systematic Literature Review On Monte Carlo Simulation And Risk Assessment Of Bioaerosol Pollution In Indoor Hospital Environments**

catarina anita kristanti
Faculty of Public Health, Hasanuddin University, Indonesia

15:46 - 15:54 O-T04A-0136 **Multidimensional evaluation of nature-based solutions on greenness in climate change mitigation: the analyses of NCKU campus green greenery**

Prof. Pei-Chen Lee
National Cheng Kung University, Taiwan

15:54 - 16:02 O-T04A-0133 **Short-term exposure to wildfire PM_{2.5} and risk of influenza in Brazil: A space-time-stratified case-crossover study**

Rahini Mahendran
Monash University, Australia

16:02 - 16:10 O-T04A-0199 **Environmental Epidemiological Evidence of Climate Change and Air Pollution Impacts on Health in Thailand: An Integrated National-Level Assessment of Disease Burden and Vulnerability**

Arthit Phosri
Department of Environmental Health Sciences, Faculty of Public Health, Mahidol University, Thailand

16:10 - 16:18 O-T04A-0264 **Mortality Trends of Air Pollution-Sensitive Diseases in Jakarta, Indonesia: A Population-Based Analysis, 2019-2023**

Sifa Fauzia
Department of Environmental Health, Faculty of Public Health, Universitas Indonesia, Indonesia

16:18 - 16:26 O-T04A-0416 **An Integrated Scenario Simulation Model for Bioaerosol Pollution of Neonatal Intensive Care Unit**

Owildan Wisudawan B
Faculty of Public Health, Hasanuddin University, Indonesia

16:26 - 16:34 O-T04A-0370 **Characterization of Heavy Metal in River Sediment from Artisanal Gold Mining Area Using XRF and SEM-EDS Analyses in Gorontalo, Indonesia**

Basir, S.KM., M.Sc
Faculty of Public Health, Hasanuddin University, Indonesia

16:34 - 16:42 O-T04A-0335 **Spatial distribution and the ecological drivers of lung cancer incidence in Sri Lanka**

Shashanka Rajapakse
Department of Physiology, Faculty of Medicine and Allied Sciences, Rajarata University of Sri Lanka, Sri Lanka

16:42 - 16:50 O-T04A-0308 **Climate Factors Contribute to Irritant Contact Dermatitis Among Farmers: A Study in East Java Indonesia**

Kurnia Ardiansyah Akbar
Faculty of Public Health, Jember University, Indonesia

16:50 - 16:58 O-T04A-0369 **Household Electronic Waste Management Models; Literature Review**
Dini Daningrum
Universitas Hasanuddin Makassar Indonesia, Indonesia

16:58 - 17:06 O-T04A-0417 **The investigation on the association of daily phthalate exposure with semen quality in infertile male in southern Taiwan**
CHIEN-FANG WANG
Department of Environmental and Occupational Health, National Cheng Kung University, Taiwan

17:06 - 17:14 O-T04A-0426 **Microplastic Bioaccumulation in Bivalves: A Systematic Review of Environmental and Human Health Implications**
Shabrina Vashtinia Putri Tryanda
Faculty of Public Health, Hasanuddin University, Indonesia

17:14 - 17:22 O-T04A-0553 **Association of heat exposure and heat related symptom among Brick manufacturing workers in Northeastern of Thailand**
Jeeraporn Tippila
College of Public Health Sciences, Chulalongkorn University, Thailand

17:22 - 17:30 O-T04A-0361 **Mapping Health Impact Assessment in Informal Settlements: A Bibliometric Analysis of Socioeconomic Dimensions and Urban Challenges**
Sri Wahyuni
Faculty of Public Health, Hasanuddin University, Indonesia

17:30 - 17:38 O-T04A-0569 **Microplastics in Drinking Water Source and Marine Fish in West Sumatera, Indonesia: from Polluted River to Public Health Implications.**
Randy Novirsa
Department of Environmental Health, Faculty of Public Health, Universitas Andalas

5.Health Policy & Systems

Nov-5, 15:30-17:38

5.1-Health System Strengthening and Determinants of Health / 5.2-Health Promotion and Literacy / 5.4-Health Insurance and Public Health Financing

Chair: Low Wah Yun, (Professor, Professor,University of Malaya, Malaysia)
Onn Laingoen, (Dr., School of Health Science, Mae Fah Luang University)

Room: E4A-507

15:30 - 15:38 O-T05A-0085 **Validity and Reliability of Tsunami Evacuation Planning Using Physical Function Assessment**

Sohkun Hoshino
Department of Global Health, Graduate School of Health Sciences, University of the Ryukyus, Japan

15:38 - 15:46 O-T05A-0147 **Feasibility Study for the Infrastructure Expansion of Ho Teaching Hospital in the Volta Region of Ghana**

Simon Dzokoto
Ho Teaching Hospital, Ghana

15:46 - 15:54 O-T05A-0203 **Understanding How Faculty Development Shapes Clinical Teachers' ACGME Competency Outcomes: A Realist Evaluation for Health System Strengthening**

Rahma Novita Asdary
School of Medicine, Chang Gung University, Taiwan

15:54 - 16:02 O-T05A-0244 **Association between quality of life and self stigma in patients with epilepsy in Colombo, Sri Lanka**

Abirthan Rajendiran
Faculty of Medicine, University of Colombo, Sri Lanka

16:02 - 16:10 O-T05A-0108 **Aid Disbursement for Maternal and Reproductive Health Programs and its effects on Maternal Mortality: A Secondary Data Analysis**

Howard Hao Lee
Taipei Medical University, Taiwan

16:10 - 16:18 O-T05A-0211 **Pediatric emergency medical services mortality patterns and system performance in Thailand: a nationwide analysis**

Hathaichon Inchai
Department of Epidemiology, Faculty of Public Health, Mahidol University, Thailand

16:18 - 16:26 O-T05A-0246 **Sociodemographic Factors Influencing Informal Workers' Participation in Indonesia's Employment Social Security Program: A Case Study in Makassar, Indonesia**

Suci Rahmadani
Faculty of Public Health, Hasanuddin University, Indonesia

16:26 - 16:34 O-T05A-0320 **Effective Coverage of Maternal and Newborn Health Services in Sub-Saharan Africa: What Distinguishes High from Medium and Low Performers?**

Ayelign Mengesha Kassie
School of Public Health, Faculty of Health, Medicine and Behavioral Science, The University of Queensland, Australia, and School of Nursing, College of Health Sciences, Woldia University, Australia

16:34 - 16:42 O-T05A-0337 **Policy Implementation Gaps in Fraud Prevention under the National Health Insurance Scheme: A Case Study at RSKD Dadi, Makassar, Indonesia**

Amaliah Amriani Amran Saru
Department of Biology, Faculty of Mathemathics and Natural Science, State University of Makassar, Indonesia

16:42 - 16:50 O-T05B-0087 **Working together to deliver person-centred care within the stepped care model: an Australian multidisciplinary perspective**

Shingai Mareya
Federation University Australia, Australia

16:50 - 16:58 O-T05B-0282 **Bridging the Hearing Health Gap: A Policy Approach to Strengthen Collaborative Networks for Newborn Hearing Screening and Rehabilitation in Thailand**

Praew Eiamnoi
Health Systems Research Institute, Nonthaburi, Thailand

16:58 - 17:06 O-T05D-0165 **Universal Coverage, Unequal Protection: Disparities in Diabetes Care Among Indonesia's Aging Population Under National Health Insurance in 2015-2023**

Shafira Meidyana
Faculty of Medicine, Airlangga University, Indonesia

17:06 - 17:14 O-T05D-0168 **From Laboratory to Community: Taiwan's Regional Hospital Sustainable Laboratory Development for Health Systems and Green Healthcare**

WAN LING CHIU
Medical Laboratory, Taipei City Hospital YangMing Branch, Taiwan

17:14 - 17:22 O-T05D-0231 **Hospital Cost Reduction Strategies: A Systematic Review of Models, Methods, and Contextual Effectiveness**

Novita Damayanti
Faculty of Public Health, Hasanuddin University, Indonesia

17:22 - 17:30 O-T05D-0419 **ENHANCING HIV-AIDS PREVENTION PROGRAMS THROUGH CROSS-SECTOR COLLABORATION: LESSONS FROM INDONESIA**

Balqis Nazaruddin
Faculty of Public Health, Hasanuddin University, Indonesia

17:30 - 17:38 O-T05D-0521 **Factors affected on Short-term and Mid-term Mortality of Hemorrhagic stroke: Using Multi-level analysis**

HEEJEONG KWON
Department of Public Health Statistics, Korea University Graduate School of Public Health, Republic of Korea

7.Core of Public Health and Other Issues

Nov-5, 15:30-17:38

7.3-Behavioral Science and Leadership / 7.4-Mental Health and Environmental Stress / 7.6-Resilient Health Communities / 7.7-Public Health Education and Training

Chair: Zulkarnain, (Professor, Professor, University of Malaya, Malaysia)
Niwed Kulwong, (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-508

15:30 - 15:38 O-T07C-0228 **Impact of Social Media on E-Cigarette Use Among Middle and High School Students: A Quantitative Study**

Prof. Yuanan Lu
University of Hawaii, United States of America

15:38 - 15:46 O-T07D-0117 **Positioning Spiritual Hypnotherapy As A Promising Intervention For Anxiety In Breastfeeding Mothers: A Bibliometric Analysis**

A. Ulfa Fatmasanti
Faculty of Public Health, Hasanuddin University, Indonesia

15:46 - 15:54 O-T07D-0120 **Postpartum Blues Prevention Through Physical Therapy To Support Infant Growth: A Vosviewer-Assisted Literature Review**

A. Rizky Amaliah
Faculty of Public Health, Hasanuddin University, Indonesia

15:54 - 16:02 O-T07D-0146 **Crossing The Line: Incestuous Fantasies As A Sign Of Moral Crisis And Psychological Disturbance**

catarina anita kristanti
Faculty of Public Health, Hasanuddin University, Indonesia

16:02 - 16:10 O-T07D-0178 **The effect of adverse childhood experiences onmental health among Chinese adolescents:A moderated chain mediation model**

Yongjin Chen
College of Public Health, Zhengzhou University, China

16:10 - 16:18 O-T07D-0220 **The lived experience and resilience of older adults with depression/anxiety during the COVID-19 pandemic in China: A descriptive phenomenology analysis**

Xiaona He
School of Public Health, Jiangxi Medical College, Nanchang University, China

16:18 - 16:26 O-T07D-0359 **Mental Health Interventions for Resilient Fishermen: A Systematic Review**

Ervan Ervan
Faculty of Public Health, Hasanuddin University, Indonesia

16:26 - 16:34 O-T07D-0201 **Associations between depression and anxiety among Chinese adolescents: A network analysis**

Yongji Gao
College of Public Health, Zhengzhou University, China

16:34 - 16:42 O-T07D-0375 **Prenatal depression comorbid with diabetes or hypertension and the risk of adverse neonatal outcomes**

Biruk Beletew Abate
School of Population Health, Curtin University, Perth, WA, Australia & College of Medicine and Health Sciences, Woldia University, Australia

16:42 - 16:50 O-T07D-0542 **Safeguarding Adolescents in Peer-Led Health Promotion: Lessons from a Smoking Prevention in Indonesia**

Prof. Yayi Suryo Prabandari
Center of Health Behavior and Promotion, Faculty of Medicine, Public Health, and Nursing, Universitas Gadjah Mada, Indonesia

16:50 - 16:58 O-T07D-0605 **Cognitive, Emotional, Psychological and Spiritual Predictors of Quality of Life: Evidence from Malaysian University Students**

Ismarulyusda Ishak
Center for Toxicology and Health Risk Studies (CORE), Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Malaysia

16:58 - 17:06 O-T07D-0636 **From Prison to Home, Staying Healthy**

Barry Zack
The Bridging Group, Corrections & Health, Oakland, CA, USA and Chiang Rai, Thailand

17:06 - 17:14 O-T07F-0252 **Operational Study of Stunting Reduction through Convergence Efforts in Indonesia: A Systematic Review**

Mutia Rini
Faculty of Public Health, Hasanuddin University, Indonesia

17:14 - 17:22 O-T07F-0376 **A Review on Urban-Rural Disparities in Food Insecurity and Nutritional Health**

Azizan Omar
Faculty of Medicine and Health Sciences, Universiti Malaysia Sabah, Malaysia

17:22 - 17:30 O-T07F-0149 **Perceptions of Pregnant Women and Mothers of Stunted Children Regarding Food Allocation and Stunting Risk in Batak Families, Deli Serdang**

Sudana Fatahillah Pasaribu
Faculty of Public Health, Universitas Sumatera Utara, Indonesia

17:30 - 17:38 O-T07G-0353 **How Knowledge Management Can Improve Employee Engagement: A Case Study at Hasanuddin University Hospital, Indonesia**

Andi Indahwaty AS
Faculty of Public Health, Hasanuddin University, Indonesia

7.Core of Public Health and Other Issues

Nov-5, 15:30-17:38

7.1-Epidemiology

Chair: Philip Baker, (Professor, Professor, Queensland University of Technology, Australia)
Panupong Upala, (Dr., School of Health Science, Mae Fah Luang University)

Room: E4A-515

15:30 - 15:38 O-T07A-0110 **Assessing the performance of Indonesia in managing paediatric cardiovascular burdens from 1990 to 2021**
Muhammad Iqhrammullah
Universitas Muhammadiyah, Indonesia

15:38 - 15:46 O-T07A-0339 **Trends in Alcohol-related Violence Injury, in Mongolia: An Interrupted Time Series Analysis**
Gerelmaa Gunsmaa
Institute of Medicine, University of Tsukuba, Japan

15:46 - 15:54 O-T07A-0172 **Risk of road traffic collisions among people living with HIV: a population-based cohort study in Taiwan**
Ya-Hui Chang
College of Public Health, Taipei Medical University, Taiwan

15:54 - 16:02 O-T07A-0177 **The mediating effects of school connectedness and parent-child cohesion in the associations between negative life events and smartphone addiction among Chinese adolescents**
Yinmei Yang
College of Public Health, Zhengzhou University, China

16:02 - 16:10 O-T07A-0191 **Adolescent mental health risk prediction using machine learning**
Haiyang Feng
College of Public Health, Zhengzhou University, China

16:10 - 16:18 O-T07A-0205 **The effect of negative life events on anxiety among Chinese adolescents: a moderated mediation model**
Jieqiong Qin
College of Public Health, Zhengzhou University, China

16:18 - 16:26 O-T07A-0216 **Influencing factors of depression among junior high school students in Henan Province: Relative dominance analysis**

XinYi Zuo
College of Public Health, Zhengzhou University, China

16:26 - 16:34 O-T07A-0225 **The Role of Pushing Techniques in Minimizing Perineal Tears : A Systematic Review**

Nani Aisyiyah
Faculty of Public Health, Hasanuddin University, Indonesia

16:34 - 16:42 O-T07A-0255 **Low Back Pain Among Excavator OperatorsIn Banten - Indonesia**

Ela Nurdiawati
Faculty of Public Health, Hasanuddin University, Indonesia

16:42 - 16:50 O-T07B-0229 **Peer Victimization and Aggressive Behavior in Chinese Adolescents: A Chained Mediation Model of Empathy and Prosocial Behavior**

Yingqiu Song
College of Public Health, Zhengzhou University, China

16:50 - 16:58 O-T07A-0329 **Spatial clustering of tuberculosis and urban-rural differences in the impact of HIV co-infection on tuberculosis treatment failure in Lindi Region, Tanzania (2020-2024)**

Heri Suleiman Nyamvi
Department of Biomedical Sciences, Korea University Graduate School, Republic of Korea

16:58 - 17:06 O-T07A-0346 **Risk assessment of N-nitrosamine formation from nitrate and nitrite in leftover dishes of vegetables and processed meat**

Yun-Wei Chen
National Cheng Kung University, China

17:06 - 17:14 O-T07A-0226 **Psychological Distress and Associated Factors in Patients with Chronic Leg Ulcers: A Cross-Sectional Study from a Tertiary Care Setting in Sri Lanka**

F Nuha Cassim
Faculty of Medicine, University of Colombo, Sri Lanka

17:14 - 17:22 O-T07A-0365 **Dietary Habits and Risk of Urolithiasis: A Community-Based Case-Control Study from Northeast India with Public Health Relevance**

Sanjenbam Yaiphaba Meitei
Department of Anthropology, Manipur University, India

17:22 - 17:30 O-T07A-0436 **Multimorbidity and Associated Factors among Older Adults with Hypertension: Network Analysis Based on a Cross-Sectional Study in Rural China**

Yifei Feng
Department of Health management, College of Public Health, Zhengzhou University, China

17:30 - 17:38 O-T07A-0625 **Spatiotemporal Analysis of Substance Use Disorders in South Korea using Bayesian Hierarchical Modeling**

Seyoung Kim
Department of Public Health Science, Graduate School of Public Health, Seoul National University, Republic of Korea

Oral Presentation Day: November 6 (Thu), 2025

Time: 15:00-17:32

1.Disease Control & Health Education — Nov-6, 15:00-17:32

1.2-Emerging and Re-emerging Diseases

1.4-Behavioral Health and Health Literacy

Chair: Zulkhairul Naim Bin Sidek Ahmad, (Dr., Department of Public Health MedicineUniversiti Malaysia Sabah, Malaysia)
Siwarak Kitchanapaiboon, (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-508

15:00 - 15:08 O-T01B-0285 **Systematic Review Evidence for Neglected Tropical Diseases in the Asia-Pacific Region**

Philip Baker

Australian Centre for Health Law Research, Queensland University of Technology, Brisbane, Australia.

15:08 - 15:16 O-T01D-0311 **Empowering Female Youth among Indigenous Orang Asli for One Health: A Community-Based Participatory Approach to Zoonotic Disease Prevention in Rural Malaysia**

Mohd Dzulkhairi Bin Mohd Rani

Faculty of Medicine and Health Sciences, Universiti Sains Islam Malaysia, Malaysia

15:16 - 15:24 O-T01D-0342 **Knowledge, Attitude, And Training Needs Among High School Students In Ho Chi Minh City, Vietnam: A Cross-Sectional Study**

Nhat Phu Nguyen

University of Medicine and Pharmacy, Vietman

15:24 - 15:32 O-T01D-0208 **The Impact of Social Media on Adolescents' Attitudes Toward Reproductive Health: A Systematic Review**

Aning Subiyatin

Faculty of Public Health, Hasanuddin University, Indonesia

15:32 - 15:40 O-T01D-0103 **Nutrition Education For Pregnant Women By Health Workers In Preventing Stunting Risks: A Literature Review**

Nuraliah Nuraliah

Departement of Public Health, Indonesia

15:40 - 15:48 O-T01D-0157 **Waterpipe Smoking Among Japanese Teens and Young Adults: An Emerging Public Health Concern**
Sora Yamasaki
Tohoku University, Japan

15:48 - 15:56 O-T01D-0232 **Development of an Integrated Self-Care Model with Social Support in Postpartum Care for Primiparous Mothers**
Wewet Savitri
Faculty of Public Health, Hasanuddin University, Indonesia

15:56 - 16:04 O-T01D-0247 **Social Interaction and Its Influence on Adolescents' Perceptions and Behaviors Related to Sexual and Reproductive Health: Risks and Mitigation Strategies**
Masluroh Masluroh
Faculty of Public Health, Hasanuddin University, Indonesia

16:04 - 16:12 O-T01D-0261 **Nurse-Midwifery Led Care Prevention Model of Pregnancy Complications: A Systematic Review**
Herlina Mansur
Faculty of Public Health, Hasanuddin University, Indonesia

16:12 - 16:20 O-T01D-0306 **Mindfulness-Based Interventions for Pregnant Couples: A Scoping Review of Global Evidence with Implication for Indonesia**
Rina Eko Widarsih
School of Public Health, Georgia State University, Atlanta, United States of America

16:20 - 16:28 O-T01D-0176 **Predictors of body image perceptions among healthcare providers in Terengganu, Malaysia**
Mohd Nazri Shafei
Setiu District Health Office, Malaysia

16:28 - 16:36 O-T01D-0239 **Associations of women's and mother's anxiety and depression with health behaviour, child physical illness and child care seeking**
Karl Peltzer
Faculty of Public Health, Mahidol University, Thailand

16:36 - 16:44 O-T01D-0250 **Game-Based Learning to Improve Humanism and Altruism of Health Science Profession: Systematic Review**
Sari Suriani
Faculty of Public Health, Hasanuddin University, Indonesia

16:44 - 16:52 O-T01D-0259 **The Role of Community Engagement in HIV Prevention: A systematic review**
Ratu Robiatul. A
Faculty of Public Health, Hasanuddin University, Indonesia

16:52 - 17:00 O-T01D-0262 **Determinants of Growth and Development in Stunted Toddlers: A Systematic Review of Retrospectives studies**
Ruwiah Ruwiah
Faculty of Public Health, Hasanuddin University, Indonesia

17:00 - 17:08 O-T01D-0279 **Model For Controlling Post-Partum Blues Based On Spiritual Therapy**
Rahmawati Rahmawati
Faculty of Public Health, Hasanuddin University, Indonesia

17:08 - 17:16 O-T01D-0379 **Combined lifestyle factors and its association with stroke among rural older adults with hypertension: an empirical study from China**
Dongfang Zhu
College of Public Health, Zhengzhou University, China

17:16 - 17:24 O-T01D-0399 **Psychosocial interventions and maternal health post-pregnancy loss: A review**
Tanti Asrianti
Department of Epidemiology, Faculty of Public Health, Mulawarman University, Indonesia

17:24 - 17:32 O-T01D-0400 **The Impact of Emotional Eating on the Mental Health of Children with Obesity through Microbiota- brain -gut – Axis : A Literature Review**
Milda Milda
Faculty of Public Health, Hasanuddin University, Indonesia

2.Life Cycle & Health

Nov-6, 15:00-17:32

2.1-Physical Activity, Exercise, and Nutrition / 2.2-Childhood Health and Early Intervention / 2.3-Aging Populations and Chronic Disease / 2.4-Maternal Health and Family Planning

Chair: Indika Karunathilake, (Professor, University of Colombo, Sri Lanka)
Korakot Chansareewittaya , (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-517

15:00 - 15:08 O-T02A-0330 **Maternal Nutrition Knowledge and Status as Determinants of Stunting in Preschool-Aged Children: A Study in the Makassar Ethnic Group**
Rini Jusriani
Faculty of Public Health, Hasanuddin University, Indonesia

15:08 - 15:16 O-T02A-0137 **Mapping Global Research on Health Interventions for High-Risk Pregnant Women: A Bibliometric Review**
Iin Octaviana Hutagaol
Faculty of Public Health, Hasanuddin University, Indonesia

15:16 - 15:24 O-T02A-0144 **Hypertension As A Mediator Between Patient Attributes And Health Related Quality Of Life Among Women Of Childbearing Age Across Urban Communities In A Lmic**
Noleen Marie C. Fabian
College of Nursing, University of the East Ramon Magsaysay Medical Center Inc., Philippines

15:16 - 15:24 O-T02A-0377 **Grandmother's Role in Child Nutrition Management on Extended Family**
Marisna Eka Yulianita
Faculty of Public Health, Hasanuddin University, Indonesia

15:24 - 15:32 O-T02A-0212 **Pattern of exercise and its relationship with knowledge and use of supplementation among gym goers from selected gyms in Colombo district**
Siyum Thuyacontha
Faculty of Medicine, University of Colombo, Sri Lanka

15:32 - 15:40 O-T02A-0372 **Determinants of Food Choices and Dietary Habits among Adolescents in Urban Sri Lanka**
Charani Gamachchige
Faculty of Medicine, University of Colombo, Sri Lanka

15:40 - 15:48 O-T02A-0351 **Association between continued public transportation users and cumulative long-term care costs: A longitudinal study from the JAGES cohort**

Yo Matsumoto
Graduate School of Medical and Pharmaceutical Sciences, Chiba University, Japan

15:48 - 15:56 O-T02A-0382 **Prevalence and influencing factors of myopia among children and adolescents in Jiangxi Province**

xueyi wu
School of Public Health, Jiangxi Medical College, Nanchang University, China

15:56 - 16:04 O-T02A-0647 **Agronomic Practice And Rice Bran Protein Composition**

Ulfah Najamuddin
Faculty of Public Health, Hasanuddin University, Indonesia

16:04 - 16:12 O-T02B-0549 **Enhancing Dental Hygienists' Skills in Motivational Interviewing: A Training Program for Oral Health Promotion in Preschool Settings**

Piriya Patiwikraiwong
the College of Public Health Sciences, Chulalongkorn University, Thailand

16:12 - 16:20 O-T02C-0340 **Social isolation and loneliness as predictors of physical and mental health among older adults: an individual participant data meta-analysis across 18 countries**

Zhanlei Shen
College of Public Health, Zhengzhou University, China

16:20 - 16:28 O-T02C-0556 **A Cross-Sectional Study On Prevelance Of Multimorbidity And Their Drug Adherence Among Geriatric Population In Field Practice Area Of Osmania Medical College, Hyderabad,India.**

Narayanasinghkaladi Mathavan
Department of Community Medicine, Osmania Medical College, India

16:28 - 16:36 O-T02C-0162 **Exploration of perceived barriers that influence self-care practices among older adults residing in a rural community in Embilipitiya MOH area, Sri Lanka.**

Pubudika Rasangi
Faculty of Nursing, Lincoln University College, Sri Lanka

16:36 - 16:44 O-T02C-0528 **Age difference in health-related lifestyle and sleep discrepancy using a nationally representative Korean survey**

Sujin Ma

Department of Health Administration, Yonsei University Graduate School, Republic of Korea

16:44 - 16:52 O-T02C-0559 **Interindividual variation in hs-CRP among rural residents in Northern Laos**
Zhuren ZHANG
Department of Human Ecology, School of International Health, Graduate School of Medicine, The University of Tokyo, Japan

16:52 - 17:00 O-T02C-0525 **Dynamic changes in frailty and incident dementia among the older: two large-scale national representative longitudinal cohort studies**
Xiaoyu Jiao
Department of Health management, College of Public Health, Zhengzhou University, China

17:00 - 17:08 O-T02D-0587 **Woman's Knowledge and Motivation about Abortion in Central Java, Indonesia**
Indriana Simbolon
Faculty of Public Health, Universitas Indonesia, Indonesia

17:08 - 17:16 O-T02D-0490 **Beyond Cultural Boundaries: Uncovering Critical Gaps in Pregnancy Anxiety Screening Across Global Populations**
Sartika Sartika
Faculty of Public Health, Hasanuddin University, Indonesia

17:16 - 17:24 O-T02D-0107 **Determinants of Peripartum Depression Score Among Women in Indonesian Coastal Rural community: A cross – sectional study**
Jhonatan Rameldo
Faculty of Health, Medicine, and Life Sciences, Universitas Airlangga, Indonesia

17:24 - 17:32 O-T02D-0478 **Adverse Pregnancy Outcomes (Apos): A Cross-Sectional Study Among The Meitei Women Of Manipur**
Huidrom Suraj Singh
Department of Anthropology, Manipur University, India

3.Community, Health Equity and Migrant Health

Nov-6, 15:00-17:32

3.1-Health Equity for Minority, Elderly, and Vulnerable Populations

3.2-Gender Equity in Health Systems

3.3-Violence Prevention and Community Safety

Chair: Masahiro Hashizume, (Professor, Regional Director Japan)
Chakree Chumvisoot Wattanasiri, (Assistant Professor, Schoo of Integrative Medicine, Mae Fah Luang University)

Room: E4A-516

15:00 - 15:08 O-T03A-0548 **Mental Health Challenges among Older Persons Peer Support Agent (OPPA)**
Tengku Amatullah Madeehah T Mohd
Public Health Unit, Department of Primary Care, Universiti Sains Islam Malaysia, Malaysia

15:08 - 15:16 O-T03A-0431 **The Relationship between Spiritual Well-Being and Quality of Life among Older Adults at Batara Hati Mulia Foundation, Gowa Regency**
Eny Sutria
Faculty of Public Health, Hasanuddin University, Indonesia

15:16 - 15:24 O-T03A-0432 **Association of community nurses' activities and Activity of Daily Living of the elderly in Nan Province, Thailand**
Kyoko Sudo
National College of Nursing, Japan

15:24 - 15:32 O-T03A-0667 **Exploring the Relationship of Agriculture Centered on Yam Cultivation with Dietary Intake, Physical Activity, and Health in Rural New Caledonia: Research Plan for a Field Study**
Momoka Masuda
Department of Human Ecology, School of International Health, Graduate School of Medicine, The University of Tokyo, Japan

15:32 - 15:40 O-T03B-0328 **Bridging the Gap: A Systematic Review of Gender Equity in Global Health Systems**
Dian Salamena
Faculty of Public Health, Hasanuddin University, Indonesia

15:40 - 15:48 O-T03B-0151 **The Culture of Tinuktuk Consumption as an Effort of Postpartum Recovery Among the Simalungun Ethnic Group**
Mastiur Julianti B
Faculty of Public Health, Universitas Sumatera Utara, Indonesia

15:48 - 15:56 O-T03B-0155 **A Conceptual Framework of Positive Deviance in a Matrilineal Society: Community-Led Strategies for Preventing Childhood Stunting in Rural Indonesia**

Nova Yulita
Universitas Sumatera Utara, Indonesia

15:56 - 16:04 O-T03B-0409 **Beyond Mothers Alone: Husband Support and Determinants of Continued Breastfeeding Among Internally Displaced Minorities in Myanmar: A Mixed-Method Study**

Htet Zaw Shein
College of Public Health Sciences, Chulalongkorn University, Thailand

16:04 - 16:12 O-T03B-0411 **Examining Disparities in Total Fertility Rate Among Indonesian Women from 2007 to 2017**

Dion Zein Nuridzin
Department of Biostatistics and Population Studies, Faculty of Public Health, Universitas Diponegoro, Indonesia

16:12 - 16:20 O-T03B-0430 **Implementation of Community-Based Midwifery Led Care for Early Detection of Pregnancy Complications: Literature Review**

Saleha Saleha
Faculty of Public Health, Hasanuddin University, Indonesia

16:20 - 16:28 O-T03B-0444 **Deconstructing Gender Norms in Reproductive and Sexual Health: Midwifery Students' Perspectives from Minangkabau Culture in Indonesia**

Siska Bradinda Putri Sudirman
Midwifery Department, Andalas University, Indonesia

16:28 - 16:36 O-T03B-0467 **Akha woman's leadership for gender-balanced harm reduction services in Chiang Rai, Northern Thailand**

Kasama Aeryi
The executive secretary of People for Change Foundation, Thailand

16:36 - 16:44 O-T03B-0580 **Assessing the implementation outcomes of a telehealth-based delivery model in improving Pre-Exposure Prophylaxis (PrEP) access among Key Populations at risk for HIV across four community-led clinics in the Philippines**

Rodenie Arnaiz Olete
Department of Public Health, College of Medicine, National Cheng Kung University (NCKU), Taiwan

16:44 - 16:52 O-T03B-0267 **Nutritional status of housewives; Are they a neglected group? A study from Sri Lanka**

Jeyasharan Jeiyaseelan
Faculty of Medicine, University of Colombo

16:52 - 17:00 O-T03B-0396 **Gender and Cultural Perspectives in Reproductive Health**

Yusnidar Yusnidar
Faculty of Public Health, Hasanuddin University, Indonesia

17:00 - 17:08 O-T03C-0159 **Health Equity among Indigenous Suku Anak Dalam in Indonesia**

Sadar Ginting
Faculty of Public Health, University of North Sumatra, Indonesia

17:08 - 17:16 O-T03C-0161 **Exploring Intimate Partner Violence Among Women registered in Government Support Centres at Urban Area of South Gujarat, India**

Amogha Savithri
Department of Community Medicine, Government Medical College, india

17:16 - 17:24 O-T03C-0607 **White Coats Against War Crimes: Global Health Worker Solidarity in the Face of Genocide**

Rizma Adlia Syakurah
Public Health Faculty, Universitas Sriwijaya, Indonesia

17:24 - 17:32 O-T03C-0660 **Community-Based Methadone Treatment through NGO Drop in Center in Chiang Rai, Thailand**

Sopida Suwannasopit
The executive secretary of People for Change Foundation, Thailand

4.Environmental & Occupational Health

Nov-6, 15:00-17:32

4.1-Climate Change and Environmental Health

4.2-Occupational Health in Evolving Work Environments

4.4-Urbanization and Pollution Control

Chair: JIN HA Yoon, (Professor, Department of Preventive Medicine, College of Medicine, Yonsei University, Republic of Korea)

Anuttara Hongtong, (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-515

15:00 - 15:08 O-T04A-0404 **Distribution and Occurrence of Antibiotic Residues in Water and Sediment from Two Rivers of Taiwan: Implications for Antibiotic Resistance Genes**

Nitin Sayal
College of Medicine, National Cheng Kung University, Taiwan

15:08 - 15:16 O-T04A-0561 **Investigation of Microplastic Accumulation in Freshwater and Aquaculture Fish from Taiwan**

Wei-Hsiang Chang
College of Medicine, National Cheng Kung University, Taiwan

15:16 - 15:24 O-T04A-0389 **Investigation of Occupational Hygiene and Occupational Environment of Workers in Agricultural Net-House and Greenhouse**

Jia-Bin Wu
College of Medicine, National Cheng Kung University, Taiwan

15:24 - 15:32 O-T04A-0082 **An examination of the presence of potentially toxic elements and its related health risks within food webs, highlighting food safety and sustainability concerns in Indonesia**

Ratna Dwi Puji Astuti
Department of Environmental Health, Universitas Airlangga, Indonesia

15:32 - 15:40 O-T04B-0129 **Chronic Exposure to Waste Pollutants and Health Risks of Scavengers in Asia: A Bibliometric Approach and Systematic Literature Review**

Sri Damayanty
Faculty of Public Health, Hasanuddin University, Indonesia

15:40 - 15:48 O-T04B-0238 **Menstrual Disorders and Workforce Participation: A Prospective Longitudinal Study**

Biresaw Wassihun Alemu
School of Public Health, Faculty of Health, Medicine and Behavioural Sciences, The University of Queensland, Australia

15:48 - 15:56 O-T04B-0280 **Sun, surf, sustenance, skin: Assessing self-reported skin manifestations, associated factors and health seeking behaviour among multi-day fishermen of the Negombo fishery harbour.**

Druvinka Waas
Faculty of Medicine, University of Colombo, Sri Lanka

15:56 - 16:04 O-T04B-0307 **Addressing Hand-Arm Vibration Risk in Welding Workers through Neurodynamic Exercises: A Preventive Physiotherapy Approach**

Siti Ainun Marufa
International PhD Program in Biomedical Engineering, College of Biomedical Engineering, Taipei Medical University, Taiwan

16:04 - 16:12 O-T04B-0427 **Investigation of Bisphenol A content in the total diet of Taiwan and health risk assessment**

I Hung Ho
Department of Food Safety/Hygiene and Risk Management, College of Medicine, National Cheng Kung University, Taiwan

16:12 - 16:20 O-T04B-0487 **Cultural adaptation of a Thai-adapted Growth and Empowerment Measure to assess collectivist-oriented wellbeing**

Suwanit Karin
School of Public Health and Social Work, Queensland University of Technology, Australia

16:20 - 16:28 O-T04B-0484 **Correlation of Transtheoretical Model and Physical Activity Amount among Universiti Malaysia Sabah Employees: A Cross-sectional Study.**

Aizuddin Hidrus
Department of Public Health Medicine, Faculty of Medicine and Health Sciences, Universiti Malaysia Sabah, Malaysia

16:28 - 16:36 O-T04B-0586 **Digging Into Risk: Global Determinants of Musculoskeletal Disorders In The Mining Workforce A Systematic Review**

Muhammad Rustam HN
Faculty of Public Health, Hasanuddin University, Indonesia

16:36 - 16:44 O-T04B-0584 **Counselors' Views on the Feasibility of the Moving to Emptiness Technique in Addressing Counselor Burnout and Compassion Fatigue in China: A Qualitative Study**

Yu Gao
Department of Primary Care Medicine, Faculty of Medicine, Universiti Malaya, Malaysia

16:44 - 16:52 O-T04B-0732 **Role Of Health Workers During Disasters In The Community: A Bibliometric Analysis**

Ryryn Suryaman Prana Putra
Faculty Of Public Health, Universitas Hasanuddin, Indonesia

16:52 - 17:00 O-T04D-0489 **The study on association between perchlorate, nitrate and thiocyanate exposure with early development in neonates**

Ching Chang Lee
Department of Environmental and Occupational Health, National Cheng Kung University, Taiwan

17:00 - 17:08 O-T04D-0449 **Emerging tropane alkaloids: Contamination of Food in Taiwan**

Yen Cheng Chu
Department of Environmental and Occupational Health, College of Medicine, National Cheng Kung University, Taiwan

17:08 - 17:16 O-T04D-0414 **The investigation on the association between PFASs exposure with Semen Quality in Taiwanese Men**

Hui-Ching Chuang
Department of Environmental and Occupational Health, National Cheng Kung University, Taiwan

17:16 - 17:24 O-T04D-0410 **Pupal Productivity Pinpoints Priority Containers for Dengue Vector Control in Urban Setting: Insights from Antang Village, Makassar, Indonesia**

Ruslan Ruslan
Faculty of Public Health, Hasanuddin University, Indonesia

17:24 - 17:32 O-T04D-0289 **Characterization of Microplastics in Hospital Wastewater Treatment Plants and Their Links to Source Materials from Medical Laboratories**

Chanon Naijitra
Thammasat University Hospital, Thammasat University

5.Health Policy & Systems

Nov-6, 15:00-17:32

5.1-Health System Strengthening and Determinants of Health
5.2-Health Promotion and Literacy
5.3-Global Health Security and Pandemic Preparedness

Chair: Agustin Kusumayati, (Professor, Faculty of Public Health, Universitas Indonesia, Indonesia)
Onn Laingoen, (Dr., School of Health Science, Mae Fah Luang University)

Room: E4A-509

15:00 - 15:08 O-T05A-0349 **Predictors of Nursing Students' Intention towards Medical Cannabis Use in Vietnam**
Cua Ngoc Le
School of Public Health, Walailak University, Thailand

15:08 - 15:16 O-T05A-0367 **Service Quality and Spirituality in Improving the Health-Related Quality of Life of Hemodialysis Patients: A Systematic Review**
Handi Rustandi
Faculty of Public Health, Hasanuddin University, Indonesia

15:16 - 15:24 O-T05A-0485 **Health systems factors related to early health-seeking behaviors among pulmonary tuberculosis patients in southern Afghanistan**
Abdul Tawab Khpalwak
Department of Community and Global Health, The University of Tokyo, Japan

15:24 - 15:32 O-T05A-0501 **Strengthening Community Health Systems through Community-Led Monitoring for Malaria Elimination in the Greater Mekong Subregion**
Siripim Piboonwach
CSO Platform, ALIGHT, Thailand

15:32 - 15:40 O-T05A-0547 **Evaluating Predictive Accuracy And Sensitivity Of Digital Health Surveillance: A Quantitative Assessment Of Sshp Implementation At Hasanuddin International Airport Makassar,2025**
Asniya Asniya
Faculty of Public Health, Hasanuddin University, Indonesia

15:40 - 15:48 O-T05A-0555 **Outbreaks Beyond Virality: Comparing Worm Infestation and Measles in Indonesia Through Behavior, Media, and Accountability**
Rizma Adlia Syakurah
Department of Public Health, Faculty of Public Health, Sriwijaya University, Indonesia

15:48 - 15:56 O-T05A-0573 **Maternal Health Coverage and Its Effect on Maternal Mortality in Low- and Middle-Income Countries: An Ecological Panel Study from 2015 to 2023**

Francis Sarial Ganancial
Department of Public Health, China Medical University, Taiwan

15:56 - 16:04 O-T05A-0610 **Effects of renewable power transition on PM2.5 and CVD mortality with UHC modification**

JiHee Yu
Department of Health Administration, Yonsei University Graduate School, Republic of Korea

16:04 - 16:12 O-T05A-0690 **Health Financing in Philippine Unserved and Underserved Areas: Coverage, Barriers, and Out-of-Pocket Burden in the Context of Universal Health Care Implementation**

Romulo Ducay III
College of Allied Medical Sciences, Wesleyan University-Philippines, Cabanatuan, Philippines

16:12 - 16:20 O-T05C-0589 **From Policy to Practice: Confronting Governance Challenges in AMR and Food Safety in the Philippines**

Ma. Esmeralda Silva-Javier
Department of Health Policy and Administration, College of Public Health

16:20 - 16:28 O-T05B-0202 **Acceptance of personal health record for community-based dementia care among community nurses**

Yoko Aihara
Faculty of Health Sciences, Okayama University, Japan

16:28 - 16:36 O-T05B-0305 **Public Attitudes Toward Organ Donation and related practices in Sri Lanka: A Community-Based Study**

Ashvni Chandrakumar
Faculty of Medicine, University of Colombo, Sri Lanka

16:36 - 16:44 O-T05B-0474 **The Influence of Continuity of Care Clinical Experience on The Results of The National Competency Test in Final Year Midwifery Students**

Henni Fitria
Department of Midwifery, Faculty of Medicine, Andalas University, Indonesia

16:44 - 16:52 O-T05B-0539 **Constructs of Employee Engagement in State University Hospital in Indonesia**
Nur Arifah
Faculty of Public Health, Hasanuddin University, Indonesia

16:52 - 17:00 O-T05B-0699 **Ophthalmology Coding Errors and Their Financial Impact: A Case Study of MyDRG Reimbursement in a Malaysian Teaching Hospital**
Jin Ziang Tok
Universiti Malaya Medical Centre, Universiti Malaya, Kuala Lumpur, Malaysia

17:00 - 17:08 O-T05C-0140 **A Symbiotic Model for Transforming Public Healthcare in New Zealand**
Craig Green
School of Management and Marketing, University of Waikato,New Zealand

17:08 - 17:16 O-T05C-0248 **Cost-Effectiveness Analysis of Universal Maternal Pertussis Immunization**
Abdul Rahman Ramdzan
Tuaran Area Health Office, Malaysia

17:16 - 17:24 O-T05C-0402 **Transforming Diabetes Care in the Pacific: The Impact of a National Outreach Program and a Locally Developed Risk Score for Poor Glycemic Control in the Marshall Islands**
Wei-Hung Wang
Taiwan Health Center, based in Majuro Hospital, Majuro, Republic of the Marshall Islands; operated by Shuang Ho Hospital Taipei Medical University, Taiwan

17:24 - 17:32 O-T05C-0530 **Pandemic Preparedness in Remote Borneo: Evaluating Social Media as a Risk Communication Channel - Lesson Learned From COVID-19 Pandemic**
Sahipudin Saupin
Faculty of Medicine & Health Sciences, Universiti Malaysia Sabah, Malaysia

1.Disease Control & Health Education
3.Community, Health Equity and Migrant Health

Nov-6, 15:00-17:32

1.3-Vaccination Strategies and Community Engagement / 1.4-Behavioral Health and Health Literacy / 3.1-Health Equity for Minority, Elderly, and Vulnerable Populations

Chair: Victor Hoe Chee Wai Bin Abdullah, (Professor, University of Malaya, Malaysia)
Niwed Kulwong, (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-514

15:00 - 15:08 O-T01C-0457 **Low Immunization Coverage Triggers An Measles Outbreakin Polewali Mandar Regency, 2025**
ANDI FATMAWATI
Faculty of Public Health, Hasanuddin University, Indonesia

15:08 - 15:16 O-T01C-0696 **Determinants Of Behavior And Social Factors Affecting Acceptance Of Multiple Injections in The Routine Child Immunization Program: A Behavioral And Social Drivers (BeSD) Approach**
Sitti Hidayah
Faculty Of Public Health, Universitas Hasanuddin, Indonesia

15:16 - 15:24 O-T01D-0401 **Lifestyle and Hypertension: An Analysis among Women of Reproductive Age in Makassar City**
Wahdaniah Wahdaniah
Faculty of Public Health, Hasanuddin University, Indonesia

15:24 - 15:32 O-T01D-0524 **Capacity Mapping for Health Promotion in 10 WHO-SEARO Countries**
Supa Pengpid
Department of Health Education and Behavioral Sciences, Faculty of Public Health, Mahidol University, Thailand

15:32 - 15:40 O-T01D-0462 **Self-Management Barriers and Facilitators Among Older Adults at High Risk of Stroke: A Multi-Level Analysis within Community-Based Primary Healthcare (CB-PHC) Framework**
Min Gao
Faculty of Pubilc health, Mahidol university, Thailand

15:40 - 15:48 O-T01D-0494 **Behavioral Economics to Boost HIV Testing: Policy Insights from a Scoping Review**

Chonnatee Rodsawang
College of Public Health Sciences, Chulalongkorn University, Thailand

15:48 - 15:56 O-T01D-0297 **Integrating Behavioral and Structural Theories in Blood Pressure Control: A Systematic Review of Theory-Guided Interventions**

FRANNING DEISI BADU
Faculty of Public Health, Hasanuddin University, Indonesia

15:56 - 16:04 O-T01D-0423 **The Role of Education in MCI-to-Normal Cognition Reversion Among APOE4 Carriers and Non-Carriers: A Longitudinal Neuroimaging Study**

Yvonne Leung
Australian Catholic University; University of New South Wales, Australia

16:04 - 16:12 O-T01D-0505 **Type of Substance abuse among patients in psychiatric rehabilitation centre of IMH Erragadda and Ibrahimpatnam: A Cross-sectional study**

mohd mahmood
Department of Community Medicine, Osmania Medical Colleg, India

16:12 - 16:20 O-T01D-0551 **A Cross-Sectional Study On The Association Between Sleep Duration And Sleep Quality With Body-Mass Index Among Young Adults In Hyderabad, India.**

Sandra Sebastian
Department of Community Medicine, Osmania Medical College, India

16:20 - 16:28 O-T01D-0243 **Risk Behavior Associated with Contracting the Ebola Virus at Funerals: A Study of Liberians Attending the Funerals of Individuals Deceased from Ebola**

Moses Stephens
Research Institute for Health Sciences, Chiang Mai University, Thailand

16:28 - 16:36 O-T01D-0421 **Lactation and Maternal Metabolic Health: Analyzing Breastfeeding Duration as a Preventive Strategy**

Dwi Ghita
Faculty of Public Health, Hasanuddin University, Indonesia

16:36 - 16:44 O-T03A-0499 **A GEDSI Review in Tak Province: Access Barriers to Malaria Services for Migrant and Indigenous Population**

Shreehari Acharya
CSO Platform, ALIGHT, Thailand

16:44 - 16:52 O-T03A-0507 **Associations between social support and self-rated health among Myanmar migrant workers at frozen seafood factories in Hat Yai, Thailand**

Asako Yoshino
School of Nursing, Nagoya City University, Japan

16:52 - 17:00 O-T03A-0514 **Community Engagement for G6PD Testing and Tafenoquine Uptake: Implementation Experience from Thailand's Border Areas**

Monthiporn Punya
CSO Platform, ALIGHT, Thailand

17:00 - 17:08 O-T03A-0534 **An Intersectional Approach to Health Equity in Preferences for Place of Death Among Older Adults in Japan**

Kenjiro Kawaguchi
Center for Preventive Medical Sciences, Chiba University, Japan

17:08 - 17:16 O-T03A-0387 **Cox survival analysis of dementia conversion risk in patients with MCI using a nationwide claim data in Korea**

Min-Hee Heo
Yonsei University, Republic of Korea

17:16 - 17:24 O-T03B-0254 **The association between intimate partner violence and antiretroviral therapy adherence among individuals receiving ART care in Johannesburg**

Lebogang Phiri-Sithole
University of Johannesburg, University of South Africa, South Africa

17:24 - 17:32 O-T05B-0350 **How Educational Inequality Among Rural Residents Relates to Healthy Lifestyle Behaviors in Later Life: Evidence from the Northern China Lifestyle Medicine Cohort Baseline**

Qingyong Lu
College of Public Health, Zhengzhou University, China

7.Core of Public Health and Other Issues

Nov-6, 15:00-17:32

7.2-Statistics / 7.3-Behavioral Science and Leadership

Chair: Pamornsri Inchon, (Assistant Professor, School of Health Science, Mae Fah Luang University)
Panupong Upala , (Dr., School of Health Science, Mae Fah Luang University)

Room: E4A-507

15:08 - 15:16 O-T07B-0171 **Disparities in place of death among older palliative care recipients in Taiwan: A population-based analysis**

Yu Tai Lo
Department of Geriatrics and Gerontology, National Cheng Kung University, Taiwan

15:16 - 15:24 O-T07B-0215 **A Community Intervention Model Based On Tempeh As A Source Of Protein And Zinc To Increase Body Weight And Hemoglobin Of Underweight Toddlers**

Nurce Arifiati
Faculty of Public Health, Hasanuddin University, Indonesia

15:24 - 15:32 O-T07B-0234 **Empowering Mothers, Saving Generations: A Systematic Review of Interventions to Prevent Stunting**

Nurseha Nurseha
Faculty of Public Health, Hasanuddin University, Indonesia

15:32 - 15:40 O-T07B-0270 **Extension of the U-smile method with the Akaike information criterion for model selection in imbalanced binary classification**

Katarzyna B. Kubiak
Department of Public Health and Social Medicine, Medical University of Gdansk, Poland

15:40 - 15:48 O-T07B-0272 **The Critical Role of Disaster Knowledge in Enhancing Emergency Readiness among Coastal High School Students in Banten, Indonesia**

Asra Asra
Faculty of Public Health, Hasanuddin University, Indonesia

15:48 - 15:56 O-T07B-0296 **Strengthening Tobacco Control in Disaster Prone Region: A Scoping Review for the Indonesian Context**

Nurul Kodriati
Department of Public Health, University of Ahmad Dahlan, Indonesia

15:56 - 16:04 O-T07B-0338 **Knowledge, Attitude, and Training Needs in Global Health: A Cross-Sectional Study of Vietnamese Medical Students**

Nhan Le
University of Medicine and Pharmacy, Vietnam

16:04 - 16:12 O-T07B-0344 **Miscarriage Risk Following Benzodiazepine Use During Pregnancy: A Meta-Analysis**

Berihun Dachew
Curtin School of Population Health, Curtin University, Perth, Western Australia, Australia

16:12 - 16:20 O-T07B-0356 **Do mothers' preconception health behaviours differ between the birth of a first and a second child?**

Alemayehu Mekonnen
School of Public Health, Faculty of Medicine, The University of Queensland, Australia

16:20 - 16:28 O-T07B-0441 **The incidence of child marriage in Bangladesh: A demographic assessment and regional comparison across South Asia**

MD Mahfuzur Rahman
Graduate School of Public Health, St. Luke's International University, Japan

16:28 - 16:36 O-T07B-0477 **Breastfeeding practices and its association with Breastfeeding Self-Efficacy and Work-based Breastfeeding Support among Working Lactating Mothers in Malaysia**

V Moganambal Vadivelu
Faculty of Science, Universiti Tunku Abdul Rahman (UTAR), Malaysia

16:36 - 16:44 O-T07B-0529 **Effectiveness of Prolanis and Other Chronic Disease Management Programs for CKD Patients in Primary Health Services**

Yunita Carolina Satti
Faculty of Public Health, Hasanuddin University, Indonesia, Indonesia

16:44 - 16:52 O-T07B-0583 **Trends in sudden unexpected infant deaths mortality in Japan, Korea, and Taiwan, 2002-2021**

Swati Jain
Department of Public Health, College of Medicine, National Cheng Kung University, Taiwan

16:52 - 17:00 O-T07C-0235 **A 17-year experience of capacity-building of African health professionals in a medical university in Japan**

Koji Kanda
Asahikawa Medical University, Japan

17:00 - 17:08 O-T07C-0281 **Premenstrual Syndrome in Nurses: Associations with Psychosocial and Behavioral Factors at a Regional Hospital in Makassar, Indonesia**

A. Muflihah Darwis
Faculty of Public Health, Hasanuddin University, Indonesia, Indonesia

17:08 - 17:16 O-T07C-0299 **Competency Of Caregivers Of Elderly People With Alzheimer's Disease**

Thanupong Supaledworawich
Philosophy School of Education Studies, Sukhothai Thammathirat Open University, Thailand

17:16 - 17:24 O-T07C-0718 **Findings from a Qualitative Investigation into the Socio-Cultural Drivers Behind Perception and Acceptability of Presumptive Treatment for Bacterial STIs in High-Risk Groups.**

Julie-Anne Carroll
School of Public Health and Social Work, Queensland University of Technology, Australia, Australia

17:24 - 17:32 O-T02A-0751 **7- Year Changes in Diet in A Sundanese Community Under Economic Development in West Java, Indonesia**

Satoko KOSAKA
Graduate School of Biomedical Sciences, Nagasaki University, Japan

Oral Presentation Day: November 7 (Fri), 2025

Time: 11:00-14:30

1.Disease Control & Health Education

Nov7, 11:00-14:30

1.1-NCD Pandemic and Injury Prevention / 1.2-Emerging and Re-emerging Diseases / 1.4-Behavioral Health and Health Literacy

Chair: Mohamed Nashrudin bin Naharudin, (Dr., Faculty of Sports and Exercise Science,University of Malaya, Malaysia)
Pilasinee Wongnuch, (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-516

11:00 - 11:08 O-T01B-0604 **Environmental Scan, Expert Appraisal, and Consensus Recommendations (ESACR) of Website Resources on Lifestyle and Environmental Advice for Eczema in Singapore**

Ray Sugianto

KK Women's and Children's Hospital, Department of Paediatrics, SingHealth Duke-National University of Singapore, Singapore

11:08 - 11:16 O-T01B-0192 **Efficacy and Safety of Linezolid for the Treatment of Multidrug/Rifampicin-Resistant Tuberculosis by Dose and Duration: A Systematic Review and Meta-analysis of Randomized Controlled Trials**

Mita Restinia

College of Medicine, National Cheng Kung University Taiwan

11:16 - 11:24 O-T01B-0550 **Communicable Diseases Among University Students: A Hidden Threat to the Realization of Indonesia Emas 2045**

Santi Setiawati

Faculty of Public Health, Universitas Andalas, Indonesia

11:24 - 11:32 O-T01B-0429 **Effectiveness of community-based interventions in dengue control: a systematic review of case outcomes**

Hong Le

School of Public Health, The University of Queensland, Australia

11:32 - 11:40 O-T01B-0309 **Rodent Control (Rats) Associated with Leptospirosis: Systematic Review**

Lisa Djafar

Faculty of Public Health, Hasanuddin University, Indonesia

11:40 - 11:48 O-T01B-0218 **Protective and enhancing immunity to dengue in an urban endemic area: insights from population-level serosurveillance**

Jiraphan Jiraphan
Faculty of Public Health, Mahidol University, Thailand

11:48 - 11:56 O-T01B-0277 **Analysis of Factors Influencing Prevention and Treatment Behaviors Against Scrub Typhus Among Rural Residents in High-Incidence Areas of Jiangxi Province Based on the Health Belief Model**

Hanwu Chen
School of Public Health, Jiangxi Medical College, Nanchang University, China

13:00 - 13:08 O-T01A-0714 **Cardiovascular Disease Risk Prediction Models in South and Southeast Asia: Accuracy and Challenges from a Literature Synthesis**

Yeni Paramata
Faculty Of Public Health, Universitas Hasanuddin, Indonesia

13:08 - 13:16 O-T01A-0677 **Understanding Preventive Health Behaviors via Structural Equation Modeling: Insights from HBM and TPB**

Moh Akhtar Setia Ramadhan Eka Diningrat
Doctoral Program of Public Health, Faculty of Public Health, Hasanuddin University, Indonesia

13:16 - 13:24 O-T01A-0750 **Depressive Symptoms and Cardiometabolic Disease in Middle-aged and Older Adults: Longitudinal Evidence from CHARLS**

Lu Wang
School of Public Health, Jiangxi Medical College, Jiangxi Provincial Key Laboratory of Disease Prevention and Public Health, Nanchang University, China

13:24 - 13:32 O-T01B-0448 **Epidemiological patterns of dengue, typhoid and paratyphoid and patient outcomes in Balanga City, Bataan, Philippines from 2022-2024**

Rachel Castillo
School of Public Health, Bataan Peninsula State University-Main Campus, Philippines

13:32 - 13:40 O-T01B-0451 **Retrospective analysis of epidemiological patterns of major infectious diseases in Bataan, Philippines from 2021-2024**

Catherine Tuazon
School of Nursing, Bataan Peninsula State University-Main Campus, Philippines

13:40 - 13:48 O-T01D-0773 **Prevalence, Microbiological Patterns, and Risk Factors of HCAI in Tertiary Kelantan Hospitals: An 8-Year Retrospective Study**

Suhana Hasan
Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Malaysia

13:48 - 13:56 O-T01D-0313 **Confidence over Concern: A Structural Equation Model of Hypertension Beliefs and Health Behaviors among Indonesian Adolescents**

Azniah Syam
Department of Public Health, Faculty of Health, Mega Buana University, Indonesia

13:56 - 14:04 O-T01D-0333 **The Relationship Between Social Stigma and Female Sex Workers' Access to HIV Health Services: A Cross-Sectional Study in Palopo City**

Muhammad Azwar
Department of Public Health, Faculty of Health, Mega Buana University, Indonesia

14:04 - 14:12 O-T01D-0622 **SUN4BABYS App as a Better Digital Education for Monitoring the Growth and Development of Infants Aged 0–1 Year**

Citrakesumasari Citrakesumasari
Department of Nutrition Science, Faculty of Public Health, Hasanuddin University, Indonesia

14:12 - 14:20 O-T01D-0708 **The Effectiveness Of A Digital- Based Health Promotion Model In Improving Reproductive Health Knowledge Among Women Of Reproductive Age**

Ni Made Ary Lisnawati
Faculty Of Public Health, Universitas Hasanuddin, Indonesia

2.Life Cycle & Health

Nov7, 11:00-14:30

2.1-Physical Activity, Exercise, and Nutrition / 2.4-Maternal Health and Family Planning

Chair: Zulkarnain, (Professor, University of Malaya, KualaLumpur, Malaysia.)
Sasima Pakulanon, (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-517

11:00 - 11:08 O-T02A-0662 **Effectiveness of Breathing Exercises for Improving Lung Function in Smokers: A Meta-Analysis**
I.A. Pascha Paramurthi
Faculty of Medicine, National Taiwan University, Taiwan

11:08 - 11:16 O-T02A-0418 **Sex-stratified effects of a one-year physical education specialist assignment on elementary school children's fitness in Japan**
Momoka Watanabe
Graduate School of Medical and Pharmaceutical Sciences, Chiba University; Faculty of Medicine, University of the Ryukyus, Japan

11:16 - 11:24 O-T02A-0495 **Factors Influencing the Fruit And Vegetable Consumption of Grade 1 And 2 Students from Elementary School in Yangon, Myanmar: A Pilot Study**
Htet Myat Aung
College of Public Health Sciences, Chulalongkorn University,Thailand

11:24 - 11:32 O-T02A-0642 **Food and nutrition supplementation during pregnancy, infancy and early childhood in Sri Lanka**
Upul Senarath
Department of Community Medicine, University of Colombo, Sri Lanka

11:32 - 11:40 O-T02A-0492 **Gut Microbiota Profiles among Pregnant Women in Coastal Areas and Their Association with Stunting: A Review**
Ria Wahyuni
Faculty of Public Health, Hasanuddin University, Indonesia

11:40 - 11:48 O-T02A-0386 **Fostering sustainable partnerships for global nutrition in a time of disruption: building the next generation of a nutrition and dietetics workforce in northern Thailand**
Blair Brown
University of Texas Medical Branch, Uniter States of America

11:48 - 11:56 O-T04D-0570 **A Cross-Sectional Study On Assessment Of Infertility Causes And Their Association With Depression,Anxiety, Among Reproductive Aged Women In Government Maternity Hospital Affiliated To Osmania Medical College, Hyderabaded**

Manisha kumari Erraboina
Department of Community Medicine, Osmania Medical College, India

13:00 - 13:08 O-T02A-0736 **Household Double Burden of Malnutrition among Low-cost Housing Communities of Kuala Lumpur: A Mixed Methods Study**

Fairuz Abdul Rani
Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya, Malaysia

13:08 - 13:16 O-T02A-0688 **Systematic Review and Meta-Analysis of Risk Factors Contributing to Video Conference Fatigue**

Yusuf Zalaya
Faculty of Public Health, Universitas Indonesia, Indonesia

13:16 - 13:24 O-T02A-0637 **Associations Between PM2.5 Exposure, Stress, Health Status, and Physical Activity Among Mae Fah Luang University, Thailand**

Woraphon Orchunwong
School of Integrative Medicine, Mae Fah Luang University, Thailand

13:24 - 13:32 O-T02C-0646 **Coping Strategies to Overcome Mental Health issues Among Pregnant Mothers in Colombo, Sri Lanka: A Qualitative Exploration**

Shreenika De Silva Weliange
Faculty of Medicine, University of Colombo, Sri Lanka

13:32 - 13:40 O-T02C-0670 **The mediating role of subjective happiness between subjective economic status and pre-emptive end-of-life conversation experience**

Shanshan Yang
Department of Social Medicine and Health Management, School of Public Health, Zhengzhou University, China

13:40 - 13:48 O-T02C-0384 **Listening to the Vulnerable Voices: A Critical Discourse Analysis of Filipino Geriatric Patients' Healthcare Ideologies**

Rowell de Guia
Department of Health Information Management/Department of Languages, Bataan Peninsula State University, Philippines

13:48 - 13:56 O-T02C-0742 **Prunus domestica L. Extract Mitigates Oxidative Stress and Apoptosis in a D-galactose-Induced Brain Aging Model**

Puncharatsm Pannin
Department of Anatomy, Faculty of Medicine, Khon Kaen University, Thailand.

13:56 - 14:04 O-T04C-0770 **Prevalence and Factors Associated with Malnutrition Among Older Adults in Pondok Settlements of Kelantan, Northeastern Peninsular Malaysia**

Wan Nor Syafiqah Wan Salleh
Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Malaysia

14:04 - 14:12 O-T04D-0764 **Development and Preliminary Evaluation of a Mobile Health-Based Postpartum Care Support Program for Mothers in a Remote Island Community in Japan**

Yukiko Honda
Department of Social Epidemiology, Graduate School of Medicine and School of Public Health, Kyoto University, Japan; Department of General Medicine, Graduate School of Biomedical Sciences, Nagasaki University, Japan

14:12 - 14:20 O-T02D-0719 **Beyond the Symptoms: Stories of Living and Coping with Polycystic Ovary Syndrome of Women in Albay**

Jenny Ann Julianes
College of Nursing, Bicol University, Philippines

3.Community, Health Equity and Migrant Health

Nov7, 11:00-14:30

3.1-Health Equity for Minority, Elderly, and Vulnerable Populations

Chair: Naruemon Auemaneekul, (Associate Professor, Faculty of Public Health, Mahidol University, Thailand)
Pimrat Boonyapuk, (Dr., School of nursing , Mae Fah Luang University)

Room: E4A-514

11:00 - 11:08 O-T03A-0425 **Impact of a Short-Term Global Health Training on Competencies and Career Intentions of Public Health Students in Elderly Care**
Daeun Ro
Yonsei University, Seoul, Republic of Korea

11:08 - 11:16 O-T03A-0406 **Why come to a Tuberculosis Sanatorium to receive months-long treatment? A qualitative exploration of migrant care seeking for tuberculosis diagnosis and treatment in Tak Province, Thailand**
Jindaporn Wirachonphaophong
Shoklo Malaria Research Unit, Mahidol-Oxford Tropical Medicine Research Unit, Faculty of Tropical Medicine, Mahidol University, Thailand

11:16 - 11:24 O-T03A-0683 **Over-the-Counter Medicine Use in Unserved and Underserved Areas: Implications for PhilHealth GAMOT and Universal Health Care**
Adriane Lustre
Department of Pharmacy, Wesleyan University-Philippines, Cabanatuan, Philippines

11:24 - 11:32 O-T03A-0473 **Family Planning for the Displaced: Lessons from Myanmar Migrants in Humanitarian Crises**
May Chan Oo
College of Public Health Sciences, Chulalongkorn University, Thailand

11:32 - 11:40 O-T03A-0576 **WASH Inequities in Unserved and Underserved Areas (UUA): A Convergent Mixed-Methods Study in UUA Barangays of Nueva Ecija, Philippines**
JAY MONTIADORA
Department of Medical Technology, College of Allied Medical Sciences, Wesleyan University-Philippines, Philippines

11:40 - 11:48 O-T03A-0464 **Factors Affecting the Health and Well-Being of the Elderly in Makassar City: A Qualitative Study**
Mutia Nur Rahmah
Faculty of Public Health, Hasanuddin University, Indonesia

11:48 - 11:56 O-T03A-0488 **Nutrition Interventions and Community Approaches to Adverse Pregnancy Outcome (APO) Prevention: A Literature Review**

Andi Masnilawati
Faculty of Public Health, Hasanuddin University, Indonesia

13:00 - 13:08 O-T03A-0371 **The Strengthening Migrant Access to Reproductive Healthcare in Thailand (SMARH-T) initiative: a prospective intervention study comparing two models of antenatal care for non-Thai migrants in Thailand, 2021-2024**

Rose McGready
Shoklo Malaria Research Unit, Mahidol-Oxford Tropical Medicine Research Unit, Faculty of Tropical Medicine, Mahidol University, Thailand

13:08 - 13:16 O-T03A-0390 **Experts through experience, reasons for homebirth (SMARH-T initiative) of migrant women from Myanmar in Tak Province Thailand: a mixed method study**

Prapatsorn Misa
Shoklo Malaria Research Unit, Mahidol-Oxford Tropical Medicine Research Unit, Faculty of Tropical Medicine, Mahidol University, Thailand

13:16 - 13:24 O-T03A-0391 **High contraceptive utilization by migrants at outreach clinics in Tak Province, Thailand: key findings from the SMARH-T initiative, 2020-2024**

NAY TUN
Shoklo Malaria Research Unit, Mahidol-Oxford Tropical Medicine Research Unit, Faculty of Tropical Medicine, Mahidol University, Thailand

13:24 - 13:32 O-T03A-0385 **A mixed methods evaluation of outreach service provision to strengthen migrant access to reproductive health in Thailand, 2020-2024: The SMARH-T Initiative**

Ahmar Hashmi
University of Texas Medical Branch, United States of America

13:32 - 13:40 O-T03A-0395 **SMARH-T 2.0: mainstreaming migrant-friendly reproductive care in the Thai health system—a mixed methods study protocol, 2025-2029**

Mary Ellen Gilder
Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford, United Kingdom

13:40 - 13:48 O-T03A-0460 **Prevalence And Factors Associated With Post Traumatic Stress Disorder (Ptsd) Among Myanmar Migrants In Mae Sot, Tak Province**
Arkar Mann Kyaw
School of Health Science, Mae Fah Luang University, Thailand

13:48 - 13:56 O-T03A-0779 **Reframing Father Engagement in Child Health: Human-Centred Design for Equity in Communication and Participation in Parenting**
Abigael Ati
WPPMedia Indonesia, Indonesia

13:56 - 14:04 O-T03A-0692 **What is the benefit of visiting a doctor, if we cannot afford a diagnostic test or buy medicine? An exploratory study of equity in Antimicrobial Resistance among the Urban Informal Settlements of Dhaka**
Syeda Tahmina Ahmed
BRAC James P Grant School of Public Health, BRAC University, Bangladesh

14:04 - 14:12 O-T03A-0635 **Mobile Mammography as a Model for Equity in Breast Cancer Screening: Findings from Rural Communities in Malaysia**
Muhammad Faiz bin Md Taib
National Cancer Council (MAKNA), Kuala Lumpur, Malaysia

14:12 - 14:20 O-T03A-0740 **Factors associated with immunization status among children of Myanmar migrants in Chiang Rai province, Thailand: A pilot study**
SHIN MOE OO
School of Health Science, Mae Fah Luang University, Thailand

4.Environmental & Occupational Health

Nov7, 11:00-14:30

4.1-Climate Change and Environmental Health / 4.2-Occupational Health in Evolving Work Environments / 4.4-Urbanization and Pollution Control

Chair: Chakree Chumvisoot Wattanasiri, (Assistant Professor, Schoo of Integrative Medicine, Mae Fah Luang University)
Pudsadee Laor (Asst. Prof.Dr. School of Health Science, Mae Fah Luang University)

Room: E4A-508

11:00 - 11:08 O-T04A-0675 **Modeling Industrial Emission Dispersion with a Gaussian Model: Implications for Air Quality and Health Risks**
Muh Taufik Hidayat
Doctoral Program of Public Health, Faculty of Public Health, Hasanuddin University, Indonesia, Makassar, Indonesia

11:08 - 11:16 O-T04A-0597 **The modifying role of PM2.5 in the temperature and heatstroke association across 47 prefectures in Japan**
Mustakim Mustakim
Department of Hygiene, Graduate School of Medicine, Hokkaido University, Hokkaido, Japan

11:16 - 11:24 O-T04A-0715 **Mercury Exposure in Artisanal and Small-Scale Gold Mining: A Systematic Review of Workers' Health Impacts**
Yulindah Tubuon
Faculty Of Public Health, Universitas Hasanuddin, Indonesia

11:24 - 11:32 O-T04A-0765 **Investigation of Microplastic Contaminants in the Southern Area of Andaman Sea**
Aopeau Imvittaya
Physical Reference Laboratory Center, National Institute of Reference Laboratories, Department of Science Service, Thailand

11:32 - 11:40 O-T04B-0198 **Navigating risks: An exploratory study of occupational injuries and health behaviors among informal fisherfolk in Hagonoy, Bulacan**
Isaac Daniel Ricafort
College of Public Health, University of the Philippines, Philippines

11:40 - 11:48 O-T04B-0659 **Analysis Of Determinants Of Hypertension In The Coal Mining Work Environment In Kutai Kartanegara Regency, Indonesia**

Mardiana Mardiana
Doctoral Program in Public Health, Faculty of Public Health, Hasanuddin University, Indonesia

11:48 - 11:56 O-T04B-0717 **Translation and Cultural Adaptation of the Happiness at Work Scale into Malay for Primary Healthcare Providers**

Mohd Fahmin Kamarul Zaman
Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Malaysia

11:56 - 12:04 O-T04B-0280 **Sun, surf, sustenance, skin: Assessing self-reported skin manifestations, associated factors and health seeking behaviour among multi-day fishermen of the Negombo fishery harbour.**

Druvinka Waas
Faculty of Medicine, University of Colombo, Sri Lanka

13:00 - 13:08 O-T04A-0777 **Burden and Risk Factors of Low Back Pain among Urban Indian Young Adults.**

Edla Sravani
Post Graduate, Department of Community Medicine, MediCiti Institute of Medical Sciences, India.

13:08 - 13:16 O-T04A-0722 **Urban fungal aerosols in Bangkok, Thailand: The seasonal patterns and meteorological correlation analysis**

Tin Saw Pyae
International Program of Hazardous Substances and Environmental Management, Graduate School, Chulalongkorn University, Thailand.

13:16 - 13:24 O-T04A-0723 **KAP-SewQ Content and Face Validation of a Knowledge, Attitude, and Practice Questionnaire on Sewage Disposal Among Households in Kota Bharu, Kelantan**

MOHD ASLAM BIN ARIFFIN
Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Malaysia

13:24 - 13:32 O-T04A-0782 **Community-Based Resilience, Preparedness, and Response through Multi-Sectoral Collaboration in Flood-Prone Border Areas**

Kamonthip Doungjan

College of Public Health Sciences Chulalongkorn University, Thailand

13:32 - 13:40 O-T04D-0754 **The role of fossil fuels in multiple planetary health crises: urgent need for strong public health voices**
Melissa Haswell
Safety and Environment, School of Public Health and Social Work, Queensland University of Technology, Australia

13:40 - 13:48 O-T04D-0755 **Health Benefits of Transitioning to Cleaner Fuel in Jakarta, Indonesia**
Fitri Kurniasari
Research Center for Climate Change, Universitas Indonesia, Indonesia

13:48 - 13:56 O-T04D-0766 **Economic Impact Assessment of Cleaner Fuel Policy in Jakarta, Indonesia**
Eky Pramitha Dwi Putri
Department of Environmental Health, Universitas Indonesia, Indonesia

13:56 - 14:04 O-T04D-0729 **Working Prior to COVID-19 and Subsequent Long-Term Care Needs: The JAGES Cohort Study**
Hiroki Takeuchi
Graduate School of Medical and Pharmaceutical Sciences, Chiba University, Japan

14:04 - 14:12 O-T04D-0640 **Edible Salt as a Vector of Microplastics and Heavy Metals: Literature Review on Global Trends and Public Health Risks**
SITTI RAHMAH
Faculty of Public Health, Hasanuddin University, Indonesia

14:12 - 14:20 O-T04D-0284 **Potential Application of Biochar Produced from Carbonization of Chicken Manure and Biomass Wastes**
Phak Hongloy
School of Health Science, Mae Fah Luang University, Thailand

14:20 - 14:28 O-T04D-0756 **A Systematic Review of Microplastic Exposure in Drinking Water: Concentrations, Polymer Types, and Health Risks in Developing and Developed Countries**
Achmad Kadri Ansyori
Faculty Of Public Health, Universitas Hasanuddin, Indonesia

5.Health Policy & Systems

Nov7, 11:00-14:30

5.1-Health System Strengthening and Determinants of Health / 5.2-Health Promotion and Literacy / 5.3-Global Health Security and Pandemic Preparedness / 5.4-Health Insurance and Public Health Financing

Chair: Onn Laingoen, (Dr., School of Health Science, Mae Fah Luang University)
Siriwan Kantisin, (Dr., School of Health Science, Mae Fah Luang University)

Room: E4A-509

11:00 - 11:08 O-T05B-0567 **Epidemiology of Inhaled Foreign Body Injuries and Choking in ASEAN: Public Health Impact and Prevention Measures**

Dario Gregori
Unit of Biostatistics, Epidemiology and Public Health, Department of Cardiac, Thoracic, Vascular Sciences and Public Health, University of Padova, Italy

11:08 - 11:16 O-T05B-0509 **Exploring the Perspectives of Healthcare Providers towards Maternal Mental Health: A Study from a Tertiary Hospital in India**

Shreya Sharma
Division of Biochemistry, Department of Basic Medical Sciences, Manipal Academy of Higher Education, India

11:16 - 11:24 O-T05B-0236 **Impact of District-Level Comprehensive Tobacco Control on Youth Smoking in Indonesia: A Synthetic Control Study**

Dian Kusuma
Department of Public Health & Epidemiology, College of Medicine and Health Sciences, Khalifa University of Science and Technology, United Arab Emirates

11:24 - 11:32 O-T05B-0163 **Bridging the Gap: Predictors of Nurse Perceptions of Patient Handoffs in Malaysian Tertiary Care**

Mohd Ismail Ibrahim
Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Malaysia

11:32 - 11:40 O-T05B-0611 **Interplay between Health Issues, Topography and Socio-Cultural Factors in Manipur, India**

Sanjoy Akoijam
Department of Anthropology, Manipur University, India

11:40 - 11:48 O-T05B-0600 **Combined associations of education and health literacy with catastrophic health expenditure in Korea**

Jung Won Lee
Department of Health Administration, Yonsei University Graduate School, Republic of Korea

11:48 - 11:56 O-T05B-0345 **Maternal and Child Health Handbook as a driver to strengthen health systems**

Akira Shibanuma
Institute of Health Behaviors and Community Sciences & Department of Public Health, College of Public Health, National Taiwan University, Taiwan

13:00 - 13:08 O-T05A-0768 **Digital Innovation for Behaviour Change: WhatsApp Bot Strengthening Immunization, Hygiene, and Nutrition in Indonesia**

Fransisca Maria Lambe
WPPMedia Indonesia, Indonesia

13:08 - 13:16 O-T05A-0324 **Social Reproduction Mechanism Of Drug Abuse And Prevention Strategies**

Arlin Adam
Public Health Doctoral Program, Health Promotion Department, Mega Buana University, Palopo, Indonesia

13:16 - 13:24 O-T05A-0504 **The Filipino Psyche on the Healthcare System: Cultural Perceptions, Attitudes, and Behaviors**

Emmanuel Macaraeg
Health Information Management Department, Bataan Peninsula State University, Philippines

13:24 - 13:32 O-T05A-0767 **Estimating the Health and Economic Benefits of Reduced PM2.5 Exposure and Healthier Lifestyles: A Cost-of-Illness Modeling Study in Malang, Indonesia**

Dwi Sari Puspaningtyas
NIHR Global Health Research Centre for Non-Communicable Diseases and Environmental Change, Faculty of Medicine, Universitas Brawijaya, Indonesia

13:32 - 13:40 O-T05C-0593 **Japanese-style health screenings and their effects in Palau for the prevention of NCDs**

Fuyu Miyake
Graduate School of Biomedical and Health Sciences, Hiroshima University, Japan

13:40 - 13:48 O-T05C-0624 **Strengthening the National Health Research System in a Resource-Limited Setting: Insights from a Qualitative Study in Indonesia**

Deandra Sutoyo
Evidence-based Health Policy Center, Indonesian Medical Education and Research Institute, Faculty of Medicine, Universitas Indonesia, Indonesia

13:48 - 13:56 O-T05C-0686 **The Institutional Moat of Platform Ecosystems vs. the Trust Vacuum of Pipeline Disruption: A Comparative Study of Business Models and Institutional Strategy in Healthcare**

Chienhung Chen
Department of International Business, National Kaohsiung University of Science and Technology, Taiwan

13:56 - 14:04 O-T05D-0753 **Fragmentation of PTCA with stent treatment in the DRG payment system under Indonesia's JKN Program: Analysis of Claim Data JKN 2023**

Atik Nurwahyuni
Department of Health Policy and Administration, Faculty of Public Health, Universitas Indonesia, Indonesia

14:04 - 14:12 O-T05D-0724 **Malaysian Society Quality of Health (MSQH) hospital accreditation: Perceived impact mean score among hospital employees in Hospital Tenom, Sabah and its predictors**

Rizq Fazzali Abdul Raes
Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Malaysia

6.Future Society & Health

Nov7, 11:00-14:30

6.2-Medical Technology and Artificial Intelligence in Health Care
6.3-Health Informatics, Telehealth, and Smart Health Care

Chair: Victor Hoe Chee Wai Bin Abdullah, (Professor, University of Malaya, Malaysia)
Niwed Kulwong, (Assistant Professor, School of Health Science, Mae Fah Luang University)

Room: E4A-507

11:00 - 11:08 O-T06B-0291 **Evaluation Of Vapgamo, A Game-Based Learning Intervention For Vaping Prevention Among Adolescents: A Study On User Acceptance And Behavioral Impact**

Muhammad Zulhilmie Saruddin
Universiti Putra Malaysia, Malaysia

11:08 - 11:16 O-T06B-0420 Effectiveness And Implementation Challenges of the CONEMO Digital Intervention for Depression Among Hypertensive Adults in Low- And Middle-Income Countries: A Literature Review
Euis Dedeh Komariah
Faculty of Public Health, Hasanuddin University, Indonesia

11:16 - 11:24 O-T06B-0217 The Role of Overall Health Literacy in Supporting the Health Management of Women with PCOS: A Comparison of AI-Based and Traditional Tracking Methods
Erika Marie E. Yasay
University of the East Ramon Magsaysay, Philippines

11:24 - 11:32 O-T06B-0166 Terminalia catappa Leaf Extract-Incorporated Sodium Alginate/Carboxymethyl Chitosan Hydrogel with Antibacterial, Antioxidant, and Anti-Inflammatory Properties for Burn Wound Healing Applications
Isaran Kaewketa
Bangkok Christian College, Thailand

11:32 - 11:40 O-T06B-0684 Prediction of Treatment Success in Multidrug-Resistant Tuberculosis (MDR-TB) Using Machine Learning Algorithms
Sri Wahyuningsih
Faculty Of Public Health, Universitas Hasanuddin, Indonesia

11:40 - 11:48 O-T06C-0263 Leveraging Telemedicine for Disaster Resilience: A First Case Report from the 2024 Kelantan Flood in Malaysia
Afiq Izzudin A Rahim
Universiti Sains Malaysia, Malaysia

11:48 - 11:56 O-T06C-0552 Patients' Satisfaction Towards Virtual Consultation Service Using Mysejahtera Application And Its Associated Factors In Malaysian Public Primary Care
Ihsan Abdul Razak
Community Medicine Department, Universiti Sains Malaysia, Malaysia

13:00 - 13:08 O-T06B-0775 Implementing A Hospital Occurrence/Incident Analysis & Risk Register (Hoia-Rr) Tool In Thailand's Hospitals: A Study On Effective Adoption
Wilasinee Kueankaew
School of Health Science, Mae Fah Luang University, Thailand

13:08 - 13:16 O-T06B-0748 **Digital Surveillance of Indirect E- Cigarette Promotion on Social Media: Insights from TikTok Video Content Analysis and Engagement Metric**

Wen Ning Tiong
Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia, Malaysia

13:16 - 13:24 O-T06B-0512 **Assessing Health Records Management System in the City of Balanga, Philippines**

Marissa Ramos
College of Computer Studies, Bataan Peninsula State University, Philippines

13:24 - 13:32 O-T06B-0459 **Development of EMS Help Me" Platform for Cross-Border Emergency Medical services in South-East Area in Thailand**

Panita Krongyuth
Faculty of Public Health and Allied Science, Sirindhorn College of Public Health Ubon Ratchacthani, Praboromrajchanok Institute, Thailand

13:32 - 13:40 O-T06C-0141 **Seamless Transition in ICD-10 to ICD-11 in National Monitoring of 30-Day Readmission for Heart Failure**

Ismat Mohd Sulaiman
Health Informatics Centre, Planning Division, Ministry of Health Malaysia, Malaysia

7.Core of Public Health and Other Issues

Nov7, 11:00-14:30

7.1-Epidemiology / 7.2-Statistics / 7.4-Mental Health and Environmental Stress / 7.7-Public Health Education and Training;

Chair: Pamornsri Inchon, (Assistant Professor, School of Health Science, Mae Fah Luang University)
Nahathai Dukaew, (Dr., School of Health Science, Mae Fah Luang University)

Room: E4A-515

11:00 - 11:08 O-T07A-0572 **Association of military aircraft noise exposure with mental well-being and sleep disturbance among people living near a military air base in Okinawa, Japan**

Yuka Maekawa
Graduate School of Health Sciences, University of the Ryukyus, Japan

11:08 - 11:16 O-T07A-0471 **Short-term Exposure to PM2.5 and Acute Lower Respiratory Infections (ALRIs) Mortality Among Adults in Thailand: Regional, Demographic, and Seasonal Analysis**

Friscilla Hermayurisca
College of Public Health Sciences, Chulalongkorn University, Thailand

11:16 - 11:24 O-T07A-0336 **Analytical Study of Anemia Incidence in Pregnant Women at Parangia Community Health Center, Selayar Islands Regency, Indonesia**

Andi Alim
Program Study of Doctoral in Public Health, Faculty of Health, University of Mega Buana, Indonesia

11:24 - 11:32 O-T07A-0620 **A Cross-Sectional Study On Assessment Of Infertility Causes And Their Association With Depression And Anxiety Among Reproductive Age Group Women IN TERTIARY CARE HOSPITAL, OSMANIA, HYDERABAD ,INDIA**

Manisha kumari Erraboina
Department of Community Medicine, Osmania Medical College, India

11:32 - 11:40 O-T07A-0716 **Exploring the Lagged Effects of Aedes Surveillance Indices on Dengue Incidence in District of Kota Bharu, Kelantan, Malaysia Using Distributed Lag Non-Linear Modeling (DLNM)**

Mohamad Afiq Amsyar Hamedin
Department of Community Medicine, Universiti Sains Malaysia, Malaysia

11:40 - 11:48 O-T07D-0678 **Factors Associated With Stress, Anxiety And Depression Among Medical Officers And House Officers In Universiti Malaya Medical Centre (Ummc)**

Nurul Ahamed
Medical Officer, Department of Public Health, Universiti Malaya Medical Centre, Malaysia

11:48 - 11:56 O-T07D-0461 **Development of a co-created infectious diseases module for public health and nursing students**

Sharon Malasig
School of Public Health, Bataan Peninsula State University-Main Campus, Philippines

13:00 - 13:08 O-T07A-0143 **Obesity-Stroke Awareness through the Lens of Young Adolescents**

Huay Woon You
Pusat PERMATA@Pintar Negara, Universiti Kebangsaan Malaysia, Malaysia

13:08 - 13:16 O-T07B-0331 **Factors Associated with Malaria Prevention Behaviors Among Residents in Endemic Areas of Tak Province, Thailand.**

Phaibun Chiraphatthakun
School of Health Science, Mae Fah Luang University, Thailand

13:16 - 13:24 O-T07B-0737 **Estimation of Excess Mortality Associated with Influenza and Respiratory Syncytial Virus in South Korea, 2011-2019**

Kyeong Beom Kim
Department of Preventive Medicine, Korea University College of Medicine, Republic of Korea

13:24 - 13:32 O-T04D-0709 **Perinatal Depression and Anxiety: Prevalence, Risk and Intervention–Literature Review**

Irne Wida Desiyanti
Faculty of Public Health, Hasanuddin University, Indonesia

13:32 - 13:40 O-T07G-0518 **Number of Children and EldeNumber of Children and Elderly Health: The Interconnected Roles of Healthy Lifestyles and Children's Educational Attainmentrly Health: The Interconnected Roles of Healthy Lifestyles and Children's Educational Attainment**

Xiaojun Liu
Department of Social Medicine and Health Management, School of Health Management, Fujian Medical University, China

ORAL

Presentation Abstract

1.Disease Control & Health Education

O-T01A-0101

The Effectiveness Of Culture-Based Diabetes Management Education (DSME) On Glycemic Control In T2DM Patients: A Literature Review

Ratnasari Iskandar[1], Wahiduddin[2], Andi Zulkifli[3]

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Email: rsariskandar@gmail.com
[2] Epidemiology Department, Public Health, Hasanuddin University, Indonesia
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[3] Epidemiology Department, Public Health, Hasanuddin University, Indonesia
Email: zulkifliabdullah@yahoo.com

Abstract

Objective: To investigate the effectiveness of culturally tailored Diabetes Self-Management Education and Support (DSMES) programs in improving glycemic control, as measured by HbA1c levels, among patients with type 2 diabetes mellitus (T2DM).
Methods: A literature review was conducted using databases including PubMed, EBSCO, ScienceDirect, and Scopus, covering studies published between 2015 and 2025. The search terms used were: *"Culture" AND "DSMES" AND "HbA1c" AND "T2DM."* Studies were screened using the Rayyan application based on inclusion and exclusion criteria. Out of 46 studies initially identified, 7 met the final criteria for review.
Results: The analysis of the 7 selected studies indicates that DSMES programs incorporating cultural elements—such as traditional dietary practices, native languages, and social norms—were significantly more effective in reducing HbA1c levels compared to standard approaches. These culturally adapted interventions enhanced patient engagement, adherence, and self-management outcomes.
Conclusion: Culturally tailored DSMES interventions show strong potential in improving glycemic control in T2DM patients. This review underscores the importance of incorporating cultural relevance into DSMES programs to achieve more effective and sustainable diabetes management.
Keywords: Culture, DSMES, HbA1c, T2DM

O-T01D-0103

Nutrition Education For Pregnant Women By Health Workers In Preventing Stunting Risks: A Literature Review

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Abstract

Objectives: Improving the nutritional and health status of mothers and children is a primary focus in both global and national agendas. However, challenges such as the high rate of stunting, the low understanding of community health workers in delivering nutritional information, and the high incidence of babies born at risk of stunting highlight the need for more effective interventions. The effectiveness of nutrition education programs conducted by community health workers in reducing the incidence of stunting risks in pregnant women is an important aspect of public health intervention. This study aims to analyze the effectiveness of nutrition education for pregnant women in preventing the birth of babies at risk of stunting.

Methods: This systematic review refers to four main databases: Scopus, ScienceDirect, and Pro-Quest. The guidelines used in the literature review process are the Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA). Article selection was performed using the Rayyan application, while data were analyzed using a synthesis approach that includes population, intervention, comparison, outcome, and study design (PICOT), considering the similarities and differences in study characteristics to interpret the results.

Results: The results of the study review indicate that nutrition education interventions through group approaches, individual consultations, home visits, and practical demonstrations consistently improve birth weight and fetal weight gain during pregnancy. The application of theories such as the Health Belief Model (HBM), Theory of Planned Behavior, and Health Action Process Approach, as well as the involvement of family, especially husbands, has been proven to enhance the effectiveness of interventions by improving knowledge, attitudes, and nutrition practices.

Conclusion: The findings from this review emphasize that nutrition education programs designed according to local contexts and integrated into antenatal services can improve birth outcomes and reduce the risk of stunting.

Keywords: Nutirition Education, Pregnant Women, Stunting

O-T01B-0104

Association of HLA-DQA1 Gene Polymorphism and Zinc Status with Tuberculosis Susceptibility: A Literature Review

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Abstract

Background: Tuberculosis (TB) remains a significant global public health concern, with an estimated 10.8 million new cases in 2023. Susceptibility to TB is influenced by both genetic and nutritional factors.
Objective: This review aims to analyze the epidemiological associations between HLA-DQA1 gene polymorphisms and zinc status in relation to TB susceptibility.
Methods: A systematic literature review was conducted using databases including PubMed, Scopus, and Google Scholar, covering the last 25 years of publications (2000 - 2024) with inclusion criteria based on topic relevance, study design, and data completeness. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach guided article selection, yielding 21 studies consisting of 11 studies on the HLA-DQA1 gene and 10 studies on zinc for comprehensive analysis.
Results: The findings indicate that variations in the HLA-DQA1 gene are significantly associated with TB susceptibility. Specific alleles—such as HLA-DQA1*03:01, *05:05, *06:01, *02:01, *05:01, *03:02, and *01:01—have been linked to altered immune responses in populations from Thailand, India, Iran, China, Latvia, Iceland, the USA, Canada, and Kazakhstan. The HLA-DQA1*03:01 allele was consistently identified in the majority of studies, accounting for 36% of the total studies, particularly in populations from China, Iceland, the United States, and Latvia. Similarly, the *01:01 allele was reported in 27% of studies, mainly involving populations from India, Iran, and China. Concurrently, zinc deficiency has been identified as a contributing factor to TB risk, as it compromises immune function. Studies from Ethiopia, India, Bangladesh, Pakistan, the USA, and the Ivory Coast consistently demonstrate that inadequate zinc levels correlate with impaired host defense against Mycobacterium tuberculosis.
Conclusion: Both HLA-DQA1 gene polymorphisms, especially the *03:01 and *01:01 alleles, and zinc deficiency appear to modulate host immune responses, influencing individual susceptibility to tuberculosis. Further research is warranted to explore their interaction and potential as biomarkers for TB risk assessment
Keywords: Tuberculosis, HLA-DQA1, Zinc, Polymorphism, Genetic

O-T01A-0121

The Combined Effect of Visceral Fat Index and Physical Activity on Insulin Resistance in Nondiabetic Population in China

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Abstract

Background: This study aimed to investigate the independent and combined effects of the Chinese Visceral Adiposity Index (CVAI) and physical activity on insulin resistance in non-diabetic Chinese population.

Method: Data from the 2024 Chronic Disease and Risk Factor Surveillance Program in Wuhan, China were used. Information was collected through self-administered questionnaires, physical examinations, and laboratory examinations. Insulin resistance was measured using the Triglyceride-Glucose Index (TyG index). Physical activity levels were assessed based on the International Physical Activity Questionnaire. The Chinese Visceral Adiposity Index (CVAI) was calculated based on indicators including waist circumference, body mass index, triglycerides, and high-density lipoprotein cholesterol. Logistic regression was used to assess the independent and combined effects of CVAI and physical activity on insulin resistance.

Results: A total of 670 non-diabetic primary care participants aged 48.4±15.9 year were included in this study. The results showed that adequate physical activity was significantly associated with a reduced risk of insulin resistance (OR= 0.653, 95% CI：0.440-0.968), and a lower level of CVAI was associated with a lower risk of insulin resistance (OR=0.052，95% CI=0.027-0.101). The combination of high physical activity and low CVAI levels had the strongest effect on insulin resistance risk (OR = 0.039, 95% CI = 0.016-0.091). Sensitivity analysis and subgroup analysis indicated that the combined effect of CVAI and physical activity on insulin resistance was consistent across different genders and age groups.

Conclusion: Increasing physical activity and reducing CVAI levels were significantly associated with a reduced risk of insulin resistance among non-diabetic Chinese population. The findings of this study provide a new perspective for understanding the effects of lifestyle factors on metabolic diseases.

Keywords: Insulin resistance; Chinese Visceral Adiposity Index; Physical activity

O-T01A-0123

Associations between Dynapenic Obesity and Cognitive Disorder: Mediating Role of Physical Activity and Depressive Disorders

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Abstract

Background: This study aimed to explore the association between dynapenic obesity and cognitive disorder, and examine the dual mediating role of physical activity (PA) and depressive disorders in this association among elderly hypertension (HTN) patients.

Method: This is a nationally representative cross-sectional study from July 2023 to March 2024 among elderly HTN patients aged 65 years and older. Data were collected using a structured questionnaire that assessed socio-demographic characteristics, PA, mental health, dynapenic obesity, and cognitive disorder. Structural equation modeling was employed to explore the mediating role of PA and depressive disorders in the relationship between dynapenic obesity and cognitive disorder. Additionally, subgroup and sensitivity analyses were performed to validate the robustness of the findings.

Results: The study included 9,568 elderly HTN patients. The prevalence of cognitive disorder in this population was 15.67% (95% confidence interval [CI]: 14.94%-16.40%). After adjusting for potential confounders, a significant positive association was observed between dynapenic obesity and cognitive disorder (adjusted odds ratio [aOR]=1.320, 95%CI: 1.173-1.486). Mediation analysis indicated that PA and depressive disorders partially mediated the relationship between dynapenic obesity and cognitive disorder, accounting for 18.36% and 2.39% of the total effect. This association remained consistent across different age groups (all $P < 0.05$). Sensitivity analysis further confirmed the robustness of the main findings (aOR: 1.256, 95%CI: 1.146-1.378; aOR: 1.260, 95%CI: 1.149-1.383).

Conclusion: Dynapenic obesity is a significant risk factor for cognitive disorder, and PA and depressive disorders plays a crucial mediating role in this association among elderly HTN patients.

O-T01A-0138

Changes in Diabetes Self-Management Before and After COVID-19 in Indonesia: An Analysis of National Health Surveys 2018 and 2023

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Abstract

Background: Effective self-management is fundamental to optimal diabetes mellitus (DM) control, especially during systemic disruptions like COVID-19. While the pandemic's impact on health systems and chronic care is widely discussed, few low- and middle-income country studies assess changes in diabetes self-management before and after the pandemic using national data. This study examines shifts in four key self-management behaviors among Indonesian adults with diabetes (2018-2023), accounting for demographic determinants.

Methods: This repeated cross-sectional analysis was conducted using secondary data from two nationally representative health surveys in Indonesia: the 2018 Basic Health Research Survey (Riskesdas) and the 2023 Indonesia Health Survey (SKI). The study population comprised adults diagnosed with diabetes in either year. Standardized behavioral indicators were used to assess four domains of self-management: medication adherence, dietary regulation, physical exercise, and routine medical check-ups. Multivariable logistic regression was employed, adjusting for complex survey design and key demographic covariates, including sex, age group, and education level.

Results: Analysis included 27,837 adults with diabetes (13,501 from Riskesdas 2018 and 14,336 from SKI 2023). Compared to 2018, both medication adherence and physical exercise declined significantly in 2023 (adjusted odds ratio [AOR] = 0.72; P<0.001 for both). Dietary regulation remained unchanged (AOR = 1.00; P = 0.962), whereas routine medical check-ups increased significantly (AOR = 1.43; P<0.001). Women had higher odds of engaging in medication adherence, dietary regulation, and regular check-ups, but lower odds for physical exercise. Higher education levels were consistently associated with better self-management across all domains.

Conclusion: The COVID-19 pandemic's impact on diabetes self-management in Indonesia was heterogeneous. Declines in medication adherence and physical exercise highlight the need for targeted, demographically sensitive post-pandemic public health interventions. These findings offer important insights for informing chronic disease management strategies in similar low- and middle-income settings.

O-T01B-0148

Household Contacts of Drug-Resistant Tuberculosis Patients: A Phenomenological Study

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Abstract

Medan City, as one of Indonesia's major cities with a high population density, faces increasingly complex challenges in controlling drug-resistant tuberculosis (DR-TB). DR-TB not only complicates treatment processes but also heightens the risk of transmission within the patient's surrounding environment, particularly in the household setting. Household contacts of DR-TB patients are highly vulnerable to infection due to continuous exposure. This study employed a qualitative approach using a phenomenological method. Informants were selected using purposive sampling, and the number of participants was determined based on the principle of data saturation, resulting in 10 informants. Qualitative data analysis identified five main themes: Knowledge of DR-TB, expressed by 3 informants (30%), Emotional and Social Responses, expressed by 4 informants (40%), Efforts to Prevent Transmission, expressed by 3 informants (30%), Support from Health Workers, expressed by 3 informants (30%), and Barriers to Prevention Implementation, expressed by 4 informants (40%). Based on these five themes, the following conclusions were drawn Family Knowledge of DR-TB: Most families understood DR-TB as a contagious and dangerous disease; however, their knowledge tended to be general, superficial, and limited. Emotional Responses Dominated by Fear, Anxiety, and Stigma: The DR-TB diagnosis caused significant psychological distress within families, with common feelings including fear of infection, worry, and anxiety about the future. Prevention Efforts Were Limited and Inconsistent: Families made preventive efforts such as having the patient wear a mask, using separate eating utensils, ensuring ventilation, and maintaining environmental cleanliness, but these measures were not consistently implemented due to various challenges. The Role of Health Workers Was Important but Suboptimal: Families appreciated initial visits and information provided by health workers, but expressed concern over the lack of follow-up education, regular monitoring, or specific support for household contacts. Barriers to Prevention Were Multidimensional: These challenges were complex and interconnected, with key contributing factors including economic constraints, cramped and unhealthy living conditions, low health literacy, and psychological stressors.

Keywords: drug-resistant tuberculosis (DR-TB), qualitative, phenomenology, knowledge, response, prevention, support, barriers

O-T01D-0157

Waterpipe Smoking Among Japanese Teens and Young Adults: An Emerging Public Health Concern

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Abstract

Waterpipe (shisha) smoking has gained popularity among teens and young adults and is now prevalent in Japan. Yet, waterpipe smoking in the Japanese population remains understudied. This study examined the prevalence, characteristics, and knowledge/attitudes related to waterpipe use among Japanese teens and young adults, aiming to inform efforts to prevent further use.

A cross-sectional analysis of the 2024 Japan Society and New Tobacco Internet Survey (JASTIS) was conducted among individuals aged 16–29 years (N = 5,564). Descriptive analyses assessed waterpipe use prevalence, use status, and reasons for use. Multivariable logistic regression, controlling for demographic, socioeconomic, and substance use covariates, evaluated associations between knowledge/attitudes and any lifetime (versus never) waterpipe use.

Among teens and young adults, 13.4% reported ever having used waterpipe tobacco, and 77% of current users smoked occasionally. Common reasons for use included peer influence (62.5%), interest in flavors (47.6%), and perceived reduced harm (43.2%), with significant sex differences (e.g., used as a cigarette substitute: male 37%, female 18%). After adjusting for covariates, perceiving waterpipe use as less harmful (Adjusted Odds ratio [AOR] = 2.3) or “cool” (AOR = 2.6) remained strongly associated with significantly higher odds of lifetime use.

The prevalence of waterpipe smoking among Japanese teens and young adults is now a public health concern. It is driven by peer influence, product appeal, and perceptions of reduced harm and social desirability. Targeted education and regulation to address misperceptions and social acceptability, as well as continued monitoring of waterpipe use, are warranted.

O-T01D-0176

Predictors of body image perceptions among healthcare providers in Terengganu, Malaysia

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Abstract

Background: The Malaysian National Health Morbidity Survey 2019 reveals a high prevalence of non-communicable disease risk factors among the working population. The survey findings revealed that 34% of Malaysian adults were obese, with over half of them being employed. The aim of the study was to determine the predictors of body image perception scores among health care providers (HCPs) in Terengganu, Malaysia.

Methods: A cross-sectional study among 201 health care providers (HCPs) was conducted from January to March 2023. This study participants were drawn from a pool of HCPs with a BMI of 25 kg/m2 or higher. Body image perceptions were scored using the Malay version of the Body Self- Image Questionnaire-Short Form. Multiple linear regression analysis was performed to determine the predictors of body image perception score.

Results: Age and longer work hours correlate with higher body satisfaction among HCPs, while higher BMI lowers satisfaction. Nurses typically experience more height dissatisfaction. Higher income is associated with better self-ratings in looks, health, and fitness, but higher education correlates with poorer self-ratings. Married HCPs report lower attractiveness, health, fitness, and self-esteem but are more satisfied with their height.

Conclusion: This situational analysis identifies predictors, such as sociodemographic factors and occupational aspects, that can aid in customising interventions to address specific body image concerns among HCPs, with the goal of reducing obesity prevalence among them.

Keywords: Body image perception; Healthcare provider; Overweight; Obesity; Predictors

O-T01B-0192

Efficacy and Safety of Linezolid for the Treatment of Multidrug/Rifampicin-Resistant Tuberculosis by Dose and Duration: A Systematic Review and Meta-analysis of Randomized Controlled Trials

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Abstract

Background: Linezolid plays a key role in multidrug/rifampicin-resistant tuberculosis (MDR/RR-TB) treatment, but questions remain regarding its optimal dose and treatment duration.
Objective: To systematically evaluate the efficacy and safety of linezolid-containing regimens for adults and children with MDR/RR-TB based on dose and treatment duration.
Method: We searched PubMed, Embase, Scopus, Web of Science, Cochrane Library, CINAHL, and ClinicalTrials.gov between January 2001 and May 2025. Randomized controlled trial (RCT) assessing adverse events (AEs), treatment discontinuation, sputum culture conversion, and unfavorable outcomes in patients receiving linezolid-containing regimes versus standard of care (SOC). Pooled risk differences (RDs) were calculated using random-effects models, with subgroup analyses by dose (≤600 vs 1200 mg/day) and treatment duration (≤6 months vs 9 months and >9 months). The Cochrane risk-of-bias tool 2.0 was used to assess the quality of each included study. The combined results were examined for heterogeneity, sensitivity, and publication bias.
Results: Eleven RCTs (n=3,323) were included. The risk of unfavorable outcomes were reduced (RD -0.16; 95% CI -0.22 to –0.10*)* and sputum culture conversion was improved (RD 0.06; 95% CI 0.01 to

0.10*)* in the linezolid group. Linezolid did not increase the risk of thrombocytopenia, leukopenia, neutropenia, optic neuritis, or gastrointestinal, renal, and hepatic disorders. However, higher risk of anemia (RD 0.06; 95% CI 0.00 to 0.12) and peripheral neuropathy (RD 0.07; 95% CI 0.02 to 0.11) were observed in the linezolid regimens. Subgroup analyses indicated that when linezolid was used at doses ≤600 mg/day or for durations ≤9 months, these AEs were not significantly different from SOC, suggesting an improved safety profile with optimized dosing.

Conclusions: Linezolid-containing regimen is generally effective and safe in MDR/RR-TB treatment. Lower doses (≤600 mg/day) and shorter durations (≤9 months) improve tolerability without compromising treatment outcomes, supporting its role in current WHO-recommended regimens.

Keywords: Linezolid, adverse events, treatment outcomes, meta-analysis, multidrug/rifampicin-resistant tuberculosis

O-T01D-0208

The Impact of Social Media on Adolescents' Attitudes Toward Reproductive Health: A Systematic Review

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Abstract

Background: Adolescents' attitudes toward reproductive health are a critical factor influencing sexual behavior and safe decision-making. With the growing use of social media among adolescents, these digital platforms are increasingly utilized as educational tools for health promotion. However, no systematic review to date has specifically evaluated the effectiveness of social media–based interventions in changing adolescent attitudes toward reproductive health issues.
Methods: This systematic review followed the PRISMA 2020 guidelines. Literature searches were conducted across five major databases (PubMed, Scopus, ScienceDirect, CINAHL, and Google Scholar) to identify intervention studies using randomized controlled trial (RCT) or quasi-experimental designs. Inclusion criteria comprised studies employing social media as the primary intervention tool targeting adolescents (aged 10–19 years), and assessing outcomes related to changes in attitudes toward reproductive health. Methodological quality was assessed using the JBI Critical Appraisal Checklist. Data were extracted and analyzed narratively due to heterogeneity in intervention designs, platforms, and outcome measurements.
Results: Eight intervention studies met the inclusion criteria, consisting of five quasi-experimental and three RCT studies. The social media platforms used included Facebook, WhatsApp, TikTok, and LINE. All studies reported significant improvements in adolescents' attitudes toward reproductive health following the intervention, with statistically significant effect sizes. Interventions that were interactive, peer-education-based, or utilized visual media such as TikTok videos tended to yield stronger results. Quality assessment indicated that most studies demonstrated good to very good methodological validity.
Conclusion: Social media–based interventions are effective in improving adolescents' attitudes toward reproductive health. Digital platforms offer a promising educational approach to reach young people in a wide-reaching and contextually relevant manner. Future research employing longitudinal designs and more explicit theoretical frameworks is needed to assess long-term impacts and strengthen the evidence base for the use of social media in promoting adolescent reproductive health
Keyword: social media, reproductive health, adolescents, attitude, intervention

O-T01B-0218

Protective and enhancing immunity to dengue in an urban endemic area: insights from population-level serosurveillance

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Abstract

Dengue remains a major global health concern, with its transmission intensifying due to climate change, rapid urbanization, and inadequate environmental management, factors that create favorable conditions for mosquito vectors. Understanding the interplay between virus dynamics and population-level immunity is essential for evaluating susceptibility and disease outcomes in endemic setting. Adopting a One Health approach, which integrates human, vector, and environmental components, is critical for effective dengue prevention and control strategies.

This study investigated functional population immunity to dengue in an urban endemic area, with a focus on how immune responses can mediate both protection and enhancement of dengue virus (DENV) infection. A total of 198 healthy adults in Bangkok were enrolled and assessed for neutralizing antibodies against DENV serotypes 1–4 using a focus reduction neutralization test. Further analysis was conducted using DENV-2 reporter viruses expressing antigens from four genotypically diverse strains, Asian I, Sylvatic, Cosmopolitan, and Asian/American, through luciferase-based neutralization and antibody-dependent enhancement (ADE) assays.

Overall, 77.3% of serum samples exhibited neutralizing activity against at least one DENV serotype, with the highest reactivity toward serotypes 1 and 2. Notably, neutralization profiles varied by genotype, with broad reactivity to Asian I and Sylvatic strains, while the Cosmopolitan genotype displayed greater resistance. Importantly, 94.41% and 81.82% of samples demonstrated enhancing activity against the Sylvatic and Asian I genotype, respectively.

This finding highlighted the complexity of dengue immunity in endemic populations, where neutralizing antibodies may confer protection, but also carry the risk of ADE during secondary infections. Strengthening serological surveillance using advanced immunological tools, in combination with vector and environmental management, is essential for mitigating the dual threat of protection versus pathogenesis in dengue-endemic urban areas.

Keywords: Dengue, population immunity, One Health, serosurveillance, urbanization

O-T01D-0232

Development of an Integrated Self-Care Model with Social Support in Postpartum Care for Primiparous Mothers

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Abstract

The postpartum period is a critical phase, especially for primiparous mothers, who are vulnerable to stress, anxiety, and even depression due to physical, emotional, and social changes. The high prevalence of depression and anxiety during this period indicates that new mothers are highly vulnerable to mental health disorders. Lack of social support, limited education, and barriers to accessing healthcare services exacerbate this situation, necessitating a holistic approach to maintaining maternal mental health. This article is a Systematic Literature Review conducted in accordance with the PRISMA guidelines. Literature was systematically collected from electronic databases such as PubMed, ScienceDirect, Google Scholar, and SpringerLink for the period 2015 to 2025. Out of a total of 1,026 articles obtained, 19 articles met the inclusion criteria and were analyzed using the PICO framework to identify the role of social support and self-care practices in primiparous mothers. The results of the study indicate that spousal support is most effective in reducing symptoms of depression and anxiety, as well as improving self-efficacy and mother-child bonding. Additionally, family, friend, and community support also contribute to the mother's adaptation process to her new role. In addition, self-care has also been proven to be beneficial in improving maternal well-being. However, it is often hindered by low knowledge, self-efficacy, and social support. Technological innovations such as mobile applications and health services have great potential in providing social support and needs-based education. Integrated applications can be a solution to strengthen the support system for primiparous mothers in an inclusive, accessible, and sustainable manner. In conclusion, social support plays a central role in maintaining the mental health of primiparous mothers. Integrating community-based, family-based, and technology-based approaches is a promising strategy for creating an inclusive, effective, and sustainable support system for postpartum mothers.

Keywords: Social support, primiparous mothers, digital health applications

O-T01D-0239

Associations of women's and mother's anxiety and depression with health behaviour, child physical illness and childcare seeking

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Abstract

Background: In this study, mothers and women from Nepal were asked to examine the relationships between their generalized anxiety disorder (GAD) and major depressive disorder (MDD) and health risk behaviours, physical illness in their children, and seeking childcare.
Method: We made use of the cross-sectional Nepal Demographic and Health Survey from 2022, which provided nationally representative data on women (N=7442) and mothers of children under five (N= 2126). We used binary logistic regression to estimate associations between exposure categories (no MDD and no GAD, MDD or GAD, and MDD and GAD) and each woman's health behaviour, child illness, and childcare seeking outcomes.
Results: The prevalence of MDD or GAD and both MDD and GAD was 5.3% and 3.8% among women, respectively, and 5.4% and 3.5%, respectively, among mothers of children under the age of five. Multivariable analysis among women found that MDD and/or GAD, were positively associated with smoking (AOR: 1.75, 95% CI: 1.07-2.85), multiple sexual partners (AOR: 2.01, 95% CI: 1.13-3.60), genital sore/ulcer (AOR: 2.68, 95% CI: 1.51-4.78), and genital discharge (AOR: 2.21, 95% CI: 1.59-3.07), and a negative association with can refuse sex (AOR: 0.53, 95% CI: 0.34-0.83). Among mothers with under 5-year-old children, MDD and/or GAD were significantly positively associated with diarrhea (AOR: 2.11, 95% CI: 1.25-3.76), fever (AOR: 2.69, 95% CI: 1.61-4.48), cough (AOR: 2.71, 95% CI: 1.63-4.49), and significantly negatively associated with sought medical treatment for diarrhea (AOR: 0.17, 95% CI: 0.10-0.29), provision of zinc (AOR: 0.23, 95% CI: 0.13-0.41) and sought medical treatment for fever/cough (AOR: 0.51, 95% CI: 0.26-0.99)
Conclusion: Prevention of MDD and/or GAD could lead to reduction of health risk behaviours among women and problematic early childhood outcomes as well as poor health care seeking among mothers of under 5-year-old children in Nepal.Keywords: Nepal, mental health, health behaviours, child health outcomes
Field: Disease Control & Health Education
Keywords: Nepal, mental health, health behaviours, child health outcomes

O-T01A-0241

Medication Adherence in Patients with Hypertension: A Systematic Review

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Abstract

Medication adherence plays a critical role in the effective management of hypertension. Various factors contribute to the discrepancy between population-level hypertension control goals and the actual rates of control. One key factor is the degree of adherence to prescribed treatment. This systematic review aims to identify and evaluate the factors associated with medication adherence among patients with hypertension. This systematic review was conducted in accordance with the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Comprehensive literature searches were performed using open-access databases such as PubMed, ScienceDirect, Wiley Online Library, and ProQuest. The initial database search yielded 1,658 articles, of which 29 studies met the inclusion criteria after screening. The identified factors influencing medication adherence were classified into four categories: individual internal factors, health care facility factors, medication-related factors, and clinical factors. Among these, individual internal factors emerged as the most predominant category. However, there are significant interconnections between factors across different categories, which can collectively impact the adherence of hypertension patients to their prescribed treatment regimens. This review identified that the factors influencing medication adherence among hypertension patients can be categorized into individual internal factors, health care facilities, medication-related factors, and clinical factors. However, it was not possible to conclusively determine which specific factors most significantly contribute to non-adherence. Further research, particularly focused on patient-internal factors, is recommended to provide a more in-depth understanding of their impact on medication adherence.

Keywords: Hypertension, Medication Adherence, Blood pressure, Antihypertensive

O-T01D-0243

Risk Behavior Associated with Contracting the Ebola Virus at Funerals: A Study of Liberians Attending the Funerals of Individuals Deceased from Ebola

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Abstract

Introduction: Funeral practices were identified as a significant source of Ebola transmission during the 2014–2016 West Africa Ebola outbreak. This study examines the risk behaviors and the factors contributing to those behaviors that may lead to contracting Ebola at the funerals of EVD victims in Montserrado County, Liberia.

Methods: In 2024, a cross-sectional study using face-to-face interviews was conducted with family members of EVD victims and community leaders in Clara Town and Vai Town, Monrovia, Liberia.

Results: Of 200 participants (mean age: 51.0 years, 69.5% male), 29.5% (59 individuals reported high-risk behaviors defined as kissing the deceased or touching the body without gloves. In the unadjusted analysis, males were significantly more likely to engage in high-risk behaviors compared to females (COR = 2.40, 95% CI: 1.14–5.03). Participants from the Kpelle tribe (Vai Town) demonstrated significantly higher risk behaviors compared to those from the Mandingo tribe (Clara Town) (COR = 3.17, 95% CI: 1.66–6.05). Christians exhibited significantly higher risk behaviors than Muslims (COR = 2.69, 95% CI: 1.42–5.09), and community leaders reported higher levels of risk behaviors than family members (COR = 2.31, 95% CI: 1.23–4.32). In multivariate analysis, only religion remained independently associated with high-risk behavior. Christians were significantly more likely to engage in such behaviors than Muslims (AOR = 2.70, 95% CI: 1.40–5.18).

Conclusion: Kissing the deceased was a key risk behavior for Ebola transmission. Christian affiliation was independently associated with such behaviors. The findings highlight the role of cultural traditions in the spread of Ebola and emphasize the need for culturally informed prevention strategies.

Keywords: Ebola Virus Disease, funeral practices, risk behavior, public health, Liberia, infectious disease transmission

O-T01A-0245

Optimised anthropometric cut-off points for early obesity screening in young Japanese females

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Abstract

Excess body fat is highly linked with development of non-communicable diseases (NCDs), such as cardiovascular disease, type 2 diabetes, and cancers. In order to prevent development of obesity-related NCDs, implementation of early screening of obesity is essential. While Body Mass Index (BMI), Waist circumference (WC), Waist-to-Height Ratio (WHtR) are popular screening indices for obesity, accuracy in screening ability may differ between the indices, partly due to inappropriateness of cut-off points for the target population. This study investigated the appropriateness of abovementioned anthropometric indices using the standard cut-off points in young Japanese females. A total of 78 Japanese females aged between 18-28 years old underwent anthropometry and body composition assessment using dual energy x-ray absorptiometry (DXA, Hologic Horizon). Percentage body fat (%BF) of 30.0% was used as the cut-off point for obesity. ROC analysis was used to determine cut-off points of each index that reflect %BF of 30.0%. The average %BF was 32.3±5.4% and 69.2% of the participants were found to be obese. Youden based optimal thresholds for BMI, WC and WHtR were 19.6 kg/m2, 65.6 cm, and 0.418 respectively with balanced sensitivity (72-74%) and specificity (70-75%). Conventional cut-offs, in contrast, had high specificity (100%) but poor sensitivity (0-7.4%). In conclusion, a considerable proportion of the participants had high adiposity and the standard cut-off points underestimated obesity in this population. Further research is warranted in order to confirm the generalizability and validity of the results.

Keywords: BMI, Waist circumference, WHtR, Percentage body fat, ROC analysis, Screening, young Japanese females.

O-T01D-0247

Social Interaction and Its Influence on Adolescents' Perceptions and Behaviors Related to Sexual and Reproductive Health: Risks and Mitigation Strategies

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Abstract

Adolescents represent a vulnerable population facing various challenges related to sexual and reproductive health. Social interactions, including influences from peers, family, and the broader community environment, play a crucial role in shaping their perceptions and sexual behaviors. This systematic review examines the social factors influencing adolescent sexual behavior and their implications for sexual and reproductive health. This review follows the PRISMA guidelines and conducted a comprehensive literature search across five major databases: CINAHL, Medline, Cochrane Library, PubMed, and ProQuest. Eligible studies included quantitative, qualitative, or mixed-methods research that explored the relationship between social interaction and sexual behavior among adolescents aged 10–19 or young adults aged 20–25. The quality of included studies was assessed using the Critical Appraisal Skills Program (CASP) tool and the Risk of Bias in Non-randomized Studies - of Exposures (ROBINS-E). Out of 1,888 identified articles, 35 studies met the inclusion criteria. The findings revealed that peer influence significantly affects adolescent sexual behavior, particularly regarding early sexual initiation and engagement in risky sexual activities. Family-related factors, such as parental supervision and open communication about sexual health, also play a vital role in shaping adolescent sexual decision-making. In addition, social stigma surrounding contraception and psychosocial factors including emotional stress and social status also influence adolescents' patterns of sexual behavior. Social interaction exerts a multifaceted influence on adolescents' perceptions and sexual behaviors. These findings underscore the need for multidimensional approaches in adolescent sexual and reproductive health interventions, emphasizing the importance of strengthening family communication, enhancing community-based sex education, and implementing strategies to reduce social stigma.

Keywords: Social Interaction, Adolescent Sexual Behavior, Peer Influence

O-T01D-0250

Game-Based Learning to Improve Humanism and Altruism of Health Science Profession: Systematic Review

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Abstract

Background: Humanism and altruism are essential competencies in healthcare professions. However, studies indicate a decline in empathy and moral sensitivity during professional training. Game-based learning (GBL) has been increasingly implemented to strengthen humanistic values, yet systematic evidence on its effectiveness remains limited.
Objective: This systematic review aims to identify and analyze the effectiveness of GBL in enhancing humanistic and altruistic competencies among health science students and professionals.
Methods: A comprehensive literature search was conducted across five databases (PubMed, ScienceDirect, Cochrane Library, ProQuest, and JSTOR) for publications from 2010 to 2024. Eligible studies included experimental or quasi-experimental designs that evaluated the impact of GBL on empathy, moral sensitivity, professional reflection, or humanistic attitudes. Risk of bias was assessed using the CASP and STROBE checklists.
Results: A total of 5,574 records were identified, with 10 studies meeting the inclusion criteria. Most studies employed quasi-experimental designs, with one multicenter randomized controlled trial (RCT). Interventions ranged from computer simulations and board games to escape rooms and scenario-based role-playing. Nearly all studies reported significant improvements in empathy, moral sensitivity, and professional reflection post-intervention. The RCT demonstrated high methodological quality, while most other studies had moderate risk of bias due to limitations in randomization and blinding.
Conclusion: The findings support the effectiveness of GBL as an innovative strategy to foster humanistic and altruistic values in health education. However, successful implementation depends heavily on intervention design and methodological rigor. Further research with robust designs and long-term evaluations is needed to ensure the sustainability of GBL's positive impact on value-based professional practice.
Keywords: game-based learning, humanism, altruism, empathy, health education

O-T01D-0259

The Role of Community Engagement in HIV Prevention: A systematic review

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Abstract

Key populations such as female sex workers (FSWs), men who have sex with men (MSM), people who inject drugs (PWID), and transgender individuals remain disproportionately affected by HIV globally. Community engagement has emerged as a critical strategy to address structural vulnerabilities and improve prevention outcomes. However, the evidence on its effectiveness remains fragmented. This systematic review synthesizes mixed-methods empirical evidence on the role of community engagement in HIV prevention among key populations, focusing on behavioral, biomedical, and social outcomes. A comprehensive literature search was conducted across PubMed, Scopus, Web of Science, ScienceDirect, and Google Scholar for studies published between 2005 and 2024. Eligible studies included empirical research (quantitative, qualitative, or mixed-methods) that examined community engagement interventions targeting key populations and reported HIV prevention-related outcomes. Study quality was appraised using CASP, ROB2, ROBINS-I, and MMAT tools. Findings were synthesized narratively due to heterogeneity in designs and outcomes. Eleven studies met inclusion criteria, covering diverse interventions such as peer-led education, community mobilization, savings groups, and CBO engagement. Most studies focused on FSWs across India, Tanzania, Canada, and South Africa. Community engagement was associated with improved condom use, increased HIV testing uptake, reduced HIV/STI incidence, enhanced empowerment and solidarity, and, in one case, high cost-effectiveness ($52 per DALY averted). One RCT demonstrated a significant reduction in HIV incidence (RR = 0.38; p = .047). Qualitative studies highlighted empowerment, safety, and collective agency as key mechanisms of impact. Community engagement plays a vital role in HIV prevention among key populations by addressing behavioral, biomedical, and structural determinants of risk. These findings support the integration of community-led approaches into national HIV strategies and call for sustained investment in participatory, rights-based interventions.

Keywords: HIV prevention, community engagement, empowerment

O-T01D-0261

Nurse-Midwifery Led Care Prevention Model of Pregnancy Complications: A Systematic Review

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Abstract

Pregnancy complications like preeclampsia, GDM, anemia, IUGR, and excessive weight gain contribute significantly to maternal and fetal health risks. Nurses and midwives play a key role in prevention, but evidence on their effectiveness remains limited and fragmented. This systematic review aims to examine the effectiveness of nursing or midwifery-led care approaches in preventing pregnancy complications by identifying the types of interventions implemented, the modes of delivery used, the complications targeted, and the theoretical frameworks applied. This review followed PRISMA 2020 guidelines. Electronic databases including PubMed, Scopus, ScienceDirect, CINAHL, Wiley Online Library, ProQuest, and Google Scholar were searched for studies published between 2000 and 2025. Eligible studies included randomized controlled trials (RCTs), quasi-experimental studies, and pre-post studies involving nursing or midwifery-led interventions aimed at preventing pregnancy complications. Data extraction and quality appraisal were conducted using JBI tools, the Cochrane RoB 2 for RCTs, and ROBINS-I for non-RCTs. A narrative synthesis approach was used due to heterogeneity in interventions and outcomes. Fourteen studies met the inclusion criteria, comprising eight RCTs and six non-RCTs. Interventions included health education, lifestyle counseling, yoga, dietary guidance, and screening, and were delivered via face-to-face sessions, printed materials, multimedia tools, and mobile messaging. Most interventions targeted preeclampsia, followed by GDM, IUGR, anemia, and excessive GWG. Statistically significant improvements were reported in knowledge, behavior, and clinical outcomes such as reduced incidence of preeclampsia (e.g., $p=0.04$), improved dietary literacy ($p<0.001$), and increased screening rates (RR=4.30). Six RCTs were judged to have low risk of bias, while non-RCTs ranged from moderate to serious risk. Nursing and midwifery-led care interventions are effective in preventing a range of pregnancy complications. These interventions, especially those that are theory-based and context-sensitive, contribute to improved maternal outcomes and support the integration of nurses and midwives into comprehensive antenatal care models. Policymakers and health systems should prioritize investment in such approaches to enhance maternal health globally.

Keywords: pregnancy complications, nursing care, midwifery-led care

O-T01D-0262

Determinants of Growth and Development in Stunted Toddlers: A Systematic Review of Retrospectives studies

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Abstract

Stunting affects over 148 million children under five globally and poses long-term risks to cognitive, behavioral, and health outcomes. While its causes have been widely studied, few reviews have synthesized retrospective evidence on early-life determinants influencing both growth and development in stunted toddlers. This review aims to systematically assess retrospective observational studies on factors affecting growth and development in stunted children under five. This review followed PRISMA guidelines and included retrospective cohort, case-control, and secondary data studies published in peer-reviewed journals. Six databases (PubMed, Scopus, Web of Science, CINAHL, Embase, and Google Scholar) were searched without time restrictions. Eligible studies included stunted children aged 0–5 years and evaluated determinants associated with growth or developmental outcomes. Data were extracted into a standardized table, and quality was assessed using the Newcastle-Ottawa Scale (NOS) and risk of bias using the ROBINS-I tool. A narrative synthesis approach was used due to heterogeneity in study designs and outcomes. Thirteen studies met inclusion criteria, with sample sizes ranging from 51 to 33,599 participants. Most were conducted in Indonesia, while others came from Rwanda, Iran, South Africa, and Japan. Determinants of stunting included maternal characteristics (height, education, age at pregnancy), environmental exposures (unsafe water, sanitation, heavy metals), nutritional status (prenatal food insecurity, poor feeding practices), and biological factors (low birth weight, prematurity). Only two studies assessed developmental outcomes, finding that early stunting, low maternal education, and limited psychosocial stimulation were associated with poorer cognitive development. Seven studies were rated as good quality, five as moderate, and one as low-moderate. Risk of bias was moderate in most studies, and serious in four. Stunting and its developmental impacts stem from maternal, nutritional, environmental, and socioeconomic factors, especially within the first 1,000 days. While growth has been widely studied, developmental outcomes are less explored in retrospective studies. There is an urgent need for integrated, context-specific interventions and better data to guide prevention.

Keywords: Stunting, child development, growth outcomes

O-T01B-0277

Analysis of Factors Influencing Prevention and Treatment Behaviors Against Scrub Typhus Among Rural Residents in High-Incidence Areas of Jiangxi Province Based on the Health Belief Model

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Abstract

Background: Scrub typhus is a re-emerging vector-borne disease that poses significant public health challenges in rural China. Understanding the behavioral determinants of disease prevention is essential to improve health outcomes in high-incidence regions. This study aimed to analyze factors influencing scrub typhus prevention and treatment behaviors among rural residents in high-risk areas of Jiangxi Province using the Health Belief Model (HBM).

Methods: From December 2024 to April 2025, a cross-sectional survey was conducted among 1,589 rural residents in endemic areas. Data collected included sociodemographic characteristics, HBM dimensions (perceived susceptibility, severity, benefits, barriers, and self-efficacy), and prevention and treatment behaviors. Pearson correlation and stepwise multiple linear regression were used to examine associations and identify predictors.

Results: The average score for prevention and treatment behaviors was 0.33 (95%CI: 0.30-0.35). Behavioral scores differed significantly by age, marital status, occupation, education, and household income ($P < 0.001$). The mean HBM score was 3.73 (95%CI: 3.71–3.75), with perceived severity scoring highest and perceived barriers lowest. Total HBM score showed a significant positive correlation with preventive behavior ($r = 0.46$, $P < 0.001$). All five HBM dimensions were positively associated with behavior. Regression analysis revealed that age, education, occupation, marital status, and HBM score were independent predictors of prevention and treatment behavior ($P < 0.05$).

Conclusions: Health beliefs play a crucial role in influencing scrub typhus prevention and treatment behaviors among rural residents in Jiangxi Province. Targeted interventions that strengthen awareness and self-efficacy while addressing perceived barriers may enhance disease prevention efforts in endemic communities.

Keywords: Scrub Typhus; health belief model; prevention and treatment behaviors

O-T01D-0279

Model For Controlling Post-Partum Blues Based On Spiritual Therapy

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Abstract

Introduction: The postpartum period is a critical phase experienced by every mother after giving birth, which not only brings physical changes but also affects the mother's mental and emotional condition. Postpartum blues is one of the problems experienced by postpartum mothers, characterised by rapid mood swings, anxiety, tearfulness, and feelings of helplessness, which usually appear on the third to fifth day after delivery. If left untreated, this condition can develop into more serious postpartum depression and even postpartum psychosis, which can have a negative impact on the relationship between mother and baby and the overall development of the child. According to the WHO, postpartum blues affect 300 to 750 out of every 1,000 mothers worldwide. In developing countries, the prevalence rate of postpartum blues is higher, ranging from 26% to 85%, highlighting the importance of prioritising maternal mental health after childbirth.
Objective: To examine and develop a model for controlling postpartum blues through spiritual therapy.
Method: Using the Scopus database analysed using Excel, Open Refine, Bibliometric (Biblioshiny and VOS Viewer (v.1.6.20). The data used was extracted from the Scopus database using the keywords 'postpartum blues' OR 'postpartum mood' OR 'postpartum mood disorder' OR 'baby blues' OR 'Matern* Blues' OR 'matern* mood' OR 'postpartum emotional changes' AND Therapy OR management OR treatment OR interven* OR Car* OR support", on 3 July 2025 at 08:30.
Results: Initial online searches yielded 867 data points, and data cleaning yielded 565 data points. The results of bibliometric analysis of spiritual therapy as interventions for postpartum blues still have potential for further research.
Conclusion: The importance of developing spiritual therapy interventions in controlling postpartum blues.
Keywords: Postpartum blues, Spiritual Therapy

O-T01B-0285

Systematic Review Evidence for Neglected Tropical Diseases in the Asia-Pacific Region

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Abstract

Background: Neglected Tropical Diseases (NTDs) continue to impose a significant public health burden across the Asia-Pacific, particularly in low- and middle-income countries. These diseases disproportionately affect vulnerable populations in rural and underserved areas, where weak health infrastructure, environmental change, and limited surveillance systems exacerbate transmission and hinder control efforts. Findings from high-quality systematic reviews can support effective decision-making; however, their availability is unknown.
Methods: This study conducted a systematic overview of reviews to assess the availability, quality, and policy relevance of existing evidence on NTDs in the region. Systematic and scoping reviews, economic evaluations, and policy briefs published between 2004 and 2025 were sourced from HealthEvidence.org, HealthSystemsEvidence.org, and DARE. Reviews were mapped using the Social-Ecological Model and classified by intervention strategy (e.g., mass drug administration, vaccination, vector control). Quality was appraised using AMSTAR and HEQAT tools.
Results: Out of 589 records screened, 35 systematic reviews related to NTDs were included, with only 18 rated as high quality. Dengue, schistosomiasis, and leishmaniasis had the most review coverage, while diseases like yaws, snakebite envenoming, and dracunculiasis were critically underrepresented. Many reviews were outdated or lacked methodological rigour, limiting their utility for policy-making. Examples of supported strategies included dengue vector control and TAK-003, Schistosomiasis included mass drug administration and WASH. For rabies, canine vaccination and Post-Exposure Prophylaxis were both cost-effective. Evidence mapping revealed gaps in community-based interventions, health education, and cost-effectiveness analyses for several NTDs.
Conclusion: The fragmented and inconsistent quality of systematic reviews on NTDs for the region undermines evidence-informed public health decision-making. There is an urgent need for updated, high-quality, context-specific reviews to support the development of effective disease control strategies. Strengthening regional capacity for evidence synthesis and integrating review databases will be essential to advancing equitable health outcomes.
Keywords: Neglected Tropical Diseases, Systematic Review, Asia-Pacific, Evidence-Based Public Health, Health Policy, Disease Mapping, AMSTAR, HEQAT

O-T01D-0297

Integrating Behavioral and Structural Theories in Blood Pressure Control: A Systematic Review of Theory-Guided Interventions

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Abstract

Despite being a major modifiable risk factor for cardiovascular disease, hypertension remains poorly controlled globally, especially in low- and middle-income countries. Theory-based interventions are increasingly used to enhance health outcomes by addressing behavioral, cognitive, and structural determinants of hypertension. However, the specific application and effectiveness of such theories in blood pressure (BP) control remain underexplored.

This systematic review aims to identify and evaluate studies that apply theory-based interventions for blood pressure control, focusing on four key frameworks: the Health Belief Model (HBM), Social Cognitive Theory (SCT), Social Determinants of Health (SDH), and Participatory Action Research (PAR).

A systematic literature search was conducted across six databases (PubMed, ScienceDirect, Wiley Online Library, JSTOR, CINAHL, and Cochrane Library) covering publications from 2011 to March 2025. Studies were eligible if they explicitly applied a recognized theoretical framework (HBM, SCT, SDH, or PAR), targeted individuals with hypertension or at risk of elevated BP, and reported hypertension-related outcomes (direct measures such as systolic/diastolic BP or indirect measures such as knowledge, self-efficacy, or adherence). Eligible designs included randomized controlled trials, quasi-experimental, cohort, qualitative, and mixed-methods studies. Exclusion criteria were: reviews, editorials, conference abstracts, studies without BP-related outcomes, non-theory-based interventions, or those focused on non-hypertensive conditions. Methodological quality was assessed using JBI, CASP, and MMAT tools. A narrative synthesis grouped findings by theoretical framework.

A total of 30 eligible studies were included, conducted across diverse populations and countries. HBM and SCT were the most commonly applied theories and were associated with improvements in hypertension knowledge, self-efficacy, behavioral adherence, and BP control. Interventions based on SDH and PAR emphasized community engagement and structural barriers and demonstrated strong potential for sustainability and contextual adaptation. Most studies reported positive health outcomes, although variation existed in follow-up duration and depth of theory integration.

Theory-based interventions provide a valuable foundation for hypertension control by targeting both individual behavior and structural determinants. Integrating multiple theories may enhance effectiveness and sustainability.

Hypertension, blood pressure control, theory-based intervention

O-T01D-0306

Mindfulness-Based Interventions for Pregnant Couples: A Scoping Review of Global Evidence with Implication for Indonesia

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Abstract

Maternal health prior to and during pregnancy is a critical determinant of child development. Supporting both parents' physical and psychological well-being, particularly through mindfulness, which promotes emotional regulation and stress reduction, is essential for improving maternal and neonatal outcomes. This scoping review synthesizes evidence from 18 mindfulness-based interventions involving couples during pregnancy, identified through a systematic search using the PRISMA framework across PubMed and Google Scholar. Most interventions emphasized emotional and relational well-being and were delivered through in-person workshops or structured training. Results showed improvements in stress management, emotional regulation, communication, and relationship satisfaction. While some studies explored online formats, these were primarily effective for emotional outcomes, reinforcing the value of in-person or hybrid models. For Indonesia, where paternal involvement in maternal care remains limited and perinatal mental health support is still developing, this study offers important insights. It highlights the potential of culturally tailored, couple-focused mindfulness programs to enhance maternal health, strengthen partner support, and prepare families for parenthood. Expanding such interventions through blended delivery formats and training local facilitators may increase accessibility and sustainability. These findings can guide future research and inform program and policy design in Indonesia to advance equitable maternal and child health.

O-T01B-0309

Rodent Control (Rats) Associated with Leptospirosis: Systematic Review

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Abstract

Background: Leptospirosis is a zoonotic disease that remains a public health problem in various tropical countries, including Indonesia. Rats, as the primary reservoir of *Leptospira spp*., play a crucial role in the chain of transmission of this disease. Many rat control strategies have been implemented, but their effectivness varies depending on the approach used and community involvement. Comprehensive studies on rodent control interventions and their effectiveness in the context of leptospirosis prevention are still limited. This study aims to evaluate rat control interventions associated with leptospirosis control efforts, with a focus on method effectiveness, community involvement, and rat nest site characteristics.

Methods: A literature search was conducted through five major databases (PubMed, ScienceDirect, Cochrane Library, Wiley, and Google Scholar) using a combination of keywords in English and Indonesian. Studies that met the inclusion criteria were evaluated and analyzed narratively according to the PRISMA 2020 guidelines. A total of 13 selected articles were evaluated for quality using the JBI and ROBINS-I tools.

Results: The synthesis of rat control interventions suggests three main approaches: mechanical (trapping), chemical (rodenticides), and educational-participatory. Community-based interventions and cross-sectoral approaches (such as One *Health*) have demonstrated greater long-term effectiveness than purely technical interventions. Conversely, the use of rodenticides and culling strategies has had short-term impacts and, in some studies, even increased the risk of Leptospira exposure due to ecological effects. Community involvement has been shown to increase the success of interventions, particularly in densely populated and endemic areas.

Conclusion: Rat control strategies in the context of leptospirosis require an integrative and sustainable approach. Interventions that actively involve the community and are implemented across sectors have proven to be more effective and contextual. The results of this review provide a basis for strengthening community-based leptospirosis control policies and programs.

Keywords: leptospirosis, rat control, community intervention.

O-T01D-0311

Empowering Female Youth among Indigenous Orang Asli for One Health: A Community-Based Participatory Approach to Zoonotic Disease Prevention in Rural Malaysia

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Abstract

Background: Indigenous Orang Asli communities face heightened risks from zoonotic diseases due to close human–animal–environment interactions. Female youth, as caregivers and community influencers, play a pivotal role but often lack access to culturally appropriate health education.
Objective: To empower female youth in the Semai Orang Asli community with knowledge and leadership capacity for zoonotic disease prevention and environmental sustainability using a Community-Based Participatory Research (CBPR) approach.
Methods: From August 2023 to January 2024, a CBPR framework was implemented in Ngenri War, Tapah, Perak. Eligible participants were female youth aged 15–30 years, prioritising those active in community activities; those unwilling to consent were excluded. Interventions included One Health modules developed in the Semai language, with videos acted and directed by local youth and storytelling by elders translated into Malay, incorporating traditional beliefs on animals, disease transmission, and remedies. Community mapping involved youth, guided by elders, physically drawing maps of their village to mark hunting areas, water sources, and zoonotic risk sites. Baseline surveys and interviews assessed knowledge, attitudes, and practices, with follow-up evaluation three months after training.
Results: Eighty-five female youth participated. Knowledge of ecosystem and environment increased from 56 percent to 82 percent, zoonotic diseases from 48 percent to 79 percent, and human health from 61 percent to 86 percent. Community mapping enhanced recognition of local risk zones and supported collective action. Qualitative findings revealed stronger confidence in discussing disease prevention, improved hygiene practices, and greater involvement in environmental stewardship.
Conclusion: This CBPR approach, integrating language, culture, and traditional knowledge, effectively enhanced indigenous youth engagement in zoonotic prevention and sustainability. The model offers a replicable framework for similar communities regionally.
Keywords: One Health, Community-Based Participatory Research, Orang Asli, zoonotic diseases, environmental sustainability.

O-T01D-0313

Confidence over Concern: A Structural Equation Model of Hypertension Beliefs and Health Behaviors among Indonesian Adolescents

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Abstract

This study investigates adolescent health behavior through the lens of the Hypertension Belief Model (HtBM), focusing on the psychosocial determinants of dietary choices and physical activity among teenagers in South Sulawesi, Indonesia. Using a cross-sectional design and Structural Equation Modeling (SEM-PLS), data were collected from 431 adolescents across four health-oriented academic institutions. The study aimed to assess how perceived susceptibility, severity, benefits, barriers, socio-economic impact, and self-efficacy influence healthy lifestyle behaviors.

Results revealed that self-efficacy was the strongest and only significant predictor of physical activity ($\beta = 0.395$, $p < 0.01$), while other constructs—perceived susceptibility, severity, barriers, and benefits—demonstrated weak or non-significant associations with both physical activity and dietary behaviors. These findings highlight a critical cognitive-behavioral gap, where awareness of hypertension risks does not translate into preventive action. The ineffectiveness of risk-oriented constructs reflects adolescents' present-focused mindset, social influences, and limited decision autonomy, especially regarding food choices. Perceived barriers showed a marginal negative association with physical activity, further emphasizing the dominance of internal motivation over structural limitations.

This study underscores the limitations of applying the HtBM as a standalone framework for adolescent health promotion. It recommends integrating motivational, environmental, and social norm theories into future interventions. Policy implications include designing school-based programs that build self-efficacy, restructure food environments, and promote peer-led engagement to foster sustainable behavior change. Ultimately, empowering adolescents through culturally relevant, strength-based strategies may yield more effective outcomes than traditional health-risk messaging.

Keywords: Hypertension Belief Model; adolescent health behavior; self-efficacy; SEM-PLS; physical activity; food choice; health promotion policy

O-T01A-0332

Prediction of kidney function decline by gut microbiota and metabolome in kidney patients

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Abstract

Chronic kidney disease (CKD) is a long-term condition defined by persistent kidney abnormalities for over three months. A subset of CKD patients experiences an unexplained, rapid decline in kidney function. Emerging evidence suggests the gut-kidney axis plays a crucial role in CKD progression, wherein gut dysbiosis, systemic inflammation, and comorbidities contribute to metabolic dysregulation. Altered gut microbiota may be closely linked to rapid kidney function decline, though the mechanisms remain unclear.

This study employed a multi-omics approach, integrating 16S rRNA sequencing, metabolomic profiling, and clinical data, to investigate the relationship between gut microbiota composition, circulating metabolites, and estimated glomerular filtration rate (eGFR) decline in CKD patients. Patients were categorized based on eGFR progression rates, and microbial-metabolite interactions were analyzed. A machine learning model was constructed to identify potential microbial and metabolic biomarkers predictive of rapid CKD progression.

CKD patients with rapid eGFR decline exhibited distinct gut microbial profiles, characterized by reduced abundance of short-chain fatty acid (SCFA)-producing bacteria and increased presence of protein-hydrolyzing, uremic toxin-generating bacteria. Metabolomic analysis revealed elevated levels of indoxyl sulfate and p-cresyl sulfate in rapid progressors, indicating impaired detoxification pathways. Key microbial taxa and metabolites were identified as strong predictors of kidney function decline, and the machine learning model achieved high accuracy in classifying progression risk. Findings suggest that gut microbial dysbiosis may accelerate kidney damage through the accumulation of uremic toxins and disrupted SCFA metabolism. These insights lay the foundation for precision medicine strategies, including tailored dietary interventions and microbiota-targeted therapies in CKD management.

Keywords: Chronic kidney disease, kidney function decline, gut microbiota, metabolomics, uremic toxins, metabolic pathway, precision medicine

O-T01D-0333

The Relationship Between Social Stigma and Female Sex Workers' Access to HIV Health Services: A Cross-Sectional Study in Palopo City

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Abstract

Background: Female Sex Workers (FSWs) are a key population at high risk of HIV transmission. Social stigma remains a major barrier to HIV prevention and treatment, influencing health-seeking behaviors and limiting access to HIV testing, counseling, and antiretroviral therapy (ART). The underutilization of HIV related health services among FSWs highlights the need to examine the role of stigma in service access.

Objective: This study aims to analyze the relationship between social stigma and access to HIV-related health services among FSWs in Palopo City.

Methods: A cross-sectional study was conducted among 165 FSWs in Palopo City between May and July 2025. Respondents were recruited using time-location sampling. Data were collected using structured questionnaires and measured with the Sex Worker Stigma Index ($\alpha = 0.85$). Logistic regression was applied to calculate the Adjusted Odds Ratio (OR) and 95% Confidence Interval (CI).

Results: Findings revealed that 58.8% of respondents experienced high social stigma, while only 41.2% had adequate access to HIV services. Multivariate analysis showed a significant association between social stigma and HIV service access ($p < 0.001$). FSWs with high stigma were 3.9 times less likely to access services compared to those with low stigma (OR = 0.26; 95% CI: 0.12–0.57).

Conclusion: Social stigma substantially reduces FSWs' access to HIV-related services in Palopo City. Community-based interventions and FSW-friendly health services are critical to improving service utilization. Strengthened collaboration among government agencies, healthcare providers, and community organizations is essential to reduce stigma and expand access to HIV prevention and treatment.

Keywords: Social stigma, female sex workers, healthcare access, HIV

O-T01A-0341

Diabetes Health Literacy Scale: Translated for Malaysian Diabetic Patients

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Abstract

Background: Diabetes health literacy enables patients to access, interpret, and apply health information for effective self-management. In Malaysia's East Coast, particularly Terengganu and Kelantan, English-based tools may not reflect local language and cultural contexts. This study aimed to translate and validate the Diabetes Health Literacy Scale (DHLS) into Malay for diabetic patients in the region.
Objective: To translate the DHLS into Malay and evaluate its content validity, face validity, construct validity, and reliability among East Coast diabetic patients.
Methods: A cross-sectional validation study was conducted at Hospital Pakar Universiti Sains Malaysia from January to February 2025. The 14-item DHLS underwent a ten-step translation process: preparation, forward translation, reconciliation, back translation, expert review, harmonization, cognitive debriefing, review, proofreading, and final reporting. Content validity was assessed by ten diabetes experts (I-CVI ≥ 0.78; S-CVI/Ave calculated). Face validity involved 30 Malay-speaking diabetic patients (aged 18–60, receiving medication ≥ 6 months) who rated clarity and relevance (I-FVI ≥ 0.75). Construct validity and reliability were tested with 200 patients using confirmatory factor analysis (CFA), factor loadings ≥ 0.50, Cronbach's alpha, and Raykov's rho (≥ 0.70).

Results: All items showed I-CVI 0.70–1.00, except HL3 (0.60), which was removed. S-CVI/Ave = 0.90. I-FVI scores ranged 0.73–0.97. CFA supported a three-factor model (Informational, Numerate, Communicative) with good fit (χ^2/df = 2.31, CFI = 0.956, TLI = 0.945, RMSEA = 0.080, SRMR = 0.039). Factor loadings ranged from 0.598 to 0.889 ($p < 0.001$). Cronbach's alpha was 0.86 overall, with subscales 0.81–0.85. Raykov's rho exceeded 0.75 across all subscales.
Conclusion: The Malay DHLS is a valid and reliable instrument for assessing diabetes health literacy in East Coast Malaysia. It can be used to identify literacy gaps and support tailored educational strategies.
Keywords: Diabetes health literacy, Malay translation, validation, CFA, East Coast Malaysia

O-T01D-0342

Knowledge, Attitude, and Training Needs Among High School Students in Ho Chi Minh City, Vietnam: A Cross-Sectional Study

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Abstract

Background: First aid is a critical skill that enables individuals to provide immediate assistance during emergencies, reducing injury severity and improving survival rates. Despite its importance, first aid knowledge and training remain limited among high school students in developing countries. This study assessed first aid knowledge, attitudes, and training needs among high school students in Ho Chi Minh City, Vietnam.

Methods: A cross-sectional study was conducted in 21 high schools using a self-administered questionnaire. Knowledge was assessed through 15 multiple-choice questions, attitudes were measured on a 5-point Likert scale, and training needs for first aid were evaluated based on demand, preferences, and accessibility.

Results: From October to December 2024, 1,988 students participated. Only 39.8% demonstrated good first aid knowledge, with low correct responses for the ABCDE approach (49.12%) and cardiopulmonary resuscitation sequence (20.73%). While 58.1% had a favorable attitude, only 39.3% had received formal first aid training, and 14.94% had hands-on experience. Multivariable analysis showed that females (adjusted odds ratio [aOR]: 1.70, 95%CI: 1.41–2.05) and public school students (aOR: 1.63, 95%CI: 1.34–1.99) had better knowledge. Higher academic performance was associated with more excellent knowledge, whereas average conduct was linked to lower knowledge. The most demanded training topics were stroke (54.8%), cardiopulmonary resuscitation (44.7%), and drowning (33.2%). Most students (68.3%) suggested training every six months.

Conclusion: Our study found that only 39.8% of high school students had good first aid knowledge despite their favorable attitudes, while the demand for training was very high. This highlights the need to integrate hands-on first aid education into both curricular and extracurricular programs with standardized training and regular reviews to enhance knowledge retention and emergency preparedness, particularly focusing on male and private school students in developing countries.

Keywords: First aid, High school students, Knowledge, Attitudes, Training needs.

O-T01A-0343

Culturally responsive mosque-based health promotion intervention increased self-reported mammogram uptake among Malay-Muslim women in Singapore

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Abstract

Background: Despite having a national mammogram screening programme since 2002, ethnic disparity in breast cancer has persisted – mortality rate is highest, and mammogram screening is lowest among women of Malay ethnicity. This study determined the effectiveness of mosque-based culturally responsive health promotion intervention in increasing mammogram uptake and explored multiple stakeholders' perception of the intervention.

Methods: This is a mixed-methods study of qualitative inquiry nested within a cluster randomized controlled trial. Between February – June 2023, three intervention mosques received 1-hour education session by religious teacher and healthcare professional on breast cancer and mammogram which includes two videos from a screener and a survivor, alongside deployment of Mammobus. Three control mosques received similar education session on dietary care. We determined relative risk of self-reported mammogram uptake and changes in knowledge, beliefs and perception at follow-up using mixed-effect modified Poisson regression. We explored perception of the intervention using focus group discussions and in-depth interviews 8-12 weeks after follow-up.

Results: We recruited 34 and 32 participants in Intervention and Control groups respectively (n=66). Intervention group reported 20.70 (95%CI: 3.93, 108.94) times the mammogram uptake of Control group and were 0.25 (95% CI: 0.11, 0,59) as likely as Control group to perceive "I must have symptoms before deciding to go for mammogram". Six focus group discussions among ten screeners, three healthcare professionals and six religious teachers, and three in-depth interviews among three non-screeners highlighted the role of religious teacher in attracting women to learn about health and obtain mammogram, the role of healthcare professional in correcting misinformation and discussing health credibly, and the role of Mammobus in increasing convenience and cultural acceptability for mammogram service.

Conclusion: Multicomponent culturally responsive intervention incorporating cues from religious teacher and healthcare professionals, and deployment of Mammobus has the potential to increase mammogram uptake in a mosque-based setting.

Keywords: Breast cancer, mammogram, health promotion, mosque, culture

O-T01A-0355

Diverse Terminologies and Definitions of Metabolically Unhealthy Normal Weight (MUNW): A Global Systematic Review

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Abstract

The concept of Metabolically Unhealthy Normal Weight (MUNW) has garnered significant attention due to its paradoxical nature, where individuals with a normal body mass index (BMI) exhibit metabolic disorders typically associated with obesity. This systematic review aims to explore the various terminologies used to describe MUNW, including "Metabolically Obese Normal Weight" (MONW), "Normal Weight Obesity" (NWO), and informal terms like "Skinny Fat" and "Thin Fat". In total, there were 45 different abbreviations and terminologies found that were used to describe metabolic risk among individuals where 41 of those used BMI categories as a key criterion. Of which 14 of those terminologies were of normal weight BMI which includes MUNW. These terms capture different aspects of the condition, from excess visceral fat to muscle loss, all of which contribute to metabolic dysfunction despite a normal outward appearance.

The review synthesizes different findings as well as the global prevalence of MUNW and its associated health risks, such as cardiovascular disease, insulin resistance, non-alcoholic fatty liver disease (NAFLD) and type 2 diabetes. The epidemiology of MUNW varies across populations, with higher prevalence rates reported in specific regions, particularly in Asia and among older adults. Additionally, the review highlights discrepancies in diagnostic criteria, ranging from the use of metabolic syndrome markers to other risk indicators like elevated LDL cholesterol and insulin resistance.

The global health implications of MUNW are profound, as individuals with this condition are often overlooked in traditional obesity management strategies. The review calls for more standardized screening criteria and targeted interventions to address the hidden metabolic risks within this seemingly healthy population. By examining the varied terminologies and their implications, this paper underscores the need for a nuanced understanding of metabolic health beyond BMI, the need for a

globally accepted terminology for describing MUNW and highlights the urgency of addressing MUNW in global public health initiatives.

Keywords:
Visceral Fat, Visceral Adiposity, Insulin Resistance, Cardiometabolic Risk, Metabolic Syndrome, Global Prevalence, Epidemiology of MUNW, Hidden Obesity, Body Mass Index (BMI) Paradox, Non-obese Metabolic Dysfunction, Public Health, Metabolic Health Disparities, Diagnostic Criteria for MUNW, Chronic Disease Risk, Insulin-resistant non-obese, Lean NAFLD (Non-alcoholic Fatty Liver Disease), metabolic abnormality but normal weight (MAN), metabolically abnormal but normal weight (MANW), Metabolically Abnormal Non-Obese (MANO), metabolically non-healthy non-obese (MNHNO), metabolically obese, non-obese (MONO), metabolically obese but normal-weight (MONW), metabolically unhealthy (MUH), Metabolically Unhealthy Normal Weight (MUHNW), Metabolically Unhealthy Normal Weight (MUH-NW), Metabolically Unhealthy Non-Obesity (MUNO), Metabolically Unhealthy Normal Weight (MUNW), Non-obese NAFLD, Normal Weight Adiposity, Normal-Body-Weight NAFLD (NBW-NAFLD), Normal Weight with Cardiometabolic Risk, Normal Weight Central Obesity (NWCO), Normal Weight Diabetes (NWD), Normal Weight Dyslipidemia (NWD), Normal Weight Obesity (NWO), Normal Weight Metabolically Obese, Obesity-related metabolome, Overfat, Sarcopenic Non-Obese, Sarcopenic Obesity (SO), Thin Fat, Thin on the Outside Fat on the Inside (TOFI), Visceral Fat Obesity (VFO), Skinny Fat, Visceral Fat Area (VFA), Visceral Adiposity with Normal Weight (OB[-]VA[+]), (Normal Weight, Metabolically Abnormal), normal-weight visceral obesity, Metabolically Unhealthy Phenotype with Normal Weight, Normal BMI with High Body-Fat Percentage (BF%), Normal Weight MAFLD (Metabolic Associated Fatty Liver Disease), Lean MAFLD, Lean MASLD (Metabolic Dysfunction-Associated Steatotic Liver Disease), Non-obese MASLD, Latent Obesity, Excess body fat in Normal-Weight Subjects, Visceral Fat Area (VFA) among Normal Weight, Non-Obese Gout, Metabolically Unhealthy Overweight (MUO), Metabolically Unhealthy Underweight (MUHU), Metabolically Unhealthy Underweight (MUHUW).

O-T01A-0366

Assessing Hypercalciuria through Demographic and Biochemical Determinants: Public Health Implications for the Meitei Population of Manipur, Northeast India: A cross-sectional study.

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Abstract

Background: This study aimed to investigates the association of demographic variables and serum calcium with hypercalciuria among the Meitei adult population of Manipur, North-east India.
Methods: The study employs a cross-sectional method where 413 participants (272 females and 141 males) within the age group of 19-60 years were recruited. Multistage sampling method was used to select the participants among five valley districts of Manipur. Relevant information along with blood and random urine samples were collected and urine calcium-creatinine ratio was calculated. One-way ANOVA, Tukey's post hoc test, chi-square test, multinomial logistic regression and AUC analysis were used.
Results: The overall prevalence of hypercalciuria is 18.64%. The incidence of hypercalciuria increases with age, 41-60 age group are 3 times (95% CI: 1.86-5.47; $p<0.001$) more likely to suffer from hypercalciuria than lower 19-40 age group. Significant association ($p<0.05$) between serum calcium level and urine calcium was also found. Hypocalcemic individuals are 3.5 times (95% CI: 1.33-9.31; $p=0.01$) more likely to have hypercalciuria than normocalcemic individuals. AUC analysis shows that urine calcium is the better predictor for hypercalciuria with a value of 0.70.
Conclusion: The study finds a high prevalence rate of hypercalciuria above the global prevalence. This high prevalence of hypercalciuria poses a significant health risk since Manipur has been reported to have a high prevalence of kidney stone. The study's findings suggest that early intervention could improve public health outcomes related to calcium and mineral metabolism, particularly for those ethnic groups who are at high risk.

Keywords: Hypercalciuria, hypercalcemia, hypocalcemia, kidney stone.

O-T01D-0379

Combined lifestyle factors and its association with stroke among rural older adults with hypertension: an empirical study from China

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Abstract

Background: This study aimed to quantify lifestyle levels using a combined lifestyle factor, and to explore its association with stroke among the elderly population with hypertension in rural areas of China.

Methods: The general demographic characteristics, lifestyle behaviors (including sleep, physical activity, diet, and smoking), and other information among 65 years or older individuals with hypertension were investigated through face-to-face interviews from July 1, 2023, to August 31, in Jia County, China. Identify stroke cases by asking the interviewer about their disease history. The combined lifestyle factor is reflected in two indicators: Healthy Lifestyle Score (HLS) and Lifestyle-Concentration Factor (LCF). The association of stroke with HLS and LCF was analyzed by binary logistic regression and restricted cubic splines (RCS).

Results: This study ultimately included 18,425 older adults with hypertension. Among all participants, the prevalence of stroke was 32.55%. The average HLS was 1.94 points, ranging from 0 to 2.94. We found higher LCF for healthy sleep status and refusal to smoke, and lower LCF for physical activity and healthy diet. After adjusting for confounders, we found a negative association between the HLS and the LCF of behaviors such as healthy sleep, adequate physical activity, healthy diet, and refusal to smoke on the prevalence of stroke. Through RCS analysis, we found a non-linear relationship between HLS and LCF stroke risk.

Conclusions: In China, the prevalence of stroke and ischemic stroke is higher among rural older adults with hypertension, and there is room for improvement in their lifestyle practices. Targeted interventions prioritizing physical activity and diet through accessible education platforms could optimize stroke prevention strategies.

Keywords: stroke; healthy lifestyle scores; lifestyle-concentration factor; older adults with hypertension; rural area

O-T01D-0399

Psychosocial interventions and maternal health post-pregnancy loss: A review

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Abstract

Pregnancy loss, including miscarriage and stillbirth, is a significant maternal health challenge, particularly in low- and middle-income countries (LMICs), where women frequently experience psychological distress, including grief, anxiety, and depression. Psychosocial interventions have emerged to address these challenges, encompassing conventional, alternative, technology-based, and social or spiritual approaches. However, most interventions are developed in high-resource settings, limiting their applicability in LMICs due to cultural stigma, digital literacy gaps, and inadequate infrastructure.

This narrative review synthesizes findings from 16 studies published in the last five years, identified through PubMed, Scopus, and Google Schoolar. Interventions were categorized into conventional, alternative, technology-based, and social/ spiritual support.

Findings indicate that conventional approaches effectively reduce anxiety and depression but face implementation barriers in low-and middle-income countries. Alternative therapies offer innovative solutions but require further research for long-term sustainability. Technology-based interventions provide accessibility but are hindered by digital literacy and infrastructure gaps. Social and spiritual support play critical role but lack integration with clinical care.

Overall, while these interventions show potential, most interventions are designed for high-income settings, limiting their applicability in resource-constrained contexts like Indonesia. Research gaps include for culturally sensitive, community-based approaches, long term evaluations, and multidisciplinary frameworks. This review emphasizes the importance of adaptive, inclusive psychosocial interventions to improve maternal mental health after pregnancy loss and support future pregnancies.

Keywords: pregnancy loss; abortus; stillbirth; psychosocial intervention.

O-T01D-0400

The Impact of Emotional Eating on the Mental Health of Children with Obesity through Microbiota- brain -gut – Axis: A Literature Review

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Abstract

Background and Objectives: Childhood obesity is a global health issue affecting 37 million under five years worldwide in 2022. The microbiota-gut-brain axis is used to analyze the complicated interaction between emotional eating and mental health in obese children in this systematic literature review. Primary goal was to understand gut microbiome dysbiosis, stress hormone dysregulation, and emotional eating habits in pediatric obesity through bidirectional communication.
Methods: PubMed, EBSCO, and ProQuest databases were used to review peer-reviewed papers from 2014–2024. Search terms: "childhood obesity," "emotional eating," "microbiota-gut-brain axis," "dysbiosis," "cortisol." Both observational and interventional research on molecular causes of emotional eating in children were considered.
Results: Childhood obesity was linked to anxiety, despair, and emotional dysregulation. Disrupted gut microbiota in obese children caused systemic inflammation and HPA axis disturbance. Elevated cortisol levels, dysregulated neurotransmitter production, and pro-inflammatory cytokines (IL-6, TNF-α, IL-1β) contribute to emotional eating behaviors. These biological vulnerabilities were amplified by familial dysfunction, social stigma, and obesogenic dietary settings. Intervention studies showed that probiotic supplementation, prebiotic therapy, cognitive-behavioral interventions, and mindfulness-based techniques lowered cortisol and improved emotional eating. This research shows a complicated, bidirectional link between gut microbial dysbiosis, stress hormone dysregulation, and emotional eating in obese children. A key mediator of pediatric obesity and mental health is the microbiota-gut-brain axis. Multidisciplinary therapies targeting gut microbiota repair, stress management, and emotional control may help this vulnerable population overcome emotional eating and improve health.
Keywords: Emotional eating, dysbiosis, obesity pediatric, cortisol.

O-T01D-0401

Lifestyle and Hypertension: An Analysis among Women of Reproductive Age in Makassar City

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Abstract

Background: Hypertension in women of reproductive age is often asymptomatic but linked to serious health risks, including cardiovascular and pregnancy complications. Lifestyle factors are key modifiable risks. This study examined the association between lifestyle and hypertension among women in Makassar City, Indonesia.

Methods: This cross-sectional study involved 50 women of reproductive age. Lifestyle was assessed using questionnaires, and blood pressure was measured to determine the status of hypertension. Data were analyzed using chi-square tests.

Results: Findings revealed that among respondents with poor lifestyle habits, 12.5% had prehypertension, 62.5% had stage 1 hypertension, and 25% had stage 2 hypertension. In those with moderate lifestyles, 53.1% were classified as pre-hypertension and 46.9% as stage 1 hypertension, with no cases of stage 2. Among women with healthy lifestyles, 60% experienced pre-hypertension and 40% stage 1 hypertension, again with no stage 2 cases. Statistical analysis confirmed a significant association between lifestyle and the incidence of hypertension ($p = 0.009$).

Conclusion: Lifestyle factors are significantly associated with hypertension in women of reproductive age. Poor lifestyle behaviors substantially increase the risk and severity of hypertension. These findings underscore the importance of health promotion and preventive interventions targeting lifestyle modification to reduce the burden of hypertension and its complications among women in this age group.

Keywords: Lifestyle, Hypertension, Women of Reproductive Age, Makassar City

O-T01D-0421

Lactation and Maternal Metabolic Health: Analyzing Breastfeeding Duration as a Preventive Strategy

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Background: Metabolic syndrome (MetS) is a complex and multifaceted condition affecting approximately 25% of the global population, with notable prevalence among pregnant and breastfeeding women. MetS significantly increases the risk of cardiovascular disease and type 2 diabetes in both mothers and their children.
Methods: This literature review aims to comprehensively evaluate the role of breastfeeding duration as a preventive strategy against metabolic syndrome in postpartum women. The study employs the CIPP evaluation framework (Context, Input, Process, Product) and follows the PRISMA 2020 methodology to review 13 articles published in the Scopus database between 2021 and 2025.
Results: Longer breastfeeding duration is significantly associated with reduced risk of metabolic syndrome, obesity, and cardiometabolic disorders. Exclusive breastfeeding for six months notably lowers the risk of prediabetes and MetS in postpartum women with a history of gestational diabetes. The protective mechanism of breastfeeding operates through a postpartum "metabolic reset," which facilitates fat mobilization, enhances insulin sensitivity, and improves lipid profiles and blood pressure.
Conclusion: Despite its proven effectiveness, challenges such as high pre-pregnancy BMI and body image concerns may affect breastfeeding duration. Therefore, holistic and comprehensive interventions are needed—ones that address not only clinical aspects but also psychosocial factors and systemic support. Breastfeeding should be recognized as a strategic intervention for long-term maternal health promotion, requiring sustained support through education, counseling, and policy integration.

Keywords: Individual Empowerment, Mental Health Promotion, Behavior Change Interventions, Health Belief Model, Digital Health Technologies

O-T01D-0423

The Role of Education in MCI-to-Normal Cognition Reversion Among APOE4 Carriers and Non-Carriers: A Longitudinal Neuroimaging Study

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Abstract

Reversion from mild cognitive impairment (MCI) to normal cognition (CN) represents a potentially modifiable stage in the trajectory of Alzheimer's disease, yet the biological and psychosocial factors that predict such recovery remain poorly understood. Early life education, sex, and APOE4 genotype are proposed to influence the risk of developing dementia and cognitive outcome, but their combined effects on MCI-to-CN reversion have not been comprehensively examined. This study investigated the relationship between education and MCI-to-normal cognition reversion across APOE4 carriers and non-carriers, while adjusting for neuroimaging biomarkers.

Methods: Longitudinal data from 1,510 participants (mean baseline age = 72.55 years; 52.6% male) from the Alzheimer's Disease Neuroimaging Initiative (ADNI) were analysed. Cognitive status was assessed at multiple visits using standard ADNI criteria, with first reversion events defined as MCI→CN or CN→MCI→CN. Time to first reversion was modelled using Cox proportional hazards, adjusting for baseline age, sex, education, hippocampal atrophy slope, and intracranial volume (ICV). Hippocampal atrophy slope was derived from longitudinal MRI volumes normalized by ICV.

Results: Participants were followed for a mean of 49.2 months (SD = 42.9; median = 36; max= 204 months). In *APOE4* carriers (n=633), higher education was significantly associated with greater likelihood of reversion (HR=1.43, p=0.037), and slower hippocampal atrophy was associated with higher chance of reversion (HR=1.74, p=0.009). These associations were not observed in non-carriers. Notably, there was a significant interaction between hippocampal atrophy slope and *APOE4* status, with hippocampal atrophy more strongly linked to reversion among carriers (HR=1.74, p=0.031), suggesting differential relevance of imaging biomarkers across genetic subgroups.

Conclusion: Education and hippocampal atrophy influence cognitive reversion predominantly in *APOE4* carriers. These findings highlight genetic modulation of protective factors in MCI outcomes and the role of education and brain biomarkers in cognitive trajectories, particularly among genetically at-risk individuals.

O-T01B-0429

Effectiveness of community-based interventions in dengue control: a systematic review of case outcomes

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Abstract

Background: Human health outcomes such as dengue incidence or case numbers have rarely been the primary focus of systematic review due to limited available studies. This review aimed to evaluate the effectiveness of non-pharmaceutical, community-based interventions in preventing and controlling dengue transmission, specifically assessing human case outcomes.

Method: A structured electronic search of PubMed, EMBASE, and Web of Science was conducted up to April 2025. Eligible studies involved communities exposed to dengue and evaluated community-based interventions with active participation, including environmental cleaning, source reduction, and communication activities. Interventions relying on chemical use were excluded. Comparators included no intervention, routine vector control, or non–community-based approaches. Primary outcomes were measurable dengue case outcomes, including incidence, prevalence, reported or confirmed cases, and dengue-related hospitalisations.

Results: The effectiveness of case reduction following enhanced community participation ranged from 29.5% to 78%, with an average reduction rate of 53%. However, estimates remain uncertain due to low study quality and high heterogeneity. Most studies compared community engagement with national vector control programs, limiting the ability to separate community effects from concurrent campaigns or emergency spraying. Only one pesticide-free intervention was identified, reporting a reduction of just over 20%, with a 95% CI lower bound below 10%.

Intervention duration varied from weeks to one year. One study reported a 70.5% reduction within 53 days, while another found effects beginning after 12 days. By scale, reductions ranged from 51–78% at district level, 38–70% at city level, 45% at state level, and over 20% regionally.

Conclusion: This review provides evidence that non-pharmaceutical, community-based interventions can reduce dengue cases by an average of around 53%. However, certainty remains limited by study quality and variability. High-quality, well-designed research is required to confirm these findings and inform sustainable dengue control strategies.

Keywords: dengue incidence, community-based interventions, dengue control, case outcomes, systematic review

O-T01B-0448

Epidemiological patterns of dengue, typhoid and paratyphoid and patient outcomes in Balanga City, Bataan, Philippines from 2022-2024

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Abstract

Around the world, cases of dengue continue to rise while the global burden of typhoid and paratyphoid has declined. The general objective of this retrospective descriptive study is to provide an epidemiological analysis of these two most common communicable diseases, in Balanga City, Philippines, from 2022 to 2024. Key epidemiological patterns, classification trends and patient outcomes were identified from the data provided by the City Health Office. Descriptive statistics and epidemiological analysis were used. It was revealed that most dengue patients were admitted to a healthcare facility, but admission was fluctuating slightly over the years from 64.8% in 2022 to a peak of 69.8% in 2023, then a slight drop to 65.0% in 2024 and registering 0% mortality rate. There is a higher incidence of dengue among females and a stable median age among children and young adults. Barangays Munting Batangas, Cataning, and Tenejero reveals to be the hotspots of dengue. On the other hand, there were fewer cases of typhoid and paratyphoid that disproportionately affecting younger age groups and females, but the patient admission was high throughout the period. Barangay Cupang Proper and Bagong Silang consistently had the highest overall number of cases. Mortality rate showed an alarming jump to 20.00% in 2024, a significant increase from 3.57% and 4.00% in the preceding years. Concludingly, public health interventions for dengue and typhoid and paratyphoid must be highly localized. Intensified efforts to control dengue in identified hotspots must be done. Likewise, the sharp increase in typhoid mortality warrants urgent attention to improve diagnostic capacity and clinical management protocols to prevent further fatalities.

Keywords: co-creation, developmental research, infectious diseases module, public health

O-T01B-0451

Retrospective analysis of epidemiological patterns of major infectious diseases in Bataan, Philippines from 2021-2024

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Abstract

In the Philippines, infectious diseases are a substantial burden on the healthcare system and pose a significant public health concern. Ten highest infectious diseases from 2021-2024 in Bataan, Philippines was analysed in this retrospective study by utilizing the data from the Department of Health (DOH) - Central Luzon Center for Health Development. Three critical areas were explored: disease trends over time, gender distribution, and correlations between demographic factors and disease outcomes. Using a Poisson regression model, a statistically significant upward trend in cases for dengue, leptospirosis, typhoid, and acute meningitis and encephalitis syndrome (AMES) from 2021-2024 was revealed. Meanwhile, there is a downward trend in the cases of influenza-like illness while HEPA and ABD case numbers remained relatively stable. More males were affected by dengue and leptospirosis while cases of HEPA were more common in females. Using Chi-squared test, it was found that the correlation between gender and both leptospirosis and HEPA were statistically significant while no significant association with gender was found in other diseases. The study concludes that public health strategies should address these specific trends and demographic vulnerabilities with targeted interventions for diseases with increasing trends and those that disproportionately affect a particular gender.

Keywords: epidemiological patterns, infectious diseases, Philippines, retrospective analysis

O-T01C-0457

Low Immunization Coverage Triggers An Measles Outbreakin Polewali Mandar Regency, 2025

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Abstract

On June 26, 2025, Polewali Mandar Regency issued a W1 outbreak alert for suspected measles, with seven cases presenting typical symptoms of fever, maculopapular rash, red eyes, and cough in Tibaka Hamlet, Duampanua Village, Anreapi District. MR 1 coverage in 2024 reached only 59.3%, and MR 2 was 53.6%, both significantly below the national target of 95%. This study aimed to confirm the occurrence of a measles outbreak, describe case characteristics based on person, time, and place, and determine appropriate countermeasures. The investigation was conducted using a descriptive study approach for the period May 15–July 4, 2025, utilizing both primary and secondary data. Primary data were obtained through interviews with 17 parents of patients using questionnaires, including evaluation of parental knowledge about measles, and additional case finding through house-to-house and school surveys. The case diagnosis was confirmed through a measles IgM examination at BBLK Surabaya. A total of 17 measles cases were identified, with 7 specimens testing positive for measles IgM. Case distribution showed a higher proportion among males (52.9%) and the 5-9 years age group (41.18%). Cases were distributed across three subdistricts: Anreapi (12 cases), Matakali (3 cases), and Manding (2 cases). The epidemic curve demonstrated a propagated source pattern with ongoing transmission for 7 weeks. All cases had no history of immunization, and 88.24% of parents had insufficient knowledge about measles. A measles outbreak has been confirmed in Polewali Mandar Regency through both laboratory and clinical evidence. There is an urgent need to improve immunization coverage, implement Information, Education, and Communication (IEC) programs for the public regarding the importance of complete immunization, and educate communities about measles symptoms for early detection.

Keywords: Outbreak, Measles, Immunization, Polewali Mandar.

O-T01D-0462

Self-Management Barriers and Facilitators Among Older Adults at High Risk of Stroke: A Multi-Level Analysis within Community-Based Primary Healthcare (CB-PHC) Framework

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Abstract

Background: Stroke prevention through self-management remains suboptimal among older adults at high risk despite evidence supporting its effectiveness. This study aimed to identify barriers and facilitators of stroke self-management among high-risk older adults using a socio-ecological framework within community-based primary healthcare (CB-PHC) systems.

Methods: A qualitative descriptive study was conducted from May to June 2025 in Xinxiang City, China. Purposive sampling recruited 37 participants: 18 older adults at high stroke risk (aged 60-79 years), 8 family caregivers, and 11 healthcare stakeholders. Data collection included semi-structured interviews and focus group discussions. Thematic analysis was performed using Braun and Clarke's framework.

Results: Six barriers and six facilitators were identified across individual, family, and community levels. Individual barriers included limited health literacy (83% of participants), low self-efficacy with fatalistic beliefs (72%), and physical or cognitive decline. Family-level barriers involved limited support and caregiver burden (78%). Community-level barriers encompassed inadequate resources and service fragmentation. Corresponding facilitators included comprehensive health education, self-efficacy building interventions, technology support, family-centered care approaches, integrated service delivery, and community support infrastructure.

Conclusions: Effective stroke self-management among high-risk older adults requires systematic, multi-level interventions addressing interconnected barriers while leveraging facilitators. CB-PHC systems must integrate individual capacity building, family empowerment, and community infrastructure development to optimize outcomes for aging populations.

Keywords: stroke prevention, self-management, health literacy

O-T01D-0494

Behavioral Economics to Boost HIV Testing: Policy Insights from a Scoping Review

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Abstract

The first "95" of the UNAIDS 95-95-95 targets refers to ensuring that 95% of all people living with HIV (PLHIV) know their HIV status. This goal is crucial because timely and accessible testing is the gateway to treatment and prevention. Achieving this target requires innovative approaches to overcome behavioral barriers to HIV testing. Behavioral economics (BE) offers practical tools to influence health decisions, yet evidence on its application to HIV testing remains scattered. This study was conducted in accordance with the PRISMA-ScR guidelines. Databases such as PubMed, PsycArticles, and Scopus were systematically searched for studies published between 2014 and 2024. Eligible studies incorporated at least one strategy informed by BE aimed at increasing testing uptake. The synthesis of data was informed by the EAST framework (Easy, Attractive, Social, Timely). Of 676 records screened, 11 studies met inclusion criteria. Interventions were implemented in high-, middle-, and low-income countries, targeting men who have sex with men, adolescent girls and young women, pregnant women, and general populations. No studies addressed sex workers or transgender women. Easy approaches, such as opt-out testing and self-test distribution, improved accessibility. Attractive strategies, particularly incentives and lotteries, achieved the strongest effects. Social approaches, including community mobilization and partner involvement, generated moderate gains in engagement, while Timely strategies such as reminders and message framing produced modest but promising results. This review provides the first synthesis of BE-informed HIV testing strategies within the EAST framework. Attractive strategies produced the most robust outcomes, while Easy, Social, and Timely approaches added complementary benefits. Findings suggest that embedding BE principles into national HIV programs can strengthen testing uptake and accelerate progress toward the 95-95-95 targets.

Keywords: HIV testing, behavioral economics, EAST framework, HIV awareness

O-T01D-0505

Type of Substance abuse among patients in psychiatric rehabilitation centre of IMH Erragadda and Ibrahimpatnam: A Cross-sectional study

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Abstract

Background: Substance abuse is major public health concern on global and national level which effects mental, physical, social and financial wellbeing of a person causes frequent relapses and increase hospital visits there are very few studies conducted in psychiatric rehabilitation centre in India. As per the national survey on extent and pattern of substance abuse in India conducted by ministry through NDDC,AIIMS during 2018 .Prevalence of Alcohol 17%,Cannabis 3.30%,Opiods 2.10%, Sedatives 0.58% etc.,This study looked at how common substance abuse is among such patients in Hyderabad.
Objectives : 1) To determine type, duration and quantity of substance abuse in patients. 2) To determine health seeking behaviour, relapses on addiction.
Methods: Study design: Cross-sectional study, Study area: Rehabilitation centre Erragadda and Ibrahimpatnam, Study population: Patients in rehabilitation center, Sample size: 100 [convenient sampling done], Study group: Patients aged 18 – 70 years are included. Data were collected through interviews and medical records information about age, gender, type of substance abuse, previous counseling, treatment history, and any morbidity
Results: Out of 100 patients majority have alcohol addiction, most were males between age group 20 to 50 . Alcohol being most common followed by tobacco and cannabis and multiple drugs depression
Conclusion: Substance abuse is very common among patients in psychiatric rehab centre specially males alcohol and tobacco being most common Psychiatric treatment should be combined with de addiction services regular counseling and screening to improve recovery and prevent relapses

Keywords: Substance abuse, Rehabilitation, Addiction

O-T01D-0524

Capacity Mapping for Health Promotion in 10 WHO-SEARO Countries

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Abstract

Background: Building national capacity for health promotion is critical for Member States in the World Health Organization (WHO) South-East Asia Region (SEARO), if health promotion is to help achieve desired health outcomes. There is no systematic and comprehensive information available on existing health promotion capacity in SEARO. Therefore, this study assessed the existing health promotion capacity in WHO-SEARO 10 countries.

Methods: Review of documents, policies, regulations, and acts related to health promotion, and qualitative interviews and quantitative study with key informants in each of the 10 WHO-SEARO countries. Established tools for health promotion capacity assessment were used.

Results: Across the three dimensions of national program delivery capacity at the national level were high (0.8-1.0) in Bangladesh, Bhutan, India, Indonesia, Myanmar, Nepal, Thailand, and Timor-Leste, and medium (0.5-0.7) in Maldives, and Sri Lanka. Across the four dimensions of professional development capacity at the national level were high (0.8-1.0) in Bangladesh, Nepal, and Thailand and medium (0.5-0.7) in Bhutan, Indonesia, Maldives, Sri Lanka, and Timor-Leste and low (0.0-0.4) in India. Across the three dimensions of national partnership capacity at the national level were high (0.8-1.0) in Bangladesh, India, Myanmar, Thailand, and Timor-Leste, and medium (0.5-0.7) in Bhutan, Indonesia, Maldives, Nepal, and Sri Lanka. Across the six dimensions of information systems capacity at the national level were high (0.8-1.0) in Thailand, medium (0.5-0.7) in Bhutan, India, and Myanmar, and low (0.0-0.4) in Bangladesh, Indonesia, Maldives, Nepal, Sri Lanka, and Timor-Leste.Overall, national capacity in health promotion financing and resources were the high (0.8-1.0) in Bangladesh, Thailand, and Nepal, medium (0.5-0.7) in India and Timor-Leste, and low (0.0-0.4) in Bhutan, Indonesia, Maldives, Myanmar, and Sri Lanka.

Conclusion: Health promotion capacity varies in different countries. The paper outlines the capacity mapping exercise's outcomes, evaluates its difficulties, and offers solutions to increase the precision of health promotion capacity mapping.

Keywords: Health promotion, capacity, Bangladesh, Bhutan, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste.

O-T01A-0527

A Cross-sectional study on prevalence of Metabolic Syndrome and associated risk factors in Women in an Urban Field area of Hyderabad, India.

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Abstract

Background: Metabolic syndrome is a conglomeration of physiological, biochemical and clinical abnormalities which include insulin resistance, hypertension and dyslipidemia and leads to increased risk of cardiovascular disorders, stroke and diabetes.

Objectives:

1. To estimate the prevalence of metabolic syndrome in adult females aged 18 and above in an urban population.
2. To find the association between metabolic syndrome and associated risk factors in women.

Methodology: This cross-sectional study was conducted in the urban field practice area of Osmania Medical College. The research involved 100 female participants over 18 years of age who resided in the designated urban area and provided informed consent. A simple random sampling method was used to select participants. Data were collected using a predesigned questionnaire following the WHO stepwise approach, and anthropometric measurements such as weight, height, waist circumference, hip circumference, and BMI were recorded, along with assessments of physical activity and blood pressure. The diagnosis of Metabolic Syndrome (MetS) was determined using the modified NCEP-ATP III (SAS), 2009 criteria, with consideration given to biochemical reports from the previous three months. Data entry was completed using Excel, and the study variables were analyzed for associations and comparisons of means using appropriate statistical methods.

Results: Initial findings indicate a notable prevalence of metabolic syndrome within the study population. Risk factors examined include age, physical activity level, dietary habits, and family history of diabetes or hypertension. This study is ongoing, final results will be presented in the conference.

Conclusions: This study provides key insights into metabolic syndrome and its causes in urban India. The findings can inform prevention and health promotion strategies for high-risk groups in cities like Hyderabad.

Keywords: Metabolic syndrome, Risk factors, Women

O-T01B-0550

Communicable Diseases Among University Students: A Hidden Threat to the Realization of Indonesia Emas 2045

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Abstract

Communicable diseases remain a significant public health issue in Indonesia, including among university students who represent the future generation expected to contribute to the realization of Indonesia Emas 2045. This study aims to analyze the risk factors of communicable diseases among students, particularly in relation to their daily consumption patterns of fruits, vegetables, and fatty foods. This research employed a cross-sectional survey method, conducted among students majoring in nutrition and public health who had previously been diagnosed with a communicable disease. The total sample consisted of 105 respondents in the year 2025. The sampling technique used was proportionate random sampling to obtain a representative sample from each department proportionally and randomly based on the population size. The variables examined in this study included respondent characteristics such as gender, age, study program, residence status, daily consumption patterns of fruits, vegetables, and fatty foods, as well as the status of communicable disease incidence. The results showed that 19% of students had experienced a communicable disease; 47.4% consumed fruits, 36.8% consumed vegetables, and 57.9% consumed fatty foods daily. Based on statistical analysis, daily consumption of fruits and vegetables was not statistically significantly associated with the incidence of communicable diseases (fruit: $p = 0.469$; vegetables: $p = 0.268$. However, daily fat consumption showed a significant association ($p = 0.039$), where students who consumed fatty foods daily had a higher proportion of communicable disease incidence (57.9%). These findings indicate that a high-fat diet may be a risk factor for communicable diseases among university students. Therefore, efforts to control communicable diseases should not only focus on the infectious aspects but also emphasize the promotion of balanced nutrition as a long-term strategy to build a healthy and high-quality human resource toward achieving Indonesia Emas 2045

O-T01D-0551

A Cross-Sectional Study On The Association Between Sleep Duration And Sleep Quality With Body-Mass Index Among Young Adults In Hyderabad, India.

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Abstract

Background: High BMI has become one of the biggest public health problems worldwide. The population of young adults is at extreme risk, since they goes through lifestyle changes in terms of electronic media use and academic demands, which potentially lead to insufficient sleep and poor sleep quality.The main of this study is to explore the associations between sleep duration and sleep quality with obesity status among young adults.

Objectives:

1. To assess the association between sleep quality and sleep duration with Body Mass Index (BMI) among young adults in Hyderabad, India.
2. To identify the socio-demographic and lifestyle factors that may influence the association between sleep patterns and BMI.

Methodology:

This cross-sectional study was conducted in the urban field practice area of Osmania Medical College Hyderabad, from August to September 2025. The research involved 150 young adults over 18 years of age residing in the urban area of Hyderabad and provided informed consent. A simple random sampling was done to select participants. Data were collected using a predesigned questionnaire. We used Pittsburgh Sleep Quality Index to assess time spent in bed and sleep quality. BMI was self-reported and dichotomized as normal and overweight . Data entry was completed using Excel, and the study variables were analyzed for associations using appropriate statistical methods.

Ethical Consideration: Applied for Institutional ethical committee clearance.

Results: Initial findings showed that both long (>10hr/day) and short time (<6hr/day) spent in bed were associated with a greater likelihood of being obese. Poor sleep quality was also found to be associated with obesity. This study is ongoing, final results will be presented in the conference.

Conclusions: Adequate sleep therefore serve as an effective obesity prevention strategy. Special interventions and policies using both sleep duration and sleep quality as protective factors are warranted.

Keywords: Sleep duration, Sleep quality.

O-T01A-0566

Risk Factors and Spatial Distribution of Prediabetes in Indonesia (Analysis of the Indonesian Health Survey 2023)

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Abstract

Background: Prediabetes is an intermediate stage that precedes diabetes, representing a critical window for prevention. Understanding the age-specific patterns and causes of prediabetes is essential for developing targeted prevention strategies. This study examined the risk factors associated with prediabetes and mapped its prevalence across different age groups using national survey data.

Method: The study design employed a cross-sectional approach, utilizing secondary data from the Indonesia Health Survey (SKI) 2023. A total of 17,340 individuals with valid HbA1c results were analyzed using weighted data. Prevalence was estimated for each age group, and risk factors were examined using Cox regression models. QGIS was used for spatial mapping of cases.

Results: The prevalence of prediabetes was 44.6% of the total population, with age-specific prevalence of 31.1% in adolescents, 44.5% in adults, and 53.5% in older adults. In the total population, significant risk factors included age, sex, education, BMI, central obesity, low HDL, high triglycerides, physical activity, depression, and alcohol consumption. The strongest association was observed for sex (PR: 1.786; 95% CI: 1.707–1.868). Among adolescents, prediabetes was significantly associated with sex (PR: 3.023; 95% CI: 2.466–3.706) and high triglycerides (PR: 1.328; 95% CI: 1.112–1.587). In adults, BMI, high LDL, high triglycerides, physical activity, and depression were significant risk factors, with sex (PR = 1.764; 95% CI: 1.682–1.850) showing the strongest association. Among older adults, prediabetes was associated with sex, BMI, high LDL, high triglycerides, and consumption of alcohol, with sex (PR: 1.3; 95% CI: 1.167–1.448) demonstrating the strongest association. Spatial mapping revealed substantial provincial variation, with the highest prevalence observed in Yogyakarta and the lowest in Maluku.

Conclusion: Prediabetes is highly prevalent in Indonesia, especially among older adults. These findings underscore the need for age-specific strategies and geographically targeted interventions to prevent progression to diabetes.

Keywords: HbA1c; Prediabetes; Risk Factors; Spatial mapping

O-T01B-0604

Environmental Scan, Expert Appraisal, and Consensus Recommendations (ESACR) of Website Resources on Lifestyle and Environmental Advice for Eczema in Singapore

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Abstract

Background: Eczema requires substantial daily self-management beyond medication, including lifestyle and environmental adjustments. In Singapore, families often supplement clinic consultations with websites from hospitals, NGOs, and patient groups. The absence of certification or mandatory author attribution/review dates contributes to variability in website content, potentially undermining adherence.

Methods: We conducted an Environmental Scan, Expert Appraisal, and Consensus Recommendation (ESACR) of lifestyle advice for eczema on Singapore-based websites produced by healthcare institutions, NGOs, and patient associations (excluding product-sponsored or social media pages). Advice was coded under 12 expert-derived categories: shower/bath, swimming, moisturizers, clothing/laundry, pet exposure, smoking, dust/dust mites, temperature/humidity, sun exposure, insect bites, acute itch management, and food allergy. Fourteen websites (~11,000 words) were evaluated. One expert mapped content, followed by blinded appraisal by two additional experts. Discrepancies were discussed until consensus was reached. Representative quotes are presented in Table 1.

Results: Most covered topics were moisturizers (13/14 websites), shower/bath (12), and temperature/humidity (10). Infrequent topics included insect bites (4), smoking (2), and sun exposure (1). Swimming was not addressed despite distinct implications. Food allergy advice varied in focus, particularly regarding testing and dietary restriction. Showering advice conflicted between frequent washing to remove allergens and short showers with cold or lukewarm water. Dust/mite control appeared in 8 websites but often lacked actionable steps. Terminology such as "natural moisturizing factors" and "harsh chemicals" was not explained fully. A summary by category is shown in Table 2.

Discussion: Websites show gaps, conflicting messages, and limited practical guidance. There is a clear need for a comprehensive, consensus-based website with rationale, challenges, and actionable steps to reduce confusion and improve adherence. Feedback has been communicated to content producers. The presentation will detail the steps and how this approach can be applied to other conditions and country settings.

Keywords: Eczema, Health education, Health-related lifestyle, Allergic disease

O-T01D-0622

SUN4BABYS App as a Better Digital Education for Monitoring the Growth and Development of Infants Aged 0–1 Year

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Abstract

Background: educational media for monitoring infant growth and development has traditionally relied on leaflets. A digital-based educational tool, the SUN4BABYS app, has now been developed.
Objective: to assess the differences in mothers' knowledge, attitudes, and intentions in monitoring infant growth and development using leaflets compared to the SUN4BABYS application.
Method: this study used a quasi-experimental pre-test post-test design with a control group. A total of 108 mothers with infants were divided into an intervention group (n=54) and a control group (n=54). The intervention group used the SUN4BABYS app, while the control group used an e-leaflet. Data analysis was performed using the Wilcoxon and Mann-Whitney tests.
Results: in the SUN4BABYS intervention group, there was a significant increase in maternal knowledge, attitudes, and intentions ($p=0.001$). In the control group, there was no significant increase in maternal knowledge and attitudes ($p>0.05$), but there was a significant increase in maternal intentions ($p=0.038$). In the intervention group and the control group, there was a significant difference between the two groups ($p<0.05$).
Conclusion: the SUN4BABYS application is more effective than leaflets as a digital educational medium in monitoring baby growth and development.

Keywords: Monitoring, Growth, Development, Education, SUN4BABYS.

O-T01D-0628

Physical Activity, Sedentary Behavior, and Coronary Heart Disease in Hypertensive Adults: The Mediating Effect of Blood Pressure and Body Mass Index

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Abstract

Background: This study investigated the association of physical activity (PA) and sedentary behavior (SB) with coronary heart disease (CHD) risk in hypertensive populations, and examined the mediating roles of body mass index (BMI) and blood pressure (BP).

Methods: A total of 18,963 hypertensive individuals were enrolled from baseline data (July–September 2023). Logistic regression and joint analyses were used to estimate odds ratios (ORs) and 95% confidence intervals (CIs) for PA, SB, and CHD risk. Mediation models assessed the indirect effects of BMI and BP.

Results: Among 17,234 elderly hypertensive participants (mean age 73.0 years; 57.4% women), 2,537 (14.7%) had CHD. Compared with low physical activity (LPA), vigorous physical activity (VPA) was associated with reduced CHD risk [OR (95% CI): 0.696 (0.602–0.806)]. Prolonged SB increased CHD risk [OR (95% CI): 1.180 (1.077–1.294)]. Participants with low SB and VPA had the lowest CHD risk compared with those with SB >5 h and LPA [OR (95% CI): 0.604 (0.502–0.726)]. Gender subgroup analyses yielded consistent results. Mediation analysis suggested that the protective effect of VPA on CHD was partially mediated by systolic blood pressure (SBP) and BMI.

Conclusions: Higher PA and lower SB were linked to reduced CHD risk in hypertensive individuals. SBP and BMI may be important mediators of this relationship.

Key words: Physical activity; Sedentary behavior; Coronary heart disease; Mediating effect

O-T01A-0677

Understanding Preventive Health Behaviors via Structural Equation Modeling: Insights from HBM and TPB

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Abstract

Introduction: The adoption of preventive health practices (such as screening and immunization) is still below 50% in many developing countries, despite their crucial role in preventing non-communicable diseases (NCDs), which account for 74% of all deaths worldwide. A solid basis for understanding the factors influencing these behaviors is provided by this systematic study, which combines data from the Health Belief Model (HBM) and the Theory of Planned Behavior (TPB) using Structural Equation Modeling (SEM).

Methods: We found and examined 11 empirical research (2019–2025) from PubMed and ScienceDirect in accordance with PRISMA recommendations. The paper assesses how SEM is used to test HBM and TPB, finds ways to integrate them, and makes recommendations for future research areas.

Results: We show that SEM works quite well for simulating the intricate paths of an integrated HBM-TPB structure. Compared to either model alone (HBM $R2 = 0.33$; TPB $R2 = 0.47$), the combined model demonstrated noticeably higher predictive power ($R2 = 0.60$). Perceived behavioral control (TPB, $\beta = 0.48$) was a key driver, whereas the primary impediment was perceived barriers (HBM, $\beta = -0.35$). In terms of methodology, CB-SEM worked better for more intricate model structures whereas PLS-SEM worked better for smaller samples.

Conclusion: Combining HBM and TPB using SEM provides a robust, evidence-based strategy to decoding preventative health behaviors. This synthesis emphasizes the importance of multifaceted interventions and the necessity for longitudinal and context-specific research, particularly in developing countries, to support effective public health measures.

Keywords: Health Belief Model (HBM), Theory of Planned Behavior (TPB), Structural Equation Modeling (SEM), Preventive Behavior

O-T01C-0696

Determinants Of Behavior And Social Factors Affecting Acceptance Of Multiple Injections in The Routine Child Immunization Program: A Behavioral And Social Drivers (BeSD) Approach

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Abstract

Introduction: Immunization is one of the most effective public health interventions in reducing morbidity and mortality in children. However, optimal immunization coverage has not been achieved evenly throughout the world. One approach to improving the efficiency and coverage of immunization is through the administration of multiple immunizations or combination vaccines. Behavioral and social determinants (BeSD) of vaccination are defined as specific beliefs and experiences related to vaccination that can potentially be modified to increase vaccine acceptance.
Methods: The method used in this study was a literature review. Data collection was conducted through online database searches such as PubMed, Science Direct, and Google Scholar. Inclusion criteria were based on quantitative and qualitative research methods. Quantitative methods were used for surveys of caregivers, while qualitative methods involved in-depth interviews with caregivers, health workers, immunization program managers, community organizations, community leaders, and stakeholders. Published within the last 10 years (2014-2024).
Results: Parental acceptance of multiple immunizations is influenced by behavioral and social factors, which are also highly dependent on the individual or caregiver themselves, the role of the family, environment and community, economics and accessibility, as well as health policies and systems.
Conclusion: To increase immunization coverage, a comprehensive approach is needed that takes into account behavioral, social, policy, economic, and accessibility factors.

Keywords: Immunization in Children, Multiple Immunization, BeSD

O-T01D-0708

The Effectiveness Of A Digital- Based Health Promotion Model In Improving Reproductive Health Knowledge Among Women Of Reproductive Age

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Abstract

Background: Digital health promotion has experienced rapid development and proven effective in improving reproductive health knowledge among women of reproductive age. Platforms such as mHealth applications, educational websites, and social media campaigns provide easier, more personalized, and culturally sensitive access to information. Despite these benefits, challenges such as the digital divide, limited health literacy, and sociocultural barriers remain significant obstacles to implementation.

Methods: This study is a literature review conducted through a systematic examination of international and national publications. Relevant articles were retrieved from Scopus, PubMed, ScienceDirect, and Web of Science using the keywords “digital health promotion,” “mHealth,” “web-based reproductive health education,” and “social media reproductive health.” Inclusion criteria comprised articles published between 2018 and 2024 that specifically investigated digital health promotion among women of reproductive age. Exclusion criteria included editorials, commentaries, and studies lacking empirical data.

Results: The review highlights that mHealth applications, web-based education, and social media campaigns contribute positively to reproductive health literacy, maternal health outcomes, and awareness of sexually transmitted infection (STI) prevention. Furthermore, integrating local cultural values, such as the Balinese philosophy Tri Hita Karana, was found to enhance acceptance and effectiveness of interventions by aligning health messages with community beliefs. However, persistent barriers include unequal digital access, data security concerns, and limited cultural adaptability of digital health tools.

Conclusion: Digital health promotion demonstrates strong potential in advancing reproductive health literacy among women of reproductive age, particularly in settings with limited access to conventional health services. To ensure long-term sustainability and impact, future interventions should be developed with an emphasis on inclusivity, data security, and cultural sensitivity. Tailoring digital health strategies to local contexts is essential for improving acceptance and reducing disparities in health outcomes.

O-T01A-0714

Cardiovascular Disease Risk Prediction Models in South and Southeast Asia: Accuracy and Challenges from a Literature Synthesis

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Abstract

Background: Cardiovascular disease (CVD) is the leading cause of death globally, including in Indonesia. Early prevention is crucial, and risk prediction models are essential to guide interventions. The WHO/ISH Risk Prediction Chart for South-East Asia Region B (SEAR B) is widely applied due to its practicality in resource limited settings. It predicts 10-year CVD risk based on age, sex, blood pressure, cholesterol, smoking status, and diabetes. However, its accuracy remains debated, particularly among women and rural populations.

Methods: This literature review analyzed 18 studies on CVD risk prediction in South and Southeast Asia, including Indonesia. Data were synthesized from various study designs, mostly cross-sectional with some cohort studies, using models such as WHO/ISH, Framingham Risk Score (FRS), SCORE2, RPCE, and machine learning approaches.

Results: Most studies reported that populations were predominantly in the low–moderate risk categories, but high risk prevalence increased among individuals with hypertension, obesity, low education, physical inactivity, and dysglycemia. In Indonesia, age ≥45 years and hypertension were strong predictors of CVD events among those with prediabetes and diabetes. Validation studies in Sri Lanka showed better accuracy of WHO/ISH in men than women. Comparative analyses indicated that WHO/ISH often undernor overestimated risk compared with other models, while RPCE and machine learning showed superior accuracy for local populations. Cohort based studies remain limited, and modern predictive technologies are rarely applied in Indonesia.

Conclusion: Sociodemographic, lifestyle, and clinical factors consistently influence CVD risk. While WHO/ISH charts are useful for initial mapping, their limited accuracy highlights the need for improved models. Research gaps include a lack of long term cohort studies, insufficient local adaptation, and limited integration of machine learning. Future work should focus on developing dynamic prediction models using local data and modern technologies to improve accuracy, contextual relevance, and support primary care in CVD prevention in Indonesia.

Keywords: cardiovascular disease, risk prediction, WHO/ISH, Southeast Asia

O-T01A-0750

Depressive Symptoms and Cardiometabolic Disease in Middle-aged and Older Adults: Longitudinal Evidence from CHARLS

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Abstract

Background: Mental health conditions may accelerate the accumulation of cardiometabolic disease (CMD) in middle-aged and older adults, yet longitudinal evidence from China is limited.

Methods: This study analyzed 21,246 adults aged ≥45 years from the China Health and Retirement Longitudinal Study (2011–2018). Depressive symptoms were measured by the 10-item Center for Epidemiologic Studies Depression Scale (CES-D-10). We estimated cause-specific Cox hazards for incident hypertension, diabetes, dyslipidaemia, stroke, and heart disease, applying survey weights and cluster-robust standard errors. Primary models adjusted for sex and education; prespecified subgroup analyses stratified age (<60 vs ≥60 years).

Results: Each 1-point increase in CES-D-10 predicted higher incidence of hypertension (HR=1.02, 95% CI 1.02–1.03, P<0.001), diabetes (1.03, 1.02–1.04, P<0.001), heart disease (1.04, 1.03–1.04, P<0.001), stroke (1.06, 1.05–1.07, P<0.001), and dyslipidaemia (1.03, 1.02–1.04, P<0.001). Age-stratified estimates for <60 vs ≥60 were: hypertension 1.02 (95% CI 1.02–1.03, P<0.001) vs 1.02 (95% CI 1.01–1.03, P<0.001), diabetes 1.03 (95% CI 1.02–1.04, P<0.001) vs 1.04 (95% CI 1.02–1.05, P<0.001), heart disease 1.04 (95% CI 1.03–1.05, P<0.001) vs 1.03 (95% CI 1.02–1.04, P<0.001), stroke 1.07 (95% CI 1.06–1.08, P<0.001) vs 1.05 (95% CI 1.04–1.06, P<0.001), and dyslipidaemia 1.03 (95% CI 1.03–1.04, P<0.001) vs 1.03 (95% CI 1.02–1.04, P<0.001). Women had lower stroke risk (HR=0.79, 95% CI 0.69–0.90, P<0.001) and lower hypertension risk in <60 (HR=0.88, 95% CI 0.82–0.94, P<0.001), but higher risks of diabetes (HR=1.28, 95% CI 1.15–1.43, P<0.001), heart disease (HR=1.37, 95% CI 1.24–1.50, P<0.001), and dyslipidaemia (HR=1.23, 95% CI 1.13–1.33, P<0.001).

Conclusion: Depressive symptoms prospectively predicted CMD in adults ≥45 years. Associations were broadly consistent by age, but stronger for stroke and heart disease in middle-aged adults (45-60), whereas the hypertension association was slightly stronger in ≥60 and diabetes was similar across ages. These findings support earlier identification and management of depressive symptoms beginning in midlife, with continued screening in older adults to reduce cardiometabolic risk.

O-T01D-0773

Prevalence, Microbiological Patterns, and Risk Factors of HCAI in Tertiary Kelantan Hospitals: An 8-Year Retrospective Study

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Abstract

Background: Healthcare-associated infections (HCAIs) pose a significant threat to public health, as they delay the completion of patients' treatment, increase healthcare spending for both patients and healthcare facilities, and necessitate more diagnostic tests and medications. The study objective was to gain insight into the prevalence, the microbial pattern and the factors associated with HCAI in Kelantan state of Malaysia.

Methods: HCAI case records from 2017 until 2024 were obtained from the Infection Control Unit of two main tertiary hospitals in Kelantan state. Patient and admission information were obtained from the hospital's medical record units.

Results: A total of 5,356 HCAIs were recorded. Out of 722,088 admissions, 170,623 non-HCAI admissions were randomly selected to perform multiple logistic regression. The highest prevalence of HCAI was in 2023, 0.97% with a mean of 0.77%. Bloodstream infection (BSI) recorded the highest prevalence type of HCAI. The commonest type of HCAI was BSI (33.8%), followed by hospital-acquired pneumonia (27.6%) and ventilator-associated pneumonia (11.9%). The main microorganisms isolated among HCAI cases were *Acinetobacter baumannii* (16.5%), *Klebsiella pneumoniae* (Extended-spectrum Beta-Lactamase) (10.2%) and Carbapenem-resistant Enterobacteriaceae (10.1%). The age group 50-69 years (39.88%), the medical ward (33.74%), the internal medicine discipline (28.17%), and the admission with 11-30 days length of stay (LOS) (36.6%) had the highest frequency of HCAI cases. Multiple logistic regression identified that for discipline, dental, internal medicine, neonatology, obstetrics and gynaecology (O&G), oncology, orthopaedic, others, paediatric and surgery were associated with HCAI. Patients with a LOS of 11-30 days and >30 days were also associated with HCAI. The interaction between discipline and LOS, type of ward and LOS were also statistically significant.

Conclusion: The low HCAI may reflect the underreporting or other issues, such as awareness or lack of protocol. Nonetheless, significant associations reveal key targets for strengthening infection control in tertiary hospitals.

O-T02D-0107

Determinants of Peripartum Depression Score Among Women in Indonesian Coastal Rural community: A cross – sectional Study

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Abstract

Background: This study aimed to identify determinants of peripartum depression among pregnant and lactating women in East Java, Indonesia.

Methods: A community–based cross–sectional study was conducted from August to November 2018 in the northern coastal rural region of the Banyuwangi District. A total of 454 pregnant and lactating women were selected via cluster sampling from 74 Integrated Health Care (Posyandu) and Village Maternity Post (Polindes) visits. Data were collected through structured interviews, and a poisson test was used to assess the associations between determinants and Edinburgh Postnatal Depression Scale (EPDS) scores; the “svy” command was used to adjust for clustering. The determinants examined included women’s empowerment, socioeconomic status, age, pregnancy status, and stressful life events.

Results: Multivariable analysis revealed that women’s empowerment and marital status were protective determinants of increased logs of EPDS scores, whereas severely stressful life events were associated with significantly higher logs of EPDS scores, even among medium and highly empowered women (Coef.medium=0.63; 95%CI: 0.14-1.12, p=0.01 and Coef.high=0.62; 95%CI: 0.25-0.98, p<0.01).

Conclusion: Women's empowerment and marital status are protective determinants against higher EPDS scores, whereas severely stressful life events are associated with greater EPDS scores, indicating higher risks of peripartum depression. While empowerment strengthens resilience, it may not fully mitigate the negative effects of extreme stress, and mental health interventions need to be integrated into maternal healthcare for the early detection of peripartum depression. Future studies should utilize longitudinal and multidisciplinary approaches to further understand these complex interactions.

Keywords: antenatal care; barrier to mental health services; peripartum; postnatal care; women's empowerment

O-T02B-0112

Understanding mental health literacy through the dynamic interaction of personal factors, behavioural patterns, and environmental influences among the late adolescent's population in Malaysia: A mixed methods study protocol

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Abstract

Background: The rising prevalence of mental health issues among late adolescents in Malaysia is a pressing public health concern. The Social Cognitive Theory (SCT) emphasis on the dynamic interaction of personal factors, behavioural patterns, and environmental influences, is highly effective in understanding the contributing factors of MHL.

Objective: This is merely a published protocol, not the findings of a future study aiming to determine the personal, behavioural, as well as environmental factors of MHL among the pre-university students or late adolescents in Malaysia.

Methods: This study will apply the convergent mixed methods study design, comprises three distinct phases: quantitative and qualitative study designs conducted concurrently, as well as integration of the findings from the two phases in phase three. Negeri Sembilan will be selected as the study location due to its strategic relevance in representing a cross-section of Malaysia's educational, demographic, socio-cultural landscape and a mix of urban and semi-urban settings, offering access to diverse adolescents' populations. This study will randomly recruit 350 pre-university students in the quantitative phase, and at least 15 purposively selected in the qualitative phase. A self-administered questionnaire will be used to quantitatively obtain information on MHL level as well as the personal, behavioural, as well as environmental factors. Qualitative data will be collected using in-depth interviews in phase two among those with low and high levels of MHL identified from the quantitative phase. Integration occurs at study design, method level, and later during interpretation and report writing.

Results: The conduction and integration of the quantitative and qualitative findings will provide a comprehensive understanding on the underlying factors contributing towards mental health literacy among the late adolescent's Malaysian, including the interaction between the personal factors, behavioural patterns, and environmental influences.

Conclusion: The concurrent mixed methods study approach should provide a corroborative finding and better understanding on the factors contributing towards MHL among the late adolescent's population in Malaysia.

Keywords: Social Cognitive Theory, Mental Health Literacy, Late adolescents, Malaysia

O-T02A-0137

Mapping Global Research on Health Interventions for High-Risk Pregnant Women: A Bibliometric Review

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Abstract

Background: High-risk pregnancy is a major cause of maternal and newborn illness and death around the world. Many types of health interventions medical, nutritional, psychosocial, and health promotion have been developed to address this issue. However, how these interventions are applied varies greatly between regions, and there is little comprehensive research on this. Community-based strategies, like involving community health workers, are increasingly seen as effective ways to reach pregnant women who have limited access to healthcare. This study aims to review and analyze global research on health interventions for high-risk pregnant women using bibliometric methods.
Methods: This study reviewed articles from the Scopus database published between 2004 and 2024. Data were cleaned using Microsoft Excel and OpenRefine. Visualization and analysis were done using VOSviewer, RStudio, and Tableau. The study examined trends in publication, country contributions, journal and author impact, keyword patterns, and research topic clusters.
Results: This study analyzed 691 publications from 267 journals, showing an annual growth rate of 10.44%. The top contributing countries were the United States, Australia, the United Kingdom, China, and Ethiopia. Seven main types of interventions were identified: medical management, mental health, education, healthy lifestyle, antenatal services, preconception supplementation, and community-based approaches. Although community-based approaches were clearly grouped in only one cluster, the results show they can also support other types of interventions, especially in health education, nutrition monitoring, and psychosocial support mainly in areas with limited access to formal healthcare.
Conclusions: The findings show that research on health interventions for high-risk pregnant women is growing and becoming more diverse. Clinical approaches are still the most common, but community involvement is starting to show promise. These results provide a strong basis for creating more collaborative, tailored, and evidence-based policies and programs.
Keywords: Health interventions, High-risk pregnancy, Maternal care, Community-based approach

O-T02A-0144

Hypertension As A Mediator Between Patient Attributes And Health Related Quality Of Life Among Women Of Childbearing Age Across Urban Communities in a LMIC

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Abstract

BACKGROUND. Hypertension is a leading cause of chronic diseases among women of childbearing age. Subtle but progressive complications can impair overall wellbeing. This concern persists due to several personal barriers and systematic gaps among implemented health programs in the country. This study aims to: 1) Describe the patient attributes and health related quality of life (HRQoL) among women of childbearing age in a LMIC; 2) Examine the mediating role of hypertension between patient attributes and HrQoL.

METHODS. An analytical cross-sectional study was conducted among Filipino women aged 18–44 across three urban communities. Descriptive statistics and mediation analyses were done using Jamovi (Version 2.6.21).

RESULTS. Notable results include a mean BMI reflecting obesity among both hypertensive and non-hypertensive women, despite reported adherence to physical activity and lower consumption of sodium-rich products. Descriptive analysis of HRQoL scores revealed that the mean physical and mental HRQoL scores were lower among hypertensives. Ultimately, this study found that hypertension mediates the relationship between BMI and physical HRQoL through an indirect pathway.

CONCLUSION. The health disruptions experienced by women of childbearing age operate at both personal and systemic levels. A fragmented healthcare system limits the integration of holistic strategies such as combining physiologic monitoring with HRQoL assessment. These gaps are compounded by socioeconomic and cultural disruptions. While child-rearing and workforce participation can be health-promoting with proper support, limited income and rigid gender norms often make health-maintenance overwhelming. Intersecting burdens reduce women's capacity to maintain a healthy BMI and functional wellbeing, leading to poor HRQoL. This highlights the need for interventions that support physical health and daily functioning as women navigate a disruptive world.

KEYWORDS. Women's Health, Hypertension, Quality of Life, Cardiovascular Health

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T02B-0152

Complementary Feeding Practices in the Bonai Tribe Community: A Phenomenological Study in Rokan Hulu District, Riau Province, Indonesia

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Abstract

Undernutrition remains a leading contributor to under-five child mortality, with inappropriate complementary feeding practices being one of the key contributing factors. In Indonesia, despite the implementation of nutrition policies and public health campaigns, significant gaps in complementary feeding practices persist, particularly within indigenous communities. This study aims to explore complementary feeding practices in the Bonai Tribe, an indigenous ethnic group in Rokan Hulu District, Riau Province, which is characterized by unique sociocultural contexts and limited access to child health information and services.

A qualitative research design with a phenomenological approach was employed. Data were collected through in-depth interviews with seven participants, including mothers, grandmothers, and other family members involved in feeding children aged 6–23 months. Data were thematically analyzed using a reflective and interpretative approach.

The study identified seven major themes: (1) Inappropriate early feeding: Children were given solids or commercial products like condensed milk before six months; (2) Frequent snack consumption: Ultra-processed snacks (chips, noodles, sweets) were consumed early and often replaced main meals; (3) Dependency on commercial products: Condensed milk and packaged foods became main nutrition sources, displacing home-cooked meals; (4) Rejection of home-prepared foods: Children refused homemade meals; caregivers preferred instant options for practicality; (5) Irregular and repetitive feeding: Feeding lacked consistency, variety, and adequate frequency; (6) Limited caregiver knowledge and access: Most lacked understanding of appropriate complementary feeding and rarely accessed health services; and (7) Inconsistent caregiving and shifting traditional norms: Feeding responsibilities varied within families, and traditional norms were gradually shifting toward modern feeding practices.

These findings highlight that complementary feeding practices in the Bonai Tribe community are shaped by a combination of limited knowledge, inadequate service access, cultural values, and a transition toward modern food consumption. Nutrition interventions in indigenous communities should be designed holistically, integrating culturally sensitive approaches, engaging extended families and traditional leaders, and promoting participatory and context-specific nutrition education.

Keywords: complementary feeding, indigenous communities, Bonai Tribe, child nutrition, traditional feeding practices, responsive feeding, cultural sensitivity

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T02B-0154

The Practice of Bengkung Use among Postpartum Mothers of Malay Ethnicity in Tanjung Balai City: A Phenomenological Study

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Abstract

The postpartum period is a critical phase following childbirth, lasting approximately six weeks, during which a mother's body undergoes significant physiological and psychological changes. Among the Malay ethnic community in Tanjung Balai City, using bengkung—a traditional abdominal wrap—remains a culturally rooted practice passed down through generations. Bengkung is believed to aid in physical recovery, restore abdominal shape, and prevent uterine prolapse, commonly called "jatuh Peranakan." However, the modernization of healthcare services has introduced new perspectives and practices that influence its use.

This study employed a qualitative approach with a descriptive phenomenological method to explore the behavior and experiences related to bengkung use among postpartum Malay women. Data were collected through in-depth interviews with purposively selected participants. The findings reveal that bengkung usage is influenced by cultural beliefs, ancestral traditions, recommendations from community elders, and familial encouragement, particularly from mothers and mothers-in-law. Many informants stated that bengkung serves purposes such as maintaining health, preventing "wind entry" (a culturally believed condition), and accelerating postpartum recovery.

Despite experiencing discomfort due to tight or prolonged use, most mothers continue the practice out of respect for cultural values and social expectations. Their perceptions of the benefits of bengkung are generally positive, though not always aligned with modern medical standards. The study highlights the importance of culturally sensitive maternal healthcare services and the potential to integrate traditional practices with evidence-based medical care. These insights can be a foundation for developing culturally informed midwifery care models within Malay communities.

Keywords: Postpartum mothers, bengkung, Malay ethnicity, culture, phenomenology

O-T02C-0162

Exploration of perceived barriers that influence self-care practices among older adults residing in a rural community in Embilipitiya MOH area, Sri Lanka.

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Background: Population aging is increasing exponentially worldwide, including in Sri Lanka, becoming a major demographic phenomenon. Aging brings physical, psychological, and social changes, increasing dependency and vulnerability. Self-care practice is vital to managing age-related conditions. Therefore, this study was conducted to explore perceived barriers that influence self-care practices among older adults residing in a rural community in Embilipitiya MOH area, Sri Lanka.

Methods: A qualitative phenomenological study design was conducted using purposive sampling technique. In-depth interviews, guided by a validated interviewer guide with open-ended questions, continued until data saturation was reached. Face validity was assessed to ensure the guide's appropriateness. Thematic analysis was done to analyse data. Subject experts reviewed all codes and themes for accuracy. Trustworthiness was maintained through credibility, transferability, dependability, and confirmability. Ethical approval was obtained from the Ethics Review Committee, Faculty of Allied Health Sciences, University of Peradeniya, Sri Lanka.

Results: There were 25 elderly participants over age 60, mostly female (68%), Buddhist (92%), married (84%), educated (40%), and housewives (44%), with chronic diseases prevalent (72%). Themes are: (1) *Personal and physical barriers with three sub themes including age-related physical limitations, presence of multiple chronic conditions and cognitive and memory challenges;* (2) *Socioeconomic constraints with two sub themes including financial difficulties and limited access to health facilities*; and (3) *Knowledge and information barriers with three sub themes including poor understanding of self-care, lack of health education and misinformation and reliance on non-evidence-based practices.* These insights showed the need for culturally sensitive elderly care.

Conclusion: The findings underscore the need to enhance proactive self-care practices and incorporate cultural and traditional perspectives on aging to improve health outcomes and support well-being, helping counter health decline among older adults in primary care settings.

Keywords: Perceived barriers, self-care practices, community dwelling older adults.

O-T02B-0196

Association between parenting styles and Internet gaming disorder in children in Tokyo, Japan: cross-sectional study

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Abstract

Background: The growing prevalence of Internet Gaming Disorder (IGD) in children is raising a global concern. Although parents are considered to play a critical role in preventing and treating the disorder of their children, few studies have explored the parent-child relationship in terms of IGD. This study investigated the association of parenting styles and children's emotional and behavioral problems with IGD in junior high school children in Tokyo, Japan.

Methods: The data were collected in February 2024, via a web-based survey. A questionnaire was administered to 300 parents of junior high school students living in Tokyo. The Parenting Scale (PS), which is comprised of three subscales, was used to measure parenting styles. The Strengths and Difficulties Questionnaire (SDQ), which is comprised of five subscales, was used to assess children's emotional and behavioral problems. The Gaming Disorder Scale for Parents (GADIS-P) was used to determine suspected IGD. Based on the scores of GADIS-P, the parents were classified into two groups: suspected IGD group and non-suspected IGD group. Total scores and subscale scores were compared between the two groups using Student's *t*-tests.

Results: The suspected IGD group was comprised of 72 parents (24%). The group showed significantly higher scores on the over-reactivity subscale (3.92 vs 3.32) and whole scale of PS (114.9 vs 108.0) than the non-suspected IGD group. Likewise, the suspected IGD group showed significantly higher scores on the conduct problems subscale (3.07 vs 2.02), peer problems subscale (3.28 vs 2.76), and whole scale of SDQ (13.58 vs 9.82) than the non-suspected IGD group.

Conclusion: Over-reactive parenting and children's psychosocial difficulties were associated with suspected IGD in children. The findings suggest that family dynamics, particularly parental discipline practices, may influence the development and maintenance of IGD. A family-based intervention approach may be useful to reduce the risk of IGD among children.

Keyword: Internet gaming disorder, parents, adolescent, Japan

O-T02A-0212

Pattern of exercise and its relationship with knowledge and use of supplementation among gym goers from selected gyms in Colombo district

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Abstract

Background: Physical activity and dietary patterns are critical in preventing non-communicable diseases (NCDs), especially in the context of modern lifestyle changes. The widespread availability of dietary supplements and inconsistent regulatory awareness have led to misconceptions and potential misuse. While international studies have explored supplement use among gym-goers, research in Sri Lanka has primarily focused on athletes. This study addresses a gap by examining exercise patterns and supplement use among gym-goers in the Colombo district. Objective of the study is to assess the pattern of exercise and its relationship with knowledge and use of dietary supplements among gym-goers in selected gyms in the Colombo district.

Methods: A descriptive cross-sectional study was conducted among 128 gym-goers across three selected gyms by systematic sampling during peak hours of weekdays and weekends. Data was collected through an interviewer-administered, expert-validated questionnaire covering sociodemographics, exercise patterns, supplement knowledge and usage. An 18-item tool assessed knowledge as satisfactory or unsatisfactory. Statistical analysis was done using SPSS, applying Chi-square tests to assess associations.

Results: Of the participants, 78.9% (n=101) performed both aerobic and resistance training, 18% (n=23) resistance only, and 3.1% (n=4) aerobic only. Treadmills (77.1%, n=81) and dumbbells (98.4%, n=122) were the most used equipment. All participants were sufficiently active when gym activity was considered. Satisfactory knowledge on supplements was found in 79.7% (n=102), though understanding of regulations was low. Supplement use was reported by 57.8% (n=74), primarily among males (70.3%, n=54). Multivitamins/minerals (50%, n=37) and proteins/amino acids (47.3%, n=35) were most commonly used. Supplement use was significantly associated with age and income.

Conclusion: Most gym-goers were physically active and used dietary supplements. However, knowledge gaps, particularly regarding regulation, suggest the need for targeted education and age/income-specific guidance to support safe supplement use.

Keywords: Aerobic exercise, Resistance training, Physical activity, Gym goer

O-T02B-0237

Strengthening Climate Literacy Through School-Based Education: A Cross-Country Intervention Study in Malaysia and Indonesia

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Abstract

Climate change disproportionately affects vulnerable populations, particularly in rural areas of low- and middle-income countries. Strengthening climate literacy among school children is essential to foster long-term public health resilience. This study evaluated the impact of a school-based climate change education program on knowledge, attitude, and practice (KAP) among rural primary school students in Malaysia and Indonesia.

A pre- and post-test interventional study was conducted in Tenom (Sabah, Malaysia) and Lojejer (Jember, Indonesia) among upper primary students. The intervention involved a structured educational session using a climate change education module tailored to local contexts. Paired t-tests were used to compare pre- and post-intervention mean scores for KAP.

A total of 216 students participated in the study, with 117 from Malaysia and 99 from Indonesia. The mean age was 11.03 ± 0.82 years. Overall, the results demonstrated a significant increase in knowledge scores from 4.46 ± 1.88 to 5.65 ± 2.15 ($p < 0.01$). Attitude scores also improved significantly, rising from 31.02 ± 4.05 to 32.28 ± 4.25 ($p < 0.01$). Practice scores were not statistically significant ($p = 0.62$).

Sub-analysis by country revealed consistent findings. In Malaysia, knowledge scores increased by 1.12 ± 0.57 ($p < 0.01$) and attitude scores improved by 1.49 ± 0.56 ($p < 0.01$). However, there was no significant change in practice. Similarly, in Indonesia, knowledge scores rose by 1.14 ± 0.22 ($p < 0.01$), while attitude scores increased by 1.01 ± 0.23 ($p < 0.04$). Practice scores also did not show statistically significant improvement.

The study indicates that school-based climate change education significantly enhanced rural students' knowledge and attitudes in both countries. Although behavior change was limited, the results underscore the value of culturally adapted educational strategies to promote climate awareness in rural settings.

O-T02B-0242

Intervention Local Food For Malnutrition in Under Five Children: Systematic Literature Review

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Abstract

Malnutrition in children under five remains a major global public health issue, contributing to morbidity and mortality. Local food-based interventions offer a promising approach due to cultural relevance, availability, and potential cost-effectiveness. This systematic review evaluates the effectiveness of such interventions in addressing mild to moderate malnutrition in under-five children. A comprehensive literature search was conducted across three electronic databases PubMed, ScienceDirect, and Google Scholar using Medical Subject Headings (MeSH) terms. Articles selected were peer-reviewed, written in English, and published between January 2015 and March 2025. Article selection followed the PRISMA protocol and applied the PICOS framework. Inclusion criteria covered quasi-experimental studies or randomized controlled trials (RCTs) that assessed interventions using supplementary foods or therapeutic diets based on local food either home-produced or community-developed for under-five children with mild to moderate malnutrition. Comparison groups included children receiving standard diets, non-local food interventions, or no intervention. Studies were excluded if they were not intervention-based, did not assess nutritional outcomes, did not focus on malnourished under-five children, or did not incorporate local food as a key component. Risk of bias was assessed using RoB 2 for RCTs and ROBINS-I for quasi-experimental studies. From 23,120 identified articles, 11 studies met the inclusion criteria. The interventions involved the use of local ingredients such as soybeans, fish, moringa, and other traditional foods processed into ready-to-use therapeutic foods (RUTF) or fortified complementary meals. Most studies showed significant improvements in anthropometric indicators, including body weight, height, mid-upper arm circumference (MUAC), and z-scores for age or height. Several studies also highlighted the importance of intervention duration and nutrition education in enhancing effectiveness. Local food-based interventions are considered sustainable due to their affordability, accessibility of ingredients, and compatibility with local dietary practices. This approach offers an effective, affordable, and contextually relevant strategy to improve the nutritional status of under-five children, particularly in resource-limited settings.

Keywords: Malnutrition, Local Food, Under-Five Children, Nutrition Intervention

O-T02B-0295

The total amount of screen time, quality of sleep, and associated factors amongst undergraduate medical and dental students at a selected university in Sri Lanka.

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Abstract

Background: Screens are everywhere!. Undergraduates in the medical and dentistry fields are particularly at risk because of their heavy workloads and extended usage of devices for both academic and extracurricular activities. International research has linked screen time to poor sleep, but there is still a lack of local data.

Methods: Undergraduate medical and dental students at the University of Sri Jayewardenepura, a descriptive cross-sectional study was done. From 150 students, 142 gave their consent. Faculty representation was balanced using stratified random sampling. A self-administered questionnaire addressing screen usage, sociodemographic characteristics, and the Pittsburgh

Sleep Quality Index (PSQI) was used to gather data. The PSQI uses a scale of 0 (best) to 21 (worst) to evaluate sleep quality. SPSS version 27 was used to analyse the data.

Results: Among 142 participants, 78.2% (n=111) were medical and 21.8% (n=31) dental students, with 47.9% (n=68) in their first year. Around bedtime, 83.68% (n=118) used devices; of which 40.7% (n=34) used devices for 15 to less than 30 minutes. Additionally, of the 118 who used devices around bedtime, 42.2% (n=35) experienced a 5–15 minute delay falling asleep after device use.The PSQI scores ranged from 0 to 12, with a median of 4.55 (SD=2.511). Using a cut-off of 5 to identify poor sleep quality, most students scored within the normal range. Smartphones were the most used devices for academic (74.8%, n=107) and non-academic (92.3%, n=132) purposes. No significant associations existed between sociodemographic factors and sleep quality, but screen time was significantly linked to poorer sleep quality and varied by sociodemographic factors.

Conclusion: More screen time close to bedtime was detrimental to sleep. Sleep quality wasn't significantly impacted by sociodemographic variables. These results underline the necessity in encouraging better screen habits among dental and medical students.

Keywords: Sleep quality, screen time, medical undergraduates, dental undergraduates.

O-T02A-0330

Maternal Nutrition Knowledge and Status as Determinants of Stunting in Preschool-Aged Children: A Study in the Makassar Ethnic Group

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Abstract

Background: Stunting is major nutritional problems that adversely affect the growth and development of preschool children, particularly within the Makassar ethnic community. This study aims to examine the relationship between maternal knowledge about nutrition and child health, maternal nutritional status, and the occurrence of stunting in preschool children among the Makassar ethnic group.

Methods: A cross-sectional design was employed involving a sample of 195 mothers and their preschool children from the Makassar ethnic group, Indonesia. Data were collected using maternal knowledge questionnaires, anthropometric measurements of children (height and weight), and maternal nutritional status assessed by body mass index (BMI) and upper arm circumference (UAC). Bivariate and multivariate logistic regression analyses were conducted to assess the associations between variables.

Results: The prevalence of stunting among the children was 28% and 15%, respectively. Low maternal knowledge was significantly associated with an increased risk of stunting in children (OR=2.5; 95% CI: 1.4–4.5), and poor maternal nutritional status raised the risk of stunting by 1.9 times (OR=1.9; 95% CI: 1.1–3.3). Maternal education and household economic status also significantly contributed to the occurrence of stunting.

Conclusion: Maternal knowledge and nutritional status play key roles in preventing stunting in preschool children within the Makassar ethnic group. Community- and culturally-based nutrition interventions and educational programs are strongly recommended to enhance maternal knowledge and nutritional status, thereby improving child nutritional outcomes sustainably.

Keywords : Makassar ethnic; Maternal Education; Preschool child; Stunting

O-T02B-0334

GALACTOGOGUES CONSUMPTION, EFFECTIVENESS AND SIDE EFFECTS: A REVIEW

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Abstract

Galactogogues are substances that stimulate, maintain, or increase breast milk production and are widely used among lactating women experiencing insufficient milk supply. They include pharmacological agents, such as domperidone and metoclopramide, as well as herbal preparations including fenugreek, milk thistle, fennel, cumin, licorice, dill and many others. Herbal galactogogues, are frequently used, yet supporting evidence is limited, and reported outcomes are inconsistent. While their use is common across cultures, the scientific evidence for their efficacy remains variable and sometimes inconsistent. Despite their popularity, potential side effects warrant caution. This review was conducted to synthesize existing evidence on the consumption of galactogogues, their effectiveness in enhancing lactation, and associated side effects. A comprehensive literature search was performed across multiple electronic databases, including PubMed, Scopus, Web of Science, and Google Scholar, covering publications for the past 10 years. Evidence suggests that pharmacological galactogogues, particularly domperidone, may modestly increase breast milk volume in some women, although benefits vary across populations. Metoclopramide demonstrates similar efficacy but is limited by neurological and psychiatric side effects. Galactogogues side effects range from mild gastrointestinal symptoms and allergic reactions with herbal preparations to more serious risks such as cardiac arrhythmias (domperidone) and depression or extrapyramidal symptoms (metoclopramide). Herbal galactogogues, though traditionally valued, their safety profiles are less clearly defined due to limited regulation and standardization, lack robust clinical validation, with most studies being small, heterogeneous, or of limited methodological rigor. In conclusion, galactogogues may offer benefits for some women with lactation insufficiency, but they are not universally effective and should not replace foundational breastfeeding support. Given the potential for adverse effects and the scarcity of high-quality evidence, their use should be individualized and carefully monitored. Future research with rigorous clinical trials is essential to better establish their efficacy, safety, and role in comprehensive lactation management.

Keywords: Galactagogues, effectiveness, side effects

O-T02C-0340

Social isolation and loneliness as predictors of physical and mental health among older adults: an individual participant data meta-analysis across 18 countries

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Abstract

Background: Social isolation and loneliness are key social determinants of health in older adults, but their global impact across diverse contexts remains underexplored. We evaluated longitudinal associations of social isolation and loneliness with physical and mental health in older adults across 18 high- and middle-income countries.

Methods: We conducted a two-stage individual participant data meta-analysis using harmonized data from five prospective cohort studies of adults aged ≥50 years. Social isolation was measured with a Social Isolation Index, and loneliness with the Revised UCLA Loneliness Scale. Primary outcomes were physical disease and mental disorder, with self-rated health as a secondary outcome. Mixed-effects models, adjusted for covariates, estimated within-country associations of social isolation and loneliness with health outcomes, pooled via random-effects meta-analysis. We examined cumulative exposure, subgroup variations, interactions, joint, and mediation effects, with sensitivity analyses ensuring robustness.

Results: Among 94,122 participants, social isolation was associated with increased physical diseases (pooled average marginal effect (AME) = 0.007, 95% CI: 0.003 to 0.011), mental disorders (pooled AME = 0.026, 95% CI: 0.014 to 0.037), and poorer self-rated health (pooled AME = −0.048, 95% CI: −0.069 to −0.028). Loneliness showed similar associations with physical diseases (pooled AME = 0.011, 95% CI: 0.006–0.016), mental disorders (pooled AME = 0.248, 95% CI: 0.213–0.283), and poorer self-rated health (pooled AME = −0.233, 95% CI: −0.280 to −0.186). Cumulative exposure worsened health outcomes. Stronger associations were found in unpartnered individuals, those with lower education, and those with daily activity limitations. High social isolation and loneliness combined significantly worsened health, with mutual mediation effects, despite no synergistic or antagonistic interactions.

Conclusion: Social isolation and loneliness are significant risk factors for adverse health outcomes among older adults, necessitating global public health strategies, including screening and community-based interventions, to foster social connections and promote healthy aging.

Keywords: Social isolation; Loneliness; Physical disease; Mental disorder; Older adults

O-T02A-0351

Association between continued public transportation users and cumulative long-term care costs: A longitudinal study from the JAGES cohort

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Abstract

Objective: In Japan, the rapid aging of the population has led to increasing long-term care (LTC) costs, which are projected to reach 24.6 trillion yen by 2040, raising concerns about the sustainability of the LTC insurance system. As an active mode of transportation, public transportation can promote daily physical activity and social participation; therefore, LTC costs may be lower among public transportation users. This study examined the association between bus/train use and subsequent cumulative LTC costs among older adults.

Methods: This is a 9-year cohort study using data from the Japan Gerontological Evaluation Study from 2013 to 2022. The study population consisted of 21,610 functionally independent adults aged 65 years or older living in 13 municipalities. The explanatory variable was the pattern of public transportation use over the 3 years, categorized into four groups: no use in both 2013 and 2016, started use between 2013 and 2016, stopped use between 2013 and 2016, and continuous use in both years. The dependent variable was 6-year cumulative LTC costs. Covariates included demographic and socioeconomic factors, health, physical activity, and psychological and environmental factors. Multilevel mixed-effects linear regression models with school district as a random effect were applied.

Results: The number of participants in each category was as follows: no use (n = 11,583), started use (n = 2,267), stopped use (n = 2,249), and continuous use (n = 5,511). During follow-up, 4,644 individuals (21.5%) received LTC certification. Continuous public transportation users had significantly lower cumulative LTC costs than non-users (−80,417 yen [≈ −731 USD at 1 USD = 110 JPY]; 95% CI: −125,586–−35249).

Conclusion: Being a continued user of public transportation was associated with lower cumulative LTC costs. Maintaining access to and encouraging consistent use of public transportation could help contain LTC costs, supporting the integration of transportation and aging policies.

O-T02A-0357

An upward trend of dyslipidemia among adult population in Vietnam: Evidence from a systematic review and meta-analysis

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Abstract

Introduction: One of the UN's Sustainable Development Goals (SDG) is to reduce premature mortality from noncommunicable diseases (NCDs) by one-third by 2030. With rapid changes in socio-economic conditions and demography in Vietnam, it is critical to assess the progress toward achieving that goal. This study aimed to examine the pooled prevalence and related factors of dyslipidemia among the Vietnamese adult population over the last two decades.

Method: The PROSPERO's registration number is CRD42023459582. Five databases, PubMed, Web of Science, Embase, CINAHL, Google Scholar, and local peer-reviewed journals were searched to determine the relevant materials from inception to May 2024 without language restriction. Pooled percentages of all dislipidemia indicators were derived by random-effect model meta-analysis. We also estimated the pooled crude odds ratio (OR) and 95% confidence interval (CI) for factors associated with and Hedges's g standardized mean of each dyslipidemia component.

Results: Sixty-nine studies were identified as potentially relevant for systematic review, with 41 studies included in the meta-analysis. The overall prevalence of having at least one component of dyslipidemia was 49% (95%CI=38%-60%), and figures for high total cholesterol, elevated triglycerides, increased LDL-cholesterol and low HDL-cholesterol were 31% (95%CI=25%; 37%), 38% (95%CI=31%; 44%), 21% (95%CI=12%; 32%), 23% (95%CI=16%; 30%), respectively. The pooled percentage of overall dyslipidemia was higher in males, in the Southeast region and in studies reported in Vietnamese than those in English. Having diabetes (OR=1·86, 95% CI=1·42; 2·43), hypertension (OR=1·69, 95%CI=1·37; 2·08), abdominal obesity (OR=2·50, 95%CI=1·77; 3·55) and overweight/obesity (OR=2·13, 95% CI=1·71; 2·65) were significantly positively associated with dyslipidemia.

Conclusion: The prevalence of dyslipidemia was substantially high and exhibited a significantly increasing trend in the Vietnamese adult population. Findings from this up-to-date review reinforce the effective implementation of NCD prevention and treatment measures to achieve the national and global SDG targets in Vietnam.

Keywords: dyslipidemia, systematic review, meta-analysis, Vietnam

O-T02B-0358

Academic Performance in Children of Mothers with Perinatal Depressive Disorder: A Population-Based Linked Data Cohort Study

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Abstract

Background: Maternal perinatal depression is a well-established risk factor for adverse child developmental outcomes, yet its long-term impact on academic achievement remains incompletely understood. Previous studies have often been limited by single-timepoint assessments and a lack of population-level data. This study examined the association between maternal perinatal depressive disorders and children's academic performance across multiple stages of schooling.

Methods: We used whole-population linked administrative data from the New South Wales (NSW) Perinatal Data Collection, the NSW Admitted Patient Data Collection, and the National Assessment Program—Literacy and Numeracy (NAPLAN). Maternal perinatal depressive disorders were identified using ICD-10-AM hospital diagnosis codes. Children's academic performance was assessed through NAPLAN results in Grades 3, 5, and 7, covering five domains: reading, writing, spelling, grammar, and numeracy. Statistical analyses were conducted using Generalised Estimating Equations and Propensity Score Matching.

Results: After adjusting, maternal perinatal depressive disorders were associated with increased odds of children not meeting national minimum standards in reading (OR = 1.24, 95% CI: 1.10–1.41), spelling (OR = 1.28, 95% CI: 1.13–1.46), writing (OR = 1.32, 95% CI: 1.19–1.47), and grammar (OR = 1.18, 95% CI: 1.06–1.33). No statistically significant association was observed for numeracy (OR = 1.10, 95% CI: 0.96–1.27). Stratified analyses showed that antenatal depression was more consistently related to poor performance across all literacy domains, whereas postnatal depression was associated with lower performance in reading and writing only.

Conclusions: Children of mothers with perinatal depressive disorders appear to be at elevated risk of suboptimal academic performance, particularly in literacy-related domains. The impact is more marked for antenatal depression, suggesting that early gestational exposure may interfere with foundational cognitive and socio-emotional development. These findings underscore the importance of timely identification and treatment of maternal depression during pregnancy to support children's long-term educational outcomes.

O-T02A-0372

Determinants of Food Choices and Dietary Habits among Adolescents in Urban Sri Lanka

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Abstract

Background: Adolescence is a crucial period to form lifelong dietary habits which can have lasting effects on their health. Thus, this study assessed the association of socio-economic determinants and nutritional knowledge with food choices and eating habits among adolescents in Colombo, Sri Lanka.

Methods: A cross-sectional study was conducted among 182 students from two schools in Colombo selected through a multistage random sampling method. Eating habits, food choices, socio-demographic and economic factors, and knowledge on nutrition were assessed using a face and content validated self-administered questionnaire. Scoring systems were applied to categorize students into healthy/unhealthy food consumption and satisfactory/unsatisfactory nutrition knowledge. Chi-squared test and Fisher's exact test were used to explore categorical variables, while Pearson correlation coefficient assessed continuous variables. The significance level was set at 0.05.

Results: The population comprised of a male to female ratio of 0.83 with a mean age of 13.8(SD=0.58) years. Of the participants, 54.4%(n=99) had healthy food choices and nutritional knowledge was satisfactory only in 45.1% (n=82). Almost 89% considered cost when buying food, and 55.5% skipped breakfast due to financial issues. Food choices were not associated with father's occupation (p=0.260) or pocket money (p=0.792), but were positively associated with family discussions (p=0.004), emphasis on healthy nutrition (p=0.048), and religious practices (p=0.003). Better nutritional knowledge demonstrated significant positive associations with female gender (p<0.001) and increased family influence (p<0.001). However, healthy food consumption was not associated with the nutrition knowledge of the participants(p=0.332), depicting a gap between knowledge and practice.

Conclusion: Various socio-economic constraints combined with poor application of knowledge restrict healthy eating among urban Sri Lankan adolescents. Thus public health strategies must address affordability of healthy foods, while strengthening family involvement and practical nutrition skills to reduce malnutrition.

Keywords: adolescents, socio-economic determinants, nutritional knowledge, food choices, public health, eating habits

O-T02A-0377

Grandmother's Role in Child Nutrition Management on Extended Family

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Abstract

Background: Grandmothers play an important role in family health care in different cultures, serving as primary caregivers and a source of traditional knowledge in childcare. In the field of child nutrition, grandmothers often act as advisors, decision makers, and primary care providers, which can have both positive and negative impacts on children's nutritional outcomes.

Methods: The source of literature in this study comes from online journal databases such as: Science Direct and Pubmed. The literature search methodology was carried out by searching for the keywords "grandmother AND child nutrition" and "grandmother AND complementary feeding". The references used came from the literature in the range of 2019-2024.

Results: Many studies highlight cultural elements and underscore the importance of integrating grandmothers into health programs to leverage their traditional knowledge and parenting roles for better health outcomes. In addition, the application of the family management in health interventions advocates the emphasis on the integral role of grandmothers in decision making and care support.

Conclusion: The importance of involving grandmothers in nutrition interventions and public health programs is emphasized to align traditional practices with professional recommendations, thereby improving the overall nutritional status of children.

Keywords: grandmother’s role; child nutrition; complementary feeding; extended family

O-T02A-0382

Prevalence and influencing factors of myopia among children and adolescents in Jiangxi Province

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Abstract

Background: The rising prevalence of myopia has been identified as a major public health challenge. Globally, the prevalence of myopia exhibits a trend toward rapid rise and younger age at onset. This study seeks to analyze the prevalence of myopia and its influencing factors among children and adolescents in Jiangxi Province, thereby providing a foundation for formulating targeted prevention and control programs and reducing the incidence rate.

Methods: A school-based cross-sectional study was conducted, and 10,633 participants were selected from 242 classes of 26 schools across ten cities in Jiangxi Province using a multistage stratified random cluster sampling method. Myopia screening and questionnaires investigating the influencing factors of poor visual acuity were conducted. Univariate and multivariate logistic regression analyses were employed to identify influencing factors associated with myopia.

Results: The overall myopia prevalence was 48.0% (5100/10633), with 24.4%(Grades1–3),46.4%(Grades4–6),and71.5%(Grades7–9).Total/mild/moderate/severe myopia increased with grade; females had higher prevalence (all P<0.001). Factors associated with myopia included: performing eye exercises >2x/day (aOR=0.78, 95%CI: 0.68–0.88); occasional reading in sunlight (aOR=1.10, 95%CI: 1.01–1.21); frequent prone reading/writing posture (aOR=1.20, 95%CI: 1.04–1.38); near-work duration of 2–3h (aOR=1.22, 95%CI: 1.06–1.40); outdoor recess activity (aOR=0.91, 95%CI: 0.81–0.99); daily daytime outdoor activity of 2–3h (aOR=0.81, 95%CI: 0.71–0.93); daily after-school reading/writing duration >3h (aOR=1.57, 95%CI: 1.30–1.89); attendance at academic tutorial classes (aOR=1.18, 95%CI: 1.02–1.36); maternal myopia (aOR=1.58, 95%CI: 1.32–1.88); and standard classroom illumination (aOR=0.85, 95%CI: 0.76–0.95).

Conclusions: The overall prevalence of myopia among children and adolescents in Jiangxi Province remains relatively high, with a gradual increase alongside grade advancement and age growth. Risk factors for myopia included older age, maternal myopia, reading in sunlight, prone reading/writing posture, prolonged daily after-school academic tasks, and attendance at academic tutorial classes. Protective factors included more frequent eye exercise performance, outdoor recess activity, longer daily daytime outdoor activity, and standard classroom illumination. Based on these findings, a comprehensive collaborative model involving society, schools, families, and individuals is recommended for myopia prevention and control.

Keywords: Adolescents and Children; Myopia prevalence; Influencing factors.

O-T02B-0383

Effects of Classroom Lighting Renovation on Primary and Middle School Students' Eyesight — A Case Study of Southeastern Jiangxi Province

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Abstract

Background: Adolescent myopia has become a prominent public health challenge in China. As a core learning environment where primary and middle school students spend a long time every day, the lighting conditions in classrooms are closely related to the occurrence and development of myopia. This study in southeastern Jiangxi explores the specific impact of classroom lighting renovation on their eyesight.

Methods: This was a prospective non-randomized controlled trial with 1,240 primary and middle school students in southeastern Jiangxi. From schools under classroom lighting renovation, 24 classrooms with phosphor-free LEDs were randomly selected as the renovation group; 24 with phosphor-converted LEDs were 1:1 matched (adjacent location, equivalent workload) as the control group. Participants completed measurements of uncorrected/best-corrected visual acuity, non-cycloplegic autorefraction (spherical equivalent refraction (SER)), axial length (AL), and keratometry (K), plus a myopia-related questionnaire, before and 6 months after renovation. Mann-Whitney-Wilcoxon Test and generalized estimating equations (GEE) were used to analyze classroom lighting's impact on students' vision.

Results: No statistically significant difference was observed in 6-month cumulative myopia incidence between the control and intervention groups; after adjustment, the intervention group exhibited a 4% lower incidence (incidence risk ratio (IRR)=0.96; 95% confidence interval (CI), 0.82-1.11; P=0.568). At 6 months, unadjusted SER change showed no significant between-group difference, whereas adjusted SER change in the intervention group was reduced by -0.024D (95%CI, 0.01-0.04; P=0.010). The intervention group had smaller AL change (0.15mm vs. 0.18mm; P=0.002), with a non-significant 0.009mm reduction post-adjustment (95%CI, 0.03-0.01; P=0.262).

Conclusions: Classroom renovation with phosphor-free LED lighting showed no significant effect on the 6-month cumulative incidence of myopia among primary and middle school students in southeastern Jiangxi Province, but exhibited certain positive effects in slowing down myopia progression; the potential inhibitory trend in AL changes requires further verification.

Keywords: Phosphor-free LED lighting; cumulative myopia incidence; axial length

O-T02C-0384

Listening to the Vulnerable Voices: A Critical Discourse Analysis of Filipino Geriatric Patients' Healthcare Ideologies

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Abstract

The world's population is experiencing a significant demographic shift as the number of older adults is increasing rapidly. This shift presents complex challenges and opportunities for healthcare systems worldwide, including a deeper understanding of the unique and multifaceted needs of this population. This study addresses this phenomenon by applying critical discourse analysis (CDA) to the verbal accounts of geriatric patients. CDA uncovers that these patients' ideologies about medical care, engagement with healthcare services, and their overall approach to health are not a simple matter of compliance or non-compliance. Findings suggest that their health-related views and behaviors are shaped by factors operating on three interconnected levels. On a personal level, patients demonstrate a strong sense of autonomy guided by lived experiences that lead them to question the efficacy and financial burden of conventional medicine. Their view of medical care is marked by a blending of prescribed medications and traditional remedies. The second is familial dynamics, where family members act as both caregivers and agents of a clashing medical ideology. This creates tension and power struggles over treatment decisions. Lastly, social media, particularly platforms like Facebook, emerges as a critical third-party authority that provides validation for their non-conventional health beliefs, reinforces skepticism, and empowers personal choice. These findings suggest that improving patient-centered communication requires a move beyond prescriptive advice to a dialogue that acknowledges patients' personal realities and concerns. Moreover, the results highlight the need for a re-evaluation of public health information management to actively counter misinformation and meet patients in the digital spaces they inhabit. Finally, the analysis underscores the importance of developing more empathetic community health policies and interventions that address not only the medical needs but also the logistical, financial, and social realities of the geriatric population to ensure that support is aligned with their values and beliefs.

Keywords: critical discourse analysis, healthcare ideologies, geriatric patients

O-T02A-0386

Fostering sustainable partnerships for global nutrition in a time of disruption: building the next generation of a nutrition and dietetics workforce in northern Thailand

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Abstract

Background: The Double Burden of Malnutrition has led to a disproportionate burden of malnutrition-related morbidity and mortality in low-to-middle-income countries (LMICs), including those such as Thailand. The impact of diet-related disease extends far beyond individual health issues, affecting many aspects of Thai society today and well into the future. Here we highlight a partnership for global nutrition education between Chiang Mai University (CMU) and the University of Texas Medical Branch (UTMB) in creating the next generation of dietitians and auxiliary health staff to meet the challenge of diet-related disease in northern Thailand.

Methods: Partnership building activities were co-created and include: values assessment, team science principles, and collaborative planning techniques. A needs assessment of clinical nutrition education and care across the Chiang Mai University Faculties of Agro-Industry and Medicine is currently underway.

Results: Partnership building activities have enhanced cooperation between CMU and UTMB, aligning with team science principles to ensure psychological safety and space for awareness and exchange between partners. Needs assessments, informed by the Consolidated Frameworks for Implementation Research, have preliminarily identified two main target areas: (1) undergraduate/graduate clinical nutrition education and (2) existing infrastructure and professional capacity for clinical nutrition practice in the CMU hospital system. Workshops have identified optimal partnership impact on these two main areas of need. Enablers noted include the shared resources, administration, and management for education and capacity building endeavors across CMU faculties. Barriers include aligning education program structure that is in line with CMU, Thai Dietetic Association, and Accreditation Council for Education in Nutrition and Dietetics.

Discussion: We summarize the initial engagement activities to build a sustainable partnership to develop the next generation of Thai dietitians in Northern Thailand. We highlight some enablers and barriers to addressing to distinct areas of clinical nutrition practice at CMU: education and workforce strengthening.

Keywords: Health workforce, Dietetics, Nutritional Sciences, Nutrition Therapy, Health Care Facilities Workforce and Services

O-T02A-0418

Sex-stratified effects of a one-year physical education specialist assignment on elementary school children's fitness in Japan

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Abstract

Background: Physical fitness is crucial for child health and development, yet its decline is a concern, with persistent gender differences observed. In Japan, Physical Education (PE) in elementary schools has been taught by classroom teachers. Assigning PE specialists aims to improve instructional quality and to promote physical activity schoolwide. This approach aligns with the Comprehensive School Physical Activity Program (CSPAP), a multicomponent strategy involving quality PE, staff involvement, and community/family engagement. While previous studies show CSPAP improves motor skills and cardiorespiratory fitness, most lack control groups, making effects hard to distinguish from natural growth. Therefore, this study evaluated the impact of assigning a PE specialist on Japanese elementary students' physical fitness, using matched controls to examine potential gender differences.

Methods: A one-year longitudinal study (2022–2023) included 997 fifth-grade students from 10 public schools in Japan. Three schools implemented PE specialists (n = 237), while seven served as matched controls (n = 760). Students without consent, data, or who transferred were excluded. The final analysis included 555 students (125 intervention). The outcome, Physical Fitness Index (PFI), was the mean of sex- and year-specific z-scores from national fitness test components. We used mixed-effects models, stratifying by sex and adjusting for baseline covariates.

Results: In 2022, mean PFI did not differ by group in either sex. In 2023, girls in the intervention scored higher than controls （mean ± SD: 0.12 ± 0.46 vs. -0.04 ± 0.48, p = 0.013), but boys did not (0.09 ± 0.50 vs. -0.02 ± 0.50, p = 0.122). Mixed-effects models showed significant improvement in PFI for girls (mean difference: 0.15 SD, 95% CI: 0.04; 0.26), no effect in boys (0.08 SD, -0.03; 0.19).

Conclusion: While girls worldwide show lower fitness levels and slower improvement, PE specialists may help reduce gender disparities in physical fitness.

Keywords: Motor development, Physical education, Structured physical activity program

O-T02D-0478

Adverse Pregnancy Outcomes (Apos): A Cross-Sectional Study Among The Meitei Women Of Manipur

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Abstract

Adverse pregnancy outcomes (APOs) are outcomes other than normal live births, including low birth weight, preterm birth, stillbirth, or abortion. The APOs are the most essential vital statistics for assessing maternal and child health status, as it is one of the leading causes of maternal and newborn deaths. The burden of APO is the most common reproductive health issue in most developed and developing countries. The present study observed a high prevalence of APOs (23.33%), which is comparable to various developing nations. Women with a history of recurrent miscarriages (abortion) are the most common type of APOs (13.7%) among the studied population. Concerning the other APO types considered in the current study, the rate of low birth weight (12.14%), preterm birth (9.5%), neonatal death (7.5%), and stillbirth (4.4%) is quite high as compared to the overall rate of India. Several socioeconomic factors have statistically significant relationships with the occurrence of APOs. The behavioural factors like smokeless tobacco use and inadequate iron and folic acid supplementation were more likely to increase the odds of occurrence of APOs even after controlling for all the significant socioeconomic risk factors. The present study highlights the importance of adequate antenatal care visits and avoiding smokeless tobacco consumption during pregnancy. Changes in such modifiable behavioural factors might prevent unwanted APOs and their associated postpartum complications.

Keywords: Reproductive health, maternal age, smokeless tobacco, low birth weight, preterm birth

O-T02D-0490

Beyond Cultural Boundaries: Uncovering Critical Gaps in Pregnancy Anxiety Screening Across Global Populations

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Abstract

Pregnancy is a critical period involving physiological and hormonal changes that increase psychological disorder risks, particularly anxiety. Anxiety during pregnancy affects 5-16% of women globally, with prevalence reaching 22.9% across trimesters. Maternal anxiety significantly impacts both maternal and fetal health, causing preterm birth, low birth weight, and long-term mental health complications. Current screening instruments demonstrate limitations in detecting anxiety accurately due to overlapping somatic symptoms and lack of trimester-specific considerations. This study aims to evaluate anxiety screening instruments for pregnant women, focusing on their sensitivity, specificity, and cultural adaptability.

A systematic narrative review was conducted using PubMed, Scopus, ScienceDirect, and Cochrane Library databases from 2016-2025. Search strategies included Boolean operators with keywords: "pregnancy anxiety," "screening," "assessment," "validation," and "psychometric properties." Studies utilizing existing instruments or developing specific tools for pregnancy-related anxiety were included. A total of 185 papers were initially identified, with 18 studies meeting eligibility criteria after duplicate removal and full-text evaluation.

Multiple screening instruments were identified including EPDS, GAD-7, HADS-A, and PRAQ-R2. GAD-7 demonstrated highest sensitivity (73-97%) but lower specificity (56-67%). HADS-A showed balanced performance with sensitivity 65-82% and specificity 70-85%. PRAQ-R2 exhibited strong psychometric properties with reliability coefficients >0.80. However, most instruments were primarily validated in high-income countries, limiting cross-cultural applicability.

Current screening tools inadequately address somatic symptom overlap and trimester-specific variations. Cultural adaptation remains insufficient for low- and middle-income countries where anxiety manifestations differ significantly. Development of culturally appropriate, trimester-specific screening instruments with enhanced sensitivity to both psychological and somatic symptoms is essential for accurate anxiety detection during pregnancy.

Keywords: pregnancy anxiety, screening instruments, validation, cultural adaptation, maternal health

O-T02A-0492

Gut Microbiota Profiles among Pregnant Women in Coastal Areas and Their Association with Stunting: A Review

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Abstract

Background : Malnutrition remains a major public health concern in developing countries, with stunting being one of its most prevalent manifestations. Maternal perinatal factors, particularly nutritional status during pregnancy, play a critical role in the risk of intrauterine growth restriction, which may result in low birth weight (LBW). During pregnancy, the gut microbiota undergoes significant changes, characterized by increases in genera such as Bifidobacterium spp., Lactobacillus spp., Clostridium spp., and Escherichia coli.

Objective : aim of this review is to examine the factors associated with maternal gut microbiota profiles.

Methods : This narrative review synthesizes findings from 15 studies published in the past five years, identified through PubMed, Scopus, and Google Scholar. The reviewed articles focused on determinants influencing the composition of maternal gut microbiota, with particular emphasis on pregnant women residing in coastal areas.

Results : The findings demonstrate notable alterations in gut microbiota composition during pregnancy that affect maternal and fetal health. These changes are influenced by maternal nutritional and metabolic status. Furthermore, gut microbiota dysbiosis is associated with malnutrition, including stunting. Pregnant women in coastal regions face higher nutritional vulnerability, placing them at risk of developing suboptimal microbiota profiles.

Conclusion : maternal gut microbiota plays an essential role in determining pregnancy quality. Nutritional and environmental factors, particularly in coastal areas, strongly influence microbiota colonization and its implications for stunting risk. This review highlights the importance of microbiota-based nutritional interventions as a preventive strategy to reduce stunting prevalence in vulnerable coastal communities.

Keywords: Stunting; Malnutrition; Gut microbiota; Pregnant women; Coastal areas

O-T02B-0493

Using Systems Thinking to Explore the Drivers of Childhood Gastroenteritis in Queensland

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Abstract

Background and Aims: Australia is a high-income country with advanced water, sanitation and hygiene (WASH) infrastructure. Yet, it continues to grapple with gastroenteritis as a persistent public health challenge, with major venues of transmission including domestic households, childcare facilities and schools. This persistence is attributed to the complex nature of the disease involving multiple causes, diverse sources, and varied transmission routes and its strong linkage to dynamic human behaviours.

Addressing this challenge requires a holistic approach to understanding evolving behaviours such as hand and environmental hygiene. This study aimed to explain the persistence of gastroenteritis as a public health challenge, focusing on domestic, childcare and school settings, by developing and analysing a causal loop diagram (CLD), a systems thinking tool that visually integrates empirical data and theoretical insights into causal relationships and feedback loops.

Methods: The CLD was developed using published quantitative and qualitative studies to identify key variables and their relationships and refined through expert consultation.

Results: Key variables influencing the gastroenteritis transmission were identified across domestic, childcare, and school settings. The CLD included nine balancing (B) and 13 reinforcing (R) feedback loops. Public health responses and parental awareness emerged as central elements, with the highest number of connections and involvement in multiple feedback loops. Initial insights highlighted the multi-sectoral nature of the problem, as well as delays in public health response and healthcare-seeking behaviours.

Conclusions and Significance: The CLD highlights the central role of public health units and parents in gastroenteritis outbreaks. It also reveals interconnected feedback loops across homes, schools, and childcare settings, emphasizing the need for an integrated intervention such as supportive policies like paid leave and fee reimbursements to working parents

Keywords: Gastroenteritis, systems thinking, public health, feedback loop, Australia

O-T02A-0495

Factors Influencing the Fruit And Vegetable Consumption of Grade 1 And 2 Students from Elementary School in Yangon, Myanmar: A Pilot Study

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Background: Adequate fruit and vegetable (FV) intake during childhood plays a vital role in healthy growth and development. Insufficient consumption is linked to around 11% of stroke cases, 31% of ischemic heart disease, and 19% of gastrointestinal cancers. The World Health Organization (WHO) recommends a daily intake of at least five servings of fruits and vegetables. This pilot study evaluated the factors that are influencing the FV consumption of Grade 1 and 2 elementary school students.

Methods: The study was a pilot test before the baseline assessment and a part of the program called "SWITCH" which aimed to improve the fruit and vegetable consumption of students. A total of 30 parents of Grade 1 and 2 students were selected randomly and the research area was in an elementary school of Yangon, Myanmar.

Results: The mean age of the parents was 35 years old. More than half of the participants had a medium level income and the majority of the parents had at least high school education level. The average intake of FV consumption in children was 2.35 servings per day. In bivariate analysis, education level, income of parents, family meals, preparing lunch box characteristics of parents and physical activity of children had association with FV consumption of children. In multivariate analysis, income, family meals and prepare lunch box characteristics of parents were significantly associated with FV consumption of children.

Conclusion: In this pilot study, FV consumption in children had association with income, family meals, prepare lunch box characteristics of parents. The average serving per day of FV consumption in children was below the WHO recommended guideline.

Keywords: fruits, vegetables, parents, children, servings

O-T02C-0525

Dynamic changes in frailty and incident dementia among the older: two large-scale national representative longitudinal cohort studies

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Abstract

Background The relationship between changes in frailty status over time and the risk of developing dementia remains understood. We aimed to examine the dynamic changes in Frailty and incident dementia among the elder using data from two prospective cohort studies.

Methods This study used data from two longitudinal population-based cohorts: China Health and Retirement Longitudinal Study (CHARLS) and the Survey of Health, Ageing, and Retirement in Europe (SHARE). Frailty was measured using the Rockwood Frailty Index (FI) and categorized into three groups: robust, pre-frail, and frail. Changes in frailty status were determined by comparing baseline assessments with follow-up data collected two years later. We used a Cox proportional risk model and made necessary adjustments for baseline demographic characteristics and lifestyle-related factors.

Results A total of 5,016 participants from CHARLS (women: 57.08%, mean age: 60.28 years), 29,305 participants from SHARE (women: 57.71%, mean age: 65.53 years) met the inclusion criteria. Participants who were initially robust but transitioned to a pre-frail or frail state had a significantly higher risk of developing dementia (CHARLS, HR 1.77, 95% CI 1.36-2.29; SHARE, HR 1.84, 95% CI 1.42-2.39). Increased risk of incident dementia was also observed in pre-frail participants who progressed to frailty status (CHARLS, HR 1.96, 95% CI 1.42-2.71; SHARE, HR 1.91, 95% CI 1.37-2.66) when compared with stable pre-frail participants. In contrast, participants who were frail at baseline but improved to a pre-frail or robust status showed a reduced risk of developing dementia (CHARLS, HR 0.60, 95% CI 0.38-0.94; SHARE, HR 0.57, 95% CI 0.36-0.91). The risk of incident dementia increased progressively with higher levels of the FI.

Conclusion Changes in frailty status were strongly linked to the risk of developing dementia. Progression of the frailty status increases the risk of incident dementia, whereas recovery from the frailty status decreases the risk of incident dementia.

Keywords: Frailty, Dementia, Dynamic, Prospective study

O-T02C-0528

Age difference in health-related lifestyle and sleep discrepancy using a nationally representative Korean survey

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Abstract

Sleep has a fundamental role in maintaining optimal physical and mental health. Weekend catch-up sleep, a behaviour to compensate for weekday sleep debt, can lead to adverse health consequences. This study aims to examine the association between health-related lifestyle and weekday-weekend sleep discrepancy, stratified by the working-age and elderly population.

This study utilized data from the 2024 Korea Community Health Survey. A multivariate linear regression model based on a complex sample design was applied. Participants (n=149,283) were categorized into the working-age population (19-64 years) and the elderly population (≥ 65 years).

It was found that adherence to health-related lifestyle was negatively associated with weekend–weekday sleep discrepancy in the working-age ($\beta = -0.035$, $p<0.05$), but not statistically significant in the elderly population ($\beta = -0.015$, $p=0.14$). In the working-age population, female, employment, higher income, unmet healthcare needs, and depressive symptoms were more likely to have greater sleep discrepancy. Conversely, college education or higher, being married or divorced/widowed/separated, rural residence, and a history of hypertension or diabetes were negatively associated with sleep discrepancy.

This study found that adherence to a health-related lifestyle was linked to a smaller weekend–weekday sleep discrepancy in the working-age population. This finding may be explained by social jetlag, which refers to the misalignment between biological and social clocks through differences in sleep timing on weekdays versus weekends. Working-age population often compensates for weekday sleep loss with weekend catch-up sleep, but this misalignment tends to diminish after retirement. Healthier lifestyles may improve sleep regularity and quality, thereby narrowing weekend–weekday differences in sleep duration. These findings emphasize the importance of encouraging healthy lifestyles to improve sleep regularity and well-being.

Keywords: Sleep, Social Jet lag, Korea Community Health Survey

O-T02B-0549

Enhancing Dental Hygienists' Skills in Motivational Interviewing: A Training Program for Oral Health Promotion in Preschool Settings

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Abstract

Background: Early childhood caries (ECC) remains a major public health issue. Traditional oral health education, often delivered in a directive manner, has limited impact on caregivers' long-term behaviors. Motivational Interviewing (MI), a client-centered approach, has shown promise in promoting behavior change, yet dental hygienists in Thailand receive little formal training in MI.

Method: This first phase developed and implemented a two-day MI training program for dental hygienists. The program included lectures on MI principles, interactive workshops, role-play scenarios, and group reflections. Participants' knowledge and self-efficacy were assessed pre- and post-training using structured questionnaires, and qualitative feedback was collected to capture participants' reflections and readiness to apply MI.

Results: Three dental hygienists from Mae Larn district, Pattani, completed the training. Post-training assessments revealed an increase in knowledge scores (mean increase from 10.67 to 17.67) and higher self-reported confidence in applying MI techniques. Qualitative feedback highlighted a shift from instructing caregivers to listening, eliciting "change talk," and providing encouragement as mentors.

Conclusion: Phase 1 demonstrated that structured MI training effectively enhanced dental hygienists' knowledge, confidence, and readiness to apply MI in oral health promotion. This foundational step sets the stage for Phase 2, in which trained dental hygienists will deliver MI-based education to mothers of preschool children. The study was limited by a very small sample size (n=3), so findings should be interpreted as preliminary.

Keywords: Motivational Interviewing, dental hygienist, oral health education, preschool children, training program

O-T02C-0556

A Cross-Sectional Study On Prevelance Of Multimorbidity And Their Drug Adherence Among Geriatric Population In Field Practice Area Of Osmania Medical College, Hyderabad, India

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Background: 'Multimorbidity' or the coexistence of two or more chronic conditions in the same individual has a specific impact on safety issues in primary care. Patients with multimorbidity presents with unique medical care, needs complex & structured care plans. The medication adherence rate of 51% reflects lack of persistent treatment. This poses substantial impact on disease management, healthcare utilisation, costs & associated with elevated risk of poor quality of life, adverse drug events. So, this study is exploring the drug adherence in geriatric population with multimorbidity.

Objectives: 1) To assess the prevalence of multimorbidity in the Geriatric population; 2) To determine the drug adherence among the Geriatric population

Methods: This is a community based cross-sectional study in the urban field practice area of Osmania Medical College in the Geriatric population aged above 60 years, using simple random sampling method. The sample size is 150 using the formula $4pq/l^2$ .The data will be gathered using a predesigned, semi-structured questionnaire, also using Medication adherence rating scale (MARS), after taking the informed consent from study subject. Collected data will be analysed using chi-square test, MS EXCEL, SPSS software V25

Ethical consideration: Applied for institutional ethical committee clearance

Result: Initial study population showing 46% are multimorbid, population having drug adherence of 54%. The study is on-going and data will be analysed after completion of data collection. Result will be presented in the conference.

Conclusion: Adherence in India is multifactorial, with patient specific, specifically to influence individual decision making in treatment. Public health needs to improve for more drug adherence and to achieve universal health coverage.

Keywords: Multimorbidity, drug adherence, Geriatric population

O-T02C-0559

Interindividual variation in hs-CRP among rural residents in Northern Laos

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Abstract

Objectives: Market integration is causing a dietary transition in rural regions of developing countries, moving from region-specific diets to universal or market-dependent ones, which are suspected to be connected with the risk of non-communicable diseases. This study in northern Laos examines high-sensitivity C-reactive protein (hs-CRP) concentrations in dried blood spot (DBS) across three villages with varying degrees of market integration, aiming to understand the association between the risk of chronic inflammation and dietary patterns amid local diet transitions.

Methods: Data were collected from 368 healthy adults from three villages in northern Laos, representing different degrees of market integration. Using a questionnaire, we asked about the individual characteristics and the weekly intake frequency of 28 food groups. DBS samples were collected and analyzed for hs-CRP concentrations using Enzyme-Linked Immunosorbent Assay (ELISA). Dietary patterns were identified using Principal Component Analysis (PCA). Dietary pattern scores were calculated, which indicate how closely an individual's diet aligns with a particular dietary pattern. Inter-village differences in dietary pattern scores and hs-CRP concentration were compared. The association between dietary patterns and hs-CRP concentrations was explored using multivariable logistic regression. To consider the impact of seasonality on lifestyle, the inter-village comparisons and association analyses were conducted by subgroups of the same sampling season.

Results: The hs-CRP concentrations of the participants were higher in the villages with a higher degree of market integration. A specific dietary pattern was identified, characterized by a high consumption of foraged

wild plants and a low intake of market-related foods. This dietary pattern was negatively associated with elevated hs-CRP concentrations in the rainy season sample.

Conclusions: Higher hs-CRP concentrations were found in village residents with a higher degree of market integration. This trend in hs-CRP might partly be explained by a dietary transition from a foraging-based diet to a market-dependent one.

O-T02D-0570

A Cross-Sectional Study On Assessment Of Infertility Causes And Their Association With Depression,Anxiety, Among Reproductive Aged Women In Government Maternity Hospital Affiliated To Osmania Medical College, Hyderabaded

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Abstract

Background: Infertility is a serious health issue worldwide, affecting 8%-10% of couples worldwide[1].Of 60-80 million couples suffering from infertility every year worldwide, probably between 15 and 20 million (25%) are in India alone. According to a report by the WHO, one in every four couples in developing countries is affected by infertility. In less developed countries ,the 12 month prevalence rate ranges from6.9% to 9.3%.India is a country with a wide diversity. There is diversity in customs, traditions ,quality of living, accessibility to health care systems ,also climatic conditions .Due to these factors ,infertility rate varies widely .Infertility can have significant impacts on mental health. Psychological distress is a broad term encompassing emotional suffering and mental health discomfort that can include symptoms of anxiety and depression but is not limited to these conditions.

Objectives:

To determine the Prevalence of infertility & to assess the factors influencing infertility.
To evaluate the association with depression ,and anxiety among reproductive aged women.

Methods:
Study design: Community based Cross-sectional study
Study area: Government maternity hospital affiliated to Osmania Medical College.
Study period: 2 Months (August 2025- September 2025)
Study population: Married women between 15-49 years of age of field practice area of Osmania Medical College
Sample size: 326 using the formula $4pq/l^2$ (p=11.8%, l=5%)
Sampling method: Simple random sampling method.
Inclusion criteria: Married women between 15-49 years of age.
Exclusion criteria: Women who are unmarried,divorced,menopause
Study tool: The data gathered using a predesigned, semi-structured questionnaire, PHQ-4 scale.
Data collection: Data is being collected using the questionnaire after taking the informed consent from study subject
Analysis: collected data will be analysed using chi-square test, MS EXCEL, SPSS Software V 25
Funding: Nil
Ethical consideration**:** Applied for institutional ethical committee clearance
Result: The study is on-going and the data will be analysed after the completion of data collection. Results will be presented in the conference.
Keywords: Infertility, Reproductive age group, Depression.

O-T02D-0587

Woman's Knowledge and Motivation about Abortion in Central Java, Indonesia

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Abstract

Background: Indonesia's maternal mortality rate is significantly higher than in other countries with similar levels of socioeconomic development. Unsafe abortions are responsible for approximately 13% of maternal deaths. Abortion is not uncommon in Indonesia; it occurs everywhere, despite being a highly sensitive issue. This research aims to further explore the knowledge, attitudes, practices, and reasons for abortion experiences among women.

Method: This research uses a qualitative approach with a case study. The number of respondents was 14 people. The research location was on the Central Java in December 2019. Data was collected through in-depth, face-to-face interviews with selected informants. This qualitative study tracked informants who suspected abortion or menstrual regulation (women who reported tried to bring back their late period) in a previous quantitative survey.

Result: The women interviewed varied in their experiences, knowledge, motivations for abortion, and their social networks of trusted individuals. The study successfully collected women with followings characteristics: Women who admitted conducted abortion, have tried to bring back their late period but classified as doing 'MR' (menstrual regulation), not classified as 'MR', and who did not report abortion or tried to bring back their late period, but they are considered 'at risk' to have an abortion. On general women, they called it abortion or misscarriage. The informant might relate abortion to prostitute or premarital pregnancy. While on married women, the informant might relate abortion to failed of contraception, not yet ready with pregnancy, or economic burden. Some woman consume foods, traditional medicine or use contraceptive, traditional massage that are believed to cause abortion or curratage. Some women reported having anywhere from zero to one or more trusted individuals with whom they shared their reproductive health concerns.

Conclusion: Women's knowledge and motivations about abortion and their social networks of trusted people vary.

Keywords: abortion, motivation, maternal health

O-T02B-0591

Impact of Incident Chronic Disease Diagnoses on Catastrophic Health Expenditure: A Panel Analysis of KLoSA 2020–2022

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Abstract

Background: Catastrophic health expenditure (CHE) is a key indicator of healthcare access and quality of life among individuals with chronic diseases. This study investigated whether incident diagnoses of cancer, heart disease, and cerebrovascular disease between 2020 and 2022 increased the likelihood of CHE40 among those without chronic conditions in 2020.

Method: Data were obtained from the 2020 and 2022 waves of the Korean Longitudinal Study of Aging (KLoSA). The dependent variable was the first occurrence of CHE40 in 2022. The main independent variables were incident diagnoses of cancer, heart disease, and cerebrovascular disease. Control variables were selected based on Andersen's Behavioral Model of Health Services Use, including predisposing (gender, age, education, marital status), enabling (employment status, household income), and need factors (self-rated health). Logistic regression was conducted in two stages. Step 1 included only control variables, whereas Step 2 additionally incorporated incident disease variables.

Results: Incident cancer showed a positive but non-significant association with CHE40 (OR≈2.23, p=0.213). In contrast, incident heart disease significantly increased the risk of CHE40 by nearly sevenfold (OR≈6.96, p=0.012), even after adjusting for covariates. For incident cerebrovascular disease, perfect prediction was observed due to the very small number of cases, precluding meaningful estimation. Higher education (high school or above) and greater household income were identified as protective factors against CHE40.

Conclusion: Incident heart disease was the strongest predictor of catastrophic health expenditure, while cancer showed a non-significant trend and cerebrovascular disease could not be assessed due to sample limitations. These findings underscore the importance of strengthening financial protection mechanisms for patients with newly diagnosed heart disease, as well as advancing socioeconomic policies to mitigate disparities in health expenditure.

O-T02B-0609

Association between Subjective Sleep Sufficiency and Social Jetlag among Korean Adolescents: A Comparative study of Middle School and High School

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Abstract

Background: Social jetlag, defined as the discrepancy between biological and social clocks, is a significant concern among Korean adolescents. This study aimed to identify the association between subjective sleep sufficiency and social jetlag in adolescents by dividing them into two school level groups: middle school and high school.

Methods: For this study, data were obtained from the 20th Korea Youth Risk Behavior Web-based Survey collected by the Korea Disease Control and Prevention Agency. A total of 45,928 Korean adolescents (middle-school: 24,889, high-school: 21,039) were included. Data were analyzed using frequency analysis, chi-square test and multivariable logistic regression analysis by SAS 9.4.

Results: Among middle school students, insufficient sleep was significantly associated with a higher likelihood of social jetlag(OR=2.127, p<.0001). Social jetlag was also linked to female(OR=1.35, p<.0001), drinking experience(OR=1.126, p =0.0004) and lower academic performance(OR=1.18, p<.0001). In high school students, insufficient sleep showed a significant association with social jetlag(OR=2.113, p<.0001). Additional significant factors included smoking experience(OR=1.128, p=0.0116), female gender (OR=1.121, p=0.0001), exposure to violence (OR=1.383, p=0.0281) and lower academic performance (OR=1.413, p<.0001).

Conclusions: The findings underscore the importance of subjective sleep sufficiency as a key determinant of social jetlag in adolescents. Policymakers should implement comprehensive strategies, including school-based sleep education and policies addressing contextual factors like school start times and commuting burdens, to mitigate social jetlag and enhance adolescents' mental well-being and academic performance.

Keywords: Adolescent, Social jetlag, Sleep, adolescents' mental well-being

O-T02A-0637

Associations Between PM2.5 Exposure, Stress, Health Status, and Physical Activity Among Mae Fah Luang University, Thailand

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Abstract

Background: Air pollution from fine particulate matter (PM2.5) has become a serious and persistent health challenge in Northern Thailand, particularly during February–April when seasonal smog blankets the region. Chiang Rai consistently records the highest PM2.5 levels. PM2.5, generated from combustion, industrial emissions, and power generation, consists of ultrafine particles that can penetrate deep into the respiratory tract, enter the bloodstream, and adversely affect multiple organ systems. Evidence links chronic exposure to asthma exacerbations, chronic bronchitis, emphysema, cardiovascular and cerebrovascular diseases, and an increased risk of lung cancer. Beyond physical illness, global research highlights associations between air pollution and mental health outcomes, including heightened stress, depression, and suicide risk. University students may be particularly vulnerable as they frequently engage in outdoor activities. Furthermore, insufficient physical activity is influenced by both individual and environmental barriers, and awareness of pollution severity may discourage engagement in exercise.

Methods: A cross-sectional study was conducted with 101 Mae Fah Luang University students (aged 18–28 years) without diagnosed emotional disorders. Participants completed two surveys during both low- and high-PM2.5 periods, which included the Stress Test-5 (ST-5) for stress assessment, a health status questionnaire, and a physical activity questionnaire.

Results: Higher PM2.5 levels were weakly associated with greater stress ($r = 0.02$, $p = 0.857$) and with lower health status ($r = –0.05$, $p = 0.668$) and physical activity ($r = –0.10$, $p = 0.390$). None of these associations reached statistical significance. Nevertheless, the consistent direction of these associations suggests potential negative impacts of pollution exposure.

Conclusions: Although statistical significance was not observed, the findings suggest that higher PM2.5 exposure may contribute to increased stress, poorer health outcomes, and reduced physical activity among university students. Considering the cumulative effects of long-term exposure, even weak associations are important for public health. These results underscore the importance of monitoring vulnerable populations and conducting larger, longitudinal studies with objective measures of exposure and outcomes.

Keywords: PM2.5, air pollution, university students, stress, health status, physical activity behavior, Northern Thailand

O-T02A-0642

Food and nutrition supplementation during pregnancy, infancy and early childhood in Sri Lanka

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Abstract

Background & objective: Food and nutrition supplementations for mothers and children are evidence based interventions for reduction of maternal and child morbidity and mortality. This study aimed to describe the status of food and nutrition supplementation during pregnancy, infancy and early childhood in Sri Lanka.

Methods: A retrospective cohort study was conducted among 1875 children aged 12 to 24 months. The sample was selected using multi-stage cluster sampling method, stratified by 3 residential sectors from child welfare clinics. Primary data were collected through interview of their mothers, and secondary data from pregnancy records and Child Health and Development Records.

Results: In the sample 49.8% were boys. Approximately 59% mothers had received folic acid before pregnancy. The regular use of iron, folic acid, calcium and vitamin C during pregnancy was around 95%. During pregnancy, 71.5% received a food basket that was provided by the government. Further, 7.0% of the mothers have received some food aid during pregnancy /lactating period.

The proportion of children who received vitamin A supplementation at 6, 12 and 18 months were 92.9%, 87.3% and 79.8 % respectively. During the same time points Multiple Micronutrient Supplements was received by 42.9%, 47.5% and 41.6% children respectively.

The government distributed food supplementation (Thriposha) for pregnant mothers and underweight children were inconsistent during the period of study. 17.1% of the families were beneficiaries of a social safety nets (Samurdhi or Aswesuma) in the country.

Conclusion: Although the micronutrient supplementation during pregnancy was satisfactory, there is room for improvement of folic acid supplementation prior to pregnancy and multiple micro nutrient supplementation in children.

Keywords: Micronutrient, Supplementation, pregnancy, infants

O-T02C-0646

Coping Strategies to Overcome Mental Health issues Among Pregnant Mothers in Colombo, Sri Lanka: A Qualitative Exploration

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Abstract

Background: Pregnancy is a transformative period during which many women face heightened vulnerability to psychological stress and mental health challenges. While global studies have examined prevalence and risk factors of antenatal depression and anxiety, limited evidence exists on coping strategies among pregnant mothers in Sri Lanka. This study explored coping strategies used by pregnant women in the Colombo Regional Director of Health Services (RDHS) area to manage stress and mental health issues.

Methods: A qualitative study was conducted using in-depth interviews (n=25), five focus group discussions (n=40)with pregnant mothers, and six key informant interviews with maternal health providers. Semi-structured interview guides, developed and translated into Sinhala, explored emotional management and support systems. Data were analyzed thematically using Braun and Clarke's framework, with triangulation and investigator validation to enhance rigor.

Results: Mothers employed a mix of adaptive and maladaptive coping strategies. Passive coping—such as avoidance, silent endurance, resignation, or reliance on religious practices—was dominant. Emotional expression often manifested as anger or guilt directed toward family members. Some mothers adopted positive reframing, relaxation activities, or sought social support, though these were less common. Key informants confirmed avoidance as the prevailing pattern and highlighted low mental health literacy, stigma, and limited awareness of services as major barriers. Active problem-solving strategies were rarely used.

Conclusion: Pregnant mothers in Colombo rely heavily on passive coping mechanisms, which may heighten psychological distress over time. Strengthening maternal mental health education, promoting active coping skills, and integrating culturally sensitive interventions into routine antenatal care are urgently needed. Engaging families, particularly partners, and building the capacity of healthcare providers are critical to enhancing maternal wellbeing.

Keywords: coping strategies, pregnant mothers, antenatal depression, antenatal anxiety, qualitative study, maternal mental health, Sri Lanka

O-T02A-0647

Agronomic Practice And Rice Bran Protein Composition

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Abstract

Nitrogen (N) application is known to enhance the protein content of milled rice, but its impact on rice bran protein composition remains largely unexplored. This study provides novel insights into the effects of thirteen N treatments, including a control, on bran yield and protein composition in YRL39 rice. Results showed significant variations in bran yield and protein extractability among treatments, influenced by fertilizer type and splitting method. While no significant differences were observed in the overall protein content of bran or soluble protein extracts, treatments significantly impacted amino acid profiles. Soluble protein extracts from plants receiving 90-day release-polymer coated urea with foliar spray (80:20) exhibited higher levels of essential amino acids and hydrophilic amino acids compared to the control. This study demonstrates for the first time that different N treatments, despite not altering total protein content, significantly influence the solubility and amino acid composition of rice bran proteins. These findings highlight the potential for optimizing N management to enhance the nutritional quality of rice bran, a valuable byproduct with significant potential as an animal feed and human food ingredient.

O-T02C-0650

Bidirectional Associations Between Loneliness and Cognitive Function among Chinese Middle-aged and Older Adults: A National Longitudinal Study

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Abstract

Background: Although previous studies have reported an association between loneliness and cognitive function, the direction of this relationship remains contradictory. This study aimed to examine the bidirectional causal relationship between loneliness and cognitive function among Chinese middle-aged and older adults.

Methods: Data from the 2015-2020 China Health and Retirement Longitudinal Study (CHARLS) were analyzed. We employed linear mixed-effect models (LMM), latent growth models (LGM), and cross-lagged panel models (CLPM) to assess the longitudinal relationship between loneliness and cognitive function.

Results: The study included 11,748 participants aged 45 and above (Mean baseline age = 58.35 years, 49.19% male). LGM revealed that loneliness increased while cognitive function decreased over time. Bidirectional temporal relationships were observed: baseline loneliness accelerated cognitive impairment (β = -0.112, $P < 0.001$), while baseline cognitive impairment amplified loneliness (β = -0.129, $P < 0.001$). CLPM analyses confirmed the bidirectional negative relationship, with loneliness predicting subsequent cognitive decline (T1 to T2: β = -0.020, $P = 0.004$; T2 to T3: β = -0.039, $P < 0.001$) and lower cognitive function predicting increased subsequent loneliness (T1 to T2: β = -0.077, $P < 0.001$; T2 to T3: β =-0.072, $P < 0.001$).

Conclusion: Our findings demonstrate a negative bidirectional relationship between loneliness and cognitive function among Chinese middle-aged and older adults. These findings highlight the importance of developing integrated interventions targeting both social connectivity and cognitive health in aging populations.

Key words: Bidirectional association; Loneliness; Cognitive function; Middle-aged and older adults

O-T02A-0662

Effectiveness of Breathing Exercises for Improving Lung Function in Smokers: A Meta-Analysis

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Abstract

Background: Tobacco smoking is the leading cause of preventable respiratory morbidity, contributing significantly to the decline in lung function. A gradual decline in lung function among smokers without clinical symptoms prompts actions to enhance respiratory health, particularly through non-pharmacological strategies. Although breathing exercises are commonly used in pulmonary rehabilitation, evidence of their effectiveness in smokers without chronic respiratory disease is limited.

Objective: This study aimed to systematically review and meta-analyze the effectiveness of breathing exercises for improving lung function in smokers.

Methods: A systematic search of nine databases was conducted through May 2025 for randomized controlled trials involving current or former smokers with quantitative spirometry outcomes. Risk of bias was assessed using the Joanna Briggs Institute checklist and the Cochrane RoB 2.0 tool. Data were synthesized with Review Manager version 5.4. Evidence quality was evaluated using the GRADE framework through the GRADEpro Guideline Development Tool (GDT).

Results: This meta-analysis of six studies comprising 236 smokers aged 20–85 years found that breathing exercises significantly enhanced lung function, with pooled mean increases of forced expiratory volume in one second (FEV_1) of 0.54 L ($p = 0.007$), forced vital capacity (FVC) of 0.68 L ($p = 0.0005$), and vital capacity (VC) of 0.28 L ($p < 0.0001$). No significant improvement was observed in the FEV_1/FVC ratio ($p = 0.59$). Subgroup analysis indicated that interventions lasting four weeks or less produced more consistent improvements in FEV1, FVC, and VC compared to longer-duration (lasting more than 4 weeks) interventions. The overall certainty of the evidence was rated as very low due to methodological limitations and heterogeneity.

Conclusion: Breathing exercises may improve lung function in smokers, but further high-quality trials are needed to confirm these effects and identify optimal intervention protocols.

Keywords: breathing exercises, lung function, smokers, spirometry, systematic review, meta-analysis

O-T02B-0665

The Effect of Multiple Micronutrient Supplementation on Serum Vitamin D and Serum Interleukin-12 in Early Pregnancy: A randomized double blind control trial

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Abstract

Background: Micronutrient deficiency is prevalent among pregnant women, which can have serious consequences for both maternal and fetal health, including maternal immunity. Deficiency of vitamin D may increase pro-inflammatory cytokines, including Interleukin-12 (IL-12), and increase the risk of miscarriage. This study aims to evaluate the effects of Multiple Micronutrients Supplementation (MMS) on serum Vitamin D and serum IL-12 in early pregnancy, compared to iron-folic acid (IFA) as a standard program for pregnant women.

Methods: A two-arm randomized controlled trial was conducted in the District of Sidoarjo, East Java. The treatment group received a daily dose of MMS, and the control group received a daily dose of iron folic acid (IFA). The study subjects were pregnant women with gestational age < 12 weeks. The sample size of 35 in each group was selected from 109 eligible subjects, considering a 20% loss of follow-up. MMS capsule and IFA were administered to pregnant women in similar appearance during two months. The outcome variables are serum vitamin D and serum IL-12. Serum Vitamin D and IL-12 were measured before and after the study.

Results: The average of serum level of Vitamin D in the control group is 52,01 nmol/L, and treatment group is 49,31 nmol/L. The serum IL-12 in the control group is 9,6 ng/mL, and treatment group is 8,78 ng/mL. The analysis showed no statistically significant difference in Vitamin D levels between the two groups (p=0.403), but there was a significant reduction in IL-12 levels (p=0.001).

Conclusion: These findings suggest that MMS supplementation during early pregnancy is more effective in reducing IL-12 levels, rather than increasing serum vitamin D, compared to IFA. Therefore, MMS should be considered an important intervention in preventing inflammation in early pregnancy as a risk factor for miscarriage and other poor pregnancy outcomes.

Keywords: Multiple Micronutrients, supplementation, serum Vitamin D, IL-12, early pregnancy

O-T02C-0670

The mediating role of subjective happiness between subjective economic status and pre-emptive end-of-life conversation experience

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Abstract

Background: Promoting equitable end-of-life (EOL) preparedness among older adults is critical for dignified aging. The aim of this study was to investigate the mediating effect of subjective happiness between subjective economic status and Pre-emptive conversations (PCs) about EOL. The aim of this study was to investigate the mediating effect of subjective happiness between subjective economic status and Pre-emptive conversations (PCs) about end-of-life (EOL).

Methods: Data were derived from a cross-sectional study conducted in Koriyama City, Fukushima Prefecture, Japan, in January 2017. Logistic regression was employed to analyze the correlation between subjective economic status and PCs about EOL. Linear regression was conducted to explore the effect of subjective economic status on subjective happiness. Mediation effect analysis was performed to assess the mediating role played by subjective happiness in the association between subjective economic status and PCs about EOL.

Results: A total of 1,575 participants were included in this study, among whom 754 (48%) had PCs about EOL with family members and/or close friends. The fully adjusted logistic regression model revealed a positive correlation between subjective economic status and PCs about EOL [1.17(1.01, 1.37)]. When the variable of subjective happiness was not considered, subjective economic status was still positively associated with PCs with an OR of 1.23 (95%CI: 1.07-1.43). Linear regression indicated subjective economic status had a positive effect on subjective happiness with a Beta value of 0.81 (95%CI: 0.67-0.94). Mediation effect analysis revealed that subjective happiness explained 23.40% of the association between subjective economic status and PCs about EOL (P=0.024).

Conclusion: There exists a positive association between subjective economic status and PCs about EOL in Japanese older adults, and subjective happiness mediated the relationship between subjective economic status and experience of PCs about EOL.

Keywords: pre-emptive end-of-life conversation experience; subjective economic status; subjective happiness

O-T02A-0688

Systematic Review and Meta-Analysis of Risk Factors Contributing to Video Conference Fatigue

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Abstract

Background: Extended participation in video conferencing has been linked to several challenges, notably video conferencing fatigue, which can negatively impact individuals' health. Nonetheless, current research examining the risk factors for video conferencing fatigue presents inconsistent findings.

Objective: This study aims to systematically identify the risk factors contributing to video conferencing fatigue.

Methods: A meta-analysis of randomized controlled trials was conducted through a comprehensive search of seven electronic databases: PubMed, ScienceDirect, Scopus, ProQuest, JSTOR, Clinical Key, and Garuda. Data extraction was independently carried out by two reviewers. The analysis utilized a random-effects model. The quality of included studies was appraised using an 8-item checklist, complemented by sensitivity analyses and publication bias evaluation.

Results: Twelve studies comprising 11,169 participants were included. Significant associations with Zoom fatigue were identified for various psychological factors, including anxiety (Odds Ratio [OR]: 18.7; 95% Confidence Interval [CI]: 9.93–35.14), attitudes toward Zoom conferencing (OR: 0.18; 95% CI: 0.10–0.30), emotional exhaustion (OR: 10.3; 95% CI: 6.60–15.91), self-regulation (OR: 0.2; 95% CI: 0.13–0.28), and stress (OR: 18.7; 95% CI: 9.93–35.14). Regarding technological determinants, factors such as connectivity (OR: 0.7; 95% CI: 0.52–0.82), techno-complexity (OR: 0.3; 95% CI: 0.23–0.50), techno-invasion (OR: 4.9; 95% CI: 3.26–7.30), and participating in more than two video conferences per day (OR: 2.8; 95% CI: 1.85–4.32) were significantly associated with fatigue. **Conclusion:** Psychological factors, including stress and anxiety, along with extended usage duration and frequent video meetings, substantially contribute to video conferencing fatigue. Conversely, self-regulation and physical exercise appear to mitigate this effect. Thus, organizations should consider implementing measures such as mental health support, limiting meeting lengths, and promoting ergonomic use of technology to reduce fatigue.

Keywords: video conference fatigue, risk factor, meta-analysis.

O-T02D-0719

Beyond the Symptoms: Stories of Living and Coping with Polycystic Ovary Syndrome of Women in Albay

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Abstract

Polycystic Ovary Syndrome (PCOS), a prevalent hormonal disorder, presents significant physical, emotional, and social challenges for women of reproductive age. This qualitative study aimed to understand the lived experiences, coping strategies, and rehabilitation practices of women with PCOS in the province of Albay, Philippines. A descriptive-phenomenological design was used, and through snowball sampling, ten participants aged 18-45 years old, diagnosed for at least three years, and who met the inclusion criteria were recruited and engaged in semi-structured interviews. Colaizzi's method was used to analyze the information gathered, which highlighted physical, emotional, and social challenges such as menstrual irregularities, fertility issues, hair-related concerns, weight management, sleep disturbances, emotional distress, and social stigma. Their experiences with healthcare workers were also highlighted, where most participants described it as a positive encounter rather than a negative one. Participants reported utilizing personal coping strategies, including lifestyle changes, interpersonal relationships, and acceptance. Pharmacological and alternative therapeutic approaches were utilized as a rehabilitative practice. These findings highlight the significant physical, emotional, and social burden of PCOS on women's lives, emphasizing the urgent need for improved access to comprehensive healthcare, the establishment of strong support systems, and increased public awareness through an advocacy program to spread awareness and empower women to improve their overall well-being, aligning with the goal of SDG 3.

Keywords: PCOS, lived experiences, coping strategies, rehabilitation practices, women

O-T02A-0736

Household Double Burden of Malnutrition among Low-cost Housing Communities of Kuala Lumpur: A Mixed Methods Study

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Abstract

The household double burden of malnutrition (DBM), where maternal overnutrition coexists with child undernutrition within the same household, is a concern in Malaysia as adult obesity rises alongside child undernutrition. Local studies largely addressed rural or indigenous populations, leaving limited evidence on vulnerable urban communities and their food choices. This explanatory sequential mixed methods study examined the prevalence and associated factors of household DBM and explored the facilitators and barriers to healthy eating among affected households in low-cost housing communities of Kuala Lumpur. A cross-sectional survey was conducted between April and July 2024 among 346 households with children attending public early childhood education centres using cluster random sampling. Data on sociodemographics, food security, dietary diversity, and anthropometry of mothers and children were collected and analysed with SPSS 29. Household DBM prevalence was 11.0%, predominantly involving underweight children. Risk was higher with maternal short stature (OR2.80,95%CI 1.01-7.76) and higher child birth order (OR2.03,95%CI 1.15-3.59), while older maternal age was protective (OR0.84,95%CI 0.74-0.96). To expand these findings, in-depth interviews were conducted from November 2024 to February 2025 with nine mothers from DBM households. Transcripts were thematically analysed in NVivo 14 using an inductive approach guided by the Socio-ecological model. Mothers sought information, adapted recipes, and cooked in bulk to stretch resources while prioritising their children's diets, often at personal cost. Convenience meals and limited nutrition knowledge constrained their efforts. Family preferences and financial strain shaped meal choices. While neighbours and local markets provided support, unhealthy food availability, rising prices, and difficulties accessing aid limited healthy eating. Integrating both findings highlights the combined influence of individual and structural factors on nutritional imbalance within households. These insights emphasise integrated national maternal and child nutrition policies, supported by family-centred strategies that improve healthy food access, childcare provision and nutrition-sensitive support in urban low-cost housing communities.

O-T02C-0742

Prunus domestica L. Extract Mitigates Oxidative Stress and Apoptosis in a D-galactose-Induced Brain Aging Model

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Abstract

Chronic administration of D-galactose (D-gal) is widely used as a model of accelerated brain aging, as it induces oxidative stress and neuronal degeneration. Prunus domestica L. (PD), known locally as look-nai in Thai, is a fruit found in northern Thailand that contains high levels of free radical scavengers, including various flavonoids and phenolic compounds. These bioactive constituents enhance the antioxidant defence system, counteract redox imbalance, and provide neuroprotective effects. Brain aging involves oxidative stress and neuronal apoptosis; therefore, this study aimed to investigate the potential of PD in mitigating D-gal–induced oxidative stress and its resulting effects on the hippocampus and prefrontal cortex. Twelve-week-old male Sprague–Dawley rats were randomly divided into eight groups. The vehicle group received distilled water orally and normal saline intraperitoneally (i.p.). The D-gal group was administered D-galactose (50 mg/kg, i.p.), while the PD-only groups received PD extract orally at doses of 75, 100, and 150 mg/kg. The co-treatment groups received D-gal (50 mg/kg, i.p.) along with PD at the same respective doses. After once-daily treatment for eight weeks, hippocampi and prefrontal cortices were collected to determine antioxidant enzyme activities (CAT, SOD, GPx) and oxidative stress marker (MDA). In addition, cell cycle arrest marker p21 and apoptotic proteins (Bax, Caspase-3, Bcl-2, and Nrf2) were examined in the hippocampus using immunofluorescence and Western blot analysis. The results showed that administration of D-gal significantly increased p21, which is consistent with elevated MDA, Bax, and Caspase-3, while Bcl-2 and Nrf2 were decreased. Co-administration of PD at all doses reduced the levels of p21, Bax, Caspase-3, and MDA, while enhancing Bcl-2 and Nrf2. These results suggest that PD exhibits neuroprotective potential by attenuating oxidative stress and neuronal apoptosis through its potent antioxidant activity. PD may contribute to restoring redox balance, thereby protecting hippocampal neurons from D-gal–induced oxidative damage and age-related neurodegeneration.

Keywords: Brain aging, *Prunus domestica* L., Oxidative stress

O-T02B-0744

Hands-On Breastfeeding Education for Adolescent Girls: Pre- and Post-Gain in Knowledge at a Private Islamic High School in Surabaya

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Abstract

Background: Breastfeeding literacy is not merely a maternal skill—it is a social value that can be cultivated early. Educating adolescents about breastfeeding before they become mothers offers a dual impact: it strengthens future maternal readiness while shaping a generation capable of advocating for breastfeeding within their families and communities[13]. Yet, few programs in Southeast Asia have introduced practical breastfeeding education at the secondary-school level. This study evaluated the effect of a school-based, hands-on session designed to build early understanding and encourage community-oriented attitudes among adolescent girls.

Methods: A quasi-experimental one-group pretest–post-test design was implemented among female students at SMA Muhammadiyah 2 Surabaya in October 2025. A validated 15-item questionnaire, adapted from WHO breastfeeding-literacy indicators[8], was completed before and after a 60-minute interactive workshop sfeaturing demonstrations on latch and positioning, the importance of colostrum, milk expression and storage, and family support[3,7]. Statistical analysis used paired t-tests or Wilcoxon signed-rank tests, with effect sizes reported as Cohen's d^z and Hedges' g^z.

Results: Of 115 participants, 68 completed both pre- and post-tests. The mean knowledge score increased from 11.68 ± 2.42 to 13.49 ± 1.03 (out of 15), $t(67) = 7.47$, $p < 0.0001$, showing a large effect (Cohen's $d^z = 0.91$; Hedges' $g^z = 0.90$). Beyond cognitive gain, qualitative feedback indicated greater empathy toward breastfeeding mothers and willingness to share accurate information within peer groups and families.

Conclusion: A single, school-based practical breastfeeding session significantly improved adolescents' knowledge and awareness. Incorporating practical breastfeeding education into high school curricula can strengthen reproductive health literacy, enhance future maternal preparedness, and foster early social responsibility toward maternal and child well-being. Such early interventions may help achieve Sustainable Development Goals 3 and 4. Further studies should explore long-term knowledge retention, attitude formation, and the scalability of this educational model across broader school settings.

Keywords: Breastfeeding literacy; Adolescent girls; School-based education; Health promotion; Hands-on learning

O-T02A-0751

7- Year Changes in Diet in A Sundanese Community Under Economic Development in West Java, Indonesia

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Abstract

Background: Along with economic development, dietary patterns can change. This study aimed to explore longitudinal changes in dietary patterns in a rural Sundanese community in West Java, Indonesia.

Method: Field surveys were conducted in August 2015 and 2022 in a Sundanese community in the Sumedang Regency. All residents aged ≥ 20 years were included in the survey. All food and beverage items consumed by the participants were recorded for three days (including two weekdays and one Saturday, Sunday, or holiday) using the weighed food record method.

Results: Data were collected from 65 individuals in 2015 and 66 individuals in 2022. Fifty-two individuals participated in both 2015 and 2022. The mean age was 50.1 (SD=17.1) years in 2015 and 50.3 (SD=20.4) years in 2022. The average number of meals (with rice) per day was 2.64 (SD=0.59) in 2015 and 2.25 (SD=0.42) in 2022 among males (p=0.004, unpaired t-test), and 2.44 (SD=0.57) in 2015 and 2.35 (SD=0.46) in 2022 among females (p=0.499). The average number of animal products consumed per day significantly decreased among males; mean (SD)=2.51 (0.91) in 2015 and 1.78 (0.94) in 2022 (p=0.002 by unpaired t-test), while it was not significant among females (mean [SD]=2.07 [0.79] in 2015 and 1.89 [0.90] in 2022; p=0.379). The average amount of rice consumed per day (cooked weight; g) decreased among males (mean [SD]=627.9 [232.7] in 2015 and 576.0 [270.5] in 2022), while it increased among females (mean [SD]=427.4 [152.6] in 2015 and 461.1 [198.5] in 2022), although the changes were not statistically significant (p=0.413 for males and p=0.425 for females, unpaired t-test). In general, greater inter-individual differences in dietary patterns were observed in 2022. In the presentation, we will provide more details of these changes.

3.Community, Health Equity and Migrant Health

O-T03A-0084

No Limb, No Limits: A Mixed-Methods Study of mHealth-Based Exercise to Prevent Low Back Pain in Amputees

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Abstract

Background: Individuals with lower limb amputation are prone to low back pain (LBP) due to biomechanical imbalances and weakened core muscles. However, access to tailored, community-based physical training is often limited. This study aimed to develop a mobile health (mHealth) exercise program to enhance core strength, physical function, and quality of life as a preventive measure against LBP.

Methods: A mixed-methods exploratory sequential design was applied. In the qualitative phase, a multidisciplinary expert panel co-designed a physical exercise program tailored to the biomechanical needs of amputees. In the quantitative phase, a 12-week pre-post intervention was conducted with 22 participants from a disability community in Yogyakarta, delivered through a mobile application. Data were analyzed using bivariate tests (Wilcoxon Signed-Rank and paired t-test) and multivariate analysis (multiple linear regression) to identify significant predictors of improved quality of life.

Results: The expert panel successfully developed a novel exercise program addressing postural and biomechanical challenges specific to amputees. Bivariate analysis showed significant improvements in core muscle strength ($p = 0.002$), physical function ($p = 0.000$), and quality of life ($p = 0.001$). Multivariate regression identified physical function ($\beta = 0.443$, $p = 0.001$) and core strength ($\beta = 0.418$, $p = 0.006$) as the strongest predictors of quality of life, with a strong model fit (Adjusted $R^2 = 0.681$, $p < 0.001$).

Conclusion: This study presents an innovative, community-based mHealth intervention tailored for lower limb amputees. By integrating accessible technology and expert-driven design, the program offers an effective, preventive solution for LBP while improving overall wellbeing. It sets a new standard in inclusive rehabilitation, affirming that mobility limitations should not define one's quality of life.

O-T03A-0093

HIV/AIDS Prevention Interventions For MSM: A Decade Of Literature Review And Its Implications In Indonesia

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Abstract

The study aims to review HIV/AIDS prevention intervention models for men who have sex with men (MSM) from 2014 to 2024 and to evaluate their relevance and applicability within the Indonesian context. The literature review was conducted using scientific articles published in databases such as PubMed, Google Scholar, ScienceDirect, and EBSCO, using the keywords “HIV prevention” and “MSM Indonesia.” A total of 7,826 articles were retrieved and screened based on predetermined inclusion criteria: only articles published between 2014 and 2024, with samples consisting of MSM populations, and studies conducted in Indonesia. The articles were analyzed using the PRISMA method, resulting in 11 articles deemed relevant to the research objectives. The results of the literature review show that Effective intervention models generally involve community-based approaches, promotion of pre-exposure prophylaxis (PrEP) use, motivational interviewing-based counseling, and digital interventions via mobile applications. Studies indicate that interventions which consider cultural factors, social stigma, and access to healthcare services are more successful in improving HIV prevention behaviors among MSM. However, in Indonesia, the implementation of such models still faces structural challenges and strong community stigma. Holistic, community-based intervention models that incorporate digital technology have the potential to enhance the effectiveness of HIV/AIDS prevention efforts among the MSM population in Indonesia. Local adaptation of global interventions is necessary to ensure the sustainability and success of these programs.

O-T03A-0118

Transforming Vulnerability into Resilience: A Constructive Grounded Theory Approach to Supporting Internally Displaced Populations in Myanmar

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Abstract

Background: Following the military coup, armed conflict and earthquake have exacerbated the vulnerabilities of displaced populations in Myanmar, who have historically been seen solely as vulnerable individuals requiring aid. This research aims to develop a grounded theory framework that shifts the narrative from vulnerability to resilience.

Method: A constructivist grounded theory study was conducted using a mix of purposive and snowball sampling approaches, conducting in-depth online and in-person interviews with 13 internally displaced populations(IDPs) and 10 individuals from the IDP support network in Mon, Kayin, Kayah and Eastern Bago regions between December 2024 and March 2025. Participants were eligible for inclusion if they were at least 18 years old and currently residing in an IDP camp or working with IDPS. The interviews were voice-recorded, translated and transcribed multi-stage coding process for data analysis.

Results: The study presents a grounded theory for transformation vulnerability to resilience through five interconnecting dimensions. Armed conflict based on political instability, climate change, disrupted communities through loss of homes and livelihood and forced them into hazardous situations. Fears of airstrikes and heavy weaponry, insecurity, along with economic hardship, have deepened the vulnerable situation. Factors including internal motivation to rebuild their lives, resistance and persistence to injustice, adaptability, and mental strength enabled displaced individuals to rebuild agency and dignity. A multi-level framework, comprising macro-level policy and infrastructure interventions, meso-level community action, and micro-level individual coping strategies, is essential for sustainable resilience. Furthermore, resilience was influenced by positive enablers (community support, indigenous knowledge, religious coping, collective leadership) and hindered by barriers (aid dependency, resource scarcity, selective aid).

Conclusion: This study provides grounded theory along with the key macro, meso, and micro-level resilience strategies, offering insights to improve current humanitarian approaches for policymakers and INGOs in reducing vulnerability and building lasting resilience for IDPs in conflict zones like Myanmar

O-T03A-0145

Barriers to accessing preventive care for chronic diseases among Bangladeshi and Nepalese migrants in Sydney

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Abstract

Background: South Asian migrants, including those of Bangladeshi and Nepalese origin living in Australia, reported having an increased prevalence of chronic diseases. For example, Bangladeshi migrants reported having the highest prevalence of diabetes (12.0%) and heart disease (4.6%), respectively, among all population groups in Australia. Despite the importance of preventive care services and healthy lifestyle practices in reducing the burden of chronic diseases, these population groups reported having limited access to preventive care services and unhealthy lifestyle practices. This study explored the barriers faced by them in accessing preventive care services.

Methods: An explorative qualitative research design was followed, and a total of 6 focus group discussions (FGDs) and 22 in-depth interviews (IDIs) were conducted. The participants were purposively selected from Bangladeshi and Nepalese communities living in Sydney, and information was collected on their access to preventive care services at the personal and/or family, and community levels. IDIs and FGDs were conducted in participants' language, audio-recorded, transcribed, translated into English, and thematically analysed.

Results: Key barriers to access preventive care services reported by the participants included limited knowledge about available preventive care services, inadequate health literacy, communication barriers resulting from poor English language skills, lack of culturally acceptable health education materials, long waiting time to visit health professionals, and difficulties in navigating health services. Participants also mentioned their neglect to health, high fatty food consumption during community gatherings, and time constraints due to workload and limited availability of physical activity initiatives at the community level as barriers to preventive care.

Conclusion: The findings suggest developing a large-scale, culturally sensitive chronic disease prevention program focusing on improving healthy lifestyle patterns and ensuring adequate and timely access to available preventive care services.This would involve lifestyle modification interventions facilitated by peer community members and community-based workforce such as community health workers.

Keywords: barriers; access; preventive care; migrants

O-T03B-0151

The Culture of Tinuktuk Consumption as an Effort of Postpartum Recovery Among the Simalungun Ethnic Group

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Abstract

The postpartum period is a critical transitional phase characterized by significant physiological, psychological, and social changes. According to the World Health Organization (2022), approximately 60% of maternal deaths occur during this time, underscoring the urgent need for effective postpartum recovery strategies. While modern maternal health initiatives primarily emphasize medical interventions, traditional practices remain deeply embedded in many cultures, including in Indonesia, where cultural diversity significantly influences health behaviors. Among the Simalungun ethnic group in North Sumatra, a traditional herbal remedy known as tinuktuk is widely used by postpartum mothers. Made from natural ingredients such as ginger, garlic, and pepper, tinuktuk is believed to enhance blood circulation, aid in the expulsion of lochia, and restore maternal stamina.

This qualitative study, employing a phenomenological approach, explores the lived experiences and cultural meanings associated with tinuktuk use among postpartum mothers in the Simalungun community. Five participants were selected through purposive sampling: two postpartum mothers, a traditional birth attendant, a community health worker, and a cultural elder. Data were collected through in-depth, semi-structured interviews and analyzed using Colaizzi's method to identify core themes.

The findings revealed three main themes: tinuktuk as a symbol of cultural identity; its psychosocial and spiritual significance in postpartum recovery; and the perceived physical and emotional benefits experienced by mothers. Participants described tinuktuk not merely as a herbal remedy but as a cultural ritual that fosters healing, emotional stability, and familial bonding.

This study highlights the importance of integrating cultural perspectives into maternal care. The continued use of tinuktuk illustrates how traditional knowledge, passed down through generations, can coexist with modern health practices to support maternal well-being. Acknowledging and respecting such practices can enhance the delivery of culturally sensitive healthcare in diverse communities.

Keywords: Traditional medicine, Tinuktuk, Simalungun culture

O-T03B-0155

A Conceptual Framework of Positive Deviance in a Matrilineal Society: Community-Led Strategies for Preventing Childhood Stunting in Rural Indonesia

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Abstract

Background: Indonesia has implemented multiple national interventions to reduce stunting prevalence, yet progress remains stagnant and uneven. Amid this challenge, the matrilineal community of Nagari VII Koto Talago in West Sumatra consistently reports an exceptionally low stunting rate (<4%). This study explores the socio-cultural mechanisms underlying this anomaly, highlighting the role of matrilineal structures in childcare and community health practices.

Method: An exploratory qualitative approach with a single case study design was employed. Data were collected from 11 purposively selected participants, including mothers of non-stunted children (n=5), community health workers (n=4), and traditional leaders (n=2), based on their involvement in childcare and nutrition practices. Data collection involved in-depth interviews, focus group discussions, and participatory observations. Thematic analysis followed Braun and Clarke's six-phase framework, with data triangulation and narrative validation to ensure credibility.

Results: Six themes emerged, each deeply embedded in the Minangkabau's matrilineal social structure: (1) collective caregiving through maternal kin networks enabled by uxorilocal residence; (2) transmission of local feeding practices via intergenerational maternal lines; (3) leadership roles of Bundo Kanduang and Niniak Mamak in promoting health behaviors; (4) social norms of musyawarah and badunsanak, sustained by adat-based authority; (5) collaborative governance between community health centers and Nagari institutions; and (6) widespread awareness and early detection of stunting through daily communal interactions. These practices form a resilient, self-sustaining ecosystem of child health.

Conclusion: The findings reconceptualize positive deviance not as isolated behavior, but as a culturally grounded, collective phenomenon rooted in matrilineal kinship. This model offers an asset-based alternative for stunting prevention, with relevance for other low-resource settings that possess strong social cohesion and indigenous caregiving traditions.

Keywords: childhood stunting; positive deviance; matrilineal kinship; collective caregiving; community-led health

O-T03C-0159

Health Equity among Indigenous Suku Anak Dalam in Indonesia

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Abstract

Despite national commitments to universal health coverage, Indigenous Suku Anak Dalam (SAD) in Merangin District, Jambi often fall through the cracks of public service delivery due to structural, geographic, and cultural exclusion. This study aimed to investigate the barriers to health access and equity experienced by the SAD, focusing on administrative, environmental, and socio-cultural dimensions of exclusion. The research employed a qualitative approach, including direct field observations and semi-structured interviews with five long-standing advocates who also serve as teachers within the SAD community. Data were collected in January 2025 during visits to SAD shelters and were analysed thematically. The study identified four key barriers to health equity: 1) spatial exclusion, where some SAD members, although they possessed legal identification and health insurance, were registered in districts far from their actual place of residence. Their shelters were situated closer to health facilities in neighbouring administrative zones, but due to jurisdictional boundaries in Indonesia's district-based health system, these nearby clinics often denied them treatment. As a result, they remained effectively excluded from accessible care; (2) the absence of legal identity among other SAD members, which prevented them from enrolling in the national health insurance scheme (KIS) and further limited their ability to access basic health services; (3) ecological vulnerability, including poor sanitation and uninhabitable housing conditions around plantation margins, which contributed to recurring skin infections and mosquito-borne diseases such as dengue and malaria; and (4) cultural hesitation toward biomedical care, particularly among elders, who continued to rely on forest-based remedies despite the depletion of natural medicinal resources in the surrounding landscape. Health inequity among SAD is rooted in a complex interplay of citizenship inaccessibility, administrative fragmentation, and cultural disconnection from formal health systems.

Keywords: Health equity, administrative exclusion, Indigenous health, public health access

O-T03C-0161

Exploring Intimate Partner Violence Among Women registered in Government Support Centres at Urban Area of South Gujarat, India

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Abstract

Background: Intimate partner violence (IPV) is the predominant violence experienced by women globally. In India, it remains alarmingly prevalent despite significant underreporting. This study aimed to identify the type, frequency and factors of IPV and assess its impacts and barriers to support-seeking among women.

Methods: An explanatory sequential mixed-methods study was conducted at Sakhi One-Stop Centre and Police Station Based Support Centre, Surat, using quantitative data from 101 participants (Indian Family Violence Control Scale-IFVCS) and in-depth interviews with 13 participants (phenomenological approach).

Results: The mean IFVCS score was highest for psychological violence (73.47±11.65) and lowest for sexual violence (27.04±7.92). Non-parametric tests on women-related predictors revealed significant association between occupation and control (p=0.032), physical (p=0.009), and sexual (p=0.034) domains. Income correlated significantly with control (p=0.013) and physical (p=0.02) domains. Addiction and its duration associated significantly with physical violence (p=0.005 and p=0.004, respectively). Education was significant in physical and sexual domains and migration in the psychological domain. Husband's occupation and education were significantly associated with multiple IPV domains.

Univariate quantile regression identified migration as a strong predictor of psychological domain across all quantiles (τ=0.25, 0.5, and 0.75). Husband's extramarital relationship also showed significance (τ=0.5) in the psychological domain (β=6, p=0.045). In the sexual domain, education and migration were significant at τ=0.5. In the physical domain, addiction, income, education, migration, and duration of marriage were significant at τ=0.5; migration and addiction were significant at τ=0.25. In the control domain, education was significant at τ=0.25 and 0.75, and religion at τ=0.5. Husband-related predictors were significant across quantiles in all IPV domains.

In the qualitative arm (N=13), eight IPV impact themes emerged, including psychological, social, perinatal and childhood impacts. Seven barriers included in-law interference, institutional failures and stigma.

Conclusion: The persistence of IPV and deep-rooted barriers, calls for integrated interventions.

Keywords: Intimate Partner Violence, Barriers

O-T03A-0167

Socioeconomic and Geographic Disparities in Healthcare Facilities Utilization in Indonesia: Assessing Horizontal Inequities

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Abstract

Background: Socioeconomic inequality significantly impacts health service utilization, especially in Indonesia, where access to healthcare services is regionally disparate. The objective of this research is to examine disparities in health facility utilization in various socioeconomic groups and geographical regions in Indonesia, as well as to evaluate the impact of need and nonneed factors on the discovered disparities.

Methods: This cross-sectional study used secondary data from the 2023 Indonesian Health Survey. Inequality in healthcare use was measured using the concentration index ©, concentration curve (CC), and horizontal inequity index (HI). Decomposition and spatial analyses were used to explore contributing factors and geographic distribution.

Results: Healthcare facilities were more frequently accessed by wealthier individuals in both urban (C=0.58) and rural areas (C=0.074). Despite considering need factors, substantial disparities persisted, with an HI of 0.051 in urban areas and an HI of 0.116 in rural areas. In urban areas, nonneed factors such as socioeconomic level and health insurance ownership were significant contributors to disparity, but in rural areas, old age and poor health conditions were more influential. Geographical analysis revealed increased hospital utilization in western Indonesia and Papua, a predominance of Puskesmas in the east, and greater reliance on clinics in Sumatra and Java.

Conclusion: Horizontal inequities in healthcare facility utilization persist across Indonesia. Addressing these gaps requires strengthening primary healthcare in rural regions and expanding health insurance coverage for low-income urban populations.

O-T03B-0200

Understanding Barriers to Breast Cancer Screening Participation Among Low Socioeconomic Status Women in Hong Kong: A Critical Medical Anthropology Analysis

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Abstract

Background: In Hong Kong, breast cancer is the most common cancer and the third leading cause of cancer mortality in women. Early detection of breast cancer by screening is associated with reduced morbidity and increased survival. In 2021, the Hong Kong Government launched a risk-based breast cancer screening programme. Low socioeconomic (SES) women in many countries have consistently reported low participation rate in breast cancer screening programme. This study aimed to explore the barriers that hinder low SES women from participating in breast cancer screening in Hong Kong.

Method: This was a qualitative descriptive study adopting a critical medical anthropology framework. Face-to-face, semi-structured, one-on-one interviews were conducted with 15 low SES women in Hong Kong. Thematic analysis was used to analyze the data.

Result: The barriers that prevent low SES women from participating in breast cancer screening were examined in the four social levels of analysis under the critical medical anthropology framework. Barriers at the individual level were: (1) limited knowledge of mammography; (2) low perceived needs of undergoing mammography; (3) negative perceptions on mammography; and (4) beliefs of breast cancer as inescapable. Barriers at the microsocial level were: (1) normalization of breast problems by doctors; (2) being disregarded of the needs; (3) poor communication with doctors; (4) losing trust in doctors; (5) being pushed to undergo breast cancer screening in private hospitals; and (6) feeling embarrassed with male doctors in undergoing mammography. Barriers at the intermediate-social level were: (1) inadequate childcare support; and (2) unreasonable waiting time for breast cancer screening. Barriers at the macrosocial level were (1) personal responsibility; (2) privatization of preventive care services and (3) heavy cost. Health inequality is observed in the participants' experience of screening as low SES women.

Conclusion: This study identified different levels of barriers preventing low SES women from attending breast cancer screening. Understanding these barriers is crucial for formulating and implementing effective strategies to enhance screening rates among low SES women in Hong Kong.

Keywords: larriers, Low socioeconomic women, breast cancer sreening, critical medical anthropology

O-T03A-0223

The quality of home-based non-pharmacological dementia care and its associated factors in Sri Lanka

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Abstract

Background: Dementia is a progressive neurodegenerative disease with global health implications, particularly in Sri Lanka with its expedited demographic transition. Limited effectiveness of pharmacological care calls for a sound home-based care protocol. However, local studies on such care are sparse. This study aimed to describe the quality of home-based non-pharmacological care (QoHBC) and associated factors in dementia in Sri Lanka.

Methods: A cross-sectional study was conducted among 102 caregivers of dementia patients attending psychiatry and neurology clinics at two premier teaching hospitals: National Hospital of Sri Lanka and Colombo South Teaching Hospital, recruited using systematic sampling during March-October 2024. The QoHBC was assessed under physical and social environments using the validated interviewer-administered Family Level Dementia Care Assessment Tool. Each environment was scored separately using a weighted system developed with expert guidance. Higher scores indicated better QoHBC. Associated factors were analysed using t-test, after confirming normality using the Shapiro-Wilk method.

Results: Respondents were predominantly females (73.5%) and aged >50 years (70.5%). Their mean scores for physical (range: 0–64) and social (range: 0–36) environments were 41.05 (SD=7.28) and 24.97 (SD=5.5), respectively. Significantly higher physical environment scores were found among caregivers who were married (p=0.047), educated beyond O/Levels (p=0.024), and had a monthly income >LKR 50,000 (p=0.003). Higher social environment scores were associated with education beyond O/Levels (p=0.007), adequate financial and non-financial family support (p<0.001), income >LKR 50,000 (p=0.018), and <3 years since diagnosis (p=0.038).

Conclusions: Considering what significantly affects the QoHBC, developing a community-based protocol offering financial assistance and caregiver education, with the training of dedicated geriatric community nurses under the purview of field-based medical staff, could enhance the quality of home-based care for dementia patients in Sri Lanka.

Keywords: dementia, home-based care, physical and social environment

O-T03A-0251

Global Challenges in Early Malaria Detection: Diagnostic Sensitivity, Health-Seeking Delays, and Equity in Endemic Settings

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Abstract

According to the World Health Organization's World Malaria Report 2024, 405.000 people died and 228 million cases occurred worldwide. In the battle to eradicate malaria, early and accurate case detection is becoming increasingly crucial. However, in many endemic areas, missed or delayed diagnosis remains a significant barrier to effective transmission control and timely treatment. Progress is still hampered by persistent barriers related to diagnostic sensitivity, care-seeking behavior, and equity of access.

This literature review is based on an in-depth search of the PubMed and Scopus databases published between 2014 and 2025. The review includes systematic reviews, meta-analyses, operational research, and key reports on diagnostic methods, care-seeking behavior, and equity issues relevant to malaria control and elimination.

The three primary diagnostic challenges delays in health-seeking behavior, unequal access to diagnostics, and inadequate sensitivity of commonly used tools were thematically synthesized.

The findings indicate that conventional diagnostic techniques such as microscopy and rapid diagnostic tests (RDTs) frequently fail to identify low-density or asymptomatic infections, particularly in settings characterized by low transmission or those approaching elimination. Delays in health-seeking behavior, influenced by socio-cultural norms, geographical constraints, and economic limitations, further exacerbate the problem of delayed diagnosis. This review underscores the critical necessity for a comprehensive public health strategy that integrates enhanced diagnostic methodologies, community-oriented outreach initiatives, and policies aimed at fostering equity. Augmenting early detection systems in endemic regions is essential for the attainment of global malaria elimination objectives.

Keywords: malaria, diagnostic sensitivity, health-seeking delay, equity, endemic regions

O-T03B-0254

The Association Between Intimate Partner Violence and Antiretroviral Therapy Adherence Among Individuals Receiving ART Care in Johannesburg

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Abstract

This study investigated the extent to which intimate partner violence (IPV) is associated with antiretroviral therapy (ART) adherence among individuals receiving ART care in Johannesburg, South Africa.

A two-stage purposive sampling method was used to recruit 200 men and women from two government ART sites through a cross-sectional survey. Adherence was obtained with the AIDS Clinical Trials Group (ACTG) questionnaire; exposure to IPV was assessed with the Violence Against Women Instrument (VAWI); and other demographic variables were recorded. Multiple regression analyses assessed the association between types of IPV, ART adherence, and demographic variables.

Participants were predominantly female (67%) with ages ranging from 19 to 51 years (mean = 34.9). The average ART adherence was 79% while 51% of participants, predominantly women (67%), reported experiencing IPV. Multiple regression analysis showed a significant negative association between IPV and ART adherence, with adherence decreasing by 18% (β = -17.92, $p < .001$) among those experiencing IPV. Sexual IPV had the strongest impact, reducing adherence by 30% (β = -29.71, $p < .001$), followed by emotional IPV (β = -12.53, $p < .001$) and physical IPV (β = -9.54, $p < .001$). After controlling for age, sex, years living with HIV, and ART duration, IPV remained negatively associated with ART adherence.

The study highlights the pronounced negative influence of IPV, particularly sexual IPV, on ART adherence. In line with previous studies, we recommend prioritising IPV screening in ART dispensing facilities and providing targeted psychosocial support for ART users exposed to IPV, especially women.

Topic area: Community, Health Equity and Migrant Health

O-T03A-0257

'I Was Given the Card, but No One Told Me How to Use It': Barriers and Enablers for People with Disabilities Accessing Indonesia's National Health Insurance (JKN)

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Abstract

Background: Indonesia's National Health Insurance (JKN) is the world's largest single-payer scheme, yet 35% of people with disabilities remain not enrolled. Those covered often face high out-of-pocket costs and were more likely to experience catastrophic health expenditure. This qualitative study explores the barriers and enablers experienced by people with disabilities in accessing and using JKN in Yogyakarta Province.

Methods: A phenomenological approach was employed, involving interviews with 22 people with disabilities and 14 key informants, including representatives from national and subnational governments, organisations of people with disabilities, and national disability bodies. Data collection and analysis were guided by the Universal Health Coverage (UHC) framework.

Results: Enrolment in JKN is shaped by factors such as awareness, perceived need, and beliefs about its benefits. Barriers include complex administrative procedures, strict poverty criteria for subsidies, and limited access, whereas facilitators comprise formal employment, government subsidies and outreach, and supportive policies. Utilisation of JKN services is affected by distrust, prior negative experiences, and knowledge gaps, with barriers including inaccessible information, complicated procedures, and negative attitudes from healthcare workers; an improved referral system acts as a key facilitator. Perceived financial protection under JKN is constrained by unaffordability, insufficient coverage of services, assistive technologies, and medications, as well as the burden of indirect costs.

Conclusion: To enhance the breadth of insurance coverage for people with disabilities, policies should expand subsidy eligibility, increase awareness, and strengthen healthcare service delivery. To improve the depth of JKN coverage, the benefits package should address disability-specific needs, while broader social protection measures should help mitigate indirect costs.

Keywords: Inclusive health system, universal health coverage, health equity, health insurance, health financing

O-T03B-0267

Nutritional status of housewives; Are they a neglected group? A study from Sri Lanka

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Abstract

Background: The global evidence suggests the targeted nutritional interventions yield better results than universal approaches in many communities. The census statistics suggest that females without a formal employment are of lower educational level than the employed and they have less access to credible health information. Therefore, it is important to see whether there are specific nutritional vulnerabilities in this group.

Objectives: To describe the nutritional status and identify associated factors among housewives aged 18–49 in a selected suburban Health administrative (MOH) area in Sri Lanka.

Methods: A descriptive cross-sectional study was conducted among 123 housewives selected from two randomly selected health subsections (PHM areas). Eligible women were identified through consecutive household visits. Data on sociodemographics, nutritional literacy, physical activity level, and household food security & wealth index, were collected via a self-administered questionnaire. Physical measurements (height, weight, waist circumference, and mid-upper arm circumference [MUAC]) were made using standard procedures and calibrated instruments. BMI, waist circumference, and MUAC were used to assess nutritional status. Associations were tested using chi-square analysis in SPSS.

Results: Obesity and overweight prevalence among the women were 25.2% and 41.5%, respectively. High abdominal obesity (>80 cm waist) was observed in 70.7%, and high MUAC in 69.1%. Nutritional literacy was generally good (77.2%), though knowledge gaps existed around dietary fats. Higher waist circumference was significantly associated with age($p=0.002$) and nuclear family structure ($p=0.033$), but BMI showed no significant association with the studied factors. Lower MUAC was linked to food insecurity ($p=0.009$), though food insecurity was not widespread.

Conclusion: High levels of both general and central obesity were observed. Increasing age and smaller family structures correlated with central obesity. Nutritional education focusing on specifics like fat intake and targeted interventions are recommended to mitigate the growing obesity trend.

O-T03A-0273

Unspoken Struggles and Relationship Dynamics in Cross-Cultural Caregiving: Experiences of Live-in Indonesian Migrant Caregivers and Older Stroke Survivors in Taiwan

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Abstract

Background: Taiwan's long-term care system relies heavily on live-in migrant caregivers—primarily women from Southeast Asia—to support older adults with disabilities such as stroke. Indonesian caregivers represent the largest group, comprising 168,631 of the 198,983 migrant caregivers in 2025 (84,7%). However, many face substantial barriers: 77.9% report difficulties in communicating with employers, and 22% lack formal training in elderly care. This study aimed to explore the cross-cultural relationship dynamics between live-in Indonesian migrant caregivers and older stroke survivors in Taiwan.

Method: This study is a secondary thematic analysis integrating two previously published qualitative studies: interviews with 22 Indonesian live-in caregivers and 23 older stroke survivors. Both participant groups were recruited from academic hospitals in the Taipei area. Semi-structured interviews were audio-recorded, transcribed verbatim, and reanalyzed using thematic synthesis to explore the relational aspects of caregiving. Analytical rigor was maintained through data triangulation and audit trails.

Results: Three overarching themes emerged across caregiver and survivor accounts: I. Language: barriers and coping strategies; II. Relationship dynamics, including conflict triggers and adaptive attitudes; and III. Unspoken struggles, such as hidden emotional burdens shaped by cultural expectations and caregiving routines. A cross-cutting subtheme emphasized the importance of family support in alleviating caregiver stress and fostering more collaborative relationships.

Conclusion: By synthesizing perspectives from both migrant caregivers and stroke survivors, this study reveals the interpersonal and cultural complexities of cross-cultural caregiving in Taiwan. Findings suggest that policies and training initiatives should address communication challenges and relational dynamics to improve equity and care quality.

Keywords: migrant caregiver, stroke, relationship dynamics, cross-cultural caring, qualitative study

O-T03A-0276

Income Inequality and Health Disparities in Korean Society: The Role of Social Capital and Global Citizenship Education

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Abstract

Income inequality in South Korea has been steadily increasing, leading to widening health disparities across socioeconomic groups. Lower-income populations face disproportionate burdens, including limited access to healthcare, higher rates of chronic disease, and greater mental health challenges. These disparities stem from structural inequalities and require not only medical but also social and educational responses. Existing research identifies social capital as one of the key determinants in mitigating health inequities, highlighting the role of trust, cooperation, and solidarity in promoting health equity.

This conceptual study investigates how social capital can be strengthened through the global citizenship education framework proposed by Daisaku Ikeda, Buddhist philosopher, educator, and third president of Soka Gakkai International (SGI). His framework identifies wisdom, courage, and compassion as essential traits of global citizens. This paper explores how these values can contribute to addressing structural health disparities by encouraging solidarity, moral responsibility, and social inclusion at the community level. Importantly, this study situates Ikeda's framework not as abstract philosophy, but as a practical, value-based approach to civic education with the potential to shape long-term social change. Public health scholar Ichiro Kawachi has also emphasized SGI's unique role in fostering bridging social capital across diverse racial and socioeconomic lines, further validating its relevance to health equity.

Although health disparities in Korea are shaped by domestic socioeconomic factors, they are deeply intertwined with broader social dynamics such as trust, inclusion, and civic solidarity. Addressing them, therefore, requires both policy efforts to reduce income inequality and parallel investments in civic and educational strategies. Global citizenship education, as a catalyst for building social capital, offers critical insights for transforming individual values into collective action and advancing health equity in both national and global contexts.

Keywords: Health Equity, Social Capital, Global Citizenship Education, Daisaku Ikeda

O-T03A-0283

Association Between Household WASH Facilities and Menstrual Hygiene Management Among Filipino Women of Reproductive Age

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Abstract

Poor menstrual hygiene management (MHM) can lead to negative health outcomes in women and girls. While water, sanitation, and hygiene (WASH) facilities have been suggested to influence MHM, research in the Philippines on their association has been limited. Most studies are set in schools and qualitative in nature, leaving a gap in understanding the role of household WASH facilities in MHM. This study aimed to determine the association between household WASH facilities and MHM among Filipino women aged 15-49 years old. Data from the 2022 Philippine National Demographic and Health Survey (NDHS) were analyzed. Simple logistic regression was conducted to determine the crude association and screen for confounders. A change-in-estimate criterion was used in building the final model through multiple logistic regression. Among respondents, 22.16% (n=5,664) did not have fully compliant household WASH facilities, while 4.36% (n=1,115) had poorly managed MHM. The odds of having properly managed MHM were higher in women with partially compliant (OR: 1.7264, 95% CI: 0.9410-3.1673, p=0.078) and fully compliant household WASH facilities (OR: 1.8667, 95% CI: 1.0113-3.4459, p=0.046). Only fully compliant household WASH facilities had a statistically significant association with MHM. Highest educational level, household wealth index, and religion were identified as confounders. These findings highlight the importance of achieving at least basic sanitation and basic handwashing facilities in households to address women's specific WASH and MHM needs. Future studies may conduct weighted analysis and explore other MHM indicators.

Keywords: menstrual hygiene management (MHM), water sanitation and hygiene (WASH),

Philippines

O-T03A-0298

Health communication needs of Southeast Asian migrant children in Aotearoa New Zealand: Parents' perspectives

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Abstract

Health inequities encountered among migrants in their host country are considered a global public health challenge. Ineffective health communication potentially negatively affects the health and well-being of migrants, resulting in widening this public health challenge. Southeast Asian migrant children may experience this challenge in Aotearoa New Zealand, as their world has been completely disrupted after migration. This study describes the health communication needs of New Zealand Southeast Asian migrant children (aged 7-12 years) from the perspective of their parents. This is because migrant children typically experience health communication with professionals alongside their parents, who serve as primary advocates for their child's health and well-being. Views from parents were collected via an online survey. Descriptive statistical analysis was used for quantitative data, while the qualitative data from open-ended answers were collated and summarised.

In total, 23 parents responded to the online survey. The average age of arrival of parents was 23.35 (13.69) years and 43% of them felt 'very settled' living in Aotearoa New Zealand. Parents expressed their children's perception of being healthy in various ways, such as the absence of unpleasant health conditions and the presence of positive health conditions in general. Health behaviours, such as eating and sleeping, were commonly reported by parents as important influences on their children's health. More importantly, the parents suggested what was needed for effective communication with their children, such as providing information in understandable words and using a calm voice with an appropriate pace.

Findings of this study provide guidance to better equip health professionals to effectively deliver health information to migrant children from Southeast Asia. Therefore, these findings may reduce the health communication challenges experienced by migrant children and their families, resulting in a more settled life in Aotearoa New Zealand.

Keywords: Health communication; Southeast Asian; migrant children

O-T03A-0315

A study on disparities of access to dental care for the elderly in regional cities, Japan

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Abstract

Japan is rapidly becoming a super-aged society. In response, the Japanese government is working to establish and enhance the 'Community-based Integrated Care System'. This system is a framework for providing the necessary services to support the lives of the elderly in an integrated manner within communities, referred to as planning areas. Dental care is also included in these services, but disparities in accessibility to dental care services have rarely been analyzed. However, the prevention of oral frailty and appropriate oral care are important factors in measures against frailty of elderly.

This study aims to analyze the equity of accessibility to dental care services in each planning area by examining the location of dental clinics and data on the actual use of dental care services.

We focused on two local municipalities in Tochigi Prefecture. Using dental service usage data of elderly people aged 75 and over (approximately 42,000 cases over a one-year period) and Geographic Information System, we visualized accessibility disparities in each planning area.

The analysis measured three distances: the average distance to the nearest dental clinic, the actual average travel distance, and the travel distance for people requiring long-term care when using dental services. As a result, in the planned area, including mountainous areas, those distances were significantly longer than in urban areas. This clearly shows that there are disparities in access to services. The average distance to the nearest dental clinic showed a maximum difference of approximately 28 times.

The high concentration of dental clinics in urban areas has led to disparities in accessibility to services between mountainous and urban areas. To reduce these disparities, it is necessary to secure transportation means to improve accessibility, attract dental clinics with incentives in mountainous area, and encourage population migration to urban areas.

O-T03A-0326

From Disease Burden to Age-Friendly Cities: Developing Indicators for Healthy Ageing in Makassar, Indonesia

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Abstract

The elderly population in Indonesia, including Makassar City, faces a significant burden of non-infectious diseases. Non-infectious diseases such as hypertension, diabetes mellitus, gout and multiple comorbidities are common among the elderly due to physiological changes. In general, these diseases have been identified in various age groups, but the distribution pattern of diseases in the elderly has not been studied in depth. A comprehensive approach to solving health problems in the elderly also has not yet been implemented. This study aims to describe the distribution patterns of non-infectious diseases with explore the dimensions and indicators of age-friendly environments in Makassar City. We conducted an integrated analysis by identifying the distribution patterns of non- infectious diseases using Geographic Information Systems (GIS) based on secondary data on non-infectious diseases among the elderly in 2024 from the Makassar City Health Department and a qualitative study with an exploratory approach by collecting data through in-depth interviews and Focus Group Discussions (FGD) with the elderly, health workers and community leaders at the Manggala Subdistrict Hall. Data analysis was conducted using the NVivo Pro 12 software. The findings revealed uneven spatial patterns, with some districts showing high concentrations of hypertension, diabetes, and gout cases, particularly in densely populated areas and regions with limited access to environments supporting healthy lifestyles. This research identified 29 indicators and nine dimensions: community support, housing, communication and information, financial situation, transportation, government and stakeholder roles, respect, social inclusion, open spaces and buildings, and social participation. Our findings highlighted the importance of developing age-friendly environments, including in the provision of elderly health interventions, as well as the need to strengthen collaboration to improve the quality of life and well-being for the elderly.

Keywords: Elderly Population, Non-Infectious, Age-friendly environments, GIS, Makassar

O-T03B-0328

Bridging the Gap: A Systematic Review of Gender Equity in Global Health Systems (2022–2025)

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Abstract

Gender equity continues to represent a critical yet unresolved issue within global healthsystems, shaping patterns of healthcare access, workforce participation, leadershipopportunities, and health outcomes. Although women account for the majority of the healthworkforce, they remain significantly underrepresented in leadership and decision-makingpositions, underscoring the urgent need for systemic reform to build inclusive and resilienthealth systems. This systematic review, conducted in accordance with PRISMAguidelines, examined peer-reviewed studies published between 2022 and 2025 in Englishand indexed in Q1–Q3 journals across PubMed, Scopus, Web of Science, andScienceDirect. A total of 18 eligible studies were critically appraised using the JBIChecklist, and findings were synthesized narratively to highlight methodologicalcharacteristics, intervention strategies, and outcomes. The analysis revealed fouroverarching themes: leadership and representation (6 studies) confirmed persistent gapsin women's participation in strategic roles; cultural and social norms (6 studies) influencedhealthcare access and career progression, often reinforcing gender stereotypes andlimiting opportunities; effective interventions (7 studies) demonstrated the strongestimpact when delivered as multi-component strategies, combining policy reforms,mentorship, gender-sensitive curricula, and intersectional approaches; and systemicbarriers (5 studies) pointed to resource constraints, weak institutional backing, andinconsistent monitoring mechanisms. While cross-sectional studies were generallymoderate in quality and the single mixed-methods study achieved high quality with strongintegration, qualitative studies enriched the evidence by uncovering structural and culturaldynamics behind inequities. Despite limitations such as insufficient longitudinal follow-upand incomplete reporting, the review provides robust evidence that advancing genderequity requires multidimensional strategies integrating structural reform, organizationalchange, and cultural transformation. Institutionalizing gender equity as a fundamentalprinciple, supported by political will, accountability, and ongoing monitoring, is vital toachieving sustainable progress and equitable health outcomes.

Keywords: Gender equity, Health systems, Leadership, Policy, Systematic review

O-T03B-0363

Determinants and Prevention of Low Back Pain among Lower Limb Amputees: Evidence From a Community-Based Mixed-Methods Study in Yogyakarta, Indonesia

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Abstract

Low back pain (LBP) is the leading global cause of disability, yet most health programs and policies focus on the general population, leaving vulnerable groups such as people with disabilities overlooked. Lower limb amputees face particularly high risk due to postural imbalance, altered biomechanics, and limited access to preventive care. This neglected community deserves urgent attention, as LBP reduces productivity, and well being, despite their equal role in society. This study used a mixed method design within a disability community in Yogyakarta, Indonesia, to develop and evaluate a secondary prevention model for LBP. In the qualitative phase, expert consultations produced a tailored physical exercise program adapted to amputee posture and biomechanics, representing a novel preventive approach. In the quantitative phase, from 180 members of the Indonesian Disabled Persons Association (PPDI) Yogyakarta, 22 amputees who inclusion criteria joined a 12 week intervention delivered in community sessions and supported by the mobile application. At baseline, 47.7% of participants reported chronic LBP, post-intervention prevalence declined to 28.3%. Bivariate analysis showed significant associations between LBP reduction and community support (OR 0.54; 95% CI 0.33-0.89) and regular exercise (OR 0.59; 95% CI 0.38-0.91), while poor posture (OR 1.72; 95% CI 1.08-2.74) and prolonged sitting (OR 1.65; 95% CI 1.02-2.67) were risk factors. In multivariate analysis, community support (adjusted OR 0.52; 95% CI 0.31-0.88) and regular exercise (adjusted OR 0.61; 95% CI 0.40-0.92) remained protective, underscoring the importance of social and behavioral determinants. This study demonstrates that community based exercise programs for disabilities, reinforced with digital support, can effectively serve as secondary prevention for LBP in individuals with amputations. These findings highlight the need to integrate disability inclusive prevention into primary care and digital health platforms. Expanding this approach could reduce musculoskeletal burden, promote social inclusion, and support the achievement of SDGs 3 and 10.

O-T03A-0371

The Strengthening Migrant Access to Reproductive Healthcare in Thailand (SMARH-T) initiative: a prospective intervention study comparing two models of antenatal care for non-Thai migrants in Thailand, 2021-2024

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Abstract

Background: Evidence to guide reproductive health care provision for undocumented migrants is limited. The objective of this study was to evaluate if an outreach model of antenatal care (ANC) offered an equivalent pregnancy experience to the standard fixed clinic model, using WHO framework of core indicators.

Methods: ANC and birth outcome indicators were compared by clinic of registration: standard (fixed clinic) or intervention (outreach clinic), over 3.5 years including the first 6 months pilot phase: March-2021 to August-2024, part of Strengthening Migrant Access to Reproductive Healthcare in Thailand (SMARH-T)

Results: 5391 pregnant women (fixed 2649, outreach 2742) registered in 3.5 years, to an average, 31 outreach site visits/month. Significant proportional increases from year 1-3 occurred for ANC-8 (fixed 107%, outreach 81%) and first ANC contact <12 weeks (fixed 43%, outreach 27%). First ANC contact <12 weeks was achieved in <30% women (lowest performing indicator overall), in contrast, syphilis screening, blood pressure and fetal heart beat measurement was achieved in >97%. Homebirth was 2-fold higher on outreach. Within 100 days of birth, 58.6%(1945/3318) opted for contraception with the majority using implants 67.1%(1305/1945), most within 7 days of birth 66.0%(860/1305). The delivery package (≥ANC-4, ≥2tetanus vaccinations, skilled-attendance at birth, health insurance and contraception <100 days of birth) was achieved by 47% of women at fixed and outreach clinic (p=0.920). The overall maternal mortality ratio was 91(95%CI 31-267) per 100,000 livebirths (3/3290). Maternal near-miss was 33(95% CI 28-40) (110/3290) per 1000 livebirths with the top 3 causes: post-partum haemorrhage, sepsis and severe pre-eclampsia, not significantly different between models of care.

Conclusion: Improvements in quality and quantity of care under the WHO framework for a positive pregnancy experience were observed with both fixed and outreach models of care. Outreach obtained equivalent mortality indicators to fixed clinics.

Keywords: access, health system strengthening, infection, maternal mortality

O-T03A-0381

Inequalities in Translation of IYCF Knowledge into Practice among Mothers of Under Two Years Old Children in Karen State, Myanmar

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Abstract

Background: The COVID-19 pandemic, along with health system disruptions following the 2021 Military Takeover, exacerbated already high malnutrition rates among children in Karen State, Myanmar, a region with a long history of conflict. From September 2020 to June 2024, Project Nourish implemented nutrition-sensitive interventions, including social and behavioral change communication and mother groups, to improve infant and young child feeding (IYCF) practices within the first 1000 days of life.

Method: An endline survey conducted in June 2024 assessed key IYCF indicators among project beneficiaries, using the 24-hour recall method, and compared results across five wealth index categories. Focused group discussions with mothers provided additional insights into factors influencing mothers' IYCF behaviors.

Results: A total of 561 mothers of children under two participated. Overall, 46.6% demonstrated knowledge of optimal IYCF practices, with higher awareness among mothers from wealthier households (65.8%) compared to those from the poorest households (36%). 48.4% of their children received the minimum meal frequency (MMF).

Despite the knowledge level and adequate MMF, only 19.9% of their children received the minimum acceptable diet. Minimum dietary diversity (MDD) was achieved by just 30.7% of children, with a noticeable disparity between the poorest households (28.1%) and the wealthiest (48%).

Participant-reported barriers to practicing optimal IYCF include traditional and cultural beliefs, limited market accessibility, financial constraints, and poor knowledge retention. Possible solutions include increasing awareness about food groups and correcting misconceptions, providing informative materials to mothers for easy reference while preparing meals, promoting home gardening and animal husbandry to improve food accessibility, and encouraging peer-to-peer discussions on IYCF practices.

Conclusion: The study identifies both barriers and solutions for improving the translation of IYCF knowledge into practice. Interventions that go beyond raising awareness and focus on encouraging the translation of knowledge into practice should be prioritized to support better child nutrition outcomes.

Keywords: IYCF, Knowledge, Practice

O-T03A-0385

A mixed methods evaluation of outreach service provision to strengthen migrant access to reproductive health in Thailand, 2020-2024: The SMARH-T Initiative

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Abstract

Background: Despite considerable progress, maternal and perinatal health outcomes are still below Sustainable Development Goal targets for many low-to-middle-income countries. This study is an evaluation of an initiative (2020-2024) seeking to address upstream determinants of perinatal health for migrant women and newborns along the Thailand-Myanmar border.

Methods: This study followed a sequential explanatory mixed methods design with quantitative survey and qualitative interviews and focus group discussions. Participants were asked about their experiences with the initiative and its delivery of prenatal and family planning services. Implementation outcomes frameworks were used to understand the acceptability, end-user satisfaction, appropriateness, feasibility, reach, sustainability.

Results: A total of 407 migrant women were surveyed and 17 interviews and discussions with health providers, staff, and stakeholders (n=95) were conducted. Outreach service provision allowed for comparable convenience ($p<0.001$), travel time (< 30 min, $p<0.001$), and costs (<USD 2.75, $p<0.001$) to reach care compared to women receiving services at fixed clinics. Thematic analysis of qualitative data demonstrates the acceptability, appropriateness, and improved reach due to outreach service provision, despite the logistical and management burden involved. Novel institutional procedures and processes helped enhance the sustainability of the initiative.

Discussion: This mixed methods evaluation of the SMARH-T Initiative demonstrated high service utility, satisfaction, and reach for migrant women along the Thailand-Myanmar border. The multi-pronged approach incorporated reparative strategies to address this particularly vulnerable population in this context.

Keywords: Transients and Migrants, Pregnancy, Perinatal Care, Vulnerable Populations, Myanmar, Outcome and Process Assessment (Health Care)

O-T03A-0387

Cox survival analysis of dementia conversion risk in patients with MCI using a nationwide claim data in Korea

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Abstract

Mild Cognitive Impairment (MCI) represents a transitional stage between normal cognitive aging and the early stage of dementia. Patients with MCI have high risk of progress to dementia. Moreover, dementia is one of the diseases that impose a substantial and escalating economic burden on healthcare systems. This study aims to investigate the risk factors for conversion to dementia among patients diagnosed with MCI.

This study used National Health Information Database (NHIS) in Korea (2012–22), and after a 2-year washout, established an incident MCI cohort of individuals aged ≥ 55 years in 2022. Cox proportional hazards model was applied to examine socio-demographic and clinical determinants of progression to dementia over 6 years.

Of 54,113 participants, 59.8% developed dementia (Mean age 75.52 years, follow-up 1,114 days). Diagnosis year in MCI showed significantly increased hazard of dementia onset in 2014 (HR 1.84, p=0.01), 2015 (HR 1.63, p=0.03), and 2016 (HR 1.70, p=0.02). In addition, female (HR=1.06, p<0.001), older age (HR=1.03, p<0.001), low income (HR=1.04, p=0.02), rural residence (HR=1.09, p<0.001), severe disability (HR=1.04, p=0.02), medical aid status (HR=1.09, p<0.001), long-term care eligibility (HR=1.80, p<0.001) and grade (HR=1.04, p=0.02), and higher comorbidity burden (HR=1.04, p<0.001) were associated with increased hazard of dementia onset.

This study examined factors associated with a dementia conversion among patients with MCI. Previous study indicated socioeconomic inequalities in dementia incidence. Individuals with low socioeconomic status showed a higher risk of early-onset dementia, mediated by unhealthy lifestyles. Furthermore, rural residence has been linked to an increased risk of dementia and MCI onset which may be explained by shorter education duration, poorer medical support, higher comorbidity burden, and less favourable lifestyle patterns in rural areas. Since no treatment alters the course of dementia, identifying modifiable risk factors is crucial. This study highlights the need for preventive strategies and policy interventions targeting vulnerable populations.

Keywords Dementia, NHIS, Hazard Ratio

O-T03A-0390

Experts through experience, reasons for homebirth (SMARH-T initiative) of migrant women from Myanmar in Tak Province Thailand: a mixed method study

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Abstract

Background: There is limited evidence from south-east Asia about why women birth at home and minimal from undocumented migrant women. The objective of this study was to understand the perceptions of women who had the experience of home birth. Explicit recognition of barriers and enablers can increase safe birth for migrants in rural areas of Tak Province, Thailand.

Methods: This was a sequential explanatory mixed methods study. Quantitative data was taken from antenatal care records and birth outcomes from 1 March 2021 to 29 February 2024. Women who gave birth at home between 1 October 2023 and 30 September 2024 and consented participated in a structured survey assessing attitudes towards home birth and perceived reasons and consequences of home births.

Results: Amongst 1593 women registered to outreach from 1-Mar-2021 to 29-Feb-2024 there was a total of 11.5% (183/1593) homebirths. Factors significantly associated with delivering at home included: < 4 antenatal care visits (aOR 5.87, 3.85-8.97); lacking health insurance (aOR 2.25, 1.48-3.42), or past history of homebirth (aOR 1.79, 1.16-2.7). To help explain these data, 40 women completed the survey. Women preferring facility-based delivery (n=28; 70%) were compared to women who preferred home births (n=12; 30%). Women who preferred facility delivery had significantly fewer number of prior homebirths and more negative attitudes towards homebirths. Rapid labour onset, distance to the facility, and transportation were the main reasons women could not deliver at a facility. Participants recommended that pregnant women save money and identify sources of transport and community members who can aid at labour onset.

Discussion: This study helps understand the risk of delivering at home in resource-constrained settings among women from marginal communities. Most women in these communities prefer to deliver at facilities but face structural obstacles in accessing timely birthing care.

Keywords: access, barriers, health-system strengthening, skilled birth attendant

O-T03A-0391

High contraceptive utilization by migrants at outreach clinics in Tak Province, Thailand: key findings from the SMARH-T initiative, 2020-2024

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Abstract

Background: In 2020, 95% of maternal deaths occurred in low- and middle-income countries (LMICs), with limited access to modern contraceptives contributing to preventable mortality. Rural migrants face additional barriers, including distance, cost, language, legal status, and fear of arrest. The Strengthening Migrant Access to Reproductive Healthcare in Thailand (SMARH-T) initiative was launched in 2020 to expand contraceptive access through outreach services.

Methods: Fifteen outreach clinics were established in Thailand alongside existing fixed facilities in Thailand and Myanmar. Service data (2020-2024) were analysed for contraceptive consultations, including oral contraceptive pills, depot medroxyprogesterone acetate (DMPA), implants, intra-uterine devices (IUDs), and tubal ligation. Healthcare provider and community volunteer training programs were implemented to build local capacity.

Results/Discussion: From 2020-2024, 20,959 contraceptive consultations were recorded, increasing 4.2-fold from 1,624 to nearly 7,000 annually. Short-acting methods comprised 66.9% of consultations, primarily DMPA (88.4%), while long-acting reversible contraceptives accounted for 31.6%, predominantly implants (96.0%). Tubal ligation was accessed by 1.4% of clients. In Thailand, 54.6% of services were delivered via outreach clinics; outreach in Myanmar was limited by funding and political instability. Training was provided to 71 birth attendants and contraceptive counselling to 121 community health volunteers, strengthening local service delivery. The SMARH-T model reduced geographic, financial, and legal barriers, increased contraceptive uptake, and enhanced reproductive autonomy, with potential to improve maternal health outcomes in underserved migrant populations.

Keywords: access, Long acting reversible contraception, Medroxyprogesterone acetate, Migrants, Tak Province, Thailand.

O-T03A-0395

SMARH-T 2.0: mainstreaming migrant-friendly reproductive care in the Thai health system—a mixed methods study protocol, 2025-2029

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Abstract

Background: To reduce barriers to care, the Borderland Health Foundation (BHF) has implemented the SMARH-T initiative, conducting outreach by maternal and child health (MCH) clinics offering antenatal and young child care on a rotating schedule in 13 agricultural migrant communities in Tak province, Thailand. SMARH-T will focus on integrating this model of migrant-friendly reproductive healthcare into 6 community-based Thai Primary Care Units (PCUs) from 2025 and 2029.

Methods: This mixed methods study will evaluate this program as it develops, seeking the opinions and experiences of Thai and migrant healthcare workers, Thai and migrant community health volunteers, and migrant women seeking care for their pregnancies. Data collection will occur at 3 time points. At all three (baseline, middle and endline), focus group discussions (FGD) will use open ended questions to understand barriers, biases, opinions and experiences of healthcare workers and patients regarding the integration of migrant care into the PCUs. In addition, the middle and endline data collection we will gather quantitative data using the ReproQ questionnaire from women receiving care at the standard outreach clinics and from the hybrid PCU based clinics to monitor development of perceived quality over the course of the program.

Results/Discussion: The results of this mixed methods study protocol will be used to improve this program and as evidence to support advocacy for improved migrant programming elsewhere in Thailand and the Asia-Pacific region.

Keywords: Transients and Migrants, Pregnancy, Perinatal Care, Community Health

O-T03B-0396

Gender and Cultural Perspectives in Reproductive Health

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Abstract

Background: The gender gap and cultural traditions including early marriage, female circumcision, and food taboos continue to shape reproductive health in Indonesia, where patriarchal values and husbands' dominance in decision making significantly influence contraceptive use, access to health services, and maternal newborn health outcomes. This study aims to review findings from 2020–2025 on how gender and culture influence women's reproductive health indicators in Indonesia.

Methods: Literature for this review was obtained from PubMed, ScienceDirect, and Google Scholar. The literature search was conducted using the keywords "Gender AND Reproductive Health," "Culture AND Maternal Health," and "Early Marriage AND Adolescent Health." Articles included were those published in the period 2020–2025, in English and Indonesian, with relevance to gender norms, cultural practices, and reproductive health outcomes in Indonesia.

Results: From 15 reviewed articles, four key issues emerged: husbands' dominance in contraceptive decisions, cultural practices affecting maternal nutrition, the high prevalence of female circumcision, and early marriage harming adolescent reproductive health.

Conclusion: Effective reproductive health interventions require culturally sensitive, gender transformative policies that engage men, strengthen youth friendly services, and promote community participation.

Keywords: Gender; Culture; Reproductive Health

O-T03A-0406

Why come to a Tuberculosis Sanatorium to receive months-long treatment? A qualitative exploration of migrant care seeking for tuberculosis diagnosis and treatment in Tak Province, Thailand

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Abstract

Background: On the Thailand-Myanmar border, tuberculosis diagnosis and care for undocumented migrants are challenging due to population mobility, limited access, and social vulnerabilities. In addition, tuberculosis treatment completion has been enhanced with the establishment of the Borderland Health Foundation (BHF) TB sanatorium model in Tak Province, Thailand. However, this model requires migrant patients to remain in residential care for months-long treatment. This study aims to explore the reasons why undocumented migrants elect to receive care through BHF.

Methods: A qualitative exploratory study was conducted, using focus group discussions, in-depth interviews, and key informant interviews. Semi-structured guides were created to explore four main factors reported by migrants seeking TB care in the past: access to diagnosis and treatment; migrant and community knowledge and awareness of TB; perceived cultural and social norms; and perceived stigma and discrimination.

Results: A total of 6 focus group discussions with migrant TB patients were conducted. A select number of TB patients (n=6) were included in in-depth interviews. An additional 6 key informant interviews were conducted with TB providers, TB counselors, and community members. Preliminary analysis has revealed three key themes: migrants prioritize complete cure from TB and go to great lengths to achieve it; barriers to accessing TB diagnosis and treatment include cost, transportation, lacking appropriate immigration documentation, and political instability; and TB patient trust of and support from community members and health providers greatly enhances treatment initiation.

Discussion: This exploratory study provides a deeper understanding of the motivation for migrants to seek out TB care, despite myriad obstacles impeding their access. Study findings will allow for improving TB sanatorium care, outreach, and community engagement.

Keywords: Transients and Migrants, Tuberculosis, Health-Seeking Behavior; Health Services Accessibility

O-T03B-0409

Beyond Mothers Alone: Husband Support and Determinants of Continued Breastfeeding Among Internally Displaced Minorities in Myanmar: A Mixed-Method Study

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Abstract

Background/Objectives: Continued breastfeeding (CBF) up to 2 years, together with optimal complementary feeding, is strongly recommended as a life-saving practice for displaced minorities affected by conflict and is essential for both child and maternal health. Sustaining this practice during displacement requires partner support and shared responsibility within households. This study aims to examine the determinants of CBF among internally displaced mothers from Southeastern Myanmar.

Methods: A cross-sectional sequential mixed-method study was conducted among 520 mothers of children aged 12-24 years from Hlaing Bwe, Myanmar. In Phase 1, trained enumerators collected quantitative data on household demographics, husband support, and CBF practices based on UNICEF indicators. Binary and multivariable logistic regression were applied, and adjusted odds ratios (aOR) with 95% confidence intervals (CI) were reported. An interview guide, developed from Phase 1 findings, was used for focus group discussions, and the data were analysed thematically.

Results: The prevalence of CBF practice up to 2 years of age was 64% among which 10.2% adopted cup feeding. Higher odds of CBF were found among mothers with frequent antenatal care (ANC) (AOR = 1.55, 95% CI: 1.02–2.35), husband support (AOR = 1.99, 95% CI: 1.24–3.18), residence in Vegan areas (AOR = 2.37, 95% CI: 1.50–3.73), and those who fed their children with minimum dietary diversity (AOR = 4.80, 95% CI: 3.04–7.56), while odds decreased with increasing child age. Thematic analysis further highlighted “Weight of Household Care”, “Male Involvement”, and “Appetite Changes” as key barriers to sustaining CBF.

Conclusion: During displacement, 64% of mothers continued breastfeeding, which was influenced by ANC, husband support, and maternal and child dietary practices. Mothers emphasized the need for dual responsibility in childcare to overcome barriers to recommended CBF. In conflicts, humanitarian interventions should foster greater male involvement in maternal and child health, extending beyond breastfeeding.

Keywords: Continued Breastfeeding, CBF, Husband Support, Internally Displaced, Southeastern Myanmar.

O-T03B-0411

Examining Disparities in Total Fertility Rate Among Indonesian Women from 2007 to 2017

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Abstract

Background: Total fertility rate (TFR), the average number of children a woman is expected to have during her reproductive years (15–49), is a key demographic indicator. Despite Indonesia's declining TFR, disparities persist across socioeconomic and geographic dimensions. This study examines TFR disparities among Indonesian women from 2007 to 2017.

Methods: Data from the Indonesia Demographic and Health Surveys (IDHS) for 2007, 2012, and 2017 were analyzed using the WHO Health Equity Assessment Toolkit (HEAT). Disparity measures, including difference (D), ratio (R), population attributable risk (PAR), and population attributable fraction (PAF), were calculated across four stratifiers: economic status, education level, place of residence, and subnational region.

Results: Indonesia's TFR fell from 2.58 births per woman in 2007 to 2.44 in 2017. Economic disparities between the richest and poorest quintiles grew, with the difference increasing from 0.50 births in 2007 to 0.85 in 2017, and the ratio rising from 1.19 to 1.40, indicating higher TFR among poorer women. Educational disparities increased slightly, with the difference rising from 0.00 births in 2007 to 0.36 in 2017 between women with no education and those with higher education, and the ratio increasing from 1.00 to 1.16. Rural-urban disparities persisted, with a difference of 0.46 births in 2007 and 0.25 in 2017, and a ratio of 1.20 to 1.11. Regional disparities were most pronounced, with the difference between subnational regions decreasing from 2.32 births in 2007 to 1.26 in 2017, but the ratio remained high at 1.59 in 2017. Even small TFR differences can significantly impact population growth and resource demands over time.

Conclusion: Indonesia's declining TFR masks persistent disparities, necessitating targeted interventions. Strengthening family planning programs, expanding affordable contraception for low-income women, enhancing women's education, and addressing barriers in rural and high-TFR regions are critical to achieving equitable fertility outcomes.

Keywords: Total fertility rate, Disparity, Indonesia, Socioeconomic, Health equity

O-T03A-0425

Impact of a Short-Term Global Health Training on Competencies and Career Intentions of Public Health Students in Elderly Care

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Abstract

Background: Health systems in low- and middle-income countries (LMICs) face a dual challenge: rapid population ageing and persistent health inequities. These realities highlight the urgent need to prepare undergraduate public health students with both global health competencies and elderly care skills. Short-term global health training programs have been proposed as an educational strategy, but limited evidence exists from undergraduate students in LMICs.

Methods: The study employed a single-group pre-post mixed-methods pilot design to evaluate the 2025 BPSU-MJC Employment-Link Invitation Program, a four-week training initiative conducted in South Korea. Ten third-year public health students from Bataan Peninsula State University participated in the program, which included institutional visits, hands-on practice in rehabilitation and long-term care, and exposure to digital health systems. Quantitative outcomes were measured using the Global Health Competency Self-Confidence Scale, Psychological Capital Questionnaire, and Professional Values Scale, Career intention in elderly care was measured through a structured survey. Qualitative data were collected from daily reflection journals and a post-program debriefing interview.

Results: Significant improvements were observed in global health competencies (Δ=+1.15, g=1.10, 95% CI 0.65-1.55, $p<0.01$), professional values (Δ=+0.55, g=0.95, 95% CI 0.50-1.40, $p<0.01$), and psychological capital (Δ=+0.63, g=0.88, 95% CI 0.42-1.33, $p<0.01$). In contrast, employment intention scores declined (Δ=-0.84, g=-0.90, 95% CI-1.35 to-0.45, $p<0.01$), suggesting that participants developed more cautious and realistic career perspectives. Qualitative analysis yielded four major themes: enhanced healthcare insights, cultural immersion, increased cross-cultural awareness, and professional growth.

Conclusions: This pilot study suggests that short-term global health training can effectively enhance the competencies, professional values, and psychological resources of undergraduate public health students in an LMIC context. At the same time, students developed a more realistic understanding of the demands of elderly care, indicating that such programs may recalibrate rather than simply increase career intentions. Larger, comparative studies are needed to confirm these findings and to further explore the long-term impact on workforce development in elderly care.

Keywords: Global Health/education; Students, Public Health; Long-term Care; Professionalism; Self-efficacy; Developing Countries

O-T03B-0430

Implementation of Community-Based Midwifery Led Care for Early Detection of Pregnancy Complications: Literature Review

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Abstract

Background: Pregnancy complications such as preeclampsia, bleeding, and infection are still the leading causes of maternal mortality in Indonesia. Data from the 2023 Indonesian Health Survey reported that 27.7% of pregnant women experienced anemia, 18.9% experienced emesis, and cases of premature rupture of amniotic membranes and significant bleeding. Early screening efforts are often hampered by limited access to services, low maternal health literacy, and weak referral systems. Community-based Midwifery Led Care (MLC) offers a model of continuous service by midwives who are close to mothers and families, thus potentially strengthening the early detection of complications.
Objective: To review the scientific evidence on the implementation of community-based MLC in supporting early detection of pregnancy complications, including supporting factors, barriers, and their impact on maternal services in rural areas.
Methods: Literature review was conducted by searching articles on PubMed, Scopus, and ScienceDirect by keywords ("midwifery led care" OR "midwife-led care") AND ("community midwifery") AND ("pregnancy complications" OR "high-risk pregnancy") AND ("early detection" OR "screening"). The articles included were original research, systematic reviews, and implementation studies published in 2010–2025, then analyzed narratively.
Results: MLC has been shown to improve continuity of service, build maternal-midwifery trust, and promote regularity of antenatal visits which contributes to the detection of obstetric complications. Midwife training, the use of simple screening tools (blood pressure, proteinuria), and mHealth integration are supporting factors. However, limited facilities, suboptimal referral routes, and socio-cultural barriers remain implementation challenges.
Conclusions: Community-based MLC has the potential to strengthen the early detection of pregnancy complications, but its effectiveness is strongly influenced by midwifery competence, health system support, and adaptation to local conditions. Further research is needed to assess the quantitative effectiveness and implementation strategies in rural Indonesia.
Keywords: Midwifery Led Care, community, early detection, pregnancy complications

O-T03A-0431

The Relationship between Spiritual Well-Being and Quality of Life among Older Adults at Batara Hati Mulia Foundation, Gowa Regency

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Abstract

Indonesia is currently experiencing a demographic shift toward an aging society, making the quality of life among older adults a crucial public health concern. A meaningful and satisfying life in old age is not only influenced by physical and social factors but also by spiritual well-being, which plays a central role in providing older adults with a sense of purpose, peace, and fulfillment. When spiritual needs are adequately met, older adults are more likely to achieve better functional capacity, psychological stability, and social engagement, all of which contribute to higher life satisfaction. Recognizing the importance of this dimension, this study explored the relationship between spiritual well-being and quality of life among older adults at the Batara Hati Mulia Foundation in Gowa Regency.This research employed a quantitative approach with a cross-sectional analytic design involving 78 older adults who fulfilled the inclusion criteria. Data collection was carried out using two standardized instruments: the WHOQOL-OLD questionnaire to measure quality of life and the Spiritual Well-Being Index to assess spiritual status. Statistical analysis was performed using the Chi-Square test with a significance level set at 0.05.The results revealed that the majority of participants demonstrated favorable outcomes, with 51 older adults (65.4%) reporting a high quality of life and 43 older adults (55.1%) indicating a high level of spiritual well-being. Importantly, the Chi-Square test confirmed a strong and statistically significant association between spiritual well-being and quality of life ($p = 0.000$, $p < 0.05$). These findings clearly highlight that older adults with higher spiritual well-being are significantly more likely to experience a better quality of life compared to those with lower levels of spirituality.

The findings underscore the vital role of spiritual health in elderly care and highlight the importance of integrating spiritual dimensions into health promotion programs for older populations. Enhancing spiritual well-being through community-based and institutional interventions may provide older adults with a stronger sense of meaning, improve resilience in facing age-related challenges, and ultimately foster a healthier, more fulfilling aging process.

O-T03A-0432

Association of community nurses' activities and Activity of Daily Living of the elderly in Nan Province, Thailand

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Abstract

Thailand is one of the most rapidly aging countries in Southeast Asia, with 22% of the population aged 60 years and older. Nan Province, where 23% of residents are elderly, faces particular challenges in sustaining community-based care. Health Promoting Hospitals (HPHs) play a central role in this system, with community nurses (CNs) providing health education, chronic disease management, home visits, and rehabilitation support. However, limited evidence exists regarding the effectiveness of CN activities for elderly eligible for Intermediate Care (IMC).

This study aimed to evaluate the association between CN activities and health outcomes, particularly activities of daily living (ADL), among IMC-eligible elderly in Nan Province. A retrospective medical record survey was conducted for patients aged ≥60 years who received IMC services at 20 HPHs. A total of 465 cases were collected, of which 123 cases were included in the analysis after excluding incomplete records. HPHs were categorized into "active" and "inactive" groups based on CN activity levels. Logistic regression analysis was performed using demographic data (age, sex, insurance type, family support, and primary diagnosis) and CN activity level as explanatory variables. The primary outcome was improvement in the Barthel Index (BI), with hospitalization and complications assessed as secondary outcomes.

Results showed no significant association between CN activity level and BI improvement. However, the active CN group demonstrated a significantly lower risk of hospitalization compared with the inactive group (AOR 0.279; 95% CI [0.108–0.718]; p = .008).These findings suggest that while CN activities may not directly improve ADL as measured by BI, proactive CN involvement contributes to reducing hospital admissions. This underscores the vital role of community nurses in elderly care within primary care and community settings, and highlights the expansion of CN-led services as essential for strengthening sustainable long-term care and achieving Universal Health Coverage in Thailand.

O-T03B-0444

Deconstructing Gender Norms in Reproductive and Sexual Health: Midwifery Students' Perspectives from Minangkabau Culture in Indonesia

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Abstract

Midwives in Indonesia play a frontline role in providing community-based care. In a culturally diverse country like Indonesia, understanding gender equality is essential for future midwives to ensure inclusive, high-quality, and culturally sensitive sexual health services. Among students from the Minangkabau ethnic group whose matrilineal kinship system shapes traditional gender roles, cultural values may shape the perspectives of health professionals. This study aims to examine how cultural backgrounds influence midwifery students' perspectives on gender equality in the context of reproductive and sexual health. A cross-sectional quantitative survey was conducted among 136 midwifery students in West Sumatra, Indonesia. Data was collected using the Gender Roles Attitude Scale (GRAS) questionnaire, that consisted of five sections assessing attitudes on egalitarian roles, women's roles, marriage dynamics, traditional expectations, and male dominance. Bivariate analyses were used to examine patterns related to demographic variables including ethnicity, place of origin, and level of education. Most of the respondents (66.9%) were aged 21–30 years, reflecting the typical age range of undergraduate midwifery students. The average GRAS score among midwifery students was 125.2 ± 9.10. The egalitarian sex roles 36.21 ± 3.10. The female sex role average was 34.40 ± 3.25, followed by sex roles in marriage (17.71 ± 2.99), and traditional sex roles (24.92 ± 3.54), reflecting mixed attitudes. The male sex roles (11.97 ± 2.89). Bivariate analysis using the Kruskal-Wallis test revealed a non-significant result ($p = 0.412$), indicating no statistically meaningful association between place of origin and gender role attitudes. This suggests that, within this sample, geographic background did not significantly influence midwifery students' perspectives on gender equality.

Keywords: gender norms, reproductive health, midwifery students, minangkabau culture

O-T03A-0460

Prevalence And Factors Associated With Post Traumatic Stress Disorder (Ptsd) Among Myanmar Migrants In Mae Sot, Tak Province

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Abstract

Background: Post traumatic stress disorder (PTSD) is a serious mental health condition, particularly affecting migrants, refugees, and communities exposed to war and trauma.

Objectives: This study estimated the prevalence of PTSD and identified associated factors among Myanmar migrants in Mae Sot, Tak Province, Thailand.

Methods: A cross-sectional study was conducted among 360 Myanmar migrants aged 18 years and older in three subdistricts of Mae Sot using a validated questionnaire. Participants were selected through a two-stage cluster sampling method. Descriptive statistics summarized demographic characteristics, while Chi-square tests and logistic regression analyses identified factors associated with PTSD at a significance level of $\alpha = 0.05$.

Results: Of the 360 participants, 63.3% were female and 68.1% were aged 18–37 years. The prevalence of probable PTSD was 34.7%. Migrants who experienced discrimination and social exclusion had higher odds of developing PTSD, while the number and type of traumatic events were also significantly associated. Conversely, having stable employment and living with family were protective factors, reducing the likelihood of PTSD compared to those unemployed and living alone.

Conclusion: PTSD is highly prevalent among Myanmar migrants in Mae Sot. Discrimination, social exclusion, and multiple traumatic experiences increase vulnerability, whereas employment and family support play protective roles. Interventions to reduce discrimination, expand job opportunities, and strengthen social and family support are crucial to addressing PTSD in this population.

Keywords: Post traumatic stress disorder, Myanmar migrants, trauma, mental health, Mae Sot, Tak Province, Thailand.

O-T03A-0464

Factors Affecting the Health and Well-Being of the Elderly in Makassar City: A Qualitative Study

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The phenomenon of population aging is a global issue that significantly impacts societies worldwide. As highlighted in various sources, including reports from the United Nations and the National Institute on Aging, population aging presents a plethora of challenges and opportunities. However, despite the increasing awareness of aging-related health and social issues, there is still a lack of context-specific evidence on how social prescribing can be adapted and implemented to address the diverse needs of older adults in Indonesia, particularly in Makassar City. Existing studies tend to generalize findings from high-income countries, leaving a research gap in understanding local cultural, social, and systemic dynamics that influence the well-being of the elderly.This study aims to identify the domains of social prescribing among the elderly within the local context of Makassar City. An exploratory, qualitative multi-step design was used containing a scoping review, Focus Group Discussion (FGD) and semi-structured interviews. The study population consisted of elderly people, geriatrician, care givers, community leaders. The main topics discussed in the focus groups and semi-structured interviews Factors Affecting the Health and Well-being of the Elderly. The findings revealed five unique, locally relevant factors influencing the health and well-being of older adults in Makassar City: (1) health vulnerability and chronic conditions, (2) the role of family and community support, (3) barriers to accessing health services, (4) economic insecurity and dependency, and (5) spirituality as a coping mechanism. These results highlight the importance of integrating cultural and contextual dimensions into the design of social prescribing interventions. The identified factors can be used as a reference in determining the main priorities in designing programs related to the welfare of the elderly in Makassar City, thereby potentially providing significant benefits for the elderly.

Keywords: Health and Well-Being, Elderly, Local Context, Makassar

O-T03B-0467

Akha women's leadership for gender-balanced harm reduction services in Chiang Rai, Northern Thailand

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Abstract

Issue – Most organization leaders are men, including civil society organizations working with people who inject drugs (PWIDs). It was found that most people who had access to the services were men, while women were less likely to have access to the services due to gender restrictions and discrimination. And services are programmed for men; they don't think of the hours of operation, child or elder care, gender-affirming care/services

The People Change Foundation (PCF) is led by a female Akha leader with deep understanding of tribal communities and their drug use culture. Based in Chiang Rai Province, part of the Golden Triangle and a major route for drug trafficking and distribution, PCF works with diverse ethnic groups including Akha, Lahu, Chinese Hor, and Thai Yai. In these communities, opium is traditionally used as household medicine and in daily life. According to the Chiang Rai Provincial Public Health Office, 60% of drug users rely on heroin and opium, 30% on methamphetamine, and 10% on other substances.

The Project: PCF aims to ensure that women of tribal ethnicity who are marginalized, vulnerable, and who use drugs can be heard and that their voices can drive policy changes for harm reduction services focusing on women.

Results: PCF established six community drop-in centers providing methadone maintenance, which improved women's access to treatment and became a provincial model. From January 2024 to June 2025 (STAR 4), the team reached 2,418 PWIDs, including 290 women (12%), and set a 2026 target to increase women's access by 25%. Through this work, PCF not only strengthened its capacity to overcome stigma and barriers for women who use drugs but also gained strong support from local authorities, including the Deputy Governor and provincial public health officials, whose engagement helped inform and influence provincial policy.

O-T03A-0473

Family Planning for the Displaced: Lessons from Myanmar Migrants in Humanitarian Crises

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Abstract

Background: Family planning (FP) is essential in humanitarian contexts, yet displaced Myanmar migrants face insurmountable barriers to accessing these services. This systematic review synthesizes evidence on the availability, accessibility, delivery, and effectiveness of FP services for Myanmar migrants in humanitarian settings.

Methods: Following PRISMA guidelines, six bibliographic databases (MEDLINE, Embase, Web of Science, Scopus, CINAHL, PsycINFO) and grey literature were searched up to 31 December 2024. Inclusion criteria targeted studies on Myanmar migrants in humanitarian or border settings reporting FP access, delivery, utilization, or interventions. Out of 348 records, 24 studies were retained for data extraction. Data were synthesized thematically across service availability, accessibility, utilization, satisfaction, unmet need, and interventions.

Results: Findings revealed expanded FP availability, including contraceptive pills, injectables, IUDs, implants, sterilization, and abortion referral programs, largely delivered by non-governmental organizations and community health networks. Accessibility was constrained by language barriers, legal insecurity, stigma, and geographic inaccessibility, with adolescents and undocumented women most disadvantaged. Utilization showed upward trends in contraceptive uptake, with growing preference for long-acting reversible contraceptives. User satisfaction arose when services were respectful, peer-supported, and culturally sensitive. Despite progress, unmet need remains substantial, particularly among Rohingya refugees, driven by partner disapproval, religious beliefs, and lack of youth-friendly services. Successful interventions included community health worker outreach, peer-to-peer education, policy advocacy, and engagement with religious leaders, which improved service uptake and reduced stigma.

Conclusion: FP services for Myanmar migrants in humanitarian contexts remain fragmented, with significant equity gaps. Strengthening community health worker networks, culturally informed counselling, adolescent- and male-inclusive services, and integrating FP with broader SRH interventions are urgently needed. Ensuring rights-based, trauma-informed FP care is not only a health priority but a humanitarian obligation, and part of sexual and reproductive health and rights.

Keywords: Family planning, Myanmar migrants, Humanitarian settings, Interventions, Sexual and reproductive health and rights

O-T03A-0488

Nutrition Interventions and Community Approaches to Adverse Pregnancy Outcome (APO) Prevention: A Literature Review

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Abstract

Background: Adverse Pregnancy Outcomes (APO) such as preeclampsia, preterm birth, and low birth weight (BBLR) are still a high-burden maternal and neonatal health problem, particularly in developing countries. One of the main mechanisms of the occurrence of APO is systemic inflammation, which is characterized by an increase in the biomarker Interleukin-6 (IL-6). Maternal nutritional status, dietary patterns, and social determinants of health such as education, income, and access to antenatal services have been shown to contribute to high levels of IL-6 and the risk of APO. A thorough understanding of APO determinants and inflammatory mechanisms is the basis for the development of more effective intervention models.

Objective: To comprehensively examine the determinants of APO, the role of IL-6 in inflammatory mechanisms, as well as the potential for nutritional interventions and community approaches as a promotive and preventive effort

Methods: A literature review was conducted by searching articles on PubMed, Scopus, and ScienceDirect with keywords ("Adverse Pregnancy Outcomes" OR "pregnancy complications") AND ("Systemic Inflammation") AND ("Maternal Inflammation" OR "Maternal Nutrition") AND ("Community-Based Intervention" OR "Community Health Programs"). The articles involved are original research, systematic reviews, and implementation studies published in 2020–2025, then analyzed narratively.

Results: Poor nutritional status, low education, limited access to antenatal services, and socio-economic factors were the main determinants of APO. Increased levels of IL-6 were found in high-risk pregnancies, particularly preeclampsia and preterm labor. Personalized nutrition interventions and community-based education have been shown to reduce IL-6 levels and improve pregnancy outcomes.

Conclusion: Integration of nutritional interventions with community approaches can be an innovative strategy in lowering IL-6 levels and preventing the occurrence of APO. Further research is needed to assess the quantitative effectiveness and implementation strategies in developing countries such as Indonesia to strengthen maternal health promotive and preventive efforts.

Keywords: Adverse Pregna ncy Outcome, Interleukin-6, nutritional status, nutritional intervention, community approach

O-T03A-0499

A GEDSI Review in Tak Province: Access Barriers to Malaria Services for Migrant and Indigenous Population

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Abstract

Along the Thailand–Myanmar border, ethnic and migrant populations living in remote, hard-to-reach, and highly endemic areas remain disproportionately vulnerable to malaria infection and poor health outcomes.[1] While Thailand progresses toward eliminating malaria, the goal is being challenged by increasing cross-border migration and the resurgence of cases. In 2023, Thailand reported more than 17,000 malaria cases, mostly along international borders.[2] The CSO Platform conducted a rapid review to assess the structural, social, and systemic barriers to malaria service access among at-risk populations, with a particular focus on gender equality, disability, and social inclusion (GEDSI). The objectives were to identify GEDSI-related access barriers and to co-develop practical solutions to address service delivery challenges.

The literature review, interviews, focus group discussions, and key informant interviews were conducted to collect data from affected communities. The analysis applied a GEDSI lens and the Malaria Matchbox tool, designed to strengthen malaria program effectiveness, to examine the continuum of malaria and broader health services.

Results highlight significant barriers faced by vulnerable populations in Tak province and other border areas when seeking malaria and general healthcare services. Data revealed additional factors contributing to poor health outcomes, such as social exclusion and mobility constraints. The assessment generated recommendations for national and subnational programs, partners, and frontline workers to advance malaria elimination efforts that are equitable, community-based, and responsive to GEDSI-related vulnerabilities. Limitations included minimal input from health facilities, insufficient perspectives on disability and inclusion, and underrepresentation of groups such as residents in shelters and Burmese and Hmong communities beyond Karen areas.

The review emphasized the importance of community engagement in advancing GEDSI in malaria programming. Strengthening participation will help ensure comprehensive identification of vulnerable groups and enable the design of responsive interventions that expand access to malaria services and complementary healthcare in the last mile of elimination.

O-T03A-0507

Associations between social support and self-rated health among Myanmar migrant workers at frozen seafood factories in Hat Yai, Thailand

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Abstract

Background: The number of migrant workers (MWs) from Myanmar has been increasing in Thailand. To study their health, self-rated health (SRH), which is a global indicator of health outcomes, and social support (SS), which is reported as a positive influencing factor, were focused on. The study aimed to analyze the associations between SS and SRH among Myanmar MWs at two frozen seafood factories in Hat Yai, Thailand.

Methods: A cross-sectional design was applied. Self-administered questionnaires were distributed to Myanmar MWs aged 18 to 59 years old at the factories. In total, 331 valid responses were collected. Migrants who answered their health as fair or poor were considered to have poor SRH. A multivariable regression model was used to identify associated factors. The total SS scores were measured by the Multidimensional Scale of Perceived Social Support. This study was approved by the institutional review board of Prince of Songkla University (ID number: 2024-PP-PP-001).

Results: One hundred thirteen migrants (34%) reported poor SRH. The median age was 31 years. Approximately 75% were female. Less than 5% had underlying diseases. The mean total SS score was 4.5 (range: 1-7). SS was not associated with poor SRH. Older MWs were less likely to report poor SRH (AOR=0.31) than younger MWs. Female MWs had 2.8 times higher odds of reporting poor SRH compared with male MWs. Underlying diseases were another associated factor.

Conclusion: In this study, SS was not associated with poor SRH. Young MWs were considered to have lived in Thailand for a short period. Their recent life changes may have contributed to poor SRH. Female MWs and those with underlying diseases could need specific healthcare services to maintain health. The non-association between SS and poor SRH might be due to MWs interpreting SRH, overlooking the mental health aspects more directly influenced by SS.

Keywords: Myanmar migrant workers, social support, self-rated health, Thailand

O-T03A-0514

Community Engagement for G6PD Testing and Tafenoquine Uptake: Implementation Experience from Thailand's Border Areas

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Abstract

Thailand has made remarkable progress in reducing Plasmodium falciparum malaria, but drug-resistant strains have shifted the burden toward Plasmodium vivax, which now accounts for over 90% of reported cases. Tak Province, along the Thailand–Myanmar border, remains highly endemic, particularly among mobile and migrant populations working in remote agricultural and forested areas.[1] Radical cure of P. vivax with primaquine (PQ) or tafenoquine (TQ) requires glucose-6-phosphate dehydrogenase (G6PD) testing to prevent adverse events. However, challenges such as limited awareness, poor treatment adherence, and inadequate follow-up continue to hinder effective case management.[2]

To address these gaps, ALIGHT, with support from Medicines for Malaria Venture (MMV) and in partnership with the provincial health office of Tak and local NGOs, implemented the Community G6PD Testing and Tafenoquine Scaling Project (December 2024-October 2025) in four high-burden districts of Tak Province. The project aimed to strengthen community-facility linkages, raise awareness of G6PD testing, and enhance patient monitoring by leveraging existing community structures. Key interventions included: (1) community awareness sessions on G6PD testing and treatment adherence, (2) training and mobilization of community volunteers to monitor treatment and adverse events, and (3) advocacy with health authorities, hospitals, malaria clinics, and local leaders to improve referral and communication systems.

By the mid-term of the project, it had engaged 20 villages across five endemic districts, conducting 40 awareness sessions and 58 volunteer training activities, reaching 1,831 participants—69% of whom were women. Preliminary outcomes indicate improved treatment adherence, with compliance rates reaching 78%.

This implementation experience demonstrates that community engagement, coupled with support from the health system, can significantly strengthen P. vivax case management. Scaling such approaches may accelerate progress toward malaria elimination in border and high-risk settings.

O-T03A-0534

An Intersectional Approach to Health Equity in Preferences for Place of Death Among Older Adults in Japan

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Abstract

Background: Achieving health equity in end-of-life care (EOLC) requires that an individual's preferences are honored regardless of their social position. Yet, sociodemographic factors can create systemic, inequitable barriers influencing preferred place of death (PPoD). How these factors jointly shape such disparities is poorly understood. This study applies an intersectional approach to examine these interactions among older Japanese adults.

Method: We analyzed data from the 2022 Japan Gerontological Evaluation Study, a cross-sectional survey of community-dwelling independent individuals aged ≥65. We applied Multilevel Analysis of Individual Heterogeneity and Discriminatory Accuracy to nest individuals within 108 intersectional strata, defined by sex, age (65–74, 75–84, ≥85 years), education (≤9, 10–12, ≥13 years), household income (tertiles), and living arrangement (living alone vs. not). A multilevel logistic model was fitted using the variance partition coefficient (VPC) to assess discriminatory accuracy and the proportional change in variance (PCV) to evaluate how strata differences were explained by additive main effects. The predicted percentages of home preference were calculated for each stratum.

Results: Overall, 34.4% preferred home death. Our intersectional analysis revealed striking disparities, with predicted probabilities ranging from 15.8% to 65.2% across strata, demonstrating that social position profoundly shapes preferences. These systematic between-strata differences accounted for 8.6% of the total variance (VPC), indicating that most of the preference heterogeneity exists within these groups. The high PCV (96.5%) confirmed that disparities were largely attributable to the cumulative effects of an individual's social factors.

Conclusion: Our findings show a crucial duality for EOLC equity. Stark disparities between strata expose systemic inequities and identify vulnerable groups. However, the moderate VPC is a vital reminder that true equity requires personalization, as demographic profiles cannot predict individual wishes. This reinforces person-centered dialogue. An intersectional perspective is therefore essential to advance health equity through both systemic reform and individualized clinical practice.

O-T03A-0548

Mental Health Challenges among Older Persons Peer Support Agent (OPPA)

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Abstract

Older adults in Malaysia are increasingly facing complex challenges in their daily lives, including health-related limitations, reduced social interaction, intergenerational communication gaps, and feelings of loneliness or being left behind. Mental health issues remain a stigma in Malaysia and especially among older adults. To address this, the Older People Peer Support Agent (OPPA) programme was developed as an innovative peer-support training module that emphasizes participation, self-expression, and empowerment. This study aims to understand the mental health challenges faced by older adults in the community. As part of the training, focus group discussions (FGDs) were conducted to provide a platform for older adults to share openly about the difficulties they experience in everyday life. The participants were older adults aged 60 years and older who volunteered to be an OPPA agent. FGD was conducted with a total of 40 participants. These discussions revealed a wide range of issues, from challenges in physical function, feeling of loneliness, to difficulties in expressing personal needs within family structures, and navigating modern digital communication. Importantly, the participants not only to voice their struggles but also to find solidarity in shared experiences, recognizing that many of their peers were facing similar realities. This approach fostered active involvement and encouraged participants to contribute their perspectives. Several participants, including those with backgrounds in counselling, were able to share advice and provide meaningful peer support, enriching the collective learning experience. The initial implementation of OPPA demonstrates that creating safe and participatory spaces for older adults to articulate their daily challenges is a critical step in designing effective interventions. By centering the voices of older adults themselves, OPPA offers a novel, empowering framework that strengthens peer connections, enhances communication skills, and promotes resilience among the ageing population.

Keywords: Older adults, community, mental health, peer support

O-T03A-0575

Association of insomnia symptoms with mental well-being among general population in Yaese, Japan: a cross-sectional study

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Abstract

Background: Although evidence has accumulated on the association between insomnia and mental well-being among special groups including patients, elderly persons and healthcare workers, limited evidence is available on the association among general population. We, thus, assessed the association between insomnia symptoms and mental well-being among general population in Yaese town, Japan.

Methods: Between September and December 2024, we made household visits in Yaese town which is a suburban area in Okinawa, to distribute a self-administered questionnaire to adult household members. The questionnaire collected data on insomnia symptoms measured by Athens Insomnia Scale, mental well-being measured by WHO-5 and other characteristics. We performed two multivariate models to assess the association between insomnia symptoms and mental well-being, using logistic regression analysis. The first model adjusted for age and sex, while the second model adjusted for perceived economic situations, physical activities (40 minutes/day) and presence of chronic illnesses, in addition to age and sex.

Results: A total of 155 residents participated in the study. The prevalence of insomnia symptoms was 29.0%. The prevalence of poor mental well-being was 21.9%. In the first model, residents who have insomnia symptoms were significantly more likely to have poor mental well-being compared to those who do not (51.1% vs. 10.0%, adjusted odds ratio: 10.35, 95% confidence interval: 4.10–26.14). In the second model, the association remained significant (adjusted odds ratio: 11.59, 95% confidence interval: 4.06–33.12).

Conclusion: This study showed that presence of insomnia symptoms is significantly associated with poor mental well-being among general population in Yaese. Thus, there is a possibility that addressing sleeping problems can lead to better mental well-being. This study also showed that many people suffer from insomnia symptoms and poor mental-well-being, suggesting the importance of tackling these issues in Japan.

Keywords: insomnia, mental well-being, sleep disturbance, general population, Japan

O-T03A-0576

WASH Inequities in Unserved and Underserved Areas (UUA): A Convergent Mixed-Methods Study in UUA Barangays of Nueva Ecija, Philippines

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Abstract

Background: Provincial reports in Nueva Ecija indicate high coverage of safely managed drinking water (82%) and sanitation (85%). Yet, underserved GIDA/UUA barangays may remain invisible under aggregate statistics. This study examined inequities in water, sanitation, and hygiene (WASH), aligning with the Sustainable Development Goals (SDGs 3, 6, 10) and the Philippine Universal Health Care (UHC) Act.

Methods: The study employed a convergent parallel mixed-methods design with methodological triangulation. Quantitative data included a cross-sectional purposive household survey (n = 608), microbiological testing of household taps (n = 284, December 2024–January 2025), and secondary morbidity surveillance (2022–2024). Qualitative data came from four FGDs with household heads and barangay health workers (8–11 participants each). Quantitative and qualitative strands were analyzed in parallel and integrated to confirm, complement, and explain each other.

Results: Water analysis showed 162/284 (57%, 95% CI 51–63) compliant and 122/284 (43%, 95% CI 37–49) failed, with all taps within ≤15 m of septic tanks. Surveys revealed 83% of households did not treat water, 53.8% shared latrines, and 48% disposed child feces in trash. Hygiene indicators showed 89% had handwashing stations, but soap was inconsistently available. FGDs explained these patterns: water was considered safe if no one fell ill, boiling was occasional, and substitutes like papaya leaves were used for soap. BHWs focused on maternal-child health and census reporting, not water safety promotion. Morbidity data confirmed diarrhea entered the Top 10 causes in 2024.

Conclusion: This triangulated evidence shows that apparent WASH coverage conceals unsafe practices in GIDA barangays. Structural hazards (septic proximity, shared latrines), behavioral practices (conditional boiling, unsafe disposal, inconsistent handwashing), and institutional gaps (BHWs as record-keepers, not WASH promoters) converge to sustain inequities. These findings move beyond description, explaining how inequities are produced, and highlight the need for equity-focused WASH interventions to achieve SDGs 3, 6, and 10.

Keywords: Water, Sanitation, and Hygiene (WASH); Mixed-Methods Research; Universal Health Care (UHC) Act, Philippines; Sustainable Development Goals (SDG 3, 6, 10); Unserved and Underserved Areas (UUA); Drinking Water Quality; Health Inequities; Nueva Ecija, Philippines

O-T03B-0580

Assessing the implementation outcomes of a telehealth-based delivery model in improving Pre-Exposure Prophylaxis (PrEP) access among Key Populations at risk for HIV across four community-led clinics in the Philippines

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Abstract

Background: Despite global declines in HIV incidence, the Philippines continues to see rising cases and inequitable access to pre-exposure prophylaxis (PrEP). SAIL TelePrEP—a telehealth, differentiated service delivery model—was implemented to expand PrEP access for key populations (KPs) in remote or underserved areas.

Objective: To evaluate the first year of SAIL TelePrEP using the RE-AIM framework.

Design, setting, and data: Retrospective cohort of PrEP service records uniquely encoded by client identifier from four SAIL community-led clinics (January–December 2023).
Measures: Reach—TelePrEP uptake and predictors using multivariable logistic regression (adjusting for age, geography, KP, and clinic). Effectiveness—incident HIV infections (seroconversion) and PrEP persistence (≥75% of expected refills). Adoption—proportion of clinics implementing TelePrEP and site-level uptake. Implementation—key process indicators (e.g., couriered refills). Maintenance—continuity of service delivery across 2023.
Results: Of 5,876 PrEP service records, 494 (8.4%) used SAIL TelePrEP. In adjusted models, odds of TelePrEP use were higher for individuals aged ≥25 years (adjusted odds ratio [AOR]=1.54; 95%CI=1.19–2.01), residents outside the Greater Manila Area (AOR=1.77; 95%CI=1.28–2.44), men having sex with men (MSM) (AOR=5.73; 95%CI=2.68–12.26), and sex workers (AOR=4.53; 95%CI=2.04–10.05). Zero incident HIV-seroconversion were recorded among TelePrEP users during follow-up, and PrEP persistence among TelePrEP clients 86.5%. All four clinics adopted and implemented TelePrEP; site-level uptake ranged from 3.8% (SAIL–Cavite) to 10.6% (SAIL–Makati). Remote PrEP access was supported by 1,094 couriered refills, with demand peaks in September–October. To date, TelePrEP operations are maintained through international development partners.
Conclusions: SAIL TelePrEP expanded PrEP access for underserved KPs, especially outside major urban areas, while achieving zero seroconversions and high persistence. Gaps include lower uptake among younger clients and people using drugs. Findings support adaptable, client-centered TelePrEP as a scalable strategy in archipelagic settings, but should improve youth-focused, harm-reduction approaches to strengthen effectiveness.
Keywords: pre-exposure prophylaxis; implementation science; HIV prevention; Philippines; key populations; telehealth; vulnerable populations, differentiated service delivery

O-T03C-0607

White Coats Against War Crimes: Global Health Worker Solidarity in the Face of Genocide

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Abstract

Background: The ongoing genocide in Gaza (2023–2025) has decimated the health system and killed over 1400 healthcare workers. This atrocity catalysed and created an extraordinary wave of global health worker resistance. From front-line emergency care in besieged hospitals to legal testimonies at the International Court of Justice, health professionals have mobilized in unprecedented ways, offering direct care, bearing witness, and breaking silences.

Aim: This article explores the multifaceted forms of solidarity expressed by global health workers in response to war crimes and mass atrocities, focusing on Gaza as the most extreme case of structural violence and targeted destruction of healthcare in modern history.

Method: Drawing on field testimonies, diaspora advocacy, professional repression cases, academic supports, grassroots movements, and a bibliographic analysis of health-related publications on Palestine, this study reveals how health workers have transformed their roles: from neutral and apolitical practitioners to active agents of resistance.

Results: Acts of solidarity span from clinical volunteering, grassroots mutual aid, academic publishing, digital advocacy, and institutional whistleblowing, which are often undertaken at great personal and professional risk. The analysis is grounded in interdisciplinary theoretical frameworks, including the ethics of care, epistemic injustice, global health diplomacy, and the sociology of professional activism.

Conclusion: We argue that the genocide in Gaza has disrupted the moral comfort of neutrality long held in health professions. In the face of mass death, deliberate targeting of hospitals, and global political inaction, care has become defiance and publishing a form of survival testimony. This article calls for recognizing healthcare not only as a humanitarian duty, but as a site of political struggle, where silence kills, and solidarity heals.

Keywords: Global health diplomacy, medical advocacy, conflict medicine, Gaza, Palestine

O-T03A-0635

Mobile Mammography as a Model for Equity in Breast Cancer Screening: Findings from Rural Communities in Malaysia

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Abstract

Background: Breast cancer is the most common cancer among Malaysian women, with late diagnosis particularly affecting rural communities due to barriers such as distance, cost, and limited awareness. These challenges are greatest in rural communities. To address this, the National Cancer Council (MAKNA) launched a Digital Mobile Mammogram Unit (DMMU) in 2011, expanding to Sabah and Sarawak in 2022, to deliver free screening in underserved areas.

Objective: To evaluate 2-year outcomes of MAKNA's digital mobile mammogram program in participation, abnormal findings, cancer detection, and implications for Southeast Asia.

Methods:This retrospective descriptive study analysed data from January 2023 to December 2024. Free digital mammography was provided to women aged ≥40 years, with portable ultrasound used for immediate triage of abnormal findings. Data on demographics, abnormalities, referrals, and cancer detection were analyzed descriptively.

Results: A total of 13,343 mammograms were performed at 80 events, 63 (78.8%) in rural areas, with 9,848 participants (73.8%) from these communities. Most women were aged 40–59 years. Abnormal findings were detected in 3,693 women (27.7%), of whom 1,682 (45.5%) underwent ultrasound and 180 (1.3% of all; 4.9% of abnormal) were referred to hospital. Thirty-three cancers were diagnosed (0.25% of all screened; 18.3% of referrals), comprising 16 early-stage (I–II, 48.5%) and 17 late-stage (III–IV, 51.5%) cases.

Conclusion: The digital mobile mammogram program bridges healthcare gaps for rural Malaysian women by bringing life-saving screening directly to their communities. By reducing cost, distance, and access barriers, it enables earlier detection and efficient referrals through on-site ultrasound triage. This model is feasible, cost-effective, and transformative in advancing equity in cancer care, and can be adopted by countries with similar demographic and geographic challenges to improve outcomes for women in remote areas.

Keywords: Malaysia, mobile mammogram, rural health, breast cancer screening, lowerincome women, ultrasound triage, Southeast Asia

O-T03C-0660

Community-Based Methadone Treatment through NGO Drop in Center in Chiang Rai, Thailand

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Abstract

Introduction: Methadone is a substitution therapy for people who use drugs. There is also a shortage of treatment centers, and government agencies impose conditions on treatment. As a result, people who live far away the hospital are unable to access these services. Community-based methadone services offer a solution, with the community actively participating to enhance the effectiveness of treatment.

Purpose: People who use drugs can access treatment, modify their behavior to reduce the harm from drug use, live with their families and improve their quality of life.

Methods:: Drop-in Centers (DICs) were established in compliance with Healthcare Accreditation (HA) standards. A peer-led approach was employed to engage PUD and link them to methadone services. Continuous follow-up by the PCF local team ensured retention in the treatment program.

Results: From January 2024 to June 2025, PCF set up six friendly drop in centers in Mae Fah Luang and Mae Chan district, treating 167 individuals. All participants were screened for HIV and HCV, and those who tested positive were linkage to treatment, decrease drug use, decrease expenses, enabling them to work and live with their families with good relationship and CBTx community base treatment are participated.

Conclusion: The PCF initiative demonstrates that community-based methadone services are both feasible and effective in addressing barriers to care for people who use drugs, particularly those living in remote areas. By integrating peer-led outreach, culturally sensitive communication, and HA-compliant service delivery, the model improved treatment retention, reduced drug use, and enhanced social reintegration. Importantly, the program highlights the critical role of communities and CBOs in reducing health inequities and ensuring access for marginalized populations. The success of this model has informed policy adaptation and inspired replication in other provinces, contributing to stronger, more resilient communities and a more inclusive national response to drug dependence.

O-T03A-0667

Exploring the Relationship of Agriculture Centered on Yam Cultivation with Dietary Intake, Physical Activity, and Health in Rural New Caledonia: Research Plan for a Field Study

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Abstract

Non-communicable diseases such as obesity and diabetes were once rare in the South Pacific but have become increasingly common due to lifestyle changes driven by the market economy. While New Caledonia is one of the most market-integrated regions in Melanesia, rural indigenous Kanak communities have largely maintained traditional lifestyles centered on agriculture, with yam as the primary crop due to its cultural significance. However, a recent study on Lifou Island reported a high prevalence of obesity—60% among adults and 8% among children. My fieldwork on Mare Island suggests that agriculture primarily serves ceremonial yam gifting, while daily diets rely heavily on imported store-bought foods, often high in fat and energy. Nevertheless, due to limited mechanization, agriculture may still promote physical activity. This study aims to examine the relationship between agriculture, dietary intake, physical activity, and health in rural New Caledonia.

An in-depth observational study will be conducted through long-term fieldwork on Mare Island. Participants will be accompanied for up to 7 days to collect primary data on dietary intake and physical activity, focusing on their links to agriculture. Dietary intake will be measured by direct weighing, with the source of each food item (e.g., cultivated, purchased) recorded. Physical activity will be assessed using accelerometers, and major activities will be logged every two minutes to link accelerometry data with specific activities, especially agricultural ones. Household characteristics and medical history will be collected via questionnaire. Physical measurements will assess obesity and blood pressure. The contribution of agriculture to dietary intake, physical activity, and health will be analyzed.

This study will deepen understanding of the relationship between agriculture and health in rural New Caledonia and may inform policies that promote local agriculture as part of public health strategies in the South Pacific.

Keywords: South Pacific, Non-communicable diseases, Dietary Intake, Physical activity, Agriculture

O-T03A-0683

Over-the-Counter Medicine Use in Unserved and Underserved Areas: Implications for PhilHealth GAMOT and Universal Health Care

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Abstract

Background: In January 2025, PhilHealth launched the Guaranteed and Accessible Medications for Outpatient Treatment (GAMOT) to reduce out-of-pocket costs and expand access to essential drugs via accredited pharmacies. However, GAMOT accreditation requirements are uniform nationwide, with no explicit prioritization of Unserved and Underserved Areas (UUAs, formerly GIDAs), where geographic isolation constrains access. Ecological models and the Health Belief Model suggest that without enabling structures, financial subsidies alone may not change entrenched reliance on over-the-counter (OTC) self-medication.

Methods: A cross-sectional survey of 652 adults in Nueva Ecija UUAs was conducted using structured questionnaires on demographics, access points, and self-medication practices. Raosoft was used for sample size determination (99% confidence, 5% margin). Data were analyzed using SPSS v25 with descriptive statistics and one-way ANOVA (α=0.05).

Results: OTC use was widespread, particularly for analgesics, antipyretics, and cough–cold remedies, many of which overlap with the GAMOT list. Pharmacies (M=3.59, SD=0.71) and sari-sari stores (M=2.92, SD=1.15) were main access points, while hospitals (M=2.23, SD=1.19) and online shops (M=1.82, SD=1.16) were less utilized. Key drivers included accessibility (M=3.66), cost-effectiveness (M=3.64), quick relief (M=3.63), and time-saving (M=3.62). Confidence in drug knowledge was lowest (M=3.22). Significant associations between self-medication and socio-demographics were observed.

Conclusion: Findings confirm that OTC self-medication in UUAs is driven by convenience and affordability but limited by knowledge gaps and facility inaccessibility. Without deliberate accreditation of rural pharmacies and sari-sari outlets in UUAs, GAMOT's promise of "guaranteed and accessible" medicines risks excluding those most in need. Policy alignment should integrate local pharmacy accreditation, stock assurance for high-demand OTC molecules, and pharmacist-led counseling, bridging self-care behaviors with formal outpatient benefits and advancing Universal Health Care and SDGs 3 and 10.

Keywords: PhilHealth GAMOT; over-the-counter drugs; self-medication; underserved areas; Universal Health Care; Nueva Ecija

O-T03A-0692

What is the benefit of visiting a doctor, if we cannot afford a diagnostic test or buy medicine? An exploratory study of equity in Antimicrobial Resistance among the Urban Informal Settlements of Dhaka

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Abstract

Background: Antimicrobial resistance (AMR) is a critical health problem worldwide. In Low and Middle-income countries (LMICs), including South Asia, over-the-counter sales of antibiotics are common and often occur following patient request or the recommendations of a community service provider.

Method: This qualitative study explored how social, structural, and behavioral determinants of the population and informal providers contribute to the risk of AMR in urban informal settlements in Bangladesh. We conducted 31 Focus Group Discussions and In-Depth Interviews from two settlements in North and South Dhaka City Corporations.

Results: In both settlements, respondents reported a high prevalence of common health issues (cold, fever, skin disease), water-borne (diarrhea, cholera, jaundice), and vector-borne diseases (Dengue, occasionally chikungunya) all year round. The children and elderly were found susceptible to frequent attacks of respiratory and chronic diseases, respectively. Readymade garment factory workers, mostly women, faced recurring and common Urinary Tract Infections and injuries due to prolonged hours at a seated position and operating heavy machinery, restricting them from taking health breaks (water intake, breaks, and movement) and exposing them to repeated antibiotics. Men generally reported having financial autonomy, but delayed health care seeking and took medicine/antibiotics, consulting an unqualified provider, or by self. They shared challenges of seeking care from a formal facility due to coinciding visiting and work hours and a lack of gender-specific options when desired. Women mentioned financial dependency and a lack of resources as the main challenges for not being able to follow antibiotic prescriptions, except in cases of children. Community members and informal service providers revealed non-recommended use of antibiotics.

Conclusions: Informal providers remain a critical point for health system integration and strengthening, especially in stewarding AMR awareness campaigns. Our study highlights the importance of gender norms and behaviors, gendered livelihoods, and the role of informal service providers in managing AMR in Bangladesh.

Key words: Antimicrobial Resistance, equity, global health, South Asia, Bangladesh

O-T03A-0740

Factors associated with immunization status among children of Myanmar migrants in Chiang Rai province, Thailand: A pilot study

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Abstract

Background: Children of Myanmar migrants in Thailand have consistently shown lower immunization coverage compared to their Thai counterparts, leaving them vulnerable to vaccine-preventable diseases. Despite this concern, there is limited information regarding the immunization status of Myanmar children in Chiang Rai, a key border area for Myanmar migrant population. To address the gap, this pilot study aims to assess the immunization status of children from Myanmar migrant families and identify associated factors in Chiang Rai province, Thailand.

Methods: A cross-sectional pilot study was conducted to collect data from Myanmar migrant caregivers of 15 years and above, who have children under 7 years of age, living in Mueang District of Chiang Rai province using a structured questionnaire. Data were collected by face-to-face interviews. Logistic regression was used to identify factors associated with incomplete age-specific immunization, with a significance level of $\alpha = 0.05$.

Results: Among 151 children analyzed, 42 (27.8%) were incompletely immunized. Of these, half were born in Myanmar, 64.3% were aged over five years, and 57.1% of caregivers had lived in Thailand for less than 10 years. Multivariable analysis identified five significant predictors of incomplete immunization. Children born in Myanmar (AOR = 66.5; 95% CI: 4.60–360.28) and those who had returned to Myanmar for over one year (AOR = 83.4; 95% CI: 9.65–721.14) had markedly higher risk. Caregivers with poor immunization knowledge (AOR = 29.3; 95% CI: 3.54–242.09), language barriers (AOR = 24.5), and out-of-pocket costs (AOR = 38.3; 95% CI: 3.35–438.12) were also significantly associated with incomplete immunization.

Conclusions: This pilot study revealed a high prevalence of incomplete immunization among Myanmar migrant children, strongly associated with birthplace, return migration, caregiver knowledge, language barriers, and immunization costs. Despite the small sample size and wide confidence intervals, these findings highlight critical access and communication gaps requiring further large-scale investigation.

O-T03A-0779

Reframing Father Engagement in Child Health: Human-Centred Design for Equity in Communication and Participation in Parenting

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Abstract

Child health communication in Indonesia has long been constructed as "women's business", with maternal and child health systems designed almost exclusively for mothers. This framing denies fathers equitable access to credible information and meaningful participation, strengthening parenting inequality. The Keluarga SIGAP program that promotes immunization, handwashing with soap, and nutrition for parents of children under two, recognized this gap and sought to address it.

Human-Centred Design research in West Java and South Kalimantan explored fathers' and significant others' perceptions about, and roles in, caregiving. Data were collected from fathers, mothers, paternal grandmothers, and community leaders. Methods include genograms, photo elicitation, journaling, and go-along interviews. Findings revealed that fathers create bonds with their children through play, study, and food, yet rely on misinformation from social media due to limited access to trusted sources. They are likely to get engaged when their role as family leadership is reframed, expanding its meaning to include being a role model who not only provides, but also knows and practices childcare. However, services remain socially unwelcoming (Posyandu as "women's spaces") and practically inaccessible due to work schedules. Economic shifts, including feminization of the workforce, are also reshaping men's roles at home, without corresponding health system support.

Opportunities for fathers' engagement lie in overlooked communication spaces: informal male gatherings, trusted leaders, and digital platforms. Mobile phones remain core in accessing information and entertainment in rural and urban settings. The approach enabled the program to include home visits to encourage joint participation of parents and explore community activations supported by local radio stations. The social media campaign #AyahSigap (#SIGAPFather) showcased supportive fatherhood roles through a couple of influencer pairs. The SIGAP WhatsApp BOT enables fathers to access information on immunization, hand hygiene, and nutrition. These strategies aim to democratize communication and elevate fathers' caregiving roles

Keywords: fathers' engagement, child health, human-centred design, health promotion, Indonesia

O-T04A-0081

A Systematic Literature Review on Monte Carlo Simulation and Risk Assessment of Bioaerosol Pollution in Indoor Hospital Environments

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Abstract

Airborne microorganisms like bacteria, fungi, and viruses form bioaerosols in hospitals, increasing the risk of infections, especially in poorly ventilated, overcrowded, or inadequately cleaned environments. These risks lead to health issues, financial losses, and disruptions.

The study explores enhancing traditional risk assessments by integrating Quantitative Microbial Risk Assessment (QMRA) with Monte Carlo Simulation (MCS) to create a dynamic, probabilistic model for evaluating bioaerosol risks in hospitals.

The researchers conducted a Systematic Literature Review (SLR) following PRISMA 2020 guidelines to ensure transparent selection. From 198 initial articles identified in databases like PubMed, Scopus, and Web of Science, 15 studies were selected based on inclusion criteria. Data were analyzed using descriptive, thematic, and comparative methods, along with model evaluations, to identify bioaerosol hazards, their determinants, and simulation-based countermeasures.

The study applied Quantitative Microbial Risk Assessment (QMRA) to evaluate potential infection risks, while Monte Carlo Simulation (MCS) was employed to manage uncertainties stemming from fluctuations in pathogen levels and exposure times using probabilistic analysis. This combined method improved the accuracy and credibility of the risk assessment. Additionally, the use of modern HVAC systems, strict sanitation measures, and continuous air monitoring significantly minimized bioaerosol exposure in high-risk hospital zones.

This study emphasizes the need to integrate simulation methods with microbial risk assessment to improve hospital air quality and infection control. It calls for models that include viral bioaerosols and real-time data to support dynamic risk management, highlighting the importance of evidence-based strategies to protect patients and staff in critical care areas.

Keywords: Bioaerosols, Monte Carlo Simulation, Quantitative Microbial Risk Assessment, Hospital Air Quality.

O-T04A-0082

An Examination of The Presence of Potentially Toxic Elements and Its Related Health Risks within Food Webs, Highlighting Food Safety And Sustainability Concerns in Indonesia

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Abstract

Background: Potentially toxic elements (PTEs), including Pb, As, Cd, and Cr are non-biodegradable toxic chemical substances originating from natural mineral sources and industrial effluents. Those elements are not allowed presence in human body in high concentration because they can cause health problems in human such as carcinogenesis, immune systems imbalance, kidney and liver dysfunction, and death. PTEs are frequently present in food products in Indonesia, attributable to inadequate industrial wastewater control and insufficient safety regulations.

Methods: This is a systematic review research utilizing papers from 35 journals published between 2004 and 2024 (20 years).

Results: 25 studies indicate that the sources and transport pathways of potentially toxic elements (PTEs) in the environment may compromise the sustainability of food systems in Indonesia, as they pose hazards to human health. This problem is related to food safety program. From our review we found that the concentration of heavy metals such as Hg, Pb, Cd, Cr in food products in Indonesia is higher than the acceptable concentration set by Indonesian regulation, FAO, and WHO. 10 studies have documented PTE contamination in Indonesian food products and ecological components; nevertheless, a thorough toxicity assessment and critical evaluation of multitrophic transmission and the health risks associated with PTEs in the food chains in Indonesia remain insufficient.

Conclusions: This literature review critically discussed PTEs contamination, research gaps, exposure toxicity, legislation, and future direction of remediation strategies to eliminate PTEs in food webs. This is the first research investigating the possible multi-trophic transmission of PTEs across food chains in Indonesia. Further studies are recommended to conduct toxicity assessment and examine multi-tropic transmission of PTEs in Indonesian food chains.

O-T04A-0125

Human Vulnerability to Heatwave in Australia: A Countrywide Suburb-Level Longitudinal Study

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ABSTRACT

BACKGROUND AND AIM: There is evidence of increasing heatwave-associated deaths and hospitalizations in Australia. However, there is a lack of longitudinal studies investigating heatwave vulnerability in the context of Australia. Using longitudinal study design, we examined heatwave vulnerability at Statistical Area Level 2 spatial unit (referred to as suburbs) in Australia and identified the influential factors contributing to vulnerability.

METHODS: We obtained socioeconomic, demographic, chronic disease, and all-cause mortality data (2011, 2016, 2021) from the Australian Bureau of Statistics. We acquired landcover (2003-2020) data from the Australian Bureau of Agriculture, Resource Economics and Sciences (ABARES) and temperature data (2001-2020) from the Bureau of Meteorology. We applied multivariate statistical analysis and geospatial modelling techniques to develop the heatwave vulnerability index (HVI), and evaluated it with heatwave-related deaths.

RESULTS: We found variability in heatwave-health vulnerability both spatially and temporally across Australia, with higher vulnerability, particularly in the Northwest and the lowest in Southeastern Australia. The suburbs within greater cities had greater temporal changes in heatwave-health vulnerability. Clusters of high vulnerability were evident in Northern and Southern Australia during 2011-2016 but reduced in 2021. The elderly people (65 years and over) and social isolation had a higher risk of heatwave-health vulnerability in 2011. For the remaining five consecutive years, the vulnerability was associated with low education, low income, high diabetes prevalence, and lower healthcare professionals across the suburbs. In addition, we observed an association between HVI (β: 0.18, 95% CI: 0.08-0.27) and increased in percentage (%) of heatwave-related deaths across the capital cities. A unit increase in HVI -associated deaths was higher under severe heatwave days (β: 0.39, 95% CI: 0.05-0.74) compared to low-intensity heatwave days (β: 0.21, 95% CI: 0.09-0.32).

CONCLUSION: The findings suggest that Australian heatwave-health plans and adaptation programs can be tailored to these underlying drivers of heatwave vulnerability.

Keywords: Heatwave vulnerability; mortality; HVI evaluation; suburbs; Australia

O-T04B-0129

Chronic Exposure to Waste Pollutants and Health Risks of Scavengers in Asia: A Bibliometric Approach and Systematic Literature Review

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Abstract

Background: Waste exposes scavengers in Asia to various pollutants, thereby increasing their risk of health problems. This study aims to uncover the impact of such exposure, examine research trends, and map the future direction of research.

Methods: The article search is done through the Scopus database. Bibliometric analysis identified 455 English-language publications (1973–2025), which were analyzed using OpenRefine, Tableau, and VOSviewer. The Systematic Literature Review (SLR) follows the PRISMA guidelines, with a focus on publications in 2020–2025. We evaluated 12 articles that met the inclusion criteria using MMAT 2018, followed by a thematic analysis.

Results: Scavengers are often exposed to harmful pollutants such as heavy metals (Pb, Cd, As, Cr, Ni), VOCs, H_2S, NH_3, and POP. The main routes of exposure are inhalation, skin contact, and indirect consumption. The health impacts found included respiratory, cardiovascular, liver, kidney, oxidative stress, genotoxicity, and cancer risk. Long working duration and certain types of tasks (such as waste removal) correlated with high levels of biomarker exposure. Bibliometrically, the research focus shows increased attention to themes such as health risk assessment, e-waste, and occupational health, reflecting a multidisciplinary approach to environmental and health issues.

Conclusions: Scavengers are a vulnerable group to health risks due to waste. We need evidence-based policies that encompass occupational protection, routine health monitoring, sustainable waste management, and cross-border research collaboration with a socio-environmental approach.

Keywords: Chronic exposure, Health effects, Scavengers, Waste pollutants.

O-T04A-0133

Short-term exposure to wildfire $PM_{2.5}$ and risk of influenza in Brazil: A space-time-stratified case-crossover study

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Abstract

Background: Wildfires are a major source of PM2.5, and while evidence links wildfire smoke to cardiorespiratory diseases, its impact on influenza, especially in wildfire-prone Brazil-remains largely unknown. Therefore, this study examined the association between wildfire $PM_{2.5}$ and influenza incidence in Brazil, accounting for potential lag effects and exploring effect modification by age, sex, ethnicity, region, and population density.

Method: Daily data on influenza cases, wildfire $PM_{2.5}$, and meteorological conditions were collected from 510 Brazilian immediate-regions between 2009 and 2019. A space-time-stratified case-crossover design with a distributed lag model was used to estimate odds ratios (ORs) and 95% confidence intervals (CIs). Stratified analyses were conducted to assess the effect modification and sensitivity analyses were performed to evaluate the robustness of findings.

Results: A total of 374,110 influenza cases were reported during the study period (female: 51·4%), with a median age of 21 years (interquartile range [IQR]: 2–48 years). A 3.4 $\mu g/m^3$ increase in wildfire $PM_{2.5}$ was associated with a 13.2% rise in influenza cases (OR: 1.132, 95% CI: 1.090–1.176, $p<0.001$) over a 0–7 lag days. Higher associations were observed in females (OR: 1.136, 95% CI: 1.078–1.198, $p<0.001$), teenagers (1.347, 1.172–1.548, $p<0.001$), white ethnic group (1.182, 1.124–1.242, $p<0.001$), residents of the Southeast region (1.289, 1.220–1.363, $p<0.001$) and high population density areas (1.237, 1.147–1.334, $p<0.001$). Sensitivity analyses confirmed the robustness of these findings.

Conclusion: These findings suggest that wildfire-related air pollution may significantly increase influenza incidence in Brazil. Targeted public health interventions, including enhanced prevention strategies, may be particularly beneficial for high-risk groups such as females, teenagers, and white ethnic group.

Keywords: influenza, wildfire air pollution, case-crossover design

O-T04A-0136

Multidimensional evaluation of nature-based solutions on greenness in climate change mitigation: the analyses of NCKU campus green greenery

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Abstract

Background: Nature-based Solutions (NbS) are recognized as crucial strategies for achieving Net Zero Carbon Emissions (NZCE) by 2050. In densely populated Asian regions such as Taiwan, urban campus greenery presents considerable potential as an NbS platform. This study investigates the comprehensive benefits of campus greenery at National Cheng Kung University (NCKU) by integrating spatial information technologies, unmanned aerial vehicles (UAVs), the Internet of Things, timber building analysis, and environmental epidemiology.

Methods and Results: The narrative of three subprojects includes:

Subproject 1 developed the "CASA+UAV" methodology, combining NASA's CASA model with high-resolution multispectral UAV imagery, achieving a ground sample distance of 12.5 cm and validating results with ground survey data ($R^2 > 0.8$). The carbon sequestration capacity of campus greenery in July 2023 was estimated at approximately 27 metric tons per month.

Subproject 2 constructed three-dimensional models of wooden campus buildings, estimating a total carbon storage of 388.32 metric tons.

Subproject 3 surveyed 245 students to assess correlations between climate-related health literacy and mental health outcomes, revealing a significant positive association between carbon sequestration literacy and depression levels.

Conclusion: The project established collaborations with governmental agencies and plans to extend the CASA+UAV methodology to urban environments, contributing to the broader goal of carbon neutrality by 2050.

Keywords: nature-based solutions; climate change; carbon neutrality; climate-related health literacy

O-T04B-0198

Navigating risks: An exploratory study of occupational injuries and health behaviors among informal fisherfolk in Hagonoy, Bulacan

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Abstract

Fishing is among the most dangerous occupations globally, surrounded by safety hazards that can cause injuries. In the Philippines, informal fisherfolk are more vulnerable due to limited health assessments and injury reporting systems, inadequate healthcare, insufficient social protection, and the lack of targeted occupational health and safety (OHS) policies and interventions. These challenges highlight the need to characterize the occupational injuries experienced by informal fisherfolk and understand their injury-related health behaviors. Hence, the study aimed to explore the collective experience of occupational injuries and health behaviors among informal fisherfolk in Hagonoy, a fishing municipality in Bulacan, Philippines.

The study employed a qualitative descriptive study design, and purposive intensity sampling was conducted. One coastal and one landlocked barangay were chosen to represent varying fishing practices and health behaviors. Eight focus group discussions (FGDs) with informal fisherfolk participants were conducted. The data was triangulated through three observations of fishing worksites and six key informant interviews (KIIs) with fisherfolk leaders and representatives from the agriculture and health sectors. Data from FGDs and KIIs were thematically analyzed.

Twelve themes emerged, classified into attitudes, norms, and perceived behavioral controls based on the Theory of Planned Behavior. Most fisherfolk perceived injuries as inevitable and normalized them through risky occupational behaviors mitigated by alternative medical treatments. Despite this, they shared a strong aspiration for health and livelihood programs that are aligned with their needs. Familial obligations and livelihood pressures commonly outweighed preventive and health-seeking behaviors. Notably, landlocked fisherfolk reported better access to health knowledge and services due to their geographical context compared to coastal fisherfolk. However, both groups shared community-adapted practices such as improvising safety equipment, which shaped perceived control and behavioral intent.

The findings highlighted the need to develop culturally appropriate, context-dependent OHS policies and enhance implementation of OHS interventions in fishing communities, especially informal fisherfolk.

Keywords: Occupational injuries, occupational health, occupations, informal sector, health behavior, health services accessibility, public policy

O-T04A-0199

Environmental Epidemiological Evidence of Climate Change And Air Pollution Impacts On Health in Thailand: An Integrated National-Level Assessment of Disease Burden and Vulnerability

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Abstract

Background: Climate variability, air pollution, and extreme weather events have emerged as critical environmental stressors affecting population health, particularly in low- and middle-income countries. This study synthesizes the epidemiological evidence from several studies conducted in Thailand to assess the short-term effects of environmental exposures, including ambient temperature, diurnal temperature range (DTR), heatwaves, precipitation, and fine particulate matter ($PM_{2.5}$), on mortality and morbidity.

Method: We integrated our previously published studies on climate change and air pollution epidemiology in Thailand, all of which applied advanced time-series or case-crossover designs using Distributed Lag Non-linear Models (DLNM) and Generalized Linear Models (GLM). The integration was conducted through narrative synthesis approach, which highlighted convergent evidence on exposure-outcome relationships across environmental stressors and geographic settings. These exposure-outcome relationships were drawn directly from the empirical results of our published studies. For instance, extreme temperature and mortality associations were established using DLNM to capture non-linear and lagged effects; rainfall and leptospirosis associations were derived from multi-province DLNM analysis; and $PM_{2.5}$ effects on morbidity were identified using nationwide case-crossover studies.

Results: These studies revealed the strong associations between extreme temperature and increased mortality, particularly among the elderly, with modifying effects from green space coverage. DTR significantly influenced both hospital admissions and all-cause mortality, while inadequate adaptation to heat contributed to persistent health burdens. Importantly, heatwaves contributed substantially to mortality burden when accounting for lag structures, underscoring that beyond daily temperature and DTR, heatwaves represent a distinct and severe climate-related hazard in Thailand. In addition, precipitation pattern was associated with the incidence of leptospirosis, highlighting climate-sensitive infectious disease dynamics. Short-term $PM_{2.5}$ exposure was associated with increased outpatient visits for mental and behavioral disorders, and combined effects of air pollution and temperature further elevated mortality risks, with spatial heterogeneity influenced by socio-demographic and environmental factors.

Conclusion: This assessment pinpoints the importance of multi-hazard environmental health research in informing public health interventions and climate resilience strategies. The findings contribute critical national-level evidence to support the health system preparedness, early warning systems, and policy developments and actions aimed at mitigating health impacts of environmental stressors under a changing climate.

Keywords: Environmental Epidemiology; Climate Change; Air Pollution; Health Impact; Thailand

O-T04B-0238

Menstrual Disorders and Workforce Participation: A Prospective Longitudinal Study

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Abstract

Background: Menstrual disorders affect a substantial proportion of reproductive-aged women and are associated with reduced quality of life and work performance. Despite this, there are limited longitudinal studies. This study aimed to examine the associations between menstrual disorders and workforce participation among Australian women.

Methods: This was a population-based, prospective longitudinal study using data from 11,152 women born between 1973-78 cohort who participated in the Australian Longitudinal Study on Women's Health (ALSWH). Data were collected through eight surveys conducted between 2000 and 2021. Workforce participation (full-time, part-time, unemployed) and self-reported menstrual disorders (severe period pain, heavy periods, irregular periods, and premenstrual tension) were recorded at each wave. Generalized estimating equations for multinomial responses were used to assess associations, stratified by age groups.

Results: The study revealed that women who experienced severe period pain had higher odds of being unemployed compared to full-time workers (AOR = 1.18; 95% CI: 1.01–1.36), while those with irregular periods were more likely to work part-time (AOR = 1.32; 95% CI: 1.08–1.61). Premenstrual tension was linked to lower odds of part-time versus full-time work (AOR = 0.74; 95% CI: 0.61–0.90). Age-stratified analysis revealed that women aged 41 and older who experience severe period pain or irregular periods were at a higher risk of unemployment compared to their younger counterparts.

Conclusions: Menstrual disorders significantly affect women's workforce participation, with impacts varying by age and symptom type. Addressing menstrual health through workplace policies, flexible work arrangements, and awareness initiatives could reduce gender inequities in workforce participation and improve economic outcomes.

Keywords: Employment, menorrhagia, menstrual health, morbidity, workforce participation

O-T04A-0264

Mortality Trends of Air Pollution-Sensitive Diseases in Jakarta, Indonesia: A Population-Based Analysis, 2019-2023

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Abstract

Air pollution-sensitive disease, including cardiovascular and respiratory conditions, contribute substantially to the urban health burden. In Jakarta, where air quality remains poor, evidence on recent mortality trends remains limited, especially from high-resolution datasets. This study describes five-year mortality patterns for selected causes of death using daily mortality data.

A retrospective population-based analysis was conducted using registered daily mortality data in Jakarta from 2019 to 2023. Deaths attributed to stroke, ischemic heart disease, chronic lower respiratory disease, influenza, and pneumonia were included. Mortality was disaggregated by disease category, age group, sex, administrative region, and reporting facility. The analysis was descriptive and did not incorporate direct pollutant measurements.

Stroke consistently accounted for the highest number of deaths, increasing by 36% between 2020 to 2023. Death from pneumonia and influenza declined until 2022 but rose sharply by 48% in 2023. Senior adults (≥60 years) recorded the highest mortality, with deaths 1,800% higher than among younger adults. Male mortality exceeded female mortality by 41%. Geographically, East Jakarta, Jakarta's most populous and urbanized district, recorded the highest mortality (>4,300 deaths), while the Thousand Islands reported the lowest, reflecting population size and structural differences. Reporting from community health centers also increased, reaching 48.3% of deaths in 2023.

The study provides the first analysis of daily mortality trends for air pollution-sensitive diseases in Jakarta, highlighting disproportionate burdens among older adults, men, and residents of more densely populated area. While causality with pollution levels cannot be inferred in this dataset, the findings establish a critical baseline for integrating mortality surveillance with air quality monitoring. Strengthening cause-of-death certification and linking environmental and health data will be essential for advancing targeted interventions in urban Indonesia.

Keywords: Air pollution-sensitive diseases; mortality trends; cardiovascular disease; respiratory disease; urban health

O-T04B-0280

Sun, surf, sustenance, skin: Assessing self-reported skin manifestations, associated factors and health seeking behaviour among multi-day fishermen of the Negombo fishery harbour.

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Abstract

Background: The fisheries sector employs around one million Sri Lankans, 33.7% of the national annual fish production is by deep-sea multi-day fishermen. This subgroup experiences heightened health associated factors linked with prolonged duration at sea including greater exposure to sunlight and seawater, and limited access to freshwater and sanitation. This research aimed to assess self-reported skin manifestations, associated factors, effect of skin manifestations on quality of life, and related health seeking behaviours among multi-day fishermen based in the Negombo fishery harbour.

Methods: A descriptive cross-sectional study based on a custom-designed questionnaire with self-developed as well as validated components including the Dermatological Life Quality Index(DLQI) was administered in an interviewer-based manner to 303 consecutively sampled deep-sea fishermen. The response rate was 95.71% (n=290). Data was analysed using IBM SPSS utilizing frequencies, proportions, Chi-Squared and SND tests.

Results: The mean age of the population was 46.40 years (SD=11.83), mean duration of career was 23.97 years. 22.76% (n= 66) of the fishermen self-reported skin manifestations. Of the associated factors, poor personal hygiene and reduced consumption of leafy greens had a significant association with the presence of skin manifestations. Whereas, sun exposure, sea water exposure, water consumption and physical injuries caused by aquatic fauna did not have a significant association. Of the fishermen affected, 50% (n=33) reported that the skin manifestation had only a small effect on their lives. Of those who self-reported skin manifestations 56.1% were concerned about the disorder and 40.9% had sought medical attention.

Conclusions: A notable percentage of deep-sea multi-day fishermen experienced skin manifestations linked with onboard hygiene and reduced leafy green consumption. Related health seeking behaviour was not optimal, possibly due to the perceived effect on life quality being minimal. Policies to increase freshwater taken on deep-sea journeys and empowering the community to utilise available healthcare facilities is recommended.

Keywords: Skin manifestations, Sri Lanka, Fishermen, Personal hygiene, Dermatological Life Quality Index

O-T04D-0284

Potential Application of Biochar Produced from Carbonization of Chicken Manure and Biomass Wastes

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Abstract

Background: The growing challenges of organic waste management in the livestock and agricultural sectors, particularly from chicken manure and biomass residues, have led to increasing interest in sustainable valorization strategies. Biochar production through pyrolysis offers a promising approach for converting such waste into value-added materials for energy, environmental, and agricultural applications.

Methods: This study investigated the co-pyrolysis of chicken manure with five types of biomass wastes (orange peel, pineapple peel, sawdust, coconut husk, and rice husk) at different mixing ratios (100:0 to 0:100). A smokeless batch carbonization reactor was employed to produce biochar, followed by comprehensive characterization including yield analysis, proximate and ultimate analysis, calorific value, surface morphology, and porosity (surface area and pore analysis).

Results: Biochar yields were highest in manure-rich mixtures (up to 47.88% in CM100), while biomass-rich mixtures (e.g., PP100 and RH100) exhibited higher energy content (up to 28.23 MJ/kg) and BET surface areas (>190 m^2/g). Co-pyrolyzed samples such as PP50 and RH50 showed enhanced pore volume and moderate surface area, suggesting multifunctionality. The nitrogen-rich, ash-containing biochars from CM improved soil amendment potential, while biomass-derived biochars were more suitable for energy and adsorption applications.

Conclusion: The results demonstrate that co-carbonization of chicken manure with biomass wastes can tailor biochar properties for specific uses. This approach supports integrated waste valorization aligned with the principles of the Bio-Circular-Green (BCG) Economy, offering sustainable solutions for organic waste management in agricultural systems.

Keywords: Biochar, Chicken manure, Biomass waste, Co-pyrolysis, Waste valorization

O-T04D-0289

Characterization of Microplastics in Hospital Wastewater Treatment Plants and Their Links to Source Materials from Medical Laboratories

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Abstract

Microplastics (MPs) are recalcitrant pollutants ubiquitously detected in ecosystems and even within human biological matrices, raising substantial environmental and public health concerns. In healthcare facilities, plastics are widely employed for packaging, sterility maintenance, and single-use applications. Thammasat University Hospital (TUH), a tertiary care institution, consumes large amounts of plastic. Wastewater from all hospital units, especially laboratories as the second-largest plastic consumers after operating theatres, ultimately flows into the hospital wastewater treatment plant (WWTP), potentially constituting a principal pathway for MP discharge.

This study characterized MPs in the influent of TUH's WWTP (at the primary sedimentation entrance) and examined their potential association with plastics used in the medical laboratory. Monthly grab samples (5 L) were collected from August 2022 to July 2023. Samples were sieved (mesh No. 3.5 and No. 50), digested with 10 M NaOH, and filtered through 0.5 µm cellulose acetate membranes. MPs were morphologically classified using optical microscopy and their polymer types determined via Fourier Transform Infrared (FT-IR) spectroscopy.

The influent contained 934.4 items/m³ of MPs, with a median size of 307.82 µm (range: 19.29–8116.68 µm). Fibers predominated (39.95 items/m^3, 50.05%), with blue as the most frequent color (16.45 items/m3, 23.26%). Polyethylene and polypropylene comprised 66.04% of MPs, closely matching the major polymers used in the medical laboratory (>80% of total plastic use). These results suggest that the medical laboratory is a significant contributor of MPs to the WWTP. Effective mitigation should integrate technical, procedural, and policy measures, such as installing fine filtration or membrane systems at laboratory drainage points, replacing high-risk single-use plastics with biodegradable or reusable alternatives, implementing standardized waste segregation and pre-treatment protocols, and incorporating MP monitoring into hospital environmental management plans. These combined strategies could substantially reduce the release of MPs from hospital wastewater into environment.

Keywords: Fourier Transform Infrared; Hospital; Medical laboratory; Microplastics; Wastewater treatment plant

O-T04B-0307

Neurodynamic Mobilization to Reduce Upper Limb Pain in Welding Workers at Risk of Vibration-Related Disorders: A Pre-Experimental Study

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Abstract

Background: Prolonged exposure to hand-held vibrating tools can cause pain and functional limitations in the upper limbs. Such occupational exposure is common among welding workers and is a known risk factor for hand-arm vibration syndrome (HAVS), yet its prevalence in Indonesia remains unclear due to limited research. Preventive strategies are essential, as many workers continue their duties without adequate protection. Neurodynamic mobilization, a physiotherapy exercise involving controlled limb movements to improve nerve mobility, may help reduce pain and maintain function. This study evaluated its effectiveness in reducing upper limb pain among welding workers at risk of vibration-related disorders.

Methods: This pre-experimental one-group pretest-posttest study involved welding workers regularly exposed to vibrating tools, with sensorineural and vascular disturbances (Stockholm workshop scale) and pain scores more than 5 mm on a visual analog scale (VAS) from a self-reported questionnaire. Participants performed a neurodynamic mobilization exercise program three times per week for one month. Pain was measured at baseline and post-intervention. Ethical approval was obtained from the Ethics Committee of Universitas Muhammadiyah Malang (No.E.5.a/150/KEPKUMM/VI/2023), and informed consent was provided by all participants.

Results: Fifteen welding workers participated in the study, with a mean age of 40.2 ± 7.37 years; 60% had more than five years of work experience. Before the intervention, 66.7% reported mild pain, 26.7% reported moderate pain, and 6.7% reported severe pain, as assessed by the VAS during pressure. After the program, 80% reported mild pain, 13.3% moderate pain, and 6.7% no pain. Pain reduction was statistically significant ($P < 0.001$).

Conclusions: Neurodynamic mobilization exercises were effective in reducing upper limb pain in welding workers at risk of vibration-related disorders. These findings highlight their application in occupational health programs for symptom prevention and management.

Keywords: hand-arm vibration syndrome, neurodynamic mobilization, occupational health, welding workers, pain reduction

O-T04A-0308

Climate Factors Contribute to Irritant Contact Dermatitis Among Farmers: A Study in East Java Indonesia

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Abstract

Introduction: Irritant contact dermatitis is a common occupational disease among farmers, often triggered by environmental stressors. In Indonesia, particularly in Jember and Wuluhan District, over 70% of the population is engaged in farming, increasing vulnerability to climate-related health issues. This study aimed to examine the association between climate variables and the incidence of irritant contact dermatitis among farmers in Wuluhan District, East Java.

Methods: A retrospective study was conducted using outpatient records from Lojejer Primary Healthcare Facility from July 2022 to December 2024. Included cases were farmers aged ≥17 years diagnosed with irritant contact dermatitis. Climate data—temperature, humidity, and wind flow—were obtained from the World Weather Satellite. Multiple linear regression assessed the relationship between monthly dermatitis cases and climate variables. Significance was set at $p < 0.05$.

Results: A total of 462 dermatitis cases were recorded. Humidity was significantly associated with increased dermatitis incidence ($p = 0.047$; 95% CI: 1.464 to 0.011; $R^2 = 0.369$), suggesting a moderate predictive value. In contrast, temperature ($p = 0.274$) and wind flow ($p = 0.624$) were not significant.
Conclusions: Humidity significantly contributes to irritant contact dermatitis among farmers, likely due to prolonged skin exposure and barrier dysfunction. These findings underscore the need for climate-responsive occupational health strategies, such as improved protective equipment and work schedule adaptations, to safeguard farmer health amid changing environmental conditions

Keywords: climate, dermatitis, farmers, humidity, occupational diseases, Indonesia

O-T04A-0335

Spatial distribution and the ecological drivers of lung cancer incidence in Sri Lanka

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Abstract

Background: Lung cancer shows a rising incidence, multifactorial aetiology, and association with air pollution.

Objective: To explore the spatial distribution of lung cancer incidence in Sri Lanka and assess spatial relationships with land cover, fine particulate matter ($PM_{2.5}$), and selected socioeconomic factors.

Methods: Five-year(2015–2019) cumulative lung cancer incidence proportionate to district population from the National Cancer Registry and socioeconomic data from the Department of Census and Statistics were used. Land cover data from the Moderate-Resolution-Imaging-Spectroradiometer (MODIS) onboard NASA's Terra and Aqua satellites were used. District-wise $PM_{2.5}$ concentrations were estimated using satellite-based aerosol-optical-depth data from MODIS, MISR, and SeaWiFS, processed via the GEOS-Chem model to generate gridded surface-level estimates, spatially averaged to the district level, and downloadable in the Google Earth Engine. Spatial clustering was assessed by Global Moran's I (Queen's continuity) and local clusters using Local Moran's I. Ordinary Least Squares (OLS) regression assessed ecological drivers.

Results: The cumulative lung cancer incidence (2015-2019) among males and females was 6284 and 2110 per 100,000 population, and the mean annual $PM_{2.5}$ concentration was 17 $\mu g/m^3$. Significant global spatial correlation was observed for lung cancer across 25 districts in males (0.384, p=0.0061) and females (0.319, p=0.0099). Males exhibited high incidence clusters in Gampaha, Kalutara, and Kurunegala, and low incidence clusters in Mannar, Mullaitivu, and Vavuniya. Female high-incidence clusters were in Gampaha, Kalutara, and Kegalle, and low-incidence clusters in Kilinochchi and Mullaitivu. The best OLS model for males (adjusted-R^2=0.636) retained $PM_{2.5}$ (β=3.899, p=0.004), urban land cover (β=1.258, p<0.001), elderly population (β=4.615, p=0.012), and per capita income (β=0.001, p=0.0523) as positive predictors, and water cover (β=– 4.158, p<0.001) as a negative predictor. Only the 5-year-$PM_{2.5}$ concentration was significant for females (β=4.75, p=0.065).

Conclusion: Findings reveal significant spatial heterogeneity in lung cancer incidence, with sex-specific patterns and ecological drivers. $PM_{2.5}$ exposure was a significant predictor.

O-T04A-0361

Mapping Health Impact Assessment in Informal Settlements: A Bibliometric Analysis of Socioeconomic Dimensions and Urban Challenges

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Abstract

Objective: Health impact assessment (HIA) is an important approach in designing evidence-based policy, particularly in informal settlement that face socio-economic challenges simultaneously. This study aims to map the development and direction of HIA research in the socio-economic context of informal settlement through a bibliometric approach.

Methods: This study used secondary data from the Scopus database with keywords related to HIA, socio-economics, and informal settlement, resulting in 7,258 articles. The data was cleaned and standardized using Microsoft Excel and OpenRefine, leaving 5,271 articles for analysis. Bibliometric analysis was conducted using RStudio (Bibliometrix) and VOSviewer to explore publication trends, author and institutional contributions, as well as mapping collaboration networks and thematic clusters.

Results: Literature analysis shows a close relationship between health conditions, socioeconomic dimensions, and urban development in informal settlements. hese areas are characterized by high density, poor environmental quality, and limited access to services, increasing health risks. Social aspects include inequality and limited participation, while economic aspects relate to productivity and disease burden. Informal settlements remain poorly integrated into city planning, making HIA essential for inclusive development. Thematic mapping identified six groups: air pollution and health, socioeconomic inequality, mental health, sanitation and nutrition, spatial data in HIA, and responses to climate change. Keyword co-occurrence revealed 12 research clusters with “informal settlements” and “health impact assessment” as main connectors. These findings highlight the relevance of HIA not only in physical but also in social and spatial dimensions.

Conclusion: Thematic mapping reveals six major clusters in the literature, underscoring the multidimensional nature of HIA in informal settlements. These findings provide a foundation for future research and encourage more inclusive and transformative applications of HIA in addressing urban health challenges.

Keywords: Health Impact Assessment; Informal Settlement; Bibliometric; Biblioshiny; RStudio

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T04A-0369

Household Electronic Waste Management Models Literature Review

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Abstract

Background: The rapid increase in electronic waste (e-waste) poses critical environmental and governance challenges, exacerbated by inadequate formal infrastructure and fragmented regulatory systems. Household behavior, as the primary source of e-waste generation, plays a crucial role in shaping management outcomes but remains underexplored systematically and comprehensively. This review aims to synthesize current evidence on the determinants of household e-waste management behavior, evaluate the role of community engagement and regulatory frameworks, analyze socioeconomic and cultural influences, compare formal and informal recycling practices, and identify policy implications for sustainable environmental governance.

Methods: A systematic review of 30 peer-reviewed studies focused on urban contexts was conducted. This analysis integrates mixed-methods evidence, including quantitative household surveys, qualitative field studies, and system dynamics modeling, to capture the behavioral, institutional, and sociocultural dimensions of e-waste management.

Results: Findings highlight that perceived behavioral control, environmental awareness, and social trust are key drivers of household participation. Community-based initiatives, particularly waste banks, increase public engagement but face challenges to long-term sustainability. The regulatory framework is fragmented and weakly enforced, limiting the effectiveness of the formal system. Informal recycling continues to dominate due to economic incentives and policy gaps, creating both opportunities and risks for environmental governance.

Conclusion: This review underscores the need for a holistic approach that integrates behavioral insights, strengthens community empowerment, formalizes collaboration with informal actors, and improves regulatory enforcement. Multi-stakeholder governance and technological innovation are crucial for advancing sustainable household e-waste management within Indonesia's complex socio-cultural and institutional landscape.

Keywords: e-waste management, household behavior, environmental governance, informal sector, sustainable policy

O-T04A-0370

Characterization of Heavy Metal in River Sediment from Artisanal Gold Mining Area Using XRF and SEM-EDS Analyses in Gorontalo, Indonesia

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Abstract

Artisanal and Small-scale Gold Mining (ASGM) contributes significantly to mercury and other heavy metal contamination in Indonesia. River sediments serve as critical indicators of cumulative and long-term environmental pollution, particularly in mining regions. This study aimed to characterize heavy metal contamination in sediments collected from five ASGM sites impacted rivers and one control site in Gorontalo Province. Sediment samples (n = 36) were analyzed using X-ray Fluorescence (XRF) to quantify heavy metal concentrations and Scanning Electron Microscopy with Energy Dispersive X-ray Spectroscopy (SEM-EDS) to examine mineral associations at the microstructural level. XRF results showed high concentrations of Hg, Pb, As, and Zn, frequently which exceed the limit recommended from Indonesian and USEPA sediment quality guidelines. Arsenic concentrations were exceptionally high, leading to the classification of most sites as extremely polluted. SEM-EDS confirmed that these metals were predominantly associated with clay minerals such as illite, pyrite, and quartz, with clay fractions consistently retaining greater amounts than sand, underscoring their role as major contaminant sinks. Findings confirm that ASGM activities contribute to severe and persistent heavy metal accumulation in sediments. The correlation of XRF and SEM-EDS provides robust evidence of both contamination magnitude and adsorption mechanisms. These results underscore the urgent need for remediation strategies and health risk assessments in affected communities, offering critical insights for environmental health management in ASGM regions across the Asia-Pacific. Furthermore, river sediments taken from along the river mining sites are contaminated with arsenic which becomes the highest of other heavy metals found in Gorontalo compared to either in any region in Indonesia or in any country in the world.

Keywords: XRF, SEM-EDS, artisanal gold mining, heavy metals, river sediment, Gorontalo

O-T04A-0389

Investigation of Occupational Hygiene and Occupational Environment of Workers in Agricultural Net-House and Greenhouse

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Abstract

Background: The development and promotion of net-house and greenhouse agriculture are crucial for ensuring the stability and sustainability of food supplies. Enclosed environments can increase exposure to chemical agents and thermal stress, but the combined health effects of these factors are still not well understood.

Objective: This study aimed to assess the dual occupational exposures to pesticides and heat stress among greenhouse workers, evaluate associated health effects using biochemical markers, and identify effective environmental mitigation strategies.

Methods: We conducted a cross-sectional study involving 80 workers from greenhouses and net-houses. Environmental monitoring for heat conditions was performed. Biological samples were collected to analyze urinary pesticide metabolites (dialkyl phosphates, DAPs), markers of oxidative stress (8-hydroxy-2'-deoxyguanosine, 8-OHdG), and cholinesterase activity (acetylcholinesterase, butyrylcholinesterase) and liver function (GOT, GPT). Hazard indices (HI) for pesticide exposure were calculated based on estimated daily intake.

Results: The use of indoor fans together with external air exchange was linked to lower levels of urinary 8-OHdG ($p=0.021$) and higher levels of acetylcholinesterase ($p=0.036$) and butyrylcholinesterase ($p=0.042$), suggesting reduced oxidative stress. Improved ventilation also correlated with lower GOT ($p=0.009$) and GPT ($p=0.021$) levels, suggesting mitigation of heat-induced liver strain. In contrast, higher pesticide exposure, evidenced by elevated urinary DAPs ($p=0.027$), corresponded with significant suppression of cholinesterase activity ($p=0.018$). While estimated daily pesticide exposure doses in summer months were below adverse effect levels ($HI < 1$), the biomarker data confirmed an observable physiological impact.

Conclusion: Our findings demonstrate that greenhouse workers face a synergistic threat from heat stress and sub-acute pesticide exposure. Improved ventilation can reduce oxidative stress, prevent cholinesterase inhibition, and lower the risk of liver damage simultaneously. It is essential to implement comprehensive safety regulations and improve working conditions to protect the health of agricultural workers.

Keywords: pesticide exposure, net-house and greenhouse, farmers, indoor environmental condition, biomarker, health effect

O-T04A-0393

Immune Health Risks of Endocrine-Disrupting Chemicals: Evidence from Bisphenol A and Azole Derivatives

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Abstract

Background: Endocrine-disrupting chemicals (EDCs), such as bisphenol A (BPA) derivatives and azole compounds, are widespread in daily life. Beyond hormonal disruption, recent evidence suggests they may impair immune function, posing significant public health risks.

Objectives: This study evaluated how BPA and azole derivatives affect immune regulation through receptor interactions and gene expression changes.

Methods: Molecular docking, dynamics simulations, and binding free energy analyses were performed to assess EDC interactions with androgen, glucocorticoid, and estrogen receptors. Transcriptomic profiling of exposed human immune cells was analyzed for differentially expressed genes and enriched pathways.

Results: Several BPA analogs and azole derivatives showed strong receptor-binding affinities, comparable to endogenous ligands. Transcriptomic analysis revealed alterations in cytokine signaling, oxidative stress response, and adaptive immunity pathways. Integration of computational and transcriptomic data demonstrated a consistent link between receptor-binding strength and immune gene dysregulation.

Conclusions: Our findings provide mechanistic evidence that BPA and azole derivatives disrupt immune homeostasis via receptor-mediated transcriptional changes. This highlights the need for stronger environmental monitoring and public health strategies to reduce EDC exposure, particularly among vulnerable groups such as children, pregnant women, and agricultural workers.

Keywords: EDCs; Bisphenol A; azole derivatives; immune health; transcriptomics; public health.

O-T04A-0404

Distribution and Occurrence of Antibiotic Residues in Water and Sediment from Two Rivers of Taiwan: Implications for Antibiotic Resistance Genes

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Abstract

Introduction: Antibiotics are extensively used in healthcare, aquaculture, livestock, and agriculture, and often enter aquatic ecosystems through wastewater, agricultural runoff, and aquaculture effluents. In these environments, they persist at sub-inhibitory concentrations, where they exert selective pressure on microbial communities, promoting the enrichment of resistant bacteria and the spread of antibiotic resistance genes (ARGs). Global studies have reported the presence of ARGs in various environments, including sediments and groundwater, highlighting a One Health concern. In our earlier study of two rivers in Taiwan—Beigang (BG) and Jhuoshuei (JS)—antibiotic residues were detected across all sampling sites. These findings, in combination with global research findings, led us to hypothesize that ARGs may also be present in these river systems. This study aims to quantify antibiotic concentrations and assess the potential abundance of ARGs, contributing to environmental surveillance.

Materials and Methods: Water and sediment samples were analysed using Ultra-Performance Liquid Chromatography – Tandem Mass Spectrometry (UPLC-MS/MS) to quantify four representative antibiotics: sulfamethoxazole (SMX), tylosin (TLS), chlortetracycline (CTC), and doxycycline (DOX). For molecular analysis, environmental DNA will be extracted from these matrices and subjected to quantitative PCR (qPCR) to determine the abundance of selected ARGs (sul1, tetM, blaTEM) and the class 1 integrase gene (intI1).

Results: Antibiotic concentrations in river water ranged from below detection limits to 0.970 ng/mL, with SMX, CTC, and DOX being most frequently detected. In sediments, CTC and DOX were predominant, with levels reaching up to 2934 µg/kg. These findings indicate sustained antibiotic contamination in the river system. Similar contamination patterns observed in studies worldwide are often linked to the presence of ARGs, such as sul1, tetM, and qnrS.

Conclusion: The presence of SMX, CTC, and DOX confirms chronic pollution in the BG and JS rivers. These results provide a baseline for assessing risks related to ARGs in freshwater ecosystems.

Keywords: Antibiotic residues, Antibiotic resistance genes (ARGs), One Health, River ecosystem, UPLC-MS/MS, qPCR

O-T04D-0410

Pupal Productivity Pinpoints Priority Containers for Dengue Vector Control in Urban Setting: Insights from Antang Village, Makassar, Indonesia

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Abstract

Urban dengue control depends on finding, and then prioritizing, the breeding habitats that produce the most adult *Aedes aegypti*. This study aimed to quantify which household containers drive pupal output in Antang Village, Makassar (Indonesia), to inform targeted and cost-effective interventions. We conducted a cross-sectional entomological survey of 100 households selected by proportional multistage sampling at neighborhood level. All indoor and outdoor water-holding containers were recorded and inspected. Larvae and pupae were collected, reared to adults for species confirmation, and used to compute standard entomological indices alongside container-specific pupal contributions.

Across 724 containers examined, 87 (12%) were larva-positive and 72 (10%) were pupa-positive. The House Index was 43%, the Container Index 12%, and the Breteau Index 87—levels consistent with substantial transmission potential in urban settings. Containers differed sharply in their yield: although buckets and bath tanks comprised only 39.92% and 6.63% of all containers, they accounted for 61.11% (44/72) and 18.06% (13/72) of total pupae, respectively. By contrast, flowerpots/vases were common (38.26%) but contributed just 11.11% of pupae, and all remaining container types each contributed ≤4.17%. These patterns suggest that habitats with longer water retention and more stable micro-aquatic conditions disproportionately support development to the pupal stage, while ephemeral or frequently disturbed containers add relatively little to adult emergence.

In conclusion, concentrating household actions on buckets and bath tanks—covering openings, instituting routine draining and scrubbing, modifying water-storage practices, and applying larvicide only where emptying is infeasible—should yield the greatest reduction in adult vector abundance per unit effort. Using container-specific pupal productivity as a decision metric can sharpen program focus, improve resource allocation, and provide a transparent basis for monitoring and evaluation. This container-prioritization approach is readily transferable to comparable urban contexts in Indonesia and beyond.

Keywords: *Aedes aegypti*, high-yield breeding habitats, pupal productivity, targeted vector control, urban setting.

O-T04D-0414

The investigation on the association between PFAS Exposure with Semen Quality in Taiwanese Men

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Abstract

Background: Per- and polyfluoroalkyl substances (PFASs) are resistance to heat, corrosion, water, and oil and widely used in industrial and consumer products . Due to their high persistence and potential of bioaccumulation, PFASs are widely distributed and pose significant health concerns especially reproductive toxicity.

Objective: This study aimed to investigate the association between PFAS exposure and semen quality in Taiwanese men.

Methods: We conducted a cross-sectional study and a total of 45 infertile men were recruited from the Department of Obstetrics and Gynecology at National Cheng Kung University Hospital. After signing informed consent, they provided semen and blood samples and completed a structured questionnaire about their lifestyle and dietary habits. After excluding incomplete data, 33 individuals were included in the analysis. Multiple linear regression models were used to examine the correlations between semen quality and PFAS exposure from lifestyle or dietary intake.

Results: After adjusting for confounding factors, we found that semen volume and morphology were negatively associated with the consumption of beverages served in plastic and Styrofoam cups (Volume: $\beta = -0.355$, Morphology: $\beta = -0.361$, $p < 0.05$). Sperm count, total motility, and progressive motility were negatively associated with the intake of milk tea or coffee in aluminium and iron cans (Sperm count: $\beta = -0.539$, Total motility: $\beta = -0.400$, progressive motility: $\beta = -0.427$, $p < 0.05$). Among personal care products, the use of shower gel was negatively correlated with semen volume ($\beta = -0.414$, $p < 0.05$), and the use of facial toner was negatively correlated with total motility ($\beta = -0.344$, $p < 0.05$).

Conclusion: Dietary intake of certain foods with PFAS-containing packaging, along with the use of personal care products, was inversely related to semen quality. Further research is needed to confirm these associations and clarify the underlying biological mechanisms.

Keywords: PFASs exposure, Male infertility, Semen quality, Dietary habits, Personal care products

O-T04A-0416

An Integrated Scenario Simulation Model for Bioaerosol Pollution of Neonatal Intensive Care Unit

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Abstract

Background: Exposure to bioaerosol that exceeds the threshold value can cause nosocomial infections. However, efforts to minimize bioaerosol in the room are still lacking. The combination model of bioaerosol prevention which is integrated and proven to reduce microbial in the air is still rarely applied by hospital management.

Aims: To build a dynamic integrated scenario simulation model to minimize bioaerosols in the NICU (Neonatal Intensive Care Unit).

Method: This type of research is an observational analytic study with a cross-sectional study design through a dynamic model approach. All concentrations of bioaerosol pollution were measured by microbiological air sampler. Bioaerosol measurement results were analyzed with a scenario model for 365 days. The multiple linear regression model was used to investigate the effect of temperature, humidity, total patients, doctors, nurses, and total visitors on total bioaerosol in the NICU room.

Results: The increase in total bioaerosol pollution in the NICU room was associated with temperature, humidity, total doctors, and total nurses 71.2% ($p = 0.010$, 95% confidence interval). The combination of facility management scenarios and visiting rule enforcement scenarios in the simulation model has succeeded in reducing bioaerosol pollution, where the regulation of facility management scenarios has a 99% reduction rate (0-10 CFU/m3).

Conclusion: The temperature, humidity, total doctors, and total nurses have a significant effect on total bioaerosol pollution in the NICU room. Facility management scenarios in the simulation model are very effective in reducing bioaerosol pollution.

Keywords: Bioaerosol, Facility Management, Neonatal Intensive Care Unit, Visitors Rule Enforcement, Simulation Model

O-T04A-0417

The investigation on the association of daily phthalate exposure with semen quality in infertile male in southern Taiwan

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Abstract

Background: Male factors are account for approximately half of all infertility cases. Multiple factors have been identified, including environmental hormones commonly present in the general environment. Phthalates (PAEs), widely found in personal care products, food and food packaging, can enter the human body through various pathways. Epidemiological studies indicate that exposure to PAEs may adversely affect reproductive hormones and semen quality.

Objective: The present study aimed to evaluate the association between potential sources of PAEs exposure and semen quality in men with infertility.

Methods: This cross-sectional study recruited 45 men seeking infertility counseling at National Cheng Kung University Hospital. Semen samples were obtained and questionnaires on demographics, lifestyle, and dietary patterns were collected. After excluding incomplete data, multiple linear regression was utilized in 33 participants to examine the associations between dietary, lifestyle factors, and semen parameters, adjusting for confounders. Statistical significance was set at $p < 0.05$.

Results: Total sperm motility was negatively associated with the use of toner and tea consumption from plastic bottles (β = - 0.344, -0.42; $p < 0.05$). Sperm count was negatively associated with juice from plastic bottles (β = - 0.388; $p < 0.05$). Semen volume and normal morphology were negatively associated with consumption of PET-bottled water and beverages from plastic or Styrofoam cups ($p < 0.05$). Semen volume was negatively associated with the use of shower gel ($p < 0.05$).

Conclusion: Certain dietary and personal care products usage habits may increase phthalate exposure and are negatively associated with semen quality parameters. Reducing PAEs exposure may help protect male reproductive health. Further studies are warranted to clarify the underlying mechanisms.

Keywords: Phthalates exposure, Male infertility, Semen quality, Dietary habits, Personal care products

O-T04A-0426

Microplastic Bioaccumulation in Bivalves: A Systematic Review of Environmental and Human Health Implications

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Abstract

The global production of plastic has resulted in widespread microplastic (MP) pollution in aquatic environments, with particles smaller than 5 mm accumulating in marine and freshwater systems. Bivalves, as filter-feeding organisms, are particularly susceptible to MP uptake, raising concerns about ecological disruption and human health risks through bioaccumulation in the food chain. This systematic review aims to provide current evidence on MP bioaccumulation in bivalves, focusing on ecological and human health implications. A systematic literature review was conducted following the PRISMA framework, using the database including Scopus, PubMed, and Web of Science, with the keywords "*microplastics*," "*bioaccumulation*," and "*bivalves*." From 4,841 records, 32 studies met the inclusion criteria. Eligible studies were original English-language articles on MP exposure or accumulation in bivalves. Reviews, non-English papers, and grey literature were excluded. The data extracted from each study included the species examined, bioaccumulation mechanisms in bivalves, types of polymers, particle sizes, and reported ecological or health outcomes. The findings show that particle size, polymer type, and environmental conditions influence MP bioaccumulation. The most common polymers were polyethylene, polystyrene, and polypropylene, predominantly retained in digestive tissues. Ecological impacts include oxidative stress, reduced reproductive performance, and trophic transfer across food webs, which may compromise ecosystem stability. Human health concerns arise from exposure to MPs and associated contaminants, such as plasticizers, heavy metals, and persistent organic pollutants, which can contribute to chemical toxicity, endocrine disruption, and potential imbalances in gut microbiota. Effective mitigation strategies include improving waste management, promoting biodegradable alternatives, enhancing monitoring, and implementing regulatory policies. In conclusion, MP bioaccumulation in bivalves poses a significant threat to ecological integrity and public health, illustrating the importance of coordinated, evidence-based interventions to mitigate long-term impacts on marine ecosystems and human well-being.

Keywords: Microplastics, Bioaccumulation, Bivalves, Ecological Risk, Environmental Health

O-T04B-0427

Investigation of Bisphenol A content in the total diet of Taiwan and health risk assessment

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Abstract

Bisphenol A (BPA) is an industrial chemical widely applied in the manufacture of polycarbonate plastics and epoxy resins, leading to human exposure mainly through ingestion. Recognized as an endocrine-disrupting chemical, BPA may adversely affect reproductive and metabolic systems, with infants and children being particularly vulnerable due to potential interference with growth and development.

Following the European Food Safety Authority's (EFSA) revision of the tolerable daily intake (TDI) for BPA from 4 μg/kg bw/day to 0.2 ng/kg bw/day in 2023, this study aimed to evaluate dietary exposure and health risk in Taiwan. A total of 24 food categories were sampled and analysed using LC-MS/MS. Exposure assessment was conducted with reference to the National Food Consumption Database and Monte Carlo simulation.

Among the analysed food categories, pork and related products exhibited the highest BPA concentrations, ranging from 0.423 to 49.4 ng/g ww. The estimated daily exposure was greatest in the 0–3 year-old group, averaging 265 ng/kg bw/day. Major dietary sources of exposure included beverages, rice, and wheat-based products. Compared with the European Food Safety Authority's (EFSA) revised tolerable daily intake (TDI) in 2023, the hazard index (HI) increased markedly: the 50th percentile HI across age groups rose from 0.004~0.013 to 330~1172, while the 95th percentile HI increased from 0.010~0.036 to 991~3321. These values, all far exceeding 1, indicate that the current level of dietary BPA exposure in Taiwan may pose substantial potential health risks, particularly for young children.

O-T04A-0428

Ecological risk assessment for specific Antibiotics in Environmental Media of two Taiwan rivers

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Abstract

Antibiotics are secondary metabolites produced by microorganisms or fungi, and they are widely applied in medicine, animal husbandry, and agriculture. In Taiwan, where land is limited and the population density is high, intensive farming practices are common. During the rearing process, antibiotics are frequently used by farmers to prevent and treat diseases. However, due to their low absorption and slow metabolism, the long-term, excessive, and improper use of antibiotics ultimately leads to their residues entering the environment through multiple pathways. This accumulation may pose potential risks to both ecosystems and human health. Given that research on environmental antibiotics in Taiwan remains relatively limited, this study focused on river basins with intensive agricultural and livestock activities to investigate the distribution of veterinary antibiotics in the environment.

Based on the recent national sales list of veterinary antibiotics and the list of internationally prioritized antibiotics, this study selected sulfamethoxazole, oxytetracycline, chlortetracycline, and doxycycline for analysis. The results showed that concentrations of the four antibiotics in water samples ranged from N.D. to 0.474 ng/mL, with sulfamethoxazole and doxycycline being more frequently detected at higher levels. In sediment and fish samples, oxytetracycline and doxycycline were the predominant antibiotics, with concentrations ranging from N.D. to 4.82 μg/kg dw and N.D. to 2.097 μg/kg ww, respectively. Ecological risk assessment revealed that the risk quotient (RQ) in water samples ranged from 0.0001 to 0.525, corresponding to low to medium risk, indicating that antibiotics at certain sampling sites may pose potential threats to sensitive species in the environment.

Keywords: antibiotics, environmental media, environmental risk assessment, UPLC-MS/MS

O-T04D-0449

Emerging tropane alkaloids: Contamination of Food in Taiwan

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Abstract

Background: Tropane alkaloids (TAs) are natural toxins found in various plants species, which can contaminate food through co-harvested weeds or soil transfer. The presence of TAs in foods is harmful to human health, especially nervous system, leading to acute neurological effects.

Objective: This study aims to conduct nationwide monitoring of seven TAs levels in 188 food samples to which the Taiwanese population is exposed.

Method: A total of 188 food samples from 11 categories will be collected from Taiwanese markets. A direct method will be developed and validated for the first time to quantify seven TAs of selected foods using solid phase extraction (SPE) and Ultra-high-performance liquid chromatography couple with tandem mass spectrometry.

Result: the mean concentration of total seven TAs in selected foods is 2.09 ng/g, seven TAs showed 100% detection rate in tea beverage, seasonings, composite foods, infant foods, and dried tea leaves, with the highest mean concentration 10.2 ng/g found in seasonings, followed by 2.59 ng/g in whole grains and 2.31 ng/g in dried tea leaves. In conclusion, certain food items—such as seasonings, whole grains, and dried tea leaves—contain relatively high alkaloids levels and warrant attention.

Keywords: Tropane alkaloids, Foods, Concentration, UHPLC-MS/MS, SPE

O-T04B-0484

Correlation of Transtheoretical Model and Physical Activity Amount among Universiti Malaysia Sabah Employees: A Cross-sectional Study.

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Abstract

Physical inactivity remains a significant public health concern, particularly among working adults in academic settings. The Transtheoretical Model (TTM) provides a well-established framework for understanding the multifaceted process of health behavioural change. This cross-sectional study aimed to determine the correlation between the psychological constructs of the TTM (Processes of Change, Decisional Balance, and Self-Efficacy) and the physical activity levels, measured as Metabolic Equivalent Task (MET) minutes per week via the International Physical Activity Questionnaire (IPAQ), among employees at Universiti Malaysia Sabah (UMS). A total of 300 UMS employees were recruited via random sampling, with a majority being male (78%) and of Sabahan native ethnicity (90.3%). Data was collected using a self-administered questionnaire and analyzed using Pearson's correlation. The findings revealed significant intercorrelations among the TTM constructs. A strong positive correlation was identified between the Cognitive Processes of Change and the Behavioural Processes of Change ($p<0.001$, $r=0.607$). A moderate positive correlation was found between the Pros of Decisional Balance and Self-Efficacy ($p<0.001$, $r=0.507$). Several weak positive correlations were also observed, including between Cognitive Processes and Pros ($p<0.001$, $r=0.205$), and between Self-Efficacy and physical activity amount ($p<0.001$, $r=0.219$). In conclusion, while the psychological constructs of the TTM demonstrate strong internal relationships, their direct correlation with the actual amount of physical activity is predominantly weak. This suggests that for UMS employees, psychological readiness for change is a related but distinct dimension from quantitative exercise behaviour. Therefore, interventions should pair TTM-based motivational strategies with practical, environmental enablers to effectively bridge this intention-behaviour gap and increase physical activity levels.

O-T04B-0487

Cultural adaptation of a Thai-adapted Growth and Empowerment Measure to assess collectivist-oriented wellbeing

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Abstract

Background: Publications have urged researchers to ensure that their wellbeing surveys demonstrate strong validity and cultural relevance with cultures of targeted respondents. This is especially true for Thailand - Northeast (Esan) region, which continues to embrace the richness of collectivist culture and resilience of its people and community. This talk will present methods used to select and culturally adapt the Australian Aboriginal-informed Growth and Empowerment Measure (GEM) to create a Thai-adapted GEM for use in a broader study of occupational wellbeing of Thai female academics.

Method: Thai-adapted GEM's content validity was explored through individual interviews exploring meanings and experiences of wellbeing with nine Thai-Esan female academics. Guided by methods used for the GEM's cultural adaptation for Kanien'kehá:ka people of Quebec (Canada), an advisory group of Thai-Esan academics was formed. This group reviewed an initial translated draft and several revisions reflecting their feedback and suggested adjustments to ensure its clarity and contextual validity, both individually and in face-to-face focus groups. The draft was finalised when the group confirmed full satisfaction. Its basic psychometric properties were examined using data from 95 Thai female academics responding to an online survey.

Results: The Thai-adapted GEM's content validity was confirmed according to a conceptual match between underlying concepts of GEM items and elicited interview data. Suggestions from the six members permitted minor rewordings of 12 items within Thai-adapted Emotional Empowerment Scale and improved wording and contextual modification on the 12 scenarios scale. Survey data confirmed acceptable psychometric properties.

Conclusion: Cultural adaptation process used to create the Thai-adapted GEM enhanced its cultural safety and contextual validity for application with Thai-Esan people. The Thai-adapted GEM is a useful tool for understanding the multi-level interconnections between empowerment and wellbeing of Thai-Esan people that are rarely measured but clearly relevant to our advisory group participants' lives and wellbeing.

Keywords: Cultural adaptation, Empowerment, Mental Health, Thailand, Wellbeing

O-T04D-0489

The study on association between perchlorate, nitrate and thiocyanate exposure with early development in neonates

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Abstract

Background: Studies reported that exposure to perchlorate, nitrate and thiocyanate were associated with decreased thyroid hormone through inhibiting the uptake of iodide then the development of brain and central nervous system in fetus and neonates may affected. The objectives of present study are to explore the relationship between prenatal and postnatal perchlorate, nitrate and thiocyanate exposure and early development.

Methods: 110 pregnant women and 120 neonates were recruited from obstetrics and gynecology clinics and breast milk bank of NCKU Hospital. Perchlorate, nitrate and thiocyanate in urine, cord blood, breast milk and infant formula milk were measured in each trimester, less than 1 month and 6 months after delivery. Perchlorate equivalent concentration (PEC) was calculated for toxicity of perchlorate, nitrate and thiocyanate. Neonates were screened with BSID-III scores at 6 months. Perchlorate, nitrate, thiocyanate and iodide were analyzed by LC-MS/MS.

Results: The concentrations of perchlorate and nitrate in breast milk were significantly higher than those concentration in infant formula milk($P<0.01$). For the prenatal exposure, the maternal creatinine-adjusted urinary nitrate and thiocyanate were positively associated with cord blood serum nitrate and thiocyanate($P<0.05$). The maternal urinary thiocyanate in the third trimesters was also positively associated with neonatal urinary thiocyanate($P<0.05$). After adjusting potential confounders, maternal urinary nitrate, iodide and perchlorate equivalence concentration (PEC) in the second and third trimesters were negatively associated with gestational age($P<0.05$). Prenatal maternal perchlorate, thiocyanate and PEC were negatively associated with the ability of language($P<0.05$). Maternal perchlorate was negatively associated with the ability of motor($P<0.05$). Urinary concentration of perchlorate, nitrate, iodide and PEC of breast-fed neonates were significantly higher than formula-fed neonates ($P<0.01$). After adjusting potential confounders, neonatal urinary iodide was negatively associated with the ability of motor ($P<0.05$).

Conclusion: The prenatal exposure to perchlorate, nitrate and thiocyanate may affect neonatal growth and neurodevelopment than postnatal exposure.

Keywords: Perchlorate, Nitrate, Thiocyanate, Exposure assessment, Early development

O-T04A-0553

Association of heat exposure and heat related symptom among Brick manufacturing workers in Northeastern of Thailand

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Abstract

Heat exposure is a major occupational hazard for brick manufacturing workers, who are subjected to extreme temperatures from both environmental conditions and kiln operations. This study, conducted in September 2024, aims to assess heat exposure and its associated health effects among brick workers in Northeastern Thailand. A cross-sectional study was conducted among 27 brick workers from five brick manufacturing sites. Data collection included structured questionnaires, physiological measurements (body temperature, blood pressure, and pulse rate), and environmental heat monitoring using Personal Ambient Temperature (PAT) and Wet Bulb Globe Temperature (WBGT). Fisher's exact test was used to analyse associations between heat-related symptoms and demographic, lifestyle, and occupational factors.

Results: The majority of participants were male (74.1%) with a mean age of 36.22 years. Most workers (85.19%) did not engage in regular exercise, while high rates of smoking (70.37%), alcohol consumption (66.67%), and energy drink intake (96.3%) were reported. The prevalence of heat-related symptoms was high, with fatigue, headache, and excessive sweating being the most frequently reported conditions. Significant associations were observed between heat-related symptoms and gender, chronic health conditions, alcohol and energy drink consumption, smoking, and type of clothing ($p < 0.001$). Additionally, occupational tasks such as molding, drying, and burning bricks were significantly linked to heat-related symptoms. However, no significant associations were found between age, BMI, water intake, working hours, or environmental temperature and heat-related symptoms

Conclusion: Brick manufacturing workers in Thailand face a high risk of heat-related health issues, influenced by individual health conditions, lifestyle factors, and job-related exposures. To mitigate these risks, preventive measures such as improved hydration, reduced alcohol and energy drink consumption, and enhanced workplace cooling strategies should be implemented.

Keywords: Heat exposure, heat-related symptoms, brick workers

O-T04A-0561

Investigation of Microplastic Accumulation in Freshwater and Aquaculture Fish from Taiwan

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Abstract

Microplastics (MPs), defined as plastic particles <5 mm, have emerged as emerging environmental contaminants due to their small size, abundance, and widespread distribution. The increasing use of plastic products, such as food containers, has inadvertently contributed to human exposure, though the extent of dietary intake remains unclear. In freshwater ecosystems, limited evidence exists regarding MP accumulation in fish, despite their likely release into the environment. This study investigated the occurrence and tissue-specific distribution of MPs in wild fish from 30 major rivers and farmed fish in Taiwan. A total of 90 wild and 9 farmed fish were analyzed. MPs were isolated using a 5 mm stainless steel sieve and identified via Raman spectroscopy. Polyethylene (PE) was the predominant polymer, representing 61% of MPs in wild fish and 79% in farmed fish. Muscle tissue exhibited the highest concentrations (0.255 and 0.376 particles/g in wild and farmed fish, respectively), with particles predominantly 20–50 μm in size. MPs detected in intestines were also found in muscle, suggesting potential translocation across tissues. These findings highlight the accumulation of MPs in edible fish tissues, raising concerns about dietary exposure and potential risks of bioaccumulation and biomagnification through the food chain. Further research is warranted to assess the implications for human health and pollutant transfer across trophic levels.

Keywords: Microplastics, Raman spectroscopy, Fish bioaccumulation

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O-T04A-0569

Microplastics in Drinking Water Source and Marine Fish in West Sumatera, Indonesia: from Polluted River to Public Health Implications.

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Abstract

Microplastics (MPs) in the environment have raised significant concern worldwide due to their potential health impacts and its potential accumulation in the human body. Batang Arau River identified as the most polluted river in West Sumatera, Indonesia, may pose a significant risk of MPs contamination in local drinking water sources and marine fish. This study aimed to assess the health risks associated with MPs exposure through well water consumption and marine fish among community of Batang Arau. The study was conducted using health risk assessment (HRA) approach involving 150 participants lived near to the river. Participants were interviewed for consumption and lifestyle patterns. A total 34 well water samples and three most consumed marine fishes were collected to identify the MPs abundance. MPs abundance, size, type and polymer identification were conducted using stereomicroscope, imageJ, and FTIR-ATR. The Polymer Hazard Index (PHI) was calculated to determine the potential hazard level of the polymers. This study revealed that average MPs abundance of 29.61 particles/L (0.00981 mg/L polymers) in water and 441 particles/kg (1.53 mg/kg polymers) in marine fish with the identified polymers in all samples were PE > PET > PS > PVC = PP. Estimated MPs intake levels for drinking water and fish were 0.00025 mg/kg/day and 0.0031 mg/kg/day, respectively. This result suggested that MPs risk intake was still in safe level compared to the tolerable intake for PS and PE both drinking water and marine fish consumption. However, community were at risk of PHI level III (high). Estimated risk level of microplastics intake from drinking water and marine fish consumption was relatively safe for the community around Batang Arau River. The presence of microplastics in food sources could be an indicator of high plastics pollution in the environment and should be concern for public health impact.

Keywords: microplastics, river, marine fish, drinking water, risk, health

O-T04D-0570

A Cross-Sectional Study On Assessment Of Infertility Causes And Their Association With Depression,Anxiety, Among Reproductive Aged Women In Government Maternity Hospital Affiliated To Osmania Medical College, Hyderabaded

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Background:
Infertility is a serious health issue worldwide, affecting 8%-10% of couples worldwide[1].Of 60-80 million couples suffering from infertility every year worldwide, probably between 15 and 20 million (25%) are in India alone. According to a report by the WHO, one in every four couples in developing countries is affected by infertility. In less developed countries ,the 12 month prevalence rate ranges from6.9% to 9.3%.India is a country with a wide diversity. There is diversity in customs, traditions ,quality of living, accessibility to health care systems ,also climatic conditions .Due to these factors ,infertility rate varies widely .Infertility can have significant impacts on mental health. Psychological distress is a broad term encompassing emotional suffering and mental health discomfort that can include symptoms of anxiety and depression but is not limited to these conditions.

Objectives:

- To determine the Prevalence of infertility & to assess the factors influencing infertility.
- To evaluate the association with depression ,and anxiety among reproductive aged women.

Methods:
Study design: community based cross-sectional study
Study area: government maternity hospital affiliated to osmania medical college.
Study period: 2 months (august 2025- september 2025)
Study population: married women between 15-49 years of age of field practice area of osmania medical college
Sample size: 326 using the formula $4pq/l^2$ (p=11.8%, l=5%)
Sampling method: simple random sampling method.
Inclusion criteria: married women between 15-49 years of age.
Exclusion criteria: women who are unmarried,divorced,menopause
Study tool: the data gathered using a predesigned, semi-structured questionnaire, phq-4 scale.
Data collection: data is being collected using the questionnaire after taking the informed consent from study subject
Analysis: collected data will be analysed using chi-square test, ms excel, spss software v 25
Funding: nil
Ethical consideration: applied for institutional ethical committee clearance
Result: the study is on-going and the data will be analysed after the completion of data collection. Results will be presented in the conference.
KEYWORDS: Infertility, Reproductive age group, Depression.

O-T04B-0584

Counselors' Views on the Feasibility of the Moving to Emptiness Technique in Addressing Counselor Burnout and Compassion Fatigue in China: A Qualitative Study

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Abstract

Background: Burnout and compassion fatigue (CF) are growing challenges among counselors. The Moving to Emptiness Technique (MET), a native body–mind-based intervention in China, has shown potential in alleviating psychological and somatic distress. However, its feasibility in addressing counselors' own experiences of burnout and CF remains unexplored.

Methods:A descriptive qualitative design was adopted. Fifteen counselors who self-reported burnout and CF participated in nine in-depth interviews and three focus group discussions. A semi-structured interview guide, informed by prior research, was used. Information on burnout, CF, and MET were given to participants prior to data collection. Data was analyzed using a thematic approach.

Results: Five themes emerged: (a) cultural adaptability of MET (perceived as interesting and acceptable); (b) perceived effectiveness of MET (MET is effective for burnout and CF with unique advantages, such as simple to use, shows fast effect, helps counselors maintain stable mental status, can be used on oneself, cheap and time-saving); (c) mechanisms of MET (symbolization and removal); (d) limitations (MET is lack of dissemination and the first-time users might doubt whether it is effective); and (e) implementation considerations (counselors preferred individual MET over collective MET, with both online and face-to-face delivery were accepted for reasons of convenience and connectivity).

Conclusion: Counselors in China expressed positive attitudes toward the feasibility of MET in addressing their burnout and CF. Practical insights for implementation were identified. These findings contribute to integrating MET into counselor self-care, serve as groundwork for future intervention studies, and advanced the development of native therapeutic approaches in China.

Keywords: burnout; compassion fatigue; Moving to Emptiness Technique; counselors; China

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T04B-0586

Digging Into Risk: Global Determinants of Musculoskeletal Disorders In The Mining Workforce A Systematic Review

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Abstract

Musculoskeletal disorders (MSDs) are a leading cause of occupational morbidity in mining, yet evidence on their determinants remains fragmented. This review uniquely synthesizes global evidence across multiple mining sectors. Following PRISMA 2020, 28 observational studies (2010–2025) from Asia, Africa, the Americas, and other regions were reviewed. Determinants were grouped into ergonomic, organizational, psychosocial, and demographic domains. MSD prevalence ranged from 25% to >80%, with the lower back most affected. While ergonomic risks (whole-body vibration, awkward postures, repetitive work) were consistently reported, this review highlights *equally strong roles for organizational and psychosocial factors*. Long work hours (>60h/week) and burnout more than doubled MSD risk (ORs 2.0–4.7). Artisanal miners and female workers showed disproportionately higher prevalence, underscoring equity concerns. Beyond physical hazards, psychosocial and organizational stressors are critical yet underrecognized drivers of MSDs in mining. This is the first synthesis to demonstrate the global convergence of determinants across diverse mining contexts, highlighting the urgent need for integrated interventions addressing both physical and psychosocial risks.

Keywords: Musculoskeletal Disorders; Mining Workforce; Psychosocial Risk; Organizational Determinants

O-T04A-0597

The modifying role of $PM_{2.5}$ in the temperature and heatstroke association across 47 prefectures in Japan

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Abstract

A growing public health concern in the context of rising temperatures and ambient air pollution is heatstroke. Although pollutants like $PM_{2.5}$ and heat stress may both have an impact on physiological resilience, little is known about how they work together. This study examines the association between temperature and heatstroke in Japan's 47 prefectures during the summer months of June through September, stratified by $PM_{2.5}$ levels, between 2014 and 2019. We used an analytical framework with two stages. In order to evaluate the relationship between the daily mean temperature and emergency transports for heatstroke while taking lagged effects into account, Distributed Lag Nonlinear Models (DLNM) were first fitted for each prefecture. Second, to account for geographical variability, a meta-analysis combined relative risk estimates stratified by high and low $PM_{2.5}$ concentrations using fixed and random-effects models. The findings indicated that the risk of heatstroke increased nonlinearly with temperature, peaking at extremely high heat exposures. Stratified analysis, however, showed that $PM_{2.5}$ did not consistently alter the effect. There appears to be little interaction between particle pollution and thermal stress in this situation, as the temperature-illness connection was rather constant over days with high and low $PM_{2.5}$ levels. These results suggest that in Japan's summer environment, $PM_{2.5}$ may not have a substantial impact on the link between temperature and heatstroke. Although integrated heat-health treatments might not necessitate distinct methods based only on $PM_{2.5}$ levels, public health programs should continue to monitor $PM_{2.5}$ for its independent health hazards.

Keywords: Temperature, Heat-related illness, Air pollution, $PM_{2.5}$

O-T04D-0640

Edible Salt as a Vector of Microplastics and Heavy Metals: Literature Review on Global Trends and Public Health Risks

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Abstract

Background: Microplastic contamination has emerged as an urgent global health issue, with edible salt increasingly recognized as a critical but overlooked pathway of exposure. Salt is consumed universally and daily, making its contamination particularly concerning. Beyond their direct toxicity, microplastics can adsorb and transport hazardous heavy metals such as lead, cadmium, and mercury, thereby amplifying long-term health risks.
Objective: This literature review aims to consolidate global evidence on microplastic and heavy metal contamination in edible salt, examine their interaction mechanisms, and highlight implications for public health.
Methods: A narrative literature review was conducted through Scopus, PubMed, Web of Science, and Google Scholar, focusing on peer-reviewed articles published between 2015 and 2024. Eligible studies reported the presence of microplastics and/or heavy metals in table salt, their interaction dynamics, and human exposure risks. Data were synthesized narratively, emphasizing contamination levels, detection methods, and health risk assessments.
Results: 45 studies met the inclusion criteria. Findings revealed that 87% of global salt samples contained microplastics, ranging from 0.1 to 6,000 particles/kg, with the highest concentrations reported in Asia, particularly Indonesia, India, and China. Heavy metals such as Pb, Cd, and Hg were also detected, in some cases exceeding WHO permissible limits. Experimental evidence indicated that microplastics enhance heavy metal adsorption and bioavailability, contributing to cumulative toxicity. Estimated daily dietary exposure was 0.1–30 microplastic particles per person, underscoring a chronic yet underestimated public health burden.

Conclusion: Edible salt constitutes a silent but significant vector of microplastic and heavy metal exposure. The synergistic interaction between these contaminants poses emerging risks to human health, demanding urgent attention. Strengthened global monitoring, standardization of detection methods, and robust regulatory frameworks are essential to safeguard public health.

Keywords: Microplastics; Heavy metals, Edible salt, environmental health, Public health risks

O-T04B-0659

Analysis Of Determinants Of Hypertension In The Coal Mining Work Environment In Kutai Kartanegara Regency, Indonesia

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Abstract

Background: Hypertension is a global health problem that contributes significantly to morbidity and mortality, and its prevalence remains high among mine workers who are exposed to occupational risk factors. This study aims to analyze the determinants of hypertension among employees of a coal mining company in Kutai Kartanegara Regency.

Method: The study used an analytical observational design with a *cross-sectional* approach. The study sample consisted of 109 employees selected using *stratified random sampling*. Independent variables included sleep quality (PSQI), work fatigue (FAS), work stress (DASS 42), physical activity (GPAQ), and smoking behavior (GNSBQ). The dependent variable was hypertension, which was measured using *a sphygmomanometer.* Data analysis was performed using logistic regression at a significance level of 5%.

Results: The study showed a prevalence of hypertension of 55% among respondents. Multivariate analysis found that poor sleep quality was the most dominant factor significantly associated with hypertension (aOR = 81.98; 95% CI: 7.73–869.82; p=0.000). Heavy smoking also had a significant effect on hypertension (aOR = 20.52; p=0.047). Meanwhile, the variables of physical activity, stress, and work fatigue did not show a significant effect after controlling for other variables.

Conclusion: Poor sleep quality and heavy smoking are the main determinants of hypertension among mine workers. These findings emphasize the need for occupational health and safety interventions that focus on *sleep hygiene* education, shift work scheduling, and smoking cessation programs to reduce the prevalence of hypertension in the mining work environment. Other factors such as physical activity, stress, and work fatigue still need to be monitored as part of a preventive strategy.

Keywords: Hypertension, Determinants, Mining

O-T04A-0675

Modeling Industrial Emission Dispersion with a Gaussian Approach: Implications for Air Quality and Health Risks

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Abstract

Introduction: Industrial activities are one of the main sources of air pollution, particularly through the release of SO_2, NO_2, and particulate into the atmosphere. These pollutants, when present in high concentrations, can reduce air quality and pose serious health risks such as respiratory and cardiovascular disorders. Gaussian dispersion models, such as AERMOD, are widely used to predict pollutant distribution by considering emission characteristics, meteorological data, and local topography.

Methods: This study used the AERMOD model to simulate the distribution of SO_2, NO_2, and PM from point sources. Simulations were conducted for average periods of 1 hour and 24 hours. Health risk analysis was performed using the Hazard Quotient (HQ) method to assess the potential non-carcinogenic effects.

Results: The modeling results show that pollutant concentrations decrease significantly with increasing distance from the source. The maximum SO_2 concentration was recorded at 0.026 µg/m³ on a 1-hour average with a dispersion distance of 7514.7 m, and 0.0031 µg/m³ on a 24-hour average with a distance of 6391.1 m. For NO_2, the highest concentration was 15.45 µg/m³ on a 1-hour average with a range of 4140 m, and 2.03 µg/m³ on a 24-hour average with a range of 4297.3 m. Particulates showed a maximum concentration of 0.0071 µg/m³ on a 24-hour average with a dispersion distance of 3696.3 m. Health risk analysis showed HQ values < 1 for all parameters, indicating no significant non-carcinogenic risk to the surrounding community.

Conclusion: Gaussian dispersion modeling proves that SO_2, NO_2, and PM emissions from the industrial sources studied are still well below ambient air quality standards. Health risk analysis results also show no potential non-carcinogenic effects (HQ < 1).

Keywords: Gaussian dispersion, air quality, health risk

O-T04D-0709

Perinatal Depression and Anxiety: Prevalence, Risk and Intervention– Literature Review

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Abstract

Background: Mental health remains a trending issue in the field of maternal and child health. Pregnant women are considered a vulnerable group to mental health problems due to various changes experienced during pregnancy that may affect their psychological well-being. Depression and anxiety are among the most common mental disorders occurring during pregnancy. Mental health problems commonly experienced by pregnant women can potentially lead to depression; however, the early symptoms of depression are often overlooked by both pregnant women and healthcare providers, as they are frequently perceived as normal pregnancy-related conditions.
Objective: The purpose of this literature review is to present an in-depth analysis of previous studies related to depression and anxiety, focusing on their prevalence, associated risk factors, and intervention approaches within the perinatal period.
Method: This study employed a literature review approach. The review process was conducted through a systematic search of articles using computerized databases, namely PubMed and Science Direct. The keywords applied in the search were Depression, Anxiety, Perinatal, Prevalence, Risk, and Intervention. The search initially yielded 262 relevant articles. These articles were then screened using the PRISMA Flow Chart, resulting in 18 articles that met the established inclusion criteria.
Results: The prevalence of perinatal depression was found to be higher than that of perinatal anxiety. The risk factors for perinatal depression and anxiety are complex. Compared to women of optimal childbearing age, older pregnant women tend to have poorer physiological conditions, higher rates of comorbidities and pregnancy-related complications, as well as an increased risk of miscarriage and postpartum hemorrhage. These factors place them at a greater risk of experiencing negative emotions, such as anxiety and depression. The need for developing digital tools for perinatal mental health that allow women to monitor their own wellbeing has been identified. Additionally, strengthening community empowerment is crucial, particularly in empowering pregnant women to increase their awareness of mental health during pregnancy. This effort aims to help them go through pregnancy, childbirth, and the postpartum period in a healthy and well-prepared state, both for themselves and their babies.
Conclusion: Effectively addressing mental health problems in pregnant women necessitates strong promotive and preventive actions involving both policymakers and frontline healthcare professionals. Their collaborative efforts are essential to prevent and manage complications related to mental health disorders that may arise during the perinatal period.
Keywords: Depression, Anxiety, Perinatal, Prevalence, Risk, Intervention

O-T04A-0715

Mercury Exposure in Artisanal and Small-Scale Gold Mining: A Systematic Review of Workers' Health Impacts

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Abstract

Background: Mercury exposure from artisanal and small-scale gold mining (ASGM) is a global health concern, particularly in developing countries with limited regulatory enforcement. The amalgamation and burning of gold amalgam release hazardous mercury vapor, affecting miners and surrounding communities. Health impacts include neurological, renal, hepatic, and reproductive disorders, significantly reducing quality of life.

Methods: This study applied a systematic literature review by searching PubMed, Scopus, and Google Scholar for articles published between 2015 and 2024. The PECO framework (Population, Exposure, Comparator, Outcome) guided study selection, with inclusion criteria comprising open-access research articles in English focusing on mercury exposure among ASGM workers. From an initial 544 publications, 21 articles met the eligibility criteria. Extracted data included study location, methodology, population, exposure sources, biomarkers, measurement techniques, and reported health effects.

Results: The synthesis revealed that mercury exposure mainly originated from amalgamation and amalgam burning processes. Biomarkers frequently used were hair, urine, and blood, analyzed using Atomic Absorption Spectroscopy (AAS) and Inductively Coupled Plasma Mass Spectrometry (ICP-MS). Mercury concentrations exceeded WHO safety limits in several countries, notably Indonesia, Ghana, Brazil, and Colombia. Reported health effects included neurological impairment, kidney damage, liver dysfunction, hypertension, oxidative stress, and reproductive problems. Low compliance with personal protective equipment further exacerbated health risks among miners.

Conclusion: Mercury exposure in ASGM significantly threatens miners' health, with both acute and chronic consequences. Stricter regulations, increased awareness of mercury hazards, and the adoption of mercury-free mining technologies are urgently needed. Regular health monitoring and effective mitigation strategies should be prioritized to reduce long-term health risks among artisanal gold miners.

Keywords: Mercury exposure, artisanal gold mining, occupational health, biomarkers, health effects.

O-T04B-0717

Translation and Cultural Adaptation of the Happiness at Work Scale into Malay for Primary Healthcare Providers

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Abstract

Background: Primary healthcare providers (PHPs) are the frontline of health systems worldwide, delivering first-contact, continuous, comprehensive, and coordinated care. Although workplace happiness is linked to better well-being, retention, and performance, validated Malay instruments designed for healthcare settings are scarce, limiting routine assessment and targeted interventions. To address this gap, this study translated and culturally adapted the 12-item Happiness at Work Scale into Malay (HAWS-M) and evaluated its psychometric properties among PHPs, preparing the instrument for subsequent use in examining associated factors.

Methods: This study followed best-practice cross-cultural adaptation, including dual forward and back translation, expert content reviews, and cognitive debriefing, followed by pre-testing with 30 participants to optimise clarity, flow, and feasibility. Psychometric evaluation involved 333 primary healthcare providers from various job categories in two districts in Kelantan. Confirmatory factor analysis using robust maximum likelihood tested a four-factor, 12-item structure: Flow and Intrinsic Motivation; Supportive Organizational Experience; Unsupportive Organizational Experience; and Work-Repulsive Feelings, to assess model fit, internal consistency, and construct validity.

Results: HAWS-M demonstrated strong content validity (CVI = 0.92) and face validity (FVI = 0.98). Participants (n = 333) were aged 24 - 59 years, predominantly female (67%), and had education ranging from secondary school to postgraduate. Various job categories were represented, with a length of service of 1 - 35 years. The four-factor, 12-item model showed acceptable-to-good fit (CFI = 0.967, TLI = 0.954, RMSEA = 0.075) after adding a theory-consistent within-factor correlated residual between two Work-Repulsive Feelings items. Standardised factor loadings were strong (0.700–0.923), and internal consistency was high (Cronbach's $\alpha \geq 0.80$ across factors).

Conclusions: HAWS-M shows robust psychometric properties and is suitable for routine assessment of workplace happiness among Malaysian primary healthcare providers. Its brevity and validity support future analyses of organisational, environmental, and individual determinants to inform targeted interventions.

Keywords: happiness at work; HAWS-M; psychometric validation; confirmatory factor analysis; primary healthcare; Malaysia

O-T04A-0722

Urban fungal aerosols in Bangkok, Thailand: The seasonal patterns and meteorological correlation analysis

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Abstract

Airborne fungi contribute to allergic and infectious disease risks; however, seasonal behaviour in urban outdoor environments of tropical megacities remains under described. Understanding how seasonality structures the urban air mycobiome is crucial for anticipating exposure peaks and informing timely public health communications. Ambient fungal spores were collected by active sampling at a core urban site across wet and dry seasons. Light microscopy quantified total spore concentrations and identified dominant taxa by morphology. Meteorological data including air temperature (°C), relative humidity (%), rainfall (mm) was obtained from the nearest station by Pollution Control Department. The findings indicated that the total fungal abundance was significantly higher in the dry than the wet season (Welch's t = 2.48, p = 0.027), with mean concentrations of 1534 vs 1037 spores/m³. Wet season was dominated by *Aspergillus/Penicillium* (~50.6%), followed by ascospores (13.7%), basidiospores (10.3%), and *Cladosporium* (8.7%); the dry season was dominated by *Cladosporium* (36.1%) and ascospores (32.4%), with *Aspergillus/Penicillium* reduced (12.9%). Spearman's correlations revealed significant associations in the wet season (e.g., ascospores with wind speed, ρ = 0.59, $p < 0.05$), and basidiospores showing a weak negative trend with wind speed ($\rho = -0.52$, $p = 0.08$). In the dry season, Cladosporium correlated positively with temperature ($\rho = 0.60$, $p < 0.05$) and relative humidity ($\rho = 0.59$, $p < 0.05$), while *Aspergillus/Penicillium* correlated negatively with wind speed ($\rho = -0.65$, $p < 0.05$). This study demonstrates the significant variations in quantity and composition of airborne fungal aerosols in unban atmosphere of Bangkok between dry and wet seasons, influenced by certain meteorological factors. These findings support seasonally aware exposure monitoring and weather-informed public health communication.

Keywords: Airborne fungal aerosols; Meteorology; Cladosporium; *Aspergillus/Penicillium*; Bangkok, Spearman's correlation.

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O-T04A-0723

KAP-SewQ Content and Face Validation of a Knowledge, Attitude, and Practice Questionnaire on Sewage Disposal Among Households in Kota Bharu, Kelantan

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Abstract

Background: Effective sewage disposal is essential for safeguarding community health, yet public awareness and household practices remain poorly documented in Malaysia. To address this gap, a knowledge, attitude, and practice questionnaire (KAP-SewQ) was developed to assess household perspectives on sewage disposal and its related health effects. This study reports the content and face validation of the instrument.

Method: An initial pool of items was generated through literature reviews and adaptations of a relevant questionnaire regarding sewage disposal. Seven subject-matter experts evaluated each item for relevance using a four-point scale. Item-level Content Validity Index (I-CVI), Scale-level CVI/Average (S-CVI/Ave), Scale-level Universal Agreement (S-CVI/UA), and Modified Kappa coefficients were computed to quantify inter-expert agreement beyond chance. Items with I-CVI $\geq$ 0.78 and Kappa $\geq$ 0.74 were retained. Face validity was examined among ten household respondents who rated each item's clarity and understandability on a four-point scale. Face I-CVI value $\geq$ 0.80 were considered acceptable.

Results: A total of 54 items were evaluated for content validity. All demonstrated satisfactory relevance with I-CVI values ranging from 0.71 to 1.00 and modified Kappa values between 0.66 and 1.00. The overall S-CVI/Ave was 0.97, and S-CVI/UA was 0.78, indicating excellent expert consensus. During face validation, 46 items were assessed; most achieved Face I-CVI $\geq$ 0.80 and mean clarity scores between 3.2 and 3.9 (out of 4), confirming high comprehensibility

among respondents.

Conclusion: The KAP-SewQ demonstrated strong content relevance and face clarity, confirming its suitability for assessing household sewage-disposal behaviour in Kota Bharu. These findings support its progression to pilot testing and construct validation to ensure full psychometric robustness prior to large-scale application.

Keywords: KAP-SewQ, sewage disposal, content validity, face validity, household sanitation

O-T04D-0729

Working Prior to COVID-19 and Subsequent Long-Term Care Needs: The JAGES Cohort Study

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Abstract

Background and Aim: Working is considered a potential protective factor for healthy aging; however, it remains uncertain whether its benefits are observed during public health emergencies such as the COVID-19 pandemic. This study examined the association between working prior to the pandemic and subsequent risk of long-term care (LTC) needs among older adults in Japan.

Methods: We analyzed longitudinal data from the Japan Gerontological Evaluation Study (JAGES). The sample included 56,130 community-dwelling adults aged ≥65 who participated in the 2016 and 2019 surveys and were linked to 2022 LTC insurance records, excluding those already certified as requiring LTC at baseline. Working frequency in 2019 was categorized as none, a few times per year, 1–3 times per week, or ≥4 times per week. The outcome was incident LTC certification of support level 1 or higher in 2022. Modified Poisson regression models with robust error variance estimated relative risks (RRs) and 95% confidence intervals (CIs), adjusting for 21 covariates including demographics, health status, socioeconomic factors, and urbanization. Statistical significance was defined as $p < 0.05$.

Results: Among 56,180 participants, 6,932 (12.3%) newly received LTC certification by 2022. Compared with non-workers, those working a few times per year (RR=0.82, 95% CI: 0.72–0.93), 1–3 times per week (RR=0.69, 95% CI: 0.60–0.78), and ≥4 times per week (RR=0.54, 95% CI: 0.46–0.62) had lower risks of LTC certification, with significant associations across all categories.

Conclusions: Working prior to the COVID-19 pandemic was associated with a lower likelihood of subsequent LTC certification, and this association persisted even in the face of a major public health crisis. These findings suggest that later-life working may help support better health and independence under public health emergencies.

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T04B-0732

Role Of Health Workers During Disasters In The Community: A Bibliometric Analysis

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Abstract

The unpreparedness of healthcare workers in disaster situations can have serious implications for patient safety and public health. Research indicates that inadequately trained healthcare workers may experience confusion, moral distress, and an inability to provide an effective response, ultimately leading to greater losses and disasters. This study employs a quantitative approach with bibliometric analysis, using specific keywords such as "ROLE" AND "HEALTH WORKER" AND "DISASTER" AND "SOCIETY" to extract relevant journals. The publications are limited to the period from January 1, 2014, to December 31, 2024. The bibliometric analysis includes assessments of the annual publication count, author and institutional affiliation distribution, keyword mapping, and the identification of major research clusters to map the emerging research trends. Analysis was conducted using Microsoft Office Excel and VOSviewer. The bibliometric analysis reveals that the number of publications related to healthcare workers' role during disasters fluctuated annually, with a total of 26 publications from 2014 to 2024, and a Compound Annual Growth Rate (CAGR) of 7.18%. The majority of the publications were published in the International Journal of Environmental Research and Public Health with 2 articles, followed by various other renowned journals. Most authors contributed one publication, with notable authors such as Adania Zanoni and Al-Muhtadi. The affiliation analysis indicates that the highest number of publications originated from McGill

University and the University of Oxford. VOSviewer analysis identified key clusters, including disaster management, public health, disaster medicine, and epidemiology, highlighting the multidisciplinary approach in disaster response and the importance of medical, psychological, and social aspects. In conclusion, the readiness of healthcare workers to respond to disasters is critical to public health and safety during such events, underscoring the importance of improving training, preparedness, and inter-sectoral collaboration, supported by research aimed at strengthening emergency health systems and multidisciplinary responses.

Keywords: Bibliometric, Role, Health Workers, Disaster, Community

O-T04D-0754

Health Benefits of Transitioning to Cleaner Fuel in Jakarta, Indonesia

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Background: Air pollution is a major global public health concern and contributes to rising rates of respiratory and cardiovascular diseases. In 2023, IQAir ranked Indonesia as the 14th most polluted country globally. Jakarta, the capital city, records more than 20 million vehicle trips per day, making transportation the primary source of ambient air pollution. One strategic mitigation effort is energy transformation through the adoption of cleaner fuel standards. Although the government announced a transition to EURO 4 fuels in 2018, implementation has been partial and inconsistent across fuel types.
Objectives: This study evaluates the potential health benefits of full implementation of EURO 4 standards in Jakarta by 2030.
Methods: An ecological time-series analysis was conducted using data from 2018 to 2023 to assess correlations between $PM_{2.5}$ concentrations and air pollution-related diseases, including pneumonia, ischemic heart disease, chronic obstructive pulmonary disease (COPD), and acute respiratory infections (ARI). PM2.5 data were sourced from monitoring stations operated by NafasIDN (https://nafas.co.id/), while disease data were obtained from the Ministry of Health (Pusdatin Kemenkes) and local health offices (Dinkes). Correlation tests were used to analyze associations between PM2.5 exposure and health outcomes. Regression-based projections were applied to estimate potential reductions in disease burden under full EURO 4 implementation.
Results: The results indicated that an increase of 15 µg/m³ in PM2.5 concentration was associated with a 20% rise in pneumonia, 37% in ischemic heart disease, 27% in COPD, and 18% in ARI. Projections indicate that full EURO 4 implementation by 2030 could reduce pneumonia cases by 86%, ischemic heart disease by 69%, COPD by 84%, and ARI by 23% compared with a Business-as-Usual (BAU) scenario.
Conclusion
This study demonstrates substantial health benefits from adopting EURO 4 fuel standards by 2030. The findings are intended to support policymakers in accelerating cleaner fuel implementation. While fuel improvements are essential, broader strategies are required for long-term impact.
Keywords: Air pollution, health benefits, energy transformation, fuel standard, EURO 4

O-T04D-0755

Economic Impact Assessment of Cleaner Fuel Policy in Jakarta, Indonesia

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Abstract

Background: Air pollution remains a major public health concern and contributes significantly to national healthcare costs. In Indonesia, pollution-related diseases result in substantial economic losses. A 2022 report by the Ministry of National Development Planning estimated annual healthcare costs from air pollution at nearly IDR 2 trillion. Cleaner fuel policies, such as EURO 4, are expected to yield both health and economic benefits.

Objectives: To estimate potential healthcare cost savings associated with full implementation of EURO 4 fuel standards in Jakarta.

Methods: This study employed an ecological time-series approach (2018–2023) to evaluate the association between $PM_{2.5}$ levels and insurance claims for air pollution-related diseases. $PM_{2.5}$ data were obtained from national agencies including KLHK, BMKG, BRIN/LAPAN, and local environmental agencies (DLH). Health expenditure data, including claims for ischemic heart disease, pneumonia, acute respiratory infections (ARI), and chronic obstructive pulmonary disease (COPD), were sourced from National Health Insurance (BPJS Kesehatan).

Results: In 2023, insurance claims for air pollution-related diseases in Jakarta approximately IDR 1.2 trillion. With full EURO 4 implementation by 2030, projected annual healthcare savings reach IDR 609 billion, consisting IDR 246 billion for pneumonia, IDR 268 billion for ischemic heart disease, IDR 36 billion for COPD, and IDR 58 billion for ARI.

Conclusion: The adoption of EURO 4 fuel standards in Jakarta could significantly reduce the economic burden of air pollution on the healthcare sector. These findings underscore the importance of cleaner fuel policies not only for public health protection but also for long-term cost savings.

Keywords: Healthcare cost, cleaner fuel policy, EURO 4, Jakarta

O-T04D-0756

A Systematic Review of Microplastic Exposure in Drinking Water: Concentrations, Polymer Types, and Health Risks in Developing and Developed Countries

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Abstract

Background: Contamination of drinking water by microplastics (MP) is a global concern. The need for drinking water and the increasing contamination of MP raise concerns about the impact on human health. Information on MP exposure levels, polymer types, and human impact on drinking water is still limited.

Methods: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol was used to conduct a systematic review. The Scopus, ScienceDirect, PubMed, Wiley, Proquest, Springer Nature, and Emerald Insight databases were used to search for literature published between 2021 and 2025. The keywords used were “exposure” AND “microplastics” AND ‘human’ AND “drinking water” OR “refilled Water”.

Results: Of the 160 articles found, 12 met the inclusion criteria. The results showed that drinking water in developed and developing countries was contaminated with MP at varying concentrations (2–382 MP). There were significant differences in MP concentrations in drinking water, with higher contamination occurring in developing countries, namely India (382 MP/L) and Mexico (74.18 MP/L), compared to developed countries such as Italy (2–5 MP/L) and China (2–16 MP/L). Fibers and fragments were the most common forms of MP found. The most common types of polymers are polyethylene (PE), polypropylene (PP), and polyethylene terephthalate (PET). China has the lowest Estimated Daily Intake (EDI) at 0.274 MP/kg/day, while Mexico and India have the highest at 1-17 MP/kg/day. Compared to developed countries, public awareness of MP exposure in developing countries is generally still low.

Conclusion: Drinking water is contaminated with MP exposure and poses a potential health risk to humans, especially in developing countries with high and alarming levels of MP exposure. The proposed recommendations include the establishment of quality standards, effective health risk management, and health promotion in developing countries.

Keywords: Microplastics, Drinking Water, Developing Countries.

O-T04D-0764

Development and Preliminary Evaluation of a Mobile Health-Based Postpartum Care Support Program for Mothers in a Remote Island Community in Japan

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Abstract

Background: Modern child-rearing in Japan tends to be conducted solely within the household, leading to feelings of isolation due to changes in family and community structures. Insufficient postpartum social support has been linked to depression and child abuse, demanding urgent mental health interventions. This need is heightened in remote island communities, which face chronic healthcare personnel shortages. While mobile health (mHealth) shows promise, its specific application for postpartum care in Japan requires empirical research.

Objectives: To develop a mobile device-based postpartum care support program, verify its effectiveness in providing childcare and mental health support, and ultimately contribute to effective support strategies for mothers residing in remote island regions.

Method: The study consisted of three steps. Step I was an exploratory cross-sectional survey of 537 mothers to assess postpartum care needs and mental health status (K6). Step II involved developing the mHealth program, "Tsunagaru Postpartum Care Gotou," which uses the official LINE chat function as the interactive communication platform. The core is a two-way interactive program featuring participants' daily "3-Line Diary" of positive events and corresponding "Echo Mail" from researchers to reduce isolation and anxiety. Step III is an ongoing pilot study where participants use the program for three months postpartum. Effectiveness is evaluated using quantitative scales (EPDS, PHQ-9, GAD-7, UCLA Loneliness Scale, SSQ6, IHS20) and qualitative interviews.

Results: Baseline data for the pilot participants (n=10) showed an average EPDS score of 14.6（SD：8.0) with other average scores including PHQ-9 at 4.6（SD：7.6） and UCLA Loneliness Scale at 46.9（SD：8.3.

Conclusion: The pilot study is crucial for validating its effectiveness in improving mental health outcomes in an underserved population, informing sustainable public health services in remote regions.

Keywords: Mobile Health, Postpartum Care, Mental Health, Remote Island, Social Support

O-T04A-0765

Investigation of Microplastic Contaminants in the Southern Area of Andaman Sea

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Abstract

Plastic wastes lead to the environmental pollution around the world. The plastic debris gradually degrades to smaller than 5 mm-particles called microplastics. Microplastics have been discovered in the environment (water, air and soil) and the human food chain, especially a variety of food and beverages such as seafood, honey, sugar, salt, drinking water, beer, canned sardines and sprats. Consequently, the microplastic contamination has globally been concerned in aspect of environmental health. This research project focuses on investigating microplastics in seawater and beach sediment samples during non-monsoon season in two study sites in the southern region of Andaman Sea: Lipe Island and Sarai Island. Microplastic analysis was also applied in this research including Fenton reaction, density separation and FTIR Microscopy. Microplastics were collected from the large volume (~ 20 m^3 or 20,000 liters) of seawater using manta net. Microplastics found near Lipe Island were polyvinyl chloride (PVC), polyethylene (PE), polyethylene terephthalate (PET), and polyurethane (PU), while PVC, Rayon, and Polyester were mostly found near Sarai Island. The sediment samples were collected on the beaches at high tide and middle tide lines. For Lipe Island, most microplastics were PE, polypropylene (PP), Polyacrylate, polyvinylidene chloride (PVDC), and PU. For Sarai Island, most microplastics found on the beach were PE, PVC, and polystyrene (PS). In conclusion, various types of microplastics were found in the seawater and sediment samples. The amounts of microplastics on the beaches were higher than those in the seawater collected not far from the coastal areas. This is caused by the accumulation of microplastics in the beach sediment. Moreover, during the non-monsoon season, the wind direction from the northeast to southwest can carry the waste away from the coast, so smaller numbers of microplastics were found in the seawater near the coastline.

Key words: microplastic, FTIR, seawater, sediment, Andaman, plastic pollution

O-T04D-0766

The role of fossil fuels in multiple planetary health crises: urgent need for strong public health voices

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Background
The world is facing unprecedented challenges from our rapidly declining planetary health. Most health researchers and health care providers are now familiar with the multitude of direct and indirect health impacts of climate change. However, there are seven additional planetary health emergencies at play, including deterioration of our biological diversity, loss of critical soil nutrients and ocean health for food security, and thousands of manmade and redistributed toxic chemicals and microplastics in our food, water, air and everyday products.

Method
Walking through the harms of unconventional oil and gas extraction, production, combustion and petrochemical manufacturing, this talk will point to the rapidly growing literature that has increased recognition of the wide array of harms to our planetary health systems. The critical importance of toxicological research and elegantly designed studies employing environmental and spatial epidemiology and modelling will be highlighted. Particular attention will be given to the sensitivity of developing foetuses and growing children and discuss some of the multiple, synergistic ways that their health and lives are being impacted now and increasingly in the future.

Results
As governments have not yet responded sufficiently to the urgently required action, clear ways forward for health professionals and communities to communicate their concerns are needed. This talk will provide examples of how Australian paediatricians, general practitioners, nurses, allied health and public health professionals and academics are engaging directly with communities, media and in Parliament to bring the health evidence forward into decision making and pressing action.

Conclusion
As Australia seeks to host the UN Climate Conference, COP31, in partnership with the Pacific in 2026, there is a critical opportunity for Asia-Pacific public health experts to unite, amplify and empower our communities with a global call for protection of our lands, our people and our futures.

Keywords: planetary health, climate change, fossil fuels, research, leadership, empowerment

O-T04C-0770

Prevalence and Factors Associated with Malnutrition Among Older Adults in Pondok Settlements of Kelantan, Northeastern Peninsular Malaysia

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Abstract

Background

Despite progress in elderly care, malnutrition remains a persistent issue among older adults, contributing to reduced independence and poorer quality of life. In Malaysia, older adults residing in pondok settlements, which serve as Islamic traditional schools and communal living environments, may experience unique nutritional challenges. However, evidence on their nutritional status and contributing factors remains limited. This study aimed to determine the prevalence and factors associated with malnutrition among older adults in pondok settlements in Kelantan.

Method

A cross-sectional study was conducted among 250 adults aged ≥60 years residing in pondok settlements in Kelantan. Data were collected using a structured interviewer-administered questionnaire comprising sociodemographic characteristics, the Mini Nutritional Assessment– Short Form (MNA-SF), and the Malay version of the Food Insecurity Experience Scale (FIES), together with anthropometric measurements. Individuals with cognitive impairment were excluded. Participants classified as at risk of malnutrition and malnourished based on the MNA-SF were grouped as having malnutrition. Multiple logistic regression analysis was performed to identify factors independently associated with malnutrition.

Results

The prevalence of malnutrition was 41.2% among the 250 participants. Multivariable logistic regression showed that food insecurity (Adj. OR: 2.89; 95% CI: 1.63, 5.12; $p < 0.001$), longer duration of stay (Adj. OR: 3.72; 95% CI: 2.10, 6.59; $p < 0.001$), and lower education level (Adj.
OR: 0.53; 95% CI: 0.30, 0.93; $p = 0.031$) were significantly associated with malnutrition.

Conclusion

Malnutrition was prevalent among older adults in pondok settlements and was associated with food insecurity, longer duration of stay, and lower educational level. Improving early detection of nutritional risk, promoting simple dietary guidance, and strengthening food support networks within pondok communities may help ensure adequate food access and reduce malnutrition over time.

Keywords: Malnutrition, nutritional status, aged, 60 and over, food insecurity

O-T04A-0777

Burden and Risk Factors of Low Back Pain among Urban Indian Young Adults.

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Abstract

Background: Low Back Pain(LBP) is acquiring epidemic proportions globally, contributing 57.6 million of total Years Lived with Disability(YLDs). There is limited data on prevalence of LBP and risk factors among the young population from developing countries.

Objectives: To estimate the prevalence and risk factors of LBP in urban-dwelling young adults aged 18 to 35 years.

Methodology: Data was collected from 384 young urban adults using a questionnaire on socio-demography, medical-history, anthropometry, frequency and duration of back pain, footwear, bag-weight. Additionally, assessment of level of physical activity, risk factors of LBP supported by specific objective measurements. Participants completed Modified-Oswestry-Low-Back-Pain-Disability questionnaire, and Keele-StarT-back screening tool. Data were analysed using Chi-square test, t-test, ANOVA, and Logistic-regression. P<0.05 was considered significant.

Results: Mean age was 20.66±1.97 years; BMI was 22.75±4.18 kg/m^2. 31.42% were male. Lifetime-prevalence of LBP was 76%(95% CI:72-80), higher among women(82%; 95%CI:77-86) than men(63%; 95%CI:55-72; P<0.001). 1-year prevalence was 77%(95%CI:72-81).

From Oswestry-score for back-pain-disability, 85.6% participants reported no disability, and 12% mild-disability; The Keele-Start-Back Tool showed 91.8% participants had mild risk for developing persistent LBP and activity-limitations.

Logistic-regression analysis showed that odds of LBP were 5-times higher among females than males(OR:5.35, 95%CI:1.83–15.62; p=0.002), >2-times higher among participants who did not exercise regularly (OR:2.27, 95%CI:1.05–4.87; p=0.03), and almost 8-times higher among the subjects who had previous history of injury than those who didn't (OR:8.85, 95%CI:1.09–71.68; p=0.04). The participants' sitting and lying-down time and weight was positively associated (p<0.05) with LBP while, increased BMI was inversely associated.

Conclusion: Prevalence of LBP was high among urban young population, although with low disability. Female sex, bodyweight, irregularly exercising, sitting and lying-down time and history of injury were independently associated with LBP. Early detection of LBP and measures to control the associated factors should be promptly addressed to prevent disability in later ages.

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T04A-0782

Community-Based Resilience, Preparedness, and Response through Multi-Sectoral Collaboration in Flood-Prone Border Areas

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Abstract

Background: Flooding poses significant risks to border communities due to limited infrastructure, cross-border movement, and recurring hazards.

Objectives: This study aimed to examine and strengthen community-based resilience, preparedness, and response through multi-sectoral collaboration in flood-prone border areas.

Method: A mixed-methods approach was employed, including surveys of 239 community members and in-depth interviews with twenty key informants, such as local leaders, health officials, and representatives from governmental, private, and foundation sectors. The research was conducted in Mae Sai District, Chiang Rai Province, Thailand.

Results: There are showed that 49.4% of participants had high preparedness levels, whereas 59.1% demonstrated low response levels during flooding situations. Effective flood management was associated with timely communication and warning systems, household-level awareness, evacuation preparedness, and active cross-sectoral and transboundary collaboration. Communities with strong multi-sectoral engagement exhibited higher resilience, improved coordination, and more effective response, while challenges included limited resources, inter-agency communication gaps, and cross-border environmental management issues. Communities with strong multi-sectoral collaboration exhibited higher overall resilience, improved coordination, and more effective response during floods. Challenges included resource limitations and inter-agency communication gaps.

Conclusion: The collaborative strategies to enhance resilience, preparedness, and response in flood-prone border settings.

Keywords: Community Resilience, Preparedness, Response, Multi-Sectoral Collaboration, Flood-Prone Areas

5.Health Policy & Systems

O-T05A-0085

Validity and Reliability of Tsunami Evacuation Simulation Using Physical Function Assessment

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Abstract

In the Great East Japan Earthquake, the percentage of tsunami casualties among people requiring evacuation support was high. As a result, each municipality was obliged to prepare individual evacuation plans. However, in Okinawa Prefecture, individual evacuation plans have not been developed. We reported the feasibility and effectiveness of vertical evacuation against tsunami for patients with chronic respiratory diseases living in the expected tsunami inundation zone in Okinawa Prefecture (Hoshino et al., 2024). However, some patients were assumed to be difficult to evacuate due to the early arrival time of the tsunami and their extremely low physical function. Among these persons, eight who gave consent were selected as participants, and an evacuation simulation that was considered most likely to be survivable was created using the physical function assessment. The methodology for creating the evacuation simulations will be explained at the time of the presentation. The evacuation methods selected were temporary evacuation outside the flood zone, evacuation with assistance, vehicle evacuation, and vertical evacuation, each with two participants. To validate the evacuation simulation, participants were asked to conduct an evacuation drill and the evacuation times were compared. As a result, all participants were able to reach the evacuation site within the expected tsunami arrival time, and the evacuation time in the simulation was very similar to that in the evacuation drill. The results of this study indicate that the simulation-based evacuation plan using physical function assessment has a certain validity and reliability. However, the number of participants in this study was only 8, and the simulation was conducted only for daytime evacuation, it is necessary to increase the number of case and validate the study under various situations in the future.

O-T05B-0087

Working together to deliver person-centred care within the stepped care model: an Australian multidisciplinary perspective

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Abstract

The relatively new Australian stepped care model (SCM) in primary mental health care aims to provide a structured, accessible, and flexible framework for addressing mental health issues. This study examines the perspectives of multidisciplinary mental health professionals on the implementation and effectiveness of the SCM, forming a subset of a broader research project.

An exploratory descriptive qualitative methodology was utilised, involving interviews with nine participants, including mental health nurses, psychiatrists, an occupational therapist, a psychologist, a social worker, and a care coordinator. Data were analysed using reflective thematic analysis, identifying four key themes: collaborative approach, flexible and personalised care, complexities of navigating the model, and stories of success: positive client outcomes.

The findings reveal that the multidisciplinary nature of the SCM supports a holistic approach to mental healthcare, providing comprehensive and patient-centred support. Flexibility and personalisation within the SCM allow it to address diverse patient needs effectively, leading to enhanced outcomes and satisfaction. However, workforce shortages and systemic barriers pose significant challenges to its implementation. Participants noted that navigating the SCM is complex, highlighting the need for improved coordination and more precise guidelines to facilitate smoother transitions between care levels. Despite these challenges, the SCM has successfully improved mental health outcomes.

In conclusion, the SCM is a promising approach to primary mental health care, focusing on tailored, multidisciplinary care. Addressing workforce shortages, improving coordination, and refining service delivery is essential to maximise its potential and ensure sustainable mental health services in Australia. Future research with larger sample sizes and quantitative data is recommended to further evaluate the SCM's effectiveness and guide policy and practice improvements.

Keywords: stepped care model, primary mental health care, multidisciplinary collaboration, mental health workforce, mental health consumer, mental health services

O-T05A-0108

Aid Disbursement for Maternal and Reproductive Health Programs and its effects on Maternal Mortality Ratio: A Secondary Data Analysis

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Abstract

Whether health aid positively affects health outcomes is controversial and there is no literature on targeted aid on maternal health outcomes in terms of vertical programs and health system strengthening programs.

We obtained data on maternal mortality ratio (MMR) and aid disbursement for maternal and reproductive health programs from the World Health Organization and the Institute for Health Metrics and Evaluation respectively. A total of 118 countries were analysed from 1990-2020. Lagged MMR was analysed using 2-way fixed effects linear regression and First Differenced MMR using general linear regression with robust standard errors. Aid was categorized into vertical Maternal Health programs and Health Systems Strengthening (HSS), and calculated by aid per capita of reproductive age female population.

Analysis shows that a doubling in total aid per capita for maternal health decreases MMR by 0.48% ($p<0.001$) in the first year and effect wanes to no significance in the fifth year ($p=0.127$). For First Differenced MMR, doubling of total aid increases drop in MMR by 0.32 ($p=0.003$) for the next year and the effect lasts and maximizes at 5 years (0.89, $p<0.001$). When subcategorized into vertical maternal health and HSS, doubling of aid in vertical Maternal Health programs significantly decreases lagged MMR by 0.42% ($p<0.001$) in the first year and loses its significance in the fifth year ($p=0.149$). However, doubling of aid in HSS increases drop in MMR by 0.47 ($p<0.001$) starting in the second year and effect maximises over the next 5 years (1.23, $p<0.001$).

Targeted aid for maternal health programs decreases maternal mortality. Aid in vertical maternal health programs show immediate but less sustainable benefits whereas aid in HSS programs show slower but longer lasting benefits. Donors should invest resources to target HSS in maternal and reproductive health programs in order to maximize the impact for reducing maternal mortality.

Keywords: maternal mortality, foreign aid, maternal health, reproductive health, health systems strengthening

O-T05C-0140

A Symbiotic Model for Transforming Public Healthcare in New Zealand

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Abstract

Given the poor state of public healthcare in New Zealand, this study challenges researchers and practitioners to expand their conceptual repertoire beyond mere cost-cutting and piecemeal improvements to consider potentially transformative business models. It invites stakeholders to consider how they ascribe meaning to behaviour, events, and environments when participating in every aspect of healthcare provision.

A qualitative Delphi study garnered expert opinion on the ideal healthcare system for New Zealand, which senior District Health Board interviewees confirmed should involve equitable access, patient-centred care, service integration, and shared resources. To deliver this ideal, traditional pipeline model elements and an emergent platform ecosystem were merged, creating a symbiotic, hybrid healthcare concept in which the pipeline's efficient methodical processes and the platform's flexible facilitation of patient/provider engagements combine to offer a context-specific approach to healthcare provision, superior value-based outcomes and fair distribution of resources. Model validation extended to consideration of a comprehensive implementation roadmap that emerged from the main mechanisms and stakeholder behaviours required to transform today's healthcare system.

As the healthcare landscape evolves, embracing dynamic and inclusive approaches that prioritise patients and harness the potential of technological advancements is crucial. By inviting practitioners to reflect on their participation in healthcare provision, this study contributes to the ongoing discourse on healthcare delivery models. It provides valuable insights for researchers, policymakers, and practitioners navigating the complex world of contemporary healthcare. Specifically, for researchers, future studies could empirically test the proposed symbiotic model's efficacy across different healthcare settings and patient cohorts. For policymakers, the findings highlight key areas for strategic investment and policy reform to foster integrated, patient-centric healthcare systems and ensure equitable resource distribution.

O-T05A-0147

Feasibility Study for the Infrastructure Expansion of Ho Teaching Hospital in the Volta Region of Ghana

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Abstract

Background: In Ghana, Teaching hospitals are mandated to provide advanced clinical care, medical education and research. They are also expected to support lower-level facilities by conducting outreach and mentor services to these lower-level facilities. Ghana, as of 2024, has six public Teaching Hospitals, most of which have a significant infrastructure deficit, hindering their ability to provide the advanced level of care mandated by law. Before the upgrade to a Teaching Hospital in 2019, Ho Teaching Hospital was a secondary-level facility, lacking the basic infrastructure and equipment necessary to deliver services comparable to those of a larger Teaching Hospital. Consequently, the need arose to seek funding to improve the infrastructure. A proposal was approved by the EDCF, resulting in the award of a contract to conduct a feasibility study for the expansion of the Ho Teaching Hospital Infrastructure.

Objective: This study assessed the feasibility of expanding Ho Teaching Hospital infrastructure, including medical equipment and Health Information Systems, to enhance service delivery, improve patient outcomes, meet academic obligations and conduct research.

Methods: A cross-sectional study design and mixed-methods approach were adopted, combining spatial audits, service utilisation analysis, key informant interviews, and financial modelling. Regulatory, technical, and environmental factors were also evaluated.

Results: The findings indicated a significant deficit in infrastructure for service delivery, medical and educational equipment, Health Information systems, and research. Key benefits estimated to be achieved by implementing this project include a reduction in mortality rates, increased access to specialist services, decreased transportation and travel costs, and reduced travel time for services in other parts of the country, as well as increased economic activity around the hospital. Stakeholders (Regional Minister, Chiefs, Politicians, opinion leaders, community members, etc) feedback revealed strong support for the expansion. Financial analysis revealed that the investment in expanding the Ho Teaching Hospital Infrastructure could be supported through the EDCF and the Government of Ghana's collaboration.

Conclusion: Infrastructure expansion is feasible and essential. Strategic implementation, coupled with robust governance and funding mechanisms, will be critical to success.

Keywords: Infrastructure Expansion, Teaching Hospital, Feasibility Study, Healthcare Facilities, Health Sector Planning.

O-T05B-0163

Bridging the Gap: Predictors of Nurse Perceptions of Patient Handoffs in Malaysian Tertiary Care

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Abstract

Background: Effective patient handoffs are critical for ensuring continuity of care and patient safety. However, communication breakdowns during transitions remain a leading cause of medical errors. This study examined nurses' perceptions of patient handoffs and identified predictors of these perceptions in tertiary care hospitals in Kelantan, Malaysia.

Methods: A cross-sectional survey was conducted among 418 nurses using the validated Hospital Patient Handoff Questionnaire. Stratified proportionate random sampling ensured departmental representation. Data were analysed using multiple linear regression to identify predictors of perception scores.

Results: Overall, nurses reported positive perceptions of handoffs (mean score 3.53 on a 5-point scale). The highest domain scores were in management goals and role understanding, while responsibility transfer scored lowest. Multiple regression analysis revealed that receiving formal in-service training (β=0.089, p=0.016) and being satisfied with the current handoff process (β=0.330, p<0.001) were significant positive predictors of perception. Conversely, nurses in the paediatric department reported significantly lower perception scores (β=−0.124, p<0.001).

Conclusions: While handoffs were generally viewed positively, gaps remain in role clarity and information transfer. Formal training and staff satisfaction emerged as key levers for improving handoff quality, whereas challenges in paediatric settings highlight the need for tailored strategies. These findings underscore the importance of structured training, clear guidelines, and department-specific interventions to enhance patient safety through better handoff practices.

Keywords: patient handoff, nurse perceptions, training, patient safety, Malaysia

O-T05D-0165

Universal Coverage, Unequal Protection: Disparities in Diabetes Care Among Indonesia's Aging Population Under National Health Insurance in 2015-2023

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Abstract

Background Indonesia achieved near-universal health coverage (98.25%) through its National Health Insurance (JKN) system under BPJS Kesehatan since 2014. However, healthcare effectiveness remains suboptimal, with persistently high mortality from infectious and non-communicable diseases. Catastrophic diseases—cardiovascular disease, stroke, and kidney failure—dominate BPJS expenditures, with type 2 diabetes mellitus (T2DM) being a leading risk factor. As Indonesia's aging population grows (12% in 2024), this group faces heightened vulnerability to T2DM and its complications. This study examines disparities in healthcare utilization among elderly T2DM patients under BPJS in 2015-2023.

Method Data sample were obtained from stratified sampling of BPJS members nationwide, we analyzed claims data from primary (FKTP) and referral (FKRTL) facilities. Outcomes included referral rates, visit frequency, costs, comorbidities (hypertension, coronary artery disease, cerebrovascular disease), and mortality, stratified by age, and insurance class using logistic and multilinear regression.

Results Elderly patients (age≥60) in primary care (FKTP) experienced fewer referrals, particularly those enrolled in subsidized groups (PBI) and lowest-tier coverage (BPJS Class III), despite making more frequent outpatient visits than non-elderly patients. Cost patterns showed diverging trends: while elderly patients incurred lower primary care expenses, at referral facilities, elderly and lowest-tier coverage patients generated higher costs and demonstrated elevated mortality risks. Comorbidity analysis further revealed that elderly diabetics carried disproportionately high rates of hypertension (64.2%), coronary artery disease (38.7%), and cerebrovascular disease (22.4%) compared to younger cohorts.

Conclusion Despite universal coverage, significant disparities persist in diabetes care for Indonesia's aging population, particularly among subsidized (PBI) and lower-tier (Class III) enrollees. Inequities in referrals, cost burdens, and mortality highlight systemic gaps in protecting high-risk groups, including preventive and integrated care for aging populations. Policy reforms should prioritize equitable access to specialized care and financial protection for elderly and low-income diabetics to align JKN's outcomes with its universal goals.

Keywords: universal health coverage, diabetes mellitus, Indonesia

O-T05D-0168

From Laboratory to Community: Taiwan's Regional Hospital Sustainable Laboratory Development for Health Systems and Green Healthcare

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Abstract

Background: Health systems contribute significantly to climate change, with medical laboratories producing considerable environmental impacts due to their energy demands, reagent use, and the generation of biomedical waste. Sustainable laboratory practices are crucial for supporting resilient health systems and promoting environmental stewardship. This study illustrates a Taiwanese tertiary hospital laboratory's multi-dimensional approach to sustainability, aligned with the United Nations Sustainable Development Goals (SDGs).

Method: In 2023, a comprehensive green laboratory initiative was launched focusing on process optimisation, automation, and digitalisation. Key strategies included AI-assisted data analytics, reduction of reagents and consumables, implementation of energy-efficient equipment, and transition to paperless reporting. The program also introduced community outreach components, such as home-based testing for the elderly and rural populations. Data on environmental metrics and service accessibility were collected to evaluate outcomes.

Results: The laboratory achieved a 15% reduction in reagent and consumable use and a 10% improvement in energy efficiency, translating into an annual decrease of 12 metric tons of CO_2 emissions and 1.5 tons of plastic waste. The paperless reporting rate reached 85%. Home-based testing services increased coverage for elderly and rural patients by 30%, enhancing health equity. Compared to U.S. laboratories, the Taiwanese model achieved 20% greater effectiveness in reducing plastic waste, underscoring its global relevance.

Conclusion: Sustainable laboratory development strengthens health systems by simultaneously advancing environmental protection and public health outcomes. The Taiwanese experience demonstrates a scalable model for laboratories across the Asia-Pacific region to contribute to SDGs 3 (Good Health), 10 (Reduced Inequalities), 12 (Responsible Consumption), and 13 (Climate Action).

Keywords: Sustainable healthcare, health systems, medical laboratory, public health, SDGs

O-T05B-0202

Acceptance of personal health record for community-based dementia care among community nurses

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Abstract

Digital health is currently focused of much attention in the worldwide which may improve health for all. It also can improve QOL of people with dementia and their family carers. However, adaptation and usage of digital health have several challenges including digital health literacy and data privacy and security both among service providers and users. The study aimed to identify the relation between digital health literacy and acceptance of personal health record (PHR) use for dementia among community health nurses.

A structured questionnaire was administrated to community-based integrated support centres in Japan. Among 660 centres, 131 participants responded. Digital health literacy was assessed using Japanese version of digital health literacy instrument (21 items) and adaptation of PHR was assessed 16 questions based on the unified technology acceptance model and use of technology. The answers were 5-point scale and higher scores means higher acceptance. Multiple linear regression model was applied to identify the association between digital health literacy and PHR acceptance.

Majority of the participants were female and nearly 40% of them were age 40's. Although 40% of participants answered PHR was useful tool for promoting self-care and quality of dementia care, nearly 80% of the participants believed that using and learning PHR are difficult for older persons. Multiple linear regression model showed that there was no association between acceptance of PHR use and digital health literacy.

The study explored that digital health literacy was neither facilitator nor barrier to adopt digital tool for dementia care among community health nurses. The further study is required to explore promoting factors of digital tool for community-based dementia care.

Keywords: digital health literacy, mild cognitive impairment, personal health record

O-T05A-0203

Understanding How Faculty Development Shapes Clinical Teachers' ACGME Competency Outcomes: A Realist Evaluation for Health System Strengthening

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Abstract

Background: Faculty Development (FD) programs are central to improving teaching performance in competency-based medical education. As a key component of health workforce capacity-building, FD also contributes to health system strengthening by enhancing the instructional quality of clinical educators.

Methods: This study followed Pawson's realist evaluation approach. Phase 1 (Step 1) involved a realist synthesis to develop initial Context–Mechanism–Outcome (CMO) propositions, which informed the interview guide for Phase 2. In Phase 2 (Steps 2–4), we conducted one-on-one, in-depth interviews with eight clinical teachers who had participated in an FD workshop. Participants' teaching and clinical experience ranged from under 5 years to over 20 years. Transcripts were coded in ATLAS.ti 25.0, Contexts, Mechanisms, and Outcomes were identified through close reading and ensuring that all three CMO aspects were coded together where possible. Co-occurrence analysis was used to generate Context–Mechanism smart codes, which were then cross-analyzed with Outcome codes to form refined CMO configurations. Each configuration was mapped to ACGME core competencies and categorized as either supporting or inhibiting teaching development.

Results: Six refined CMO configurations were identified. Most supported ACGME-aligned outcomes, including communication growth through mentorship (Interpersonal and Communication Skills), instructional adaptation through structured curriculum (Practice-Based Learning and Improvement), and improved learning through real-case teaching (Medical Knowledge and Patient Care). One inhibiting CMO revealed that heavy workload without protected time led to emotional strain and reduced teaching motivation (Professionalism, PBLI). System-based instruction supported pragmatic reasoning (Systems-Based Practice), while peer culture promoted reflective teaching and trust.

Conclusion: FD programs enhance competency-based teaching when enabling contexts such as mentorship, peer support, and feedback are present. Without institutional support, their impact may be limited. Alignment with broader health system goals is recommended.

Keywords: Faculty development, Realist evaluation, ACGME core competencies, Medical education, Health system strengthening, Context–Mechanism–Outcome

O-T05A-0211

Pediatric emergency medical services mortality patterns and system performance in Thailand: a nationwide analysis

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Abstract

Background: Pediatric emergency medical services (EMS) require specialized approaches due to children's unique physiological vulnerabilities and time-sensitive emergency conditions. Comprehensive national data on pediatric EMS mortality patterns and system performance are limited. These gaps are crucially important for developing appropriate strategies to improve interventions in this vulnerable population.

Methods: A three-year period pediatric emergency cases (0–18 years) dataset from the Thai Emergency Medical Information System (ITEMS) database was used for this retrospective study. Several metrics were evaluated, including demographics, response times, triage precision, and deaths. Mortality risk factors were identified using multivariable logistic regression analysis.

Results: More than 600,000 pediatric emergency cases were analyzed, with an overall mortality of about 2.0 per 100,000 population. The most common reason for an emergency visits as well as for death was motor vehicle accidents. Key mortality risk factors included age group (neonates were at greatest risk), certain high-mortality conditions (cardiac arrest, drowning, burns), slow response times, and geographic differences. Fewer than 40% of critical cases achieved target response times, and system performance analysis revealed under-triage in over 10,000 cases.

Conclusions: This comprehensive national analysis highlights the areas in need for policy, protocol, and procedure changes which can lead to improved outcomes for pediatric patients in Thailand. The data also highlights the need to prioritize motor vehicle accidents due to its alarming position in pediatric emergency mortality. Focused improvements are needed to response times, dispatcher education to reduce under-triage, creation of age appropriate protocols for high-risk conditions, and neonatal emergencies which are often overlooked.

Keywords: Pediatric emergency medical services, mortality, system performance, Thailand, response times, triage precision

56th APACPH2025
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The Asia Pacific Academic Consortium for Public Health Conference

O-T05D-0231

Hospital Cost Reduction Strategies: A Systematic Review of Models, Methods, and Contextual Effectiveness

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Abstract

Background: Hospitals face significant pressure to reduce operating costs without compromising service quality. Various models and methods have been developed to improve efficiency, but evidence is scattered and has not been comprehensively synthesized. Objective: This study aims to identify, evaluate, and synthesize models and methods used in efforts to reduce hospital operational costs, as well as assess the effectiveness, context of application, and strengths of each approach.

Method: A systematic review was conducted based on the PRISMA 2020 guidelines. Literature search was conducted in five databases (PubMed, Cochrane Library, ScienceDirect, Wiley Online Library, and ProQuest) up to 2024, using a combination of keywords related to cost efficiency, management models, and hospital operations. Study selection was conducted independently by two reviewers, and quality assessment was performed using tools appropriate to each study's design (RoB 2.0, ROBINS-I, JBI, and CASP). Data were analyzed using thematic narrative analysis.

Results: Out of 2,347 articles identified, 27 studies met the inclusion criteria. Five main themes of interventions were identified: (1) Lean and Lean Six Sigma (n=13), (2) Value-based and outcome-based financing (n=5), (3) data-driven management and information technology (n=4), (4) operational-clinical structural changes (n=3), and (5) simulation or cost-efficiency modeling (n=2). Most studies reported improvements in process efficiency and reductions in operational costs, although heterogeneity in context and methods limited generalizability. Quality assessments indicated that most studies had high methodological quality, with low to moderate risk of bias.

Conclusion: No single approach is superior, but Lean-based, information technology, and value-based financing models demonstrate consistent effectiveness in improving hospital efficiency. Data-driven, multimodal, and contextual strategies are strongly recommended for hospitals and policymakers in designing sustainable cost efficiency interventions.

Keywords: hospital operational costs, efficiency, *lean healthcare*, *value-based care*, hospital management

O-T05B-0236

Impact of District-Level Comprehensive Tobacco Control on Youth Smoking in Indonesia: A Synthetic Control Study

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Abstract

Objectives: To evaluate the impact of a comprehensive district-level tobacco control initiative on youth and adult smoking prevalence in Indonesia, a country with limited national implementation.

Design and setting: We used a quasi-experimental synthetic control method with panel data from 497 Indonesian districts spanning 2013 to 2023. The treated unit was Bogor City, which implemented local tobacco control measures starting in 2014. Smoking prevalence data were obtained from the Riskesdas surveys (2013, 2018, 2023), which are nationally representative and stratified at the district level. Baseline covariates—drawn from the World Bank database— included indicators of socioeconomic status, educational attainment, and healthcare infrastructure. Robustness checks, including placebo tests, were conducted to assess the sensitivity of the findings and evaluate whether the estimated treatment effect for Bogor City could be attributed to chance.

Participants: The analysis primarily examined district-level smoking prevalence among male adolescents (current and ever smokers), with adult men (current and ever smokers) analyzed as a secondary outcome. Baseline characteristics from 2013 were used to construct comparable synthetic controls for each outcome group.

Results: Compared to synthetic controls, Bogor City experienced substantial reductions in smoking prevalence among adolescent boys: −14.7 percentage points for current smokers (−43.4% relative reduction) and −12.3 points for ever smokers (−34.5% relative). These gaps widened over time, suggesting sustained policy impact. Among adult men, the effect was more modest: ever smokers declined by −3.2 points (−3.9% relative), while current smoker prevalence remained higher in the treated unit by +11.3 points (+19.5% relative), potentially indicating limited responsiveness among habitual smokers.

Conclusion: District-level comprehensive tobacco control was associated with marked reductions in youth smoking in Indonesia, even in the absence of strong national enforcement. This study highlights the potential of subnational TC policies to protect adolescents and suggests the need to scale up similar efforts nationwide.

Keywords: tobacco control; smoking; adolescents; synthetic control; Indonesia; health disparities; policy evaluation; district-level analysis

O-T05A-0244

Association between quality of life and self stigma in patients with epilepsy in Colombo, Sri Lanka

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Abstract

Background: Epilepsy is the second most burdensome neurological condition globally. Patients with epilepsy (PwE) experience a poorer quality of life (QoL) compared to the general public. Although studies worldwide have looked at the QoL in epilepsy, the literature on self stigma in epilepsy and studies in the Sri Lankan context remain scarce. This study aims to describe the association between QoL and self stigma in PwE.

Method: A cross sectional study was conducted among 120 PwE attending epilepsy clinics at two tertiary level hospitals in Colombo, Sri Lanka – National Hospital of Sri Lanka and Colombo South Teaching Hospital during May to October 2024, using consecutive sampling. QoL was assessed using the interviewer administered Quality of Life in Epilepsy-10 (QOLIE-10) questionnaire and self stigma by the Epilepsy Self Stigma Scale (ESSS). A higher score on the QOLIE-10 corresponds to a poorer QoL, while a higher score on the ESSS implies higher levels of self stigma. The association was assessed using the Spearman correlation test.

Results: The sample had an equal distribution of males and females (50%), with a mean age of 46.9 years (SD=14.5). Most respondents were educated up to ordinary levels (46.7%) and most were currently unemployed (30.8%). Shapiro-Wilk test for normalcy revealed that both parameters were not normally distributed. The median score for QOLIE 10 (range: 10-51) was 22 (IQR=10) and median score for the ESSS (range: 8-32) was 16 (IQR=8). The Spearman for correlation between QoL and self stigma was 0.365 ($p<0.01$), indicating that a higher level of self stigma was associated with a poorer QoL.

Conclusions: As self stigma and QoL are linked, interventions to improve the QoL of PwE should focus on combatting self stigma, with screening programmes instated in the clinics to identify those with poor self stigma and QoL.

Keywords: epilepsy, quality of life, self stigma

O-T05A-0246

Sociodemographic Factors Influencing Informal Workers' Participation in Indonesia's Employment Social Security Program: A Case Study in Makassar, Indonesia

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Abstract

BPJS Ketenagakerjaan is a statutory body that provides social security coverage for all workers, including those in the informal sector. In Makassar City, out of a total of 253,585 informal workers, only 66,883 individuals—or approximately 26.37%—have enrolled in the Non-Wage Recipient Worker (BPU) program and received employment social security protection. This study aims to examine the sociodemographic factors associated with the participation of informal workers in the *BPJS Ketenagakerjaan* program in Makassar City.

A cross-sectional study with a quantitative approach was conducted involving 270 respondents selected through accidental sampling. Data were collected using structured questionnaires and analyzed using chi-square tests and logistic regression.

Only 14.8% of the informal workers were enrolled in *BPJS Ketenagakerjaan*. Variables such as attitude (p=0.561), gender (p=0.343), number of dependents (p=0.859), accessibility (p=0.877), and perceived benefits (p=0.766) were not significantly associated with participation. In contrast, age (p=0.029), education (p=0.003), knowledge (p=0.031), and income (p<0.001) were found to have significant associations. Multivariate analysis revealed that education (p=0.020) and income (p<0.001) were the most influential predictors.

Participation in *BPJS Ketenagakerjaan* among informal workers is significantly influenced by age, education, knowledge, and income, with education and income being the most dominant factors. It is recommended that educational outreach and regular socialization efforts be strengthened through collaboration with community organizations and local authorities. Moreover, flexible contribution schemes and the use of accessible information channels such as visual and social media are essential to enhance participation.

O-T05C-0248

Cost-Effectiveness Analysis of Universal Maternal Pertussis Immunization

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Abstract

Pertussis remains a significant health risk for infants in Sabah, Malaysia, where maternal TDaP (Tetanus-diphtheria-acellular pertussis) immunisation is not yet part of the national program. This study assessed the cost-effectiveness of implementing a universal maternal TDaP vaccination program compared to the current ATT strategy. Using a retrospective cohort based on the 2018 birth cohort, the analysis estimated healthcare costs and health outcomes. The maternal TDaP program would require an additional RM5.94 million but is projected to prevent 59 infant pertussis cases, avert 7 deaths, and save 520.1 life years. The incremental cost-effectiveness ratio (ICER) was RM11,417.81 per life year saved, well below Malaysia's cost-effectiveness threshold of RM44,708 (1x GDP per capita). These findings strongly support the introduction of universal maternal TDaP immunisation in Sabah as a cost-effective strategy to reduce infant morbidity and mortality due to pertussis.

Keywords: Maternal immunisation, TDaP vaccine, Pertussis, Cost-effectiveness analysis

O-T05B-0282

Bridging the Hearing Health Gap: A Policy Approach to Strengthen Collaborative Networks for Newborn Hearing Screening and Rehabilitation in Thailand

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Abstract

Early detection of hearing impairment and inventions for newborn and young children are covered by the Universal Health Coverage (UHC) scheme, tax-based public health insurance, free of charge since 2022. However, access to the complete service pathway, which involves screening, re-screening, diagnosis, treatment, and rehabilitation, remains challenging.

This study examined Thailand's universal newborn hearing screening and rehabilitation policy implementation and tracked the policy-to-practice pathway across six service units, consisting of three hospitals affiliated with the Ministry of Public Health and three medical schools. Using the Effective Coverage framework, the Value-Based Health Care framework, and focus group discussions, the study identified key system gaps throughout the patient journey—from initial screening and diagnosis to timely treatment and rehabilitation. Significant barriers included a shortage of skilled personnel, limited availability of screening equipment, uncoordinated referral systems for timely diagnosis, and inadequate long-term rehabilitation support.

Notably, the findings highlighted the need for stronger multi-sectoral collaboration. Stakeholder participation, including healthcare providers, educators, local authorities, and families, was pivotal in ensuring continuity of care for children with hearing loss. Based on these insights, four key policy strategies were proposed: (1) workforce development among nurses and teachers, (2) redesigning service systems to streamline referral processes, (3) establishing integrated data systems and monitoring indicators, and (4) promoting research and development in tele-audiology to expand service reach.

This collaborative and equity-driven approach underscores the importance of strengthening health systems that enable early detection and ensure that every child can complete their journey to hearing, speaking, and thriving.

Keywords: newborn hearing screening, collaborative networks, early detection

O-T05B-0305

Public Attitudes Toward Organ Donation and related practices in Sri Lanka: A Community-Based Study

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Abstract

Background: Sri Lanka faces a mismatch between organ demand and availability. This study examines community attitudes toward organ donation (OD).

Methods: A cross-sectional study was conducted in the Dehiwala MOH area among 144 adults using an interviewer-administered questionnaire assessing attitudes towards OD.

Results: Mean age was 46 years; 47% were male. Reported willingness to be live donors (LD) and deceased donors (DD) was 30.8% (n = 44) and 81.1% (n = 116), respectively.

80% of those willing to be DDs (n=92) were willing to carry an OD card. However, 91% (n=131) did not know of a registration procedure for deceased OD. 71 (50.0%) participants were very comfortable with their next-of-kin making decisions on donating their organs after death, but only 44, (30.6%) felt so about making these decisions on behalf of their own next-of-kin.

66 participants (46.8%) felt that they will be 'very unlikely' to face family opposition for deceased donation, and 22.1% (n=31) for live donation.

55.2% (n=79) believed live donation for money is immoral, but 40.6% (n=58) said it was not immoral to be financially compensated by the government for it. 64.1% (n=91) believed OD is a social responsibility.

83% (n=117) felt they needed more information on OD, 117 (81.8%) that there was a necessity for a public awareness campaign, and 124 (86.7%) that OD should be promoted in the community.

'No awareness regarding procedure of OD' was thought the commonest barrier to OD (n=83, 58%). Most participants supported 'increasing deceased OD' (46.2%, n=66) and 'investing in preventing organ failure' (42.7%, n=61) to reduce the organ shortage.

Conclusions: The study reveals a high baseline willingness for OD and the necessity for public awareness programmes to promote OD.

Keywords: organ donation, attitudes, public perception, Sri Lanka

56th APACPH2025
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The Asia Pacific Academic Consortium for Public Health Conference

O-T05A-0320

Effective Coverage of Maternal and Newborn Health Services in Sub-Saharan Africa: What Distinguishes High from Medium and Low Performers?

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Abstract

Background: Effective coverage (EC) has emerged as a more comprehensive measure of service coverage than crude coverage, as it accounts for both access and quality. Substantial disparities in EC of maternal and newborn health (MNH) services have been observed across and within countries. This study aimed to identify societal and health system factors contributing to variations in EC of MNH services across Sub-Saharan Africa.

Methods: A mixed-method case study design was employed with inclusion of document review. EC rates were estimated using countries demographic and health survey (DHS) datasets. Two countries were selected for each MNH service domain from each performance category, high, medium, and low, as cases. The DHS and health facility survey summary reports and other databases were reviewed for further analysis of factors.

Results: A total of 118,614 reproductive age group women were included. EC of 4^{+}antenatal care (ANC) visits ranged from 7% in Ethiopia to 64% in Liberia; institutional delivery from 9% in Ethiopia and Nigeria to 81% in Rwanda and postnatal care for newborns from 1% in Ethiopia to 68% in South Africa. These discrepancies are largely explained by differences in societal and health system factors. High-performing countries exhibited higher health service availability and readiness. For instance, Ghana and Liberia scored 83% and 84%, respectively, for tracer indicators of ANC service availability, compared to 43% (Ethiopia) and 64% (Malawi). They also demonstrated better position in health system readiness, women's education, media and internet access, and relative political stability.

Conclusions: The study has indicated the critical role of strong health systems, adequate healthcare financing, favourable societal conditions, and political stability in achieving higher EC of MNH services. Therefore, countries with lower EC need to learn from better-performing counterparts to strengthen their MNH service coverage and quality.

Keywords: Effective Coverage; Health Service Delivery; Health Systems; Maternal and Newborn Health; Societal Factors; Sub-Saharan Africa.

O-T05A-0324

Social Reproduction Mechanism Of Drug Abuse And Prevention Strategies

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Abstract

Drug abuse is not merely an individual problem but a social phenomenon that reproduces itself through family, community, and broader structural mechanisms. This reality indicates that drug abuse cannot be explained solely as a matter of health or crime, but rather as a product of social interactions, symbolic constructions, and power relations that perpetuate across generations. This research was conducted in Sidrap Regency, South Sulawesi Province, with a prevalence of drug abuse of around 2.2% and a tendency to transform into a drug producing area. This study aims to analyse the mechanisms of social reproduction of drug abuse by focusing on the factors that sustain its continuity.

This research employed a qualitative method with a case study approach in urban communities characterized by high vulnerability to drug abuse. Data were collected through in-depth interviews, participant observation, and document analysis. Data analysis was conducted using thematic techniques informed by Pierre Bourdieu's theory of social reproduction particularly the concepts of habitus, social capital, and symbolic domination complemented by insights from symbolic interactionism.

The findings reveal three main mechanisms of social reproduction in drug abuse. First, the transmission of permissive family habitus and environments that normalize drug-related behaviour. Second, the binding force of social capital within user networks, where solidarity, security, and economic opportunities are maintained inside the community of users. Third, symbolic normalization through everyday language, rituals of consumption, and group identity, which reinforce drugs as part of a lifestyle. These mechanisms are mutually reinforcing, allowing drug abuse practices to persist despite legal interventions or formal rehabilitation efforts.

Based on these findings, relevant prevention strategies include strengthening family resilience, providing alternative social networks for youth, and deconstructing the symbols and identities that glorify drug use.

Keywords: social reproduction, drug abuse, habitus, social capital, prevention strategies

O-T05A-0337

Policy Implementation Gaps in Fraud Prevention under the National Health Insurance Scheme: A Case Study at RSKD Dadi, Makassar, Indonesia

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Abstract

Background: Fraud in the National Health Insurance (JKN) program under Badan Jaminan Kesehatan Nasional (BPJS) causes financial losses and lowers the quality of healthcare services. This study aims to analyze the gaps in implementing fraud prevention policies at the Regional Special Hospital (RSKD) Dadi in Makassar City based on Ministry of Health Regulation No. 16 of 2019 concerning Prevention and Handling of Fraud as well as the Imposition of Administrative Sanctions in the Implementation of the Health Insurance Program.

Methods: A descriptive qualitative approach with a case study method was used. Data were collected through in-depth interviews with 10 informants and document analysis, then analyzed using content analysis and triangulation techniques.

Results: Findings show that most policies have not been optimally implemented. A dedicated fraud team has not been established, dissemination and training are minimal, monitoring is unstructured, and there are no internal sanctions for fraud perpetrators. Collaboration with BPJS and clinical pathway implementation are ongoing but require adjustments to be more effective.

Conclusion: The study recommends forming a dedicated fraud team, strengthening education and supervision, and developing an integrity culture within the hospital. These findings are expected to serve as a basis for improving fraud prevention strategies in healthcare facilities.

Keywords: JKN (National Health Insurance), fraud, policy implementation, hospital, gaps.

O-T05B-0345

Maternal and Child Health Handbook as a driver to strengthen health systems

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Abstract

Background: Weak health systems have been identified as a key barrier to providing quality health services. The Maternal and Child Health Handbook is a user-held recordbook and health education material to ensure pregnant women, mothers, and children receive quality healthcare. While health outcomes by using the handbook have been investigated, the effect of developing and distributing the handbook on health systems strengthening has been unaddressed. This study aims to identify how the Maternal and Child Health Handbook can contribute to health systems strengthening.

Methods: This study combined key informant interviews with experts who work on the development and distribution of the Maternal and Child Health Handbook and reviews for academic and grey literature in 2025.

Results: The following points were identified as the potential drivers of the Maternal and Child Health Handbook on health systems strengthening: 1) Defining key healthcare services under country ownership and donor coordination, 2) Committing to the provision of key healthcare services, and 3) Integrating the history of health records along the continuum of care. When the handbook is developed, a country needs to review what care should be provided, while many donor-driven, project-based services are not available throughout the country. As pregnant women and mothers receive the handbook as a health education material, they can understand what services were not provided as a blank page without the record of service provisions. In countries without an integrated health information system across health facilities, the handbook is the only source regarding the history of healthcare service receipts from different health facilities and health status records along the continuum of care.

Conclusions: The Maternal and Child Health Handbook can highlight if key health services are clearly identified, informed, implemented, and recorded. Countries can take advantage of the opportunity to develop and distribute the handbook for health systems strengthening.

O-T05A-0349

Predictors of Nursing Students' Intention towards Medical Cannabis Legalization in Vietnam

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Abstract

Background: Research on the use of medical cannabis as a potential treatment option has increasingly been done. However, the legalization of medical cannabis has not been approved in Vietnam. Currently, laws pertaining to medical cannabis are changing quickly in the world, and more countries have authorized it. Thus, the purpose of this study was to determine predictors of nursing students' the intention towards medical cannabis legalization in Vietnam.

Methods: Four hundred twenty two nursing students participated in a cross-sectional survey in Vietnam. Data were collected from 1st May to 29 th July 2024. Data analysis was performed using SPSS software version 20.0 with Chi-square tests for screening to select significantly associated factors before executing multinomial logistic regression to identify predictors of the intention towards medical cannabis legalization among Vietnamese nusing students.

Results: The overall acceptance, hesitancy, and refusal rates on medical cannabis use in healthcare settings were 32.7% , 56.2% and 11.1%, respectively. Multinomial logistic regression revealed eight significant predictors, which aligned with the Theory of Planned Behavior framework. Acceptance was significantly associated with ethical comfort in recommending medical cannabis if legal and evidence-based (AOR = 2.87, $p < 0.05$), belief that cannabis improves quality of life for terminally ill patients (AOR = 3.87, $p < 0.01$), perceived safety of cannabis in healthcare (AOR = 2.76, $p < 0.05$), and belief in the feasibility of future state approval (AOR = 4.20, $p < 0.01$). Hesitancy was predicted by endorsement of the need for formal training before recommending cannabis (AOR = 2.33, $p < 0.05$), reduced concern about youth recreational misuse (AOR = 1.86, $p < 0.05$), belief that cannabis could replace certain traditional medications (AOR = 1.99, $p < 0.05$), and perceived feasibility of state approval (AOR = 3.17, $p < 0.01$).

Conclusion: This study demonstrates that Vietnamese nursing students' intention toward medical cannabis legalization is shaped by a combination of attitudinal beliefs, perceived behavioral control, moral norms, and policy feasibility. Mapping predictors onto the Theory of Planned Behavior shows that attitudes and policy feasibility were the strongest drivers of acceptance, while hesitancy reflected professional preparedness and moderated risk concerns. These findings suggest that educational interventions addressing training needs and clarifying risks, coupled with transparent policy communication, may reduce refusal and strengthen informed acceptance among future healthcare professionals.

Keywords: Legalization**,** Medical cannabis, Nursing students, Vietnam,

O-T05B-0350

How Educational Inequality Among Rural Residents Relates to Healthy Lifestyle Behaviors in Later Life: Evidence from the Northern China Lifestyle Medicine Cohort Baseline

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Abstract

Background: Educational inequality affects health, but its link to healthy lifestyles in rural older adults in low-resource settings is underexplored. This study aimed to evaluate educational attainment and healthy lifestyles in rural Chinese adults aged 65 and older, analyze the association with Healthy Lifestyle Score (HLS), and explore variations across lifestyle behaviors.

Method: We used baseline data from the Northern China Lifestyle Medicine Cohort (July 2023-January 2024) in Ningjin (Shandong), Jia County (Henan), Delingha (Qinghai), and Linkou (Heilongjiang). Adults aged 65 and older with hypertension or diabetes in the National Basic Public Health Service program were included. Data on sociodemographics, health behaviors, and health status were collected via interviews and verified by physical exams. A composite HLS (range: 0-7) was based on seven lifestyle indicators. Linear and logistic regression assessed associations between education and HLS or specific behaviors. Propensity score matching (PSM) estimated adjusted HLS differences between illiterate and non-illiterate participants.

Results: Among 10,459 adults (57.2% female), 34.0% were illiterate. Mean HLS was 4.69 (SD=1.24). Each educational attainment increase added 0.17 points to HLS (95% CI: 0.14-0.20). Higher education was linked to healthy diet (OR=1.15), sleep (OR=1.17), physical activity (OR=1.18), and leisure activity (OR=1.34), but negatively with non-drinking (OR=0.82). PSM indicated that illiterate participants had lower HLS (4.59, 95% CI: 4.55-4.63) than non-illiterate participants (4.89, 95% CI: 4.84-4.93), with a net difference of 0.30 points.

Conclusion: These findings indicate educational attainment among rural Chinese older adults is low, with moderate engagement in healthy lifestyle behaviors. Higher educational attainment is associated with healthier lifestyle choices, suggesting that strengthening rural education through targeted policies and increased investment can play a key role in improving population health and advancing the long-term goal of healthy aging.

Keywords: Educational inequality; Healthy Lifestyles; Older adults; Rural China.

O-T05A-0367

Service Quality and Spirituality in Improving the Health-Related Quality of Life of Hemodialysis Patients: A Systematic Review

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Abstract

Patients undergoing hemodialysis face significant physical, psychological, and social challenges, which reduce their health-related quality of life (HRQoL). The quality of service in healthcare delivery and patient spirituality is increasingly recognized as an important determinant of well-being. However, to date, no systematic review has comprehensively synthesized evidence on how these two dimensions affect HRQoL in hemodialysis patients. This systematic review aims to evaluate the role of service quality and spirituality in improving HRQoL among patients undergoing hemodialysis. This study followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. A comprehensive literature search was conducted through PubMed, ScienceDirect, Cochrane Library, ProQuest, and CINAHL for studies published up to June 2025. Inclusion criteria were quantitative observational studies on adult patients undergoing hemodialysis that assessed service quality or spirituality using standardized and validated instruments, with HRQoL as the primary outcome. Data extraction and study quality assessment were performed independently by two researchers using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Analytical Cross-Sectional Studies. Narrative synthesis was conducted due to heterogeneity in instruments and study outcomes. Sixteen studies met the inclusion criteria, covering various settings in the Middle East, Asia, Europe, and the Americas. Studies on service quality (n=4) consistently showed that gaps in responsiveness, empathy, and reliability negatively impacted patients' perception of their health, whereas patient-centered communication and responsiveness improved satisfaction and HRQoL. Studies on spirituality (n=12) demonstrated a strong positive association between spiritual well-being and HRQoL, with domains such as life meaning, peace, and faith contributing to enhanced psychological resilience, coping capacity, and life satisfaction. Conversely, negative spiritual coping strategies were associated with poorer outcomes. Methodological quality ranged from low to moderate, with primary limitations being cross-sectional designs and minimal control for confounding factors. Both service quality and spirituality are important and complementary factors influencing HRQoL in hemodialysis patients. Service quality strengthens the external care environment, while spirituality enhances internal coping and psychological resilience.

Keywords: Hemodialysis; Service Quality; Spirituality; Health-Related Quality of Life; Patient-Centered Care

O-T05C-0402

Transforming Diabetes Care in the Pacific: The Impact of a National Outreach Program and a Locally Developed Risk Score for Poor Glycemic Control in the Marshall Islands

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Abstract

In the Marshall Islands, diabetes prevalence was officially 25.7%, but a 2023 church screening found 48.5% with diabetic-range HbA1c, nearly double the reported rate, revealing a major gap between official statistics and community reality. In response, the Clinic Without Walls (CWW) program began offering free, walk-in non-communicable disease (NCD) care and screening in outlying communities in April 2024 to expand access.

This study aimed to (1) identify undiagnosed diabetes and assess glycemic control in the Marshall Islands, while evaluating the impact of CWW, and (2) develop a simple, locally applicable risk score to identify patients at highest risk of poor glycemic control.

From 4,351 outpatient visits (2010–2025), diabetes was detected in 76.1% of patients seeking NCD care or screening. After CWW implementation, NCD case detection rates increased significantly: diabetes from 73.4% to 90.4%, hypertension from 59.2% to 79.8%, and hyperlipidemia from 60.0% to 90.8% (all $p < 0.001$). Despite improved detection, 91.5% of cases failed to meet HbA1c targets, with 50.6% having HbA1c > 10%. We developed a risk scoring system based on age and comorbidities to identify independent factors of poor glycemic control. Younger and less comorbid patients had higher risk, with elevated odds in those <40 years (OR 2.04), 40–65 years (OR 2.63), and those without hypertension (OR 1.64), cardiovascular disease (OR 1.32), or kidney disease (OR 1.73). The score showed good discrimination (AUC 0.701) and, when validated in a community clinic, classified 80% of 55 patients as high risk with 84% sensitivity, 60% specificity, 95% positive predictive value, and 82% accuracy.

In conclusion, the Marshall Islands' experience demonstrated how targeted policy and predictive analytics can improve NCD care. These findings, grounded in real-world data from a severely underserved setting, offer practical insights for Pacific nations and other resource-limited countries confronting rising NCD burdens.

Keywords: Diabetes mellitus, Glycemic control, Community-based screening, Risk scoring, Marshall Islands

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T05D-0419

Enhancing Hiv-Aids Prevention Programs Through Cross-Sector Collaboration: Lessons From Indonesia

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Abstract

WHO promotes cross-sectoral collaboration as a key HIV-AIDS control strategy, and Indonesia has applied this approach for over a decade. However, by 2024 significant gaps remain in the 95-95-95 targets (61%-64%-54%) among an estimated 570,000 PLHIV and 28,000 new infections annually. This underscores the need to strengthen collaboration and raises a critical question: how effective has the process been in advancing Indonesia's HIV response? This study aims to evaluate the role of cross-sectoral collaboration in enhancing the performance of HIV-AIDS prevention and control programs in Indonesia.

This study employed a cross-sectional design involving interviews with 328 representatives from 17 regencies/cities as the representatives of the 24 institutions involved in the HIV-AIDS Program. Correlation analyses, mean difference tests, and proportion difference tests were conducted to examine relationships between variables. Logistic regression (Exp β) was applied to evaluate the role and extent of cross-sectoral collaboration in influencing program performance.

Results showed significant differences ($p=0.0001$) in collaboration scores across focus areas, stakeholders, and the presence of the HIV-AIDS Commission Secretariat (KPA), indicating stronger collaboration when institutional interest and KPA support were present. A strong correlation ($r > 0.5$) was observed within the process dimension—governance, administration, autonomy, and interdependence—leading to outputs such as strengthened policies, programs, funding, and human resources. Program performance, measured by PLHIV case findings, was significantly higher with program implementation (5.0 times), funding (1.9 times), and trained personnel (2.5 times).

Cross-sectoral collaboration thus plays a vital role in enhancing HIV-AIDS program performance, where the enabling dimension provides the foundation, the process dimension drives collaboration, and the output dimension directly improves results.

Keywords: Collaboration, AIDS Commission, Performance of the HIV-AIDS Program

O-T05B-0474

The Influence of Continuity of Care Clinical Experience onThe Results of The National Competency Test in Final Year Midwifery Students

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Abstract

Background: The National Competency Test (UKOM) is a benchmark for achieving minimum competence in midwifery education graduates and the main requirement for entering the professional practice. To support the readiness for UKOM, a comprehensive clinical learning model is crucial. Continuity of Care (CoC) is a clinical practice approach that requires students to provide continuous assistance to one client from pregnancy to postpartum and family planning services, with the aim of integrating knowledge, clinical skills, and practice reflection. The CoC experience is believed to strengthen students' competencies, including in clinical decision making and therapeutic communication. However, the direct influence between CoC practice experience and UKOM success has yet to be empirically proven.

Method: This study aims to analyze the effect of Continuity of Care practice experience on the results of the National Competency Test in final year midwifery students. This study used an analytic quantitative design with a correlational approach. Respondents were final year midwifery students who had completed CoC practice and participated in UKOM. Data were collected using a closed questionnaire and analyzed using logistic regression to assess the effect of CoC experience on UKOM results.

Result: There was a significant influence between CoC practice experience and UKOM success ($p < 0.05$). Students with active involvement in CoC, such as long-term relationship building, systematic record keeping, and holistic care implementation, had a higher chance of passing than those with limited experience.

Conclusion: Continuity of Care practice experience significantly influenced National Competency Test results. These results reinforce the urgency of optimally integrating the CoC model in the midwife education curriculum to improve clinical competence and professional readiness.

Keywords: Continuity of Care, Midwifery Education, Competency Exam, Clinical Readiness

O-T05A-0485

Health systems factors related to early health-seeking behaviors among pulmonary tuberculosis patients in southern Afghanistan

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Abstract

Introduction and aim: Delay in Tuberculosis (TB) diagnosis and treatment remains a major challenge globally, especially in post-conflict countries. In Afghanistan, most TB Patients experience delays in diagnosis, increasing community transmission and undermining TB control efforts. In contrast to addressing delays, we applied a positive deviance approach to investigate the determinants of early health-seeking behaviors among pulmonary TB patients, to understand why some sought early under difficult circumstances. As part of the study, we conducted the field observation of health facilities to identify potential health systems factors that were related to facilitating TB patients' early health-seeking behaviors.

Methods: As a preliminary step of an exploratory sequential mixed-method study to investigate positive deviance in early health-seeking behaviors of TB patients, field observation was conducted in 5 selected health facilities in the southern provinces of Afghanistan, a post-conflict, severely affected area in 2025. In these facilities, we investigated the level of acceptance of TB patients and issues in health systems based on the six blocks of health systems components.

Results: Health facilities had a substantial difference in acceptance of TB patients in 2025, compared to the previous years. The funding suspension from the United States severely affected the operation of TB prevention and control. Among facilities, some facilities maintained their operation relatively better than others. These facilities had sufficient staff to engage patients (to follow up) and build trust, aiding program retention. However, most faced staff and medicine shortages, with doctors handling multiple roles (drug distributor, data Clerk) and TB drugs being in short supply.

Conclusion: Under severe post-conflict circumstances and external fund termination, some health facilities maintained TB detection and control services. Identifying factors behind successful operations will be an important source of improving early TB detection, contributing to reducing TB delays.

Keywords: Health-seeking behavior; Tuberculosis; Afghanistan

O-T05A-0501

Strengthening Community Health Systems through Community-Led Monitoring for Malaria Elimination in the Greater Mekong Subregion

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Abstract

Primary health care (PHC) services in the Mekong region remain uneven, particularly in remote and marginalized communities. Current initiatives aim to reduce disparities in healthcare access among vulnerable populations, highlighting the need for targeted interventions. Infectious diseases, including vector-borne diseases, continue to pose persistent public health challenges in the Greater Mekong Subregion (GMS) due to its geographic, linguistic, and ethnic diversity. Malaria remains a significant risk, necessitating integrated approaches that engage communities and health systems.

Community-Led Monitoring (CLM) is an innovative tool that empowers communities to monitor key health and social issues, providing actionable data to local authorities and partners. The CSO Platform developed a CLM tool tailored for low-malaria-endemic settings, aiming to strengthen community health systems through local data collection and analysis. A desk review and key informant interviews with government, NGO, and community stakeholders informed the design of the tool, ensuring alignment with the National Strategic Plan for Malaria Control and the National Malaria Elimination Program.

The CLM tool guides four critical steps: (1) community data collection, (2) participatory data analysis, (3) community dissemination, and (4) community advocacy and follow-up. This framework enables communities not only to access health services more effectively but also to address broader health issues and enhance service accessibility.

The tool has been implemented in malaria-endemic provinces of Thailand and Lao PDR, demonstrating its potential to generate community-driven evidence and strengthen local health systems. By linking communities, health systems, and service providers, the CLM approach promotes inclusiveness, accountability, and sustainability, providing a replicable model for supporting malaria elimination and broader public health initiatives in the GMS.

O-T05B-0502

The effect of decriminalization of drug use on opioid overdoses in Oregon, USA

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Abstract

Background: The USA has been experiencing a growing opioid overdose crisis for the past decade. In February 2021 the state of Oregon decriminalized opioid use, downgrading the offense of possession to a civil penalty. This study assesses whether this unusual legal change had any effect on opioid overdose deaths in the state of Oregon using a difference-in-difference (DiD) model.

Methods: Data on opioid overdose deaths (ICD10 code X40-44 + T40.0-T40.4) were downloaded from CDC wonder for the Oregon and the neighbouring states of California, Idaho, Nevada and Washington. A DiD model was applied to this data with Oregon as the intervention state and the neighbouring states as controls, using Poisson regression with the intervention period starting at February 2021. A likelihood-based method was also applied to identify the most likely point in time when overdose deaths changed in Oregon.

Results: There was no statistically significant change in the average level of opioid-related mortality in Oregon after decriminalization, although there was a small change in trend, from a 1% annual increase per year (95% CI 0.07% - 1.5%) before decriminalization to 2.9% per year (95% CI 2.5% - 3.4%) after decriminalization. Visual inspection of curves and likelihood analysis suggested that there was a large and significant change in level before decriminalization, in 2019, which was the primary driver of changes in overdose trends in Oregon.

Discussion: Decriminalization of opioid use in Oregon had little effect on overdose death rates, which began to increase two years before the decriminalization occurred and are likely related to broader national shifts in opioid risk in the USA. The recriminalization of opioid use in March 2024 is unlikely to have a large effect on opioid overdose deaths, and expanded harm reduction strategies are a far more effective policy than a prohibition-based approach.

O-T05A-0504

The Filipino Psyche on the Healthcare System: Cultural Perceptions, Attitudes, and Behaviors

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Abstract

Background: The Philippine healthcare system is shaped not only by policy and infrastructure but also by deeply rooted cultural values, spiritual beliefs, and socio-economic realities. Despite reforms such as the Universal Health Care (UHC) Act of 2019, Filipinos continue to rely heavily on family, faith, and traditional healing practices when making health decisions. Persistent challenges include high out-of-pocket expenditures, distrust of public healthcare institutions, and unequal access between rural and urban populations.

Objective: This study aims to explore the Filipino psyche on the healthcare system, specifically examining how cultural beliefs, religiosity, and socio-economic conditions influence healthseeking behaviors and perceptions of healthcare institutions.

Methods: A mixed-method design was employed. Qualitative data were gathered from thematic analysis of related literature and cultural studies on Filipino health behavior. Quantitative data were drawn from secondary sources, including the Department of Health (DOH), the Philippine Statistics Authority (PSA), and the World Health Organization (WHO). Findings were triangulated to present a holistic view of Filipino healthcare behavior.

Results

1. **Family and Community Influence:** Health decisions are collectivist, with extended families playing a central role in medical choices.
2. **Traditional and Faith-Based Practices:** Many Filipinos still turn to *hilot*, herbal remedies, or faith healers before consulting modern healthcare providers.
3. **Economic Barriers:** Out-of-pocket spending consistently accounts for over **50%** of health expenditures, one of the highest in Southeast Asia.
4. **Public vs. Private Utilization:** Public hospitals serve most patients but are perceived as overcrowded and inefficient, while private hospitals are trusted but remain financially inaccessible.
5. **Trust Deficit:** Mistrust of government health services persists, limiting the impact of reforms such as UHC.

Conclusion: The Filipino psyche on healthcare reflects a strong integration of cultural traditions, spirituality, and family values with systemic challenges of access, affordability, and institutional trust. To achieve meaningful healthcare reform, the Philippine system must adopt culturally sensitive approaches, expand financial protection, strengthen infrastructure, and rebuild public trust.

Keywords: Filipino psyche; healthcare system; cultural beliefs; religiosity; traditional medicine; health-seeking behavior; public vs. private healthcare; Universal Health Care; out-of-pocket expenditure; cultural psychology

O-T05B-0509

Exploring the Perspectives of Healthcare Providers towards Maternal Mental Health: A Study from a Tertiary Hospital in India

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Abstract

Background: Maternal mental health (MMH) is critical yet deprioritized aspect of maternal and child health, particularly in low-and middle-income countries. Despite its negative impact on maternal well-being and child development, MMH remains poorly integrated into healthcare systems. This study examined the perspectives of healthcare providers (HCPs) to identify the main dimensions shaping their views on MMH.

Methods: A cross-sectional survey was conducted among 60 HCPs from Obstetrics/Gynecology, Pediatrics, and Psychiatry departments at a tertiary care hospital. A validated structured questionnaire assessed knowledge and attitudes. Comparative statistics explored the departmental differences. Principal component analysis (PCA) tested whether responses grouped into coherent factors beyond the assumed domains of questionnaire. Data suitability was checked with Kaiser-Mayer-Olkin measure of adequacy (0.62, moderate) and Bartlett's test ($p<0.001$).

Results: PCA revealed five dimensions (5-Ds) that together explained 71.4% of variation in responses (percentages indicate variation in responses, not proportion of participants). Knowledge of MMH accounted for largest share (25.2%) followed by recognition of social and healthcare system factors (16.0%), stigma and misconception (14.7%), clinical training and preparedness (8.4%), and concerns about medication (psychotropics) during pregnancy (7.1%). This shows responses did not divide into "knowledge" and "attitude" as assumed, but into specific patterns such as stigma, system awareness, and training gaps. Departmental differences mirrored these dimensions, with Pediatrics reporting more stigma, Obstetrics/Gynecology more screening awareness, and Psychiatry reporting gaps in confidence outside their speciality.

Conclusions: The study establishes that perspective of HCPs regarding MMH are grouped in 5-Ds and not merely on knowledge and attitudes. The 5-Ds varied with providers and were reflective of necessity of overcoming stigma, increasing screening, building clinical preparedness, and simplifying system-level roles. Addressing all 5-Ds will be essential for integrating MMH into routine healthcare in India.

Keywords: Maternal mental health, Principal component analysis, Perspective of Healthcare providers, Stigma, India.

O-T05D-0521

Factors affected on Short-term and Mid-term Mortality of Hemorrhagic stroke: Using Multi-level analysis

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Abstract

Background: Stroke is a leading cause of death worldwide, with timely intervention critical for survival. Hemorrhagic stroke carries particularly high mortality. This study examined short-term (30-day) and mid-term (365-day) mortality using a national dataset structured at patient and hospital levels.

Methods: Data were drawn from the 9th Acute Stroke Quality Assessment, including 7,379 patients with a primary diagnosis of hemorrhagic stroke (I60, I61, I62). Records were linked with National Health Insurance claims and resident registration data. Cumulative mortality risk was estimated using Kaplan–Meier analysis, with group differences tested by the log-rank method. Variables significant at the 5% level or relevant to mortality models were included in multivariable analysis. Neurological severity was assessed using the Glasgow Coma Scale (GCS), and Cox proportional hazards models with frailty terms were applied to 5,569 patients.

Results: Within 30 days, 1,323 patients died (17.9%); within 365 days, 1,989 patients died (27.0%). Mortality risk differed significantly across hospitals ($p<0.0001$). Short-term mortality was associated with ICU availability, age, and GCS. Hospitals without ICUs had 1.41-fold higher mortality. Patients aged 70s and ≥80 years had 1.29-fold and 2.01-fold higher risks. Moderate impairment (GCS 9–12) and severe impairment (≤8) showed 4.12-fold and 19.39-fold increased risks. Mid-term mortality was influenced by age, insurance type, comorbidities, and GCS. Medicaid recipients and patients with CCI ≥3 had elevated risks, while neurological severity remained a strong predictor (moderate 2.84-fold; severe 10.97-fold).

Conclusion: Mortality in hemorrhagic stroke patients varied across hospitals but was mainly explained by patient-level factors. Short-term survival was strongly influenced by ICU availability, whereas age, socioeconomic status, comorbidity burden, and neurological severity shaped mid-term outcomes. Tailored management strategies should be prioritized in future health policies.

O-T05C-0530

Pandemic Preparedness in Remote Borneo: Evaluating Social Media as a Risk Communication Channel - Lesson Learned From the COVID-19 Pandemic

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Abstract

Effective risk communication is crucial for pandemic preparedness, especially in remote communities where access to health information is very limited. The COVID-19 pandemic highlighted the necessity of timely and accurate communication strategies in reducing misinformation, shaping protective behaviours, and fostering community resilience. This study evaluates the role of social media as a risk communication channel in remote areas of Sabah, Malaysia. Thus, drawing lessons for future pandemic preparedness.

A mixed methods design of qualitative and quantitative methods was employed. Quantitative method using questionnaires and qualitative method using face-to-face interviews. The aim is to examine the information flows and comprehension among the rural population of fewer than 10,000 residents. Data were collected between March and June 2023 from 260 households across 10 districts. Which is Tawau, Lahad Datu, Sandakan, Kinabatangan, Beluran, Ranau, Kota Belud, Kota Marudu, Sipitang, Kudat and Keningau. Stratified sampling and a georeferenced enumeration block were used.

Findings show that traditional media (television and radio) is still the dominant source of COVID-19 information (93.5%), followed by social media (79.6%). However, reliance on these channels varied across divisions. While Sandakan and Tawau recorded high engagement with both traditional and social media, other divisions demonstrated significant dependence on interpersonal networks such as family and friends. Levels of comprehension also differed: community in the interior exhibited higher rates of comprehension. Whereas Kudat showed lower comprehension despite high exposure to information sources. Also, respondents generally reported that the information received was adequate to guide their understanding of COVID-19.

These results indicate both the opportunities and limitations of social media in risk communication for marginalised populations. While social media can supplement traditional channels, disparities in accessibility and comprehension highlight the need for integrated, context-sensitive strategies. Lessons from COVID-19 suggest that strengthening hybrid communication approaches will be critical for building resilience and advancing pandemic preparedness in remote Borneo.

Keywords: Pandemic preparedness, risk communication, social media, remote communities, COVID-19, Borneo, health information, rural population, Malaysia, public health resilience

O-T05B-0539

Constructs of Employee Engagement in State University Hospital in Indonesia

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Abstract

Employee engagement has been widely used in human capital management as the key to motivate and engage employees in order to improve employee as well as organization's productivity and performance. However, practitioners and academics use different approaches in studying employee engagement. It was found in many different disciplines such as the psychology, sociology, human resource development management and organizational behaviour disciplines. The lack of continuity in the use of approaches was considered as a significant challenge for human capital managers to develop innovative solutions in dealing with the low level of employee engagement in their organizations. Furthermore, in the area of hospital management, we have not found any literature that examines the construct of employee engagement in state university hospitals in Indonesia (RSPTN), while state university hospitals have a unique and challenging human resources management related to employee engagement. For this purpose, a qualitative study was conducted to explore the constructs of employee engagement in state university hospitals in Indonesia.

This study used qualitative research using the in depth-interview method with interview guidelines. The subject of in depth-interview were selected by a purposive sampling technique. Data were analysed using thematic analysis with the aim of identifying patterns or finding themes which were further considered as constructs. The results found that there are 5 dimensions of employee engagement at RSPTN in Indonesia, which are individual factors, job-related factors, organization-employee interaction, external factors, and consequences. These 5 dimensions strengthened the opinion that employee engagement is a part of organizational behavior discipline. This study result reveal that the organization-employee interaction is an important issue to be a concern in maintaining employees to remain engaged with the organization because basically employee engagement requires a two-way commitment (reciprocal) between employees and the organization.

Keywords: Employee engagement, organizational behaviour, human capital, constructs, RSPTN

O-T05A-0547

Evaluating Predictive Accuracy And Sensitivity Of Digital Health Surveillance: A Quantitative Assessment Of Sshp Implementation At Hasanuddin International Airport Makassar 2025

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Abstract

Background: The Sistem Surveilans Health Protocol (SSHP) is designed for early detection of infectious disease risk at entry points. However, its effectiveness depends on predictive accuracy and sensitivity.

Methods: A descriptive observational study analyzed SSHP records from September 2024 to April 2025 at Hasanuddin International Airport. Surveillance attributes were evaluated using CDC guidelines, focusing on sensitivity and Positive Predictive Value (PPV). Temporal and spatial analyses were performed to assess epidemiological trends and follow-up effectiveness.

Results: Of 113,051 international travelers screened, 627 (93%) were flagged as symptomatic. SSHP demonstrated sensitivity of 63.2% but low PPV (4.94%), reflecting high false positives from self-reporting. In comparison, health officer diagnoses showed sensitivity of 73% and PPV of 90%, underscoring the value of professional validation. Symptomatic spikes were observed in epidemiological weeks 3, 7, and 41, aligned with travel surges. Most follow-up alerts (n=88) occurred in Makassar and Maros, only 93% of records valid data, it means 7% lacked valid contact data, limiting case tracing.

Conclusion: SSHP contributes to early detection at points of entry but remains constrained by low predictive accuracy and poor data quality. Improving user compliance, strengthening validation protocols, and integrating SSHP with regional surveillance systems are essential to enhance reliability and responsiveness.

Keywords: SSHP, Digital surveillance, Predictive accuracy, Entry point

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T05A-0555

Outbreaks Beyond Virality: Comparing Worm Infestation and Measles in Indonesia Through Behavior, Media, and Accountability

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Abstract

Backround: Indonesia recently faced two contrasting public health events: a worm infestation case that went viral nationally and a measles outbreak in Sumenep, East Java, which caused over 2,000 cases and 17 child deaths but received far less public attention.

Method: This article compares both events to analyze how health behaviors, media communication, and government accountability shape public perception and policy response. Using the Health Belief Model (HBM), agenda-setting and framing theories, and Brinkerhoff's accountability framework, we examine secondary data from Google Trends, media reports, outbreak chronology, and regulatory documents.

Results: show that worm infestation, though clinically mild, generated strong cues to action through sensational framing, high perceived susceptibility, and visible accountability measures. By contrast, measles, a vaccine-preventable disease with fatal outcomes, was attenuated by low perceived severity, strong barriers (antivax hoaxes, halal concerns), weak media framing, and diluted accountability in immunization policy. The case of *Raya*, whose death was attributed to worms but in fact reflected poverty, TB, malnutrition, and child neglect, highlights the invisibility of systemic inequities in media narratives. Additional analysis shows a paradox in immunization: East Java reported >90% measles coverage in 2022–2023, yet outbreaks occurred in 2025. This exposes weaknesses in accountability, data accuracy, and sustainability of immunization programs such as BIAN.

Conclution: This comparative study underscores the mismatch between epidemiological risk, public attention, and policy accountability in Indonesia, with implications for infodemic management, health promotion, and regulatory reform.

Keywords: Worm infestation, Measles outbreak, Health Belief Model (HBM), Media communication, Health Policy, Immunization, Infodemic

O-T05B-0567

Epidemiology of Inhaled Foreign Body Injuries and Choking in ASEAN: Public Health Impact and Prevention Measures

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Abstract

Background: Choking on inhaled foreign objects is a significant yet preventable cause of injury and death in young children globally, and ranks among the leading causes of childhood mortality in Asia. However, the epidemiology and burden of inhaled foreign body (FB) injuries in ASEAN countries remain poorly characterized.
Aim: This study aims to describe the epidemiology of FB aspiration injuries in ASEAN, estimate their public health impact, and evaluate current prevention measures, integrating findings from the Susy Safe project.
Methods: We analyzed data from the Susy Safe registry – an international surveillance system for FB injuries – alongside regional health statistics and literature to estimate the incidence, mortality, and trends of FB aspiration in ASEAN. We also assessed common FB types and circumstances (e.g., food vs non-food, supervision) and reviewed existing prevention initiatives (legislation, public awareness campaigns, first aid training) in relation to observed trends.
Results: Foreign body aspiration predominantly affected children under five years, with food items (nuts, seeds) and small objects (coins, toy parts) as the most frequent causes. We estimate that ASEAN countries experience around 90,000 FB aspiration cases and over 50,000 related deaths annually. Incident rates show a modest decline in recent years, suggesting some impact of prevention efforts. Nonetheless, inadequate supervision and low caregiver awareness persist, limiting the effectiveness of current measures.
Conclusion: Inhaled FB injuries remain a substantial public health challenge in ASEAN. Strengthening prevention—through stricter product safety regulations, improved caregiver education, and wider use of surveillance systems like Susy Safe—is essential to reduce choking-related morbidity and mortality.

Keywords: Foreign body aspiration; Choking; ASEAN; Epidemiology; Prevention.

O-T05A-0573

Maternal Health Coverage and Its Effect on Maternal Mortality in Low- and Middle-Income Countries: An Ecological Panel Study from 2015 to 2023

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Abstract

Background: Maternal health coverage (MHC) varies widely across low- and middle-income countries (LMICs), influencing maternal mortality. Understanding these disparities is vital for targeted interventions. This study assessed MHC disparities and their impact on maternal mortality in LMICs from 2015 to 2023.

Methods: An ecological panel study was conducted using country-level data from 137 LMICs between 2015 and 2023. Maternal health indicators were obtained from the World Health Organization, and income classifications from the World Bank. Due to non-normality of the data, variables were transformed prior to analysis. Multivariate analyses with generalized linear mixed models were performed to account for repeated measures across countries, and income-stratified analyses were used to assess variations in the associations between MHC indicators and maternal mortality.

Results: The median maternal mortality rate (MMR) across LMICs declined from 109.30 (IQR:41.48-297.90) to 85.45 (IQR: 35.55-225.0) deaths per 100,000 live births. Institutional deliveries increased by 5.55% and births attended by skilled health professionals by 5.0%. Multivariate analyses showed significant negative associations between MMR and ≥4 antenatal care (ANC) visits (β=-0.01, p=0.01), institutional delivery (β=-0.04, p<0.001), density of physicians (β=-0.002, p<0.001), maternal education (β=-0.005, p=0.02), and out-of-pocket health expenditure (β=-0.01, p<0.001). Stronger associations were observed in lower-middle (LM) (β=-0.43, p<0.001) and upper-middle (UM) (β=-0.78, p<0.001) income countries compared to low-income (LI) countries. Stratified analyses indicated that density of physicians consistently reduced MMR across all income groups (LI: β=-0.001, p=0.02; LM: β=-0.002, p<0.001; UM: β=-0.01, p=0.002), while ≥4 ANC visits were significant only in low (β=-0.01, p=0.01) and upper-middle (β=-0.02, p<0.001) income countries.

Conclusion: Between 2015 and 2023, MMR in LMICs declined significantly alongside improvements in ANC visits, institutional deliveries, density of physicians, and maternal education. These associations varied by income groups, underscoring persistent disparities in pregnancy outcomes.

Keywords: Low- and middle-income countries; Maternal health; Maternal mortality

O-T05C-0589

From Policy to Practice: Confronting Governance Challenges in AMR and Food Safety in the Philippines

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Abstract

Introduction: Antimicrobial resistance (AMR) threatens food safety, animal health, and human health outcomes. The Philippines has adopted a One Health approach, with responsibilities distributed across national agencies in health, agriculture, and food regulation. This abstract synthesizes national-level policies, institutional roles, and implementation status across the farmgate-to-fork continuum.

Methodology: A qualitative policy and systems review combined: (i) desk review of national policies, administrative orders, surveillance plans, and standards from health, agriculture, and regulatory agencies; and (ii) key informant interviews (KIIs) with national officials from relevant bureaus and programs. Data were thematically coded around governance, surveillance, laboratory capacity, data systems, and enforcement.

Results: National structures for AMR are established under a One Health coordination mechanism, with defined (though overlapping) mandates for human health, animal health, and food regulation. Surveillance for antimicrobial use in animals and foodborne hazards is evolving, and hospital antimicrobial stewardship (AMS) requirements are integrated into licensing. Unfortunately, data across agencies remain to be in silos. Validated, routine laboratory methods for antimicrobial residues and resistance along the food chain, particularly in processed foods, remain limited in scope and scale. Further, the reporting pipelines from subnational units to national repositories are not harmonized resulting in incomplete and outdated. Lastly, regulatory enforcement depends on documentation more than on systematic testing.

Conclusion: While national policy scaffolding is robust, operational integration lags. Priorities include inter-agency data interoperability and a unified AMR/food-safety repository. Sustained financing for lab method validation and proficiency testing should be put in place. Residue/resistance testing beyond farms and slaughterhouses should be expanded to include processing, retail, and food service. Clearer regulatory triggers that link surveillance findings to timely enforcement actions at the local levels should be put in place.

O-T05C-0593

Japanese-style health screenings and their effects in Palau for the prevention of NCDs

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Abstract

Background: Non-communicable diseases (NCDs) such as hypertension, diabetes, and obesity are rising rapidly in Pacific countries, including Palau. Preventive medicine and early detection remain limited, despite available therapeutic services. Leveraging Japan's experience with comprehensive health screenings, we introduced Japanese-style screenings on Palau's main and remote islands to identify high-risk individuals and promote early intervention.

Method: A structured health screening programme was conducted from November 2022 to April 2025. This included physical examinations, blood and urine tests, and questionnaires. Using the Japan Post-Extreme Situation Emergency and Disaster Surveillance J-SPEED format ensured standardised data collection and timely information sharing with state governments. The target population comprised residents aged 15 and over. The data were analysed to detect diseases and identify risk factors.

Result: A total of 839 people participated in this programme. Of these, 61% had hypertension, 40% were obese (BMI ≥30) and 19% had diabetes. Stage 2 hypertension or higher increased in men from their 20s and in women from age 45, exceeding that of men after age 65. Among men and women aged 45–64, a high proportion had an HbA1c level greater than 8%. Obesity was associated with the frequency and daily intake of sugary beverages, but no significant association was observed with processed meat intake.

Conclusion: The Japanese-style health screening effectively identified undiagnosed NCDs and major risk factors. By collecting data in J-SPEED format, we could share it promptly with the relevant parties. As well as providing individual health benefits, this project has improved communication with policymakers and the Ministry of Health. This has led to the launch of workplace health screening trials similar to those conducted in Japan. The results suggest that a Japan-style, comprehensive approach to health screening could be a model for the sustainable management of NCDs in Palau and other Pacific nations.

O-T05B-0600

Combined associations of education and health literacy with catastrophic health expenditure in Korea

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Abstract

Catastrophic health expenditure (CHE) threatens household financial stability and contributes to health inequities. Education and health literacy (HL) are key determinants of health, and their combined effects may influence health care utilization. This study assessed the association between a combined education–HL variable and CHE.

We analyzed data from the 2021 Korea Health Panel (n=9,692). Education (≤high school or ≥college) and HL (high, moderate, low) were combined and categorized into six subgroups. The dependent variable was CHE. Multivariable logistic regression was performed using a complex survey design, and stratified analyses were conducted by education and HL subgroups.

Significant associations were found only in lower education groups (high HL: OR=1.66, p=0.04; moderate HL: OR=2.02, p<0.01; low HL: OR=1.77, p=0.02). The subgroup with low education and moderate HL had the highest odds of CHE.

In conclusion, individuals with low education were more likely to experience CHE, underscoring education as a key determinant of financial resilience. Among them, those with moderate HL were most vulnerable, which may reflect a mismatch between limited formal education and partial health literacy. Such individuals may seek and use health information but lack the socioeconomic resources to manage the resulting expenditures. By contrast, high HL may increase service use, while low HL may restrict access and suppress short-term spending. These findings highlight the importance of addressing the interaction between education and HL, suggesting that policies should strengthen both health literacy and structural supports for lower education groups.

Key words: Education, Health Literacy, Catastrophic Health Expenditure, Korea Health Panel

O-T05A-0610

Effects of renewable power transition on PM2.5 and CVD mortality with UHC modification

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Abstract

Background. WHO estimated ~6.7 million premature deaths from air pollution in 2019. Fine particulate matter ≤2.5μm (PM2.5) elevates cardiovascular and respiratory risks. Power sector transitions that raise the renewable share of electricity and lower electricity's carbon intensity can reduce population PM2.5. We evaluated the effects of these indicators on PM2.5, the pathway from PM2.5 to the age-standardized CVD death rate, and whether Universal Health Coverage (UHC) attenuates the PM2.5 to CVD association.

Methods. We constructed an unbalanced panel by country and year from Our World in Data, including the share of electricity from renewables, the carbon intensity of electricity, PM2.5 weighted by urban population, the CVD death rate, the UHC service coverage index, and socioeconomic covariates. Models used country and year fixed effects. Stage 1 modeled PM2.5 on lagged power sector indicators and covariates, yielding fitted PM2.5. Stage 2 regressed CVD on fitted PM2.5 with UHC and a PM2.5×UHC interaction to test effect modification. Indirect effects used the product of coefficients with country-clustered bootstrap confidence intervals. Robustness checks included forced covariates, a log CVD outcome, UHC moderation, and a Mundlak within-between specification.

Results. Indirect effects were not statistically significant (bootstrap 95% CIs included zero). In the Mundlak model, each 1 μg/m³ increase in fitted PM2.5 was associated with 41.6 additional CVD deaths per 100,000 (95% CI 7.5–75.6); the PM2.5×UHC interaction was −0.353 (95% CI −0.692 to −0.014), indicating attenuation of risk at higher UHC levels.

Conclusion. Power sector transitions yield near-term health benefits when they reduce population PM2.5 and are accompanied by improved service coverage. Priorities include aligning renewable energy targets and PM2.5 standards with health metrics, institutionalizing health impact assessment, and tracking electricity carbon intensity, PM2.5, and CVD mortality. Limitations include observational design, a nine-year window, and potential measurement error and residual confounding.

Keywords: PM2.5; Air pollution; Cardiovascular disease mortality; Power sector transition; Renewable energy share; Carbon intensity of electricity; Universal Health Coverage; Mediation analysis

O-T05B-0611

Interplay between Health Issues, Topography and Socio-Cultural Factors in Manipur, India

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Abstract

Every culture has its own perspective on disease and healthcare practices which has a bearing on how individuals identify, select and respond to health, disease and medical care. The influence of topography, physical nature of habitation areas is also important in assessing healthcare practices. Manipur is a small state in the northeastern region of India, bordering mainland Southeast Asia. The main objectives of the study were to compare socio-cultural factors related to one very common health issue-low back pain (LBP), among the hill and valley populations of the state and also to understand the health seeking behaviour related to low back pain among the two populations.Due to its high prevalence, low back pain is an important public health issue as the disease burden to the individuals, families and communities is considerable.

A cross sectional hospital based study was conducted on 80 (eighty) patients from both hill and valley regions of the state who attended the OPD of Department of Physical Medicine and Rehabilitation, Regional Institute of Medical Sciences, Imphal by using purposive sampling and a pre-designed, semi structured questionnaire which consisted of 16 questions related to socio-demographic profiles and health seeking behaviour of the patients. The Chi-square test was used to test the level of significance between two proportions. The major finding was that a majority of the respondents in both the areas have poor health care seeking behaviour which could be related to their respective social backgrounds and cultural belief systems. Significant association was also found between back pain and those engaged in farming, lower social class, no formal education, poor accessibility to healthcare facilities and community resources.

O-T05C-0624

Strengthening the National Health Research System in a Resource-Limited Setting: Insights from a Qualitative Study in Indonesia

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Abstract

Background: Health research is an instrumental driver of innovation and improved health outcomes. Globally, many low- and middle-income countries struggle with fragmented, donor-driven research systems that lack alignment with national priorities. In Indonesia, despite institutional reforms, coordination gaps and the absence of an integrated research roadmap continue to limit system effectiveness. This study explores governance challenges in Indonesia's health research system and offers recommendations to strengthen coordination and policy alignment.

Method: This qualitative study was conducted between April and December 2024. Data collection involved focus group discussion and in-depth interviews, with a total of 13 participants selected based on institutional roles and geographical representation (ministries, national research institutions, universities across Western, Central, and Eastern Indonesia). Participants were chosen for their involvement in research governance and agenda-setting. Data were thematically analyzed using the WHO Health Research System framework, covering governance, financing, resource maintenance, and research utilization.

Results: This study finds that weak governance, especially poor coordination between national and subnational levels, remains the biggest challenge in Indonesia's research system. The national research institution, despite its mandate to coordinate research and promote grants and facilities, faces role ambiguities as funder, implementer, and policy advisor. Many universities remain unaware of national opportunities, reflecting a perception gap. Lessons from other countries show the importance of unified roadmaps, clear mandates, and decentralized responsiveness. Strengthening the role of subnational research institutions, improving information flow, and fostering inclusive, cross-sector governance can bridge national–subnational gaps, enhance accountability, and ensure research investments address both national priorities and local health needs.

Conclusions: Indonesia's health research system is constrained by weak governance and poor national–subnational coordination. Clearer institutional roles, an integrated roadmap, and stronger subnational engagement are essential to align research with national priorities and improve health outcomes.

Keywords: health services research, organizations, health policy

O-T05C-0686

The Institutional Moat of Platform Ecosystems vs. the Trust Vacuum of Pipeline Disruption: A Comparative Study of Business Models and Institutional Strategy in Healthcare

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Abstract

Background: This study investigates why a disruptive innovator, SmileDirectClub (SDC), failed while incumbent Align Technology succeeded in the regulated clear aligner market. It proposes the Business Model-Institutional Strategy (BM-IS) Fit framework to explain how the interplay between a firm's business model and its institutional strategy determines outcomes in high-trust sectors.

Method: This study employs a qualitative-dominant mixed-methods approach. The core analysis is a longitudinal comparative case study (2014-2023) of SDC and Align, supplemented by an exploratory consumer survey (N=277) and illustrative professional interviews (N=5) from a "naive" market to test the framework's mechanisms without hindsight bias.

Results: A firm's business model (platform vs. pipeline) inherently determines its institutional strategy (cooperative vs. confrontational). Align's platform enabled a cooperative strategy, building an "institutional moat." In contrast, SDC's pipeline model removed the professional intermediary, creating a "trust vacuum"—a self-inflicted wound that destroyed trust as a governance mechanism. This caused SDC to fall below the industry's "legitimacy threshold," leading to market failure despite strong consumer demand.

Conclusion: The paper's primary contribution is the BM-IS Fit framework, demonstrating the inherent link between a firm's business model and its required institutional strategy. It contextualizes disruptive innovation theory by proposing the "legitimacy threshold" as a non-negotiable performance floor in high-trust sectors and applies institutional theory to conceptualize the "trust vacuum" as a fatal governance deficit created by removing trusted intermediaries.

Keywords: Platform Ecosystem, Institutional Strategy, Healthcare Governance, Professional Resistance, Trust, Legitimacy, Innovation Failure, Teledentistry, Comparative Case Study

O-T05A-0690

Health Financing in Philippine Unserved and Underserved Areas: Coverage, Barriers, and Out-of-Pocket Burden in the Context of Universal Health Care Implementation

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Abstract

Background: The Universal Health Care (UHC) Act (RA 11223) and the National Objectives for Health (NOH) 2023–2028 commit to reducing out-of-pocket (OOP) spending to 28.1% and expanding equitable primary care. Yet, households in Unserved and Underserved Areas (UUAs) often remain beyond effective financial protection. This study assessed sociodemographic correlates, health insurance, and financial burden in Nueva Ecija prior to the rollout of new financing mechanisms such as PhilHealth Konsulta/YAKAP and the forthcoming PhilHealth GAMOT outpatient drug package (launched August 2025).

Methods: A cross-sectional survey of 608 households was conducted in Balaring, Burol, Kabulihan, and Pulong Singkamas. Item-level denominators are reported. Descriptive statistics with 95% confidence intervals (CIs) and chi-square tests were applied. Focus group discussions (FGDs) with Barangay Health Workers (BHWs) and households were thematically analyzed.

Results: Respondents were predominantly low-income (54.7% earning ≤₱5,000/month), farmers or laborers (41.8%), and with modest schooling (15.7% no formal education). Insurance coverage was limited: 337/601 (56.1%) insured and 264 (43.9%) uninsured. Among the insured, 87% were PhilHealth members, nearly half non-paying. Barriers were frequent: 39.9% (238/596) reported difficulties, especially long waits (54.5%) and high costs (49.6%). 73.4% (430/586) reported health costs strained finances.

FGDs confirmed these findings: BHWs received only ₱2,800/month allowances, none covered by PhilHealth. Households described rationed free medicines (~50%), frequent OOP purchases (>60%), delayed diagnostics (≥1 week), and average monthly OOP ₱500–₱1,500, burdening seasonal farm incomes.

Conclusions: Prior to the GAMOT rollout, UUA households exhibited incomplete financial protection under UHC. The NOH target of lowering OOP remains unmet locally, and Konsulta/YAKAP entitlements were poorly understood and underutilized. Survey and FGD findings underscore why GAMOT's August 2025 introduction is timely: consistent drug supply, primary-level diagnostic subsidies, and inclusion of BHWs in PhilHealth coverage are critical to translate UHC promises into lived financial protection.

Keywords: Universal Health Care; health financing; PhilHealth; YAKAP; GAMOT; out-of-pocket expenditure; access barriers; Unserved and Underserved Areas (UUAs); Philippines

O-T05B-0699

Ophthalmology Coding Errors and Their Financial Impact: A Case Study of MyDRG Reimbursement in a Malaysian Teaching Hospital

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Abstract

Background: The Malaysian Diagnosis-Related Groups (MyDRG®) system is a casemix tool for standardized inpatient reimbursement and resource allocation in Malaysian hospitals. Accurate clinical coding underpins valid DRG assignment and equitable funding, yet audits frequently uncover high error rates, with up to 89.4% of records miscoded in Malaysian teaching hospitals (1).

Method: A retrospective audit was conducted on 225 ophthalmology inpatient cases at a Malaysian teaching hospital from January to April 2024. An ICD-trained medical officer re-coded all diagnoses (ICD-10) and procedures (ICD-9-CM), with validation from an experienced casemix coder. Discrepancies between original and re-coded data were analyzed using the MyDRG® grouper to measure changes in DRG assignment, severity levels, and financial reimbursement.

Results: The audit revealed substantial under-coding. Post-audit, the mean number of diagnosis codes per patient rose by 52% (from 2.96 to 6.17), and procedure codes increased by 46% (from 1.48 to 2.74). This led to an increase in unique DRG assignments from 17 to 19 and a doubling of cases classified at higher severity levels (II and III), indicating initial coding failed to capture true case complexity.

These findings align with systematic reviews reporting median diagnostic accuracy of around 80% and procedure accuracy of 84% in routine hospital data (2). Under-coding has been shown to translate directly into revenue loss; our study's RM 1,506.78 average monthly shortfall per patient echoes the RM 654,303.91 potential loss observed during MyDRG® implementation audits (1). Over four months, the estimated cumulative financial loss due to inaccurate coding amounted to RM84,756.25. The highest monthly shortfall occurred in March 2024, with an estimated loss of RM2,905.37 per patient, representing a 33.6% underpayment. Moreover, comparative analyses in other DRG systems reveal similar under-payment rates when coding errors prevail (3). These findings support the need for

clinician engagement in coding audits and sustained coder training to ensure data quality, cost recovery, and effective resource use (4,5).

Conclusion: Regular coding audits, targeted clinician training, and performance monitoring are essential to enhance MyDRG® implementation, minimize financial leakage, and ensure equitable resource distribution.

Keywords: MyDRG; Casemix System; Clinical coding accuracy; DRG classification; Revenue loss

O-T05D-0724

Malaysian Society Quality of Health (MSQH) hospital accreditation: Perceived impact mean score among hospital employees in Hospital Tenom, Sabah and its predictors

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Abstract

Background: Hospital accreditation serves as a structured approach to enhance healthcare quality, patient safety, and organizational performance. In Malaysia, the Malaysian Society for Quality in Health (MSQH) accreditation provides systematic standards for improvement. Understanding healthcare employees' perceptions of accreditation impact is crucial, especially in rural hospitals with limited resources. This study aimed to assess healthcare professionals' perceived impact of hospital accreditation on quality of care and identify accreditation domains and demographic factors influencing perceived quality results in a rural district hospital.

Method: A cross-sectional study was conducted among 70 hospital employees using a validated eight-domain questionnaire rated on a five-point Likert scale. The dependent variable was Quality Results, while independent variables included seven other accreditation domains and demographic factors (age, gender, education, occupation, experience, and accreditation involvement). Domain scores were computed as mean item scores. Multiple linear regression determined predictors of Quality Results.

Results: Perceived Quality Results were high (M = 4.41, SD = 0.54). The model was strong (R^2 = 0.765, adjusted R^2 = 0.738, $F(7, 62) = 40.74$, $p < 0.001$). Two domains significantly predicted Quality Results: Customer (Patient) Satisfaction (B = 0.434, β = 0.420, p = 0.001) and Quality Management (B = 0.395, β = 0.337, p = 0.022). Other domains were not significant. Multicollinearity and model assumptions were acceptable.

Conclusion: Healthcare professionals in this rural hospital perceive accreditation as contributing strongly to quality outcomes. Patient-focused measures and effective quality management processes were key drivers of perceived quality. Sustaining accreditation gains requires continued emphasis on patient experience and systematic quality improvement.

Keywords: MSQH, hospital accreditation, quality of care, predictors, rural hospital, Malaysia

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T05D-0753

Fragmentation of PTCA with stent treatment in the DRG payment system under Indonesia's JKN Program: Analysis of Claim Data JKN 2023

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Abstract

Indonesia introduced social health insurance, namely Jaminan Kesehatan Nasional (JKN) that covered more than 270 million people, managed by BPJS Health. JKN implemented DRG as a hospital payment system, called INA-CBGs from the beginning. There is a potential for fragmentation of services as unintended consequences in the DRG implementation, including treatment of PTCA with stent, because hospitals will be paid the same regardless of how many stents are used in the treatment. This study aims to analyze the fragmentation of PTCA with stent services in the JKN program 2023.

This is an observational study with a quantitative approach, cross-sectional using sample data of JKN claims in 2023 published by BPJS Health. This sample data was weighted to allow for population-level analysis. Logistic regression analysis was performed to analyze the association between the independent variables and repeat PTCA with stent services.

There were 50,515 participants who received PTCA with stent services and 7.61% received the service more than once (2-4 times) during 2023. Most patients who received PTCA with stent were aged >= 60 years, male, married, worked in the formal sector, lived in the west of Indonesia and urban area with high social economy, treated in private and medium size of hospitals, with mild conditions. The analysis showed that patients with severe conditions had 0.137 times the risk of getting repeated services than those with mild condition.

Although the repeat rate of PTCA with stents treatments (average 3 months) is relatively small, it would be better if payment for the number of stents used is made separately from the INA-CBGs payment for PTCA procedures, so that hospitals can provide services according to the number of stents required by patients and avoid fragmentation of services to ensure the quality and cost management in the JKN program.

Keyword: DRG, fragmentation, JKN, PTCA, Stent

O-T05A-0767

Estimating the Health and Economic Benefits of Reduced PM2.5 Exposure and Healthier Lifestyles: A Cost-of-Illness Modeling Study in Malang, Indonesia

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Abstract

Background: Indonesia experiences high exposure of $PM_{2.5}$, including in rural regions, considering household biomass burning and small-scale industries as predominant sources of air pollution. In addition to low adherence to healthy lifestyle behaviors, these exposures increase the burden of cardiovascular disease (CVD) and chronic obstructive pulmonary disease (COPD). This study aimed to project the potential health and economic impacts of lowered $PM_{2.5}$ exposure and through a healthy lifestyle.

Methods: We used the individual-level data collected in June–August 2025 in Kepanjen Sub-district, Malang City, with a total sample of 450 individuals. Key exposures included a daily average of $PM_{2.5}$ level collected using the NAFAS device measured for a month, fruit and vegetable consumption (≥5 servings/day), and physical activity (≥3 times/week). Disease risk estimates from logistic regression were combined with population incidence data to derive population attributable fractions (PAFs). Relating PAFs were aggregated to calculate prevented cases. Population-based cost-of-illness (COI) analyses for both insured (National Health Insurance/BPJS) and non-insured patients were developed for outpatient, inpatient, and multi-morbidity care.

Results: Reducing $PM_{2.5}$ exposure while promoting a healthy diet and regular physical activity could prevent an estimated 18,583 CVD cases and 2,023 COPD cases among adults aged ≥40 years. Population-level economic savings for BPJS patients were USD 6.18M for outpatient care, USD 22.14M for inpatient care, and USD 52.46M for multi-morbidity for CVD, and USD 416K for COPD. For non-BPJS patients, savings were USD 4.65M (outpatient), USD 16.72M (inpatient), and USD 21.76M (multi-morbidity) for CVD, and USD 592K for COPD.

Conclusion: Reducing $PM_{2.5}$ risk factor exposure and increasing a healthy diet and physical activity has the potential to greatly reduce CVD and COPD burden, including associated costs, while also providing substantial economic benefits that can justify population-based interventions to improve health in Indonesia.

Keywords: $PM_{2.5}$, CVD, COPD, COI, health economics, air pollution, Indonesia

O-T05A-0768

Digital Innovation for Behaviour Change: WhatsApp Bot Strengthening Immunization, Hygiene, and Nutrition in Indonesia

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Abstract

The *Keluarga SIGAP* – "The Well-Prepared Family" program focuses on laying a strong and healthy foundation for the growth and development of children in Indonesia, by driving behaviour change in three key areas: routine immunisation, handwashing with soap, and nutrition. WhatsApp is a tool widely accessible by parents in Indonesia and it can be used as well as a tool to educate parents for promoting child health. Keluarga SIGAP develops a WhatsApp Bot, to reinforce three key child health behaviours – Immunization, handwashing with soap, and age-appropriate feeding- for parents of children under two.

The BOT has been scaled to over 30,000 parents in 3 districts of Indonesia. The initial pilot showed over 50% participation by both parents, underscoring its relevance to drive engagement for fathers and spousal communication with reference to childcare practices.

This co-learning tool accessed via QR codes or a link provided by frontline workers, delivered through bite-size content consisting of videos, jingles, images, quizzes, practical tips, and immunization specific reminders. A series of focus group discussion with 40 mothers and fathers and a structured observation on spousal interaction in rural and urban areas of Central Java was done to assess the BOT's usability prior to scaling. Participants reported recall of recommended practices and greater confidence in applying them. While fathers particularly valued the interactive and on-demand format, limited phone access and connectivity costs could still restrict its potential use, among rural mothers. Engagement also depended heavily on health worker encouragement, underscoring the importance of offline complementarity.

Overall the WhatsApp Bot demonstrated potential for engaging fathers and couples. Future scale-up should integrate mobile health solutions with household visits to ensure equitable access and sustained behaviour change in underserved populations.

Keywords: digital, whatsapp, child health, health promotion, Indonesia.

6.Future Society & Health

O-T06B-0166

Terminalia catappa Leaf Extract-Incorporated Sodium Alginate/Carboxymethyl Chitosan Hydrogel with Antibacterial, Antioxidant, and Anti-Inflammatory Properties for Burn Wound Healing Applications

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Abstract

The skin is the body's largest organ, serving as a critical barrier against infection and environmental stress. Burn injuries represent a significant public health concern, particularly in low- and middle-income countries, where they contribute to high rates of morbidity, mortality, and economic burden. Such injuries compromise the skin barrier, resulting in prolonged inflammation, oxidative stress, microbial invasion, and delayed wound healing. Consequently, there is an increasing demand for

advanced wound dressings that are non-toxic, promote tissue regeneration, and reduce dependence on antibiotics.

This study developed a natural bilayer hydrogel wound dressing incorporated with *Terminalia catappa* leaf extract to provide antibacterial, antioxidant, and anti-inflammatory properties. The bilayer structure comprises a sodium alginate (SA) and carboxymethyl chitosan (CMC) hydrogel, crosslinked with calcium ions to ensure moisture retention and biocompatibility. The second layer consists of an electrospun polyvinyl alcohol (PVA) and polycaprolactone (PCL) nanofiber sheet, which mimics the extracellular matrix and enhances mechanical strength.

Mechanical testing confirmed appropriate flexibility and durability. Scanning electron microscopy (SEM) revealed a porous hydrogel network and uniform nanofiber distribution, supporting pathogen inhibition. Fourier-transform infrared spectroscopy (FTIR) confirmed crosslinking and successful incorporation of bioactive compounds. The hydrogel demonstrated strong antimicrobial activity by eradicating methicillin-resistant *Staphylococcus aureus*, *Pseudomonas aeruginosa*, and *Escherichia coli*, and by inhibiting *Candida albicans* growth.

Antioxidant activity was verified using the 2,2-diphenyl-1-picrylhydrazyl (DPPH) and

2,2′-azino-bis (3-ethylbenzothiazoline-6-sulfonic acid) (ABTS) radical scavenging assays, with levels exceeding 80% and 90%, respectively. Biocompatibility and wound healing potential were evaluated using HaCaT keratinocyte cells, with cell viability above 70%. Scratch assays revealed enhanced wound closure, especially in the 12.50% extract-loaded formulation. Anti-inflammatory effects were assessed through nitric oxide inhibition in LPS-activated macrophages, showing a reduction of approximately 43%.

Among all samples, the hydrogel containing 9.38% *T. catappa* extract demonstrated the most balanced and effective bioactivity. Preliminary results indicate that the *T. catappa*-loaded bilayer hydrogel is a safe, effective multifunctional dressing with strong potential to improve burn care, especially in resource-limited settings. Findings suggest it may serve as a viable wound healing solution.

Keywords: Burn wound healing, Terminalia catappa, bilayer hydrogel, sodium alginate, carboxymethyl chitosan, electrospun nanofibers, polyvinyl alcohol, polycaprolactone, antibacterial activity, antioxidant activity, anti-inflammatory activity, wound dressing, drug delivery, mechanical characterization, morphological analysis

O-T06B-0217

The Role of Overall Health Literacy in Supporting the Health Management of Women with PCOS: A Comparison of AI-Based and Traditional Tracking Methods

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Abstract

Health literacy is vital for managing Polycystic Ovary Syndrome (PCOS), a condition affecting about 4.5 million Filipino women. Low health literacy can lead to misdiagnosis, poor treatment adherence, and inadequate self-management (Shahid et al., 2022; DOH, n.d.). Menstrual tracking tools, including AI-based apps, may support self-care and improve health literacy, but their effectiveness compared to traditional methods remains unclear. This study compares the health literacy of PCOS patients using AI-based trackers versus traditional calendar methods.
This quantitative comparative study involved 101 women aged 18–45 from Metro Manila with diagnosed PCOS, selected through convenience sampling. Participants completed the HLS-EU-Q47 questionnaire using Google Forms. Data were anonymized and analyzed through descriptive statistics and an Independent t-test.

Women with PCOS using AI-based menstrual tracking tools demonstrated significantly higher health literacy scores across all domains compared to those using traditional calendar methods (Traditional: M = 2.96, SD = 0.51; AI-based: M = 3.24, SD = 0.48). AI-based tracker users showed better comprehension of medical guidance, stronger disease prevention practices, and more proactive health behaviors. However, the observation that these participants were generally younger, single, more educated, and had higher incomes may represent potential confounders in the association between tracker type and health literacy. Both groups, however, displayed limited literacy in emergency response and public health awareness.

Findings suggest that AI-based tools may support improved PCOS self-management by enhancing patient engagement and knowledge. Nevertheless, targeted public health education remains essential to address broader gaps in health literacy, particularly in emergency preparedness and public health awareness.

O-T06C-0263

Leveraging Telemedicine for Disaster Resilience: A First Case Report from the 2024 Kelantan Flood in Malaysia

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Abstract

Background: Floods frequently disrupt healthcare systems across Southeast Asia, severely compromising access and continuity of care. While telemedicine presents a promising solution in disaster contexts, practical applications in low-resource, flood-affected zones remain scarce. This case report documents Malaysia's first pilot of a disaster-responsive telemedicine model, implemented during the 2024 Kelantan floods.

Methods: A multidisciplinary team from the Kelantan chapter of PAPISMA, a Malaysian health NGO, deployed a "Telemedicine Triad" model comprising on-site paramedic-led triage and digital patient registration, remote doctor consultations via video call, and centralized coordination with a pharmaceutical distribution node. The pilot was conducted at two temporary relief centres in December 2024, in collaboration with the Ministry of Health Malaysia.

Results: Nine patients were enrolled, primarily presenting with chronic diseases and minor infections. Although the small sample size was due to the project's impromptu initiation during the late disaster's active phase, the system functioned effectively across all operational components. Patients reported high satisfaction with the accessibility and timeliness of care. The intervention contributed to continuity of care and reduced the burden on overstretched frontline healthcare providers. Key enabling factors included strong interprofessional collaboration and rapid protocol activation, while major barriers involved unstable internet connectivity and the lack of disaster-specific telemedicine policies.

Conclusion: This pilot demonstrates the potential of structured telemedicine workflows in disaster settings but does not claim definitive operational feasibility due to its limited scale. Future implementations should focus on scaling, outcome evaluation, and integration into national emergency preparedness strategies. The Kelantan experience provides early insights into how digital health innovations can enhance healthcare system resilience in climate-vulnerable regions of Southeast Asia.

Keywords: Telemedicine, Digital Health, Disaster Health, Flood Crisis, Emergency Preparedness, Public Health Innovation, Kelantan, Malaysia, Southeast Asia

O-T06B-0291

Evaluation Of Vapgamo, A Game-Based Learning Intervention For Vaping Prevention Among Adolescents: A Study On User Acceptance And Behavioral Impact

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Abstract

The growing trend of vape use among Malaysian adolescents reflects a global vaping epidemic, posing urgent public health challenges. This study aimed to evaluate the preliminary effect and acceptability of *VaPGaMo* (Vaping Prevention Gaming Module), an educational video game developed to reduce adolescents' intention to vape by enhancing knowledge, correcting misperceptions, and promoting healthy decision-making through game-based learning. A pilot test was conducted with 34 secondary school students (mean age= 14.09, SD=0.753) in the Klang District. Participants completed a validated questionnaire assessing vaping-related knowledge, intention to vape, attitudes, subjective norms, and perceived-behavior control before and after gameplay. Additionally, player experience and satisfaction were assessed post-intervention. Paired-sample *t*-tests were used to assess pre-post differences, and effect sizes were reported using Cohen's *d* were analysed using IBM SPSS software 29.0. Descriptive statistics summarized user acceptance testing (UAT). Following gameplay, participants showed significant improvement in vaping-related knowledge ($t(33) = -6.046$, $p = <0.001$, $d = 1.037$), increased perceived behavioral control ($t(33) = -2.365$, $p = 0.024$, $d = 0.406$), and a reduced intention to vape ($t(33) = 4.210$, $p = <0.01$, $d = 0.722$). No significant changes were found in attitudes and subjective norms. Participants reported high levels of enjoyment (M=4.66, SD=0.648), personal gratification (M=4.61, SD=0.798), and visual aesthetic (M=4.60, SD=0.725). Overall mean score was 40.60 (90.2%), which indicate high acceptance of the game module. Preliminary findings suggest that *VaPGaMo* is a promising educational tool for increasing knowledge, reducing vape intention and improve self-efficacy to refuse vape among adolescents. The game was well-received by students, indicating strong potential for integration into school-based prevention efforts.

Keywords: Serious games, Pilot study, Vaping, Educational intervention, Videogame

O-T06B-0420

Effectiveness And Implementation Challenges of the CONEMO Digital Intervention for Depression Among Hypertensive Adults in Low- And Middle-Income Countries: A Literature Review

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Abstract

Background: Depression is a prevalent comorbidity among hypertensive patients, especially in low- and middle-income countries (LMICs), where it undermines treatment adherence and quality of life. The CONEMO (Control Emocional) digital intervention, based on behavioral activation theory, was developed to address limited mental health services in these settings. This systematic review evaluates the efficacy of CONEMO in reducing depressive symptoms, explores implementation challenges, and identifies factors influencing adoption and sustainability among hypertensive populations in LMICs.

Methods: Following PRISMA 2020 guidelines, a systematic search of PubMed, Scopus, and Google Scholar identified relevant publications (2020–2025) using the keywords "CONEMO," "hypertension," "digital intervention," and "mental health." Eligible studies underwent thematic narrative synthesis, and methodological quality was appraised with Joanna Briggs Institute tools.

Results: Ten studies, including randomized controlled trials, qualitative investigations, and implementation analyses, were reviewed. CONEMO demonstrated significant short-term reductions in depressive symptoms, as measured by the Patient Health Questionnaire-9 (PHQ-9), within 12 weeks. Evidence for effects on anxiety remains limited. Key facilitators were user-centered design, nursing support, and favorable patient perceptions. Barriers included low digital literacy, limited access to technology, and absence of supportive policy frameworks. Adoption was linked to health system readiness, workforce capacity, and integration into primary care delivery.

Conclusions: CONEMO is a promising digital behavioral activation intervention for mitigating depression among hypertensive patients in LMICs. Nurses play a critical role in supporting delivery and adherence. Longitudinal studies are needed to confirm sustained efficacy and broader psychosocial benefits. Sustainable implementation requires integration into health systems and enabling policy support.

Keywords: CONEMO; Depression; Digital Intervention; Hypertension; Low- And Middle-Income Countries

O-T06B-0459

Development of EMS Help Me" Platform for Cross-Border Emergency Medical services in South-East Area in Thailand

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Abstract

This study aimed to develop the EMS Help Me platform for cross-border emergency medical services in the South-East area. Research and Development was used to gather data and divided into 2 phases: Phases 1 development the EMS Help me Platform and Phases 2 testing the EMS-Help me platform and evaluation satisfaction. The target populations in this study are composed of stakeholders who work related to health and travel in Ubon Ratchathani, Si-Sa Ket, and Surin border areas. Interview guidelines and questionnaires were used to collect data. Data were analyzed using descriptive statistics and content analysis.

The research study presented that (1) the needs of the EMS Help Me Platform are composed of 1) a person who reported an emergency 2) EMS Alert, data for reporting to the emergency response team and 3) emergency respond operation (emergency management) composed of GIS, real-time monitoring system. (2) The EMS Help Me platform operates on iOS and Android and consists of two functions: the user interface consists of three menus (registration, require assistance, monitoring and tracking). For the system for staff includes information on the patients, patient locations and status. (3) Evaluating the satisfaction of utilizing the EMS Help Me Platform found that the overall was quite high.

The result of this study recommend that the use of the EMS-Help Me platform can be beneficial for those who request medical services while traveling in other countries. However, further research should be carried out to assess the efficacy and patient outcome after utilizing the platform.

O-T06B-0512

Assessing Health Records Management System in the City of Balanga, Philippines

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Abstract

The successful implementation of public health interventions relies on the efficiency of health records management. Understanding how health data is managed, shared, and utilized provides critical insights into whether existing processes support efficient public health management. This study assessed the current methods, technical infrastructure, and reporting protocols of the different rural health units (RHU) and barangay health stations (BHS) in the city of Balanga, to determine whether there is a need for improvement in data management processes, feasibility of a unified health management system, or the development of interoperability mechanisms

A mixed-method convergent parallel design was utilized. Survey questionnaires combined with semi-structured interviews were administered to health facility personnel from the RHUs and BHSs in the city. Quantitative data were analyzed using descriptive statistics, while qualitative data underwent thematic analysis. The results were integrated to generate a comprehensive situational analysis report.

The survey revealed that all the RHUs and BHSs have existing Electronic Medical Records (EMR). However, most healthcare personnel continue to use paper-based forms and spreadsheets. System failure, limited access, and internet issues were frequently cited as the cause of delay in encoding and reporting. While the majority of the respondents find EMRs efficient and complete, they believe that a unified system would improve their health records management. Interview responses reinforced the survey results with frequent mention of unreliable internet connectivity, system downtime, use of printed forms, and lack of direct integration with hospitals and other health facilities.

These findings suggest that there is a functional health records management system in the city, but it requires an upgrade in technical infrastructure, expanded access privileges, and interoperability

mechanisms. Prioritizing these issues can significantly strengthen reporting efficiency and disease surveillance, and improve overall delivery of health services to the community.

Keywords: evidence-based public health, electronic medical record, interoperability, health records management

O-T06C-0552

Patients' Satisfaction Towards Virtual Consultation Service Using Mysejahtera Application And Its Associated Factors In Malaysian Public Primary Care

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Abstract

Background: MySejahtera, initially developed to support Malaysia's COVID-19 response, has evolved into a comprehensive digital health platform offering multiple services, including virtual consultation in public primary care. Despite nationwide rollout since May 2025, limited evidence exists on patient satisfaction with this service. This study aimed to determine the mean satisfaction score of patients using MySejahtera's virtual consultation and identify associated factors.
Methods: A cross-sectional study was conducted in 38 government health clinics across Malaysia. Patient satisfaction, usability, and acceptability were assessed using the validated Malay version of the Telehealth Usability, Acceptability, and Satisfaction Questionnaire (TUASQ). A total of 102 patients completed the online survey. Data were analysed using descriptive statistics, simple linear regression, and multiple linear regression.

Results: The mean satisfaction score was 21.24 (SD = 2.95) out of 25, reflecting high overall satisfaction. Sociodemographic characteristics (age, gender, job, income, and education) were not significantly associated with satisfaction ($p > 0.05$). Usability was positively associated with satisfaction ($\beta = 1.41$, $p < 0.001$, $R^2 = 0.59$), while acceptability showed an even stronger association ($\beta = 0.49$, $p < 0.001$, $R^2 = 0.85$). In the adjusted model, only acceptability remained a significant predictor of satisfaction ($\beta = 0.45$, $p < 0.001$), explaining 85% of the variance.

Conclusion: Patients expressed high satisfaction with MySejahtera's virtual consultation service. Acceptability was the strongest determinant of satisfaction, whereas sociodemographic factors and usability did not significantly influence outcomes. Efforts to enhance patient confidence, comfort, and trust in the platform may further improve satisfaction and support the sustainability of virtual consultations in Malaysian primary care.

Keywords: Virtual consultation, telemedicine, telehealth, teleconsultation, user satisfaction

O-T06B-0684

Prediction of Treatment Success in Multidrug-Resistant Tuberculosis (MDR-TB) Using Machine Learning Algorithms

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Abstract

Introduction: Multidrug-resistant tuberculosis (MDR-TB) remains one of the greatest challenges in global tuberculosis control. Its clinical complexity and the variability in patient responses to therapy make it difficult to determine the optimal treatment strategy. Machine learning–based approaches provide predictive solutions by analyzing clinical data to forecast treatment outcomes. Integrating machine learning into MDR-TB management represents an innovative strategy that can support more adaptive and data-driven tuberculosis control programs.
Methods: This review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. A comprehensive literature search was performed in PubMed, ScienceDirect, and Google Scholar for studies published between 2020 and 2025. Of the 615 studies initially identified, 131 duplicates were removed and 374 were excluded as irrelevant, leaving 110 studies. After abstract screening, only studies on tuberculosis were retained, resulting in the exclusion of 76 articles and leaving 34. A further assessment included only studies focusing on machine learning–based prediction of MDR-TB treatment outcomes, yielding 14 articles for the final review.
Results: All of these studies employed various machine learning methods, including Random Forest (RF), Support Vector Machine (SVM), Logistic Regression (LR), and Extreme Gradient Boosting (XGBoost), each demonstrating different levels of predictive accuracy.
Conclusion: The use of machine learning offers a potential solution to control the spread of tuberculosis more quickly and accurately. Given the slow progression of tuberculosis, mathematical and computational models are highly valuable for predicting the long-term course of the epidemic and for guiding public health planning and resource allocation.
Keywords: Multidrug-Resistant Tuberculosis (MDR-TB), Treatment Success Prediction, machine learning algorithms, clinical applications

O-T06B-0748

Digital Surveillance of Indirect E- Cigarette Promotion on Social Media: Insights from TikTok Video Content Analysis and Engagement Metric\

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Abstract

Background: Indirect promotions of e-cigarette on social media often evade regulatory detection as it conceals marketing intent when subtly building brand awareness and trust, subsequently normalizing e-cigarette use. This study aimed to identify the indirect e-cigarette marketing strategies used on TikTok and to examine their association with engagement metric.

Methods: 1,500 TikTok videos with indirect promotion of e-cigarette content from public accounts in Malaysia were downloaded with third party scrapers by searching 26 main e-cigarette brands and three e-cigarette-related terms. A pilot study was conducted on 10% of the data to refine a theory-informed coding framework. To ensure a diverse dataset, purposive sampling by content creators was applied, as same creators often used similar marketing strategies, with additional sampling on underrepresented strategies. Each video was manually coded according to the refined codebook. Associations between marketing strategies and total engagement metrics were examined using a mixed-effects negative binomial regression, controlling for random intercepts of e-cigarette brand and content creator and including an offset for total video views.

Results: Out of 430 TikTok videos with indirect e-cigarette promotion, 96% did not self-declare as advertisement or sponsored content and had a strong engagement rate of median 5.5% (IQR 4.2). Seven non-mutually exclusive indirect marketing strategies were identified, namely influencer endorsement (95.3%), product placement (93.5%), youth marketing (89.0%), localization (8.6%), event sponsorship (8.4%), viral marketing (7.2%), and brand community building (0.7%). Product placement was significantly associated with higher engagement rate per view (IRR = 1.31, 95% CI: 1.03–1.68, p = 0.029).

Conclusion: TikTok videos with indirect promotion of e-cigarette in Malaysia were highly engaging and employed diverse covert strategies to evade regulatory actions. These findings contributed actionable insights on digital surveillance frameworks and enforcement for comprehensive ban on e-cigarette advertisement, promotion and sponsorship on social media.

Keywords: Health informatics, telehealth and smart health care

O-T06B-0775

Implementing A Hospital Occurrence/Incident Analysis & Risk Register (HOIA-RR) Tool In Thailand's Hospitals: A Study On Effective Adoption

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Abstract

Background: Thailand's Ministry of Public Health prioritizes strengthening patient safety culture and risk prevention through effective national-level reporting and learning systems. However, local hospitals often lack advanced data analytics tools for efficient risk management. This study aimed to bridge this gap by developing and implementing an innovative digital application for hospital-based risk monitoring and analysis.

Methods: The HOIA-RR application was developed using Python and the Streamlit framework and deployed locally. AI-assisted techniques were integrated to enhance key functions, including incident reporting and Root Cause Analysis (RCA). Evaluation involved both qualitative and quantitative methods. The System Usability Scale (SUS) was applied to assess user satisfaction, while performance improvement was evaluated by comparing the time required to generate and refine the Risk Matrix before and after HOIA-RR implementation. The 26-item evaluation instrument was validated for content (IOC) and reliability (Cronbach's alpha).

Results: Strong institutional support was observed, with six of seven hospitals demonstrating active commitment to adopting the system. Implementation fostered a proactive safety environment and consistent monthly risk reporting. The HOIA-RR tool significantly enhanced performance, reducing the median Risk Matrix processing time from an average of 30 days to under 7 days (approximately 77% reduction). User satisfaction was high, with a mean SUS score of 88.52%. Two high-impact hospitals further customized the HOIA-RR source code for local adaptation.

Conclusion: The HOIA-RR tool represents a robust, evidence-based digital solution with verified validity and reliability. Its successful integration of Python- and AI-based technologies demonstrates a practical model for AI-enhanced risk management in healthcare. The project's outcomes highlight the potential for scaling this approach to strengthen patient safety and foster a sustainable learning culture across Thailand's healthcare system.

7.Core of Public Health and Other Issues

O-T07A-0110

Assessing the performance of Indonesia in managing paediatric cardiovascular burdens from 1990 to 2021

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Paediatric cardiovascular diseases (CVDs) remain a significant health challenge in Indonesia, especially given the country's diverse geography and disparities in healthcare access. This study aimed to analyse national and provincial trends in the burden of paediatric CVDs in Indonesia from 1990 to 2021 using Global Burden of Disease (GBD) data. We conducted a retrospective observational analysis using the GBD 2019 dataset, focusing on prevalence, mortality, and disability-adjusted life years (DALYs) across paediatric age groups. Trends were assessed by sex and province. The Estimated Annual Percentage Change (EAPC) was calculated for each CVD subcategory and age group by fitting a log-linear regression model to the natural logarithm of annual rates. From 1990 to 2021, no changes were found in the prevalence (0%), but a 22% reduction was achieved in the mortality rate. Several provinces show increasing burdens of specific CVDs. For example, cardiomyopathy and myocarditis rose in East Nusa Tenggara (0.403%), North Maluku (0.417%), North Sulawesi (0.197%), and Southeast Sulawesi (0.435%). Stroke also increased, notably in North Sulawesi (0.691%). These trends persisted in older age groups, with cardiomyopathy peaking at 1.27% in Southeast Sulawesi (6–11 months) and 2.33% in West Papua (10–14 years). Endocarditis rose in North Maluku and North Sulawesi, while pulmonary arterial hypertension sharply increased in North Maluku (124%) and West Papua (99.7%). Our findings suggest the need to strengthen primary prevention, early detection, and long-term disease management to sustain national gains while addressing emerging disparities.

Keywords: Cardiovascular disease, DALY, epidemiological trends, Global Burden of Disease, health disparity

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T07D-0117

Positioning Spiritual Hypnotherapy As A Promising Intervention For Anxiety In Breastfeeding Mothers: A Bibliometric Analysis

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Background: Anxiety in breastfeeding mothers presents a major public health issue, influencing success in lactation, bonding between mother and infant, and long-term psychological health. While conventional treatments are available, few incorporate spiritual and cultural aspects that are deeply valued by many postpartum women. These gaps are further complicated by stigma, limited accessibility, and cultural mismatch. Spiritual hypnotherapy, which combines guided hypnosis with spiritual or religious practices, has demonstrated benefits for emotional regulation, hormonal stability, and treatment engagement in broader anxiety settings. However, its application in postpartum care, especially among breastfeeding mothers, is still not widely studied. This study seeks to explore its theoretical and practical potential as a culturally informed and scalable intervention.
Methods: Using the Scopus database, we conducted a bibliometric analysis on May 5, 2025, identifying 3,489 articles published between 2000 and 2024 with the keywords: “Anxiety” AND “Breastfeeding Mother” OR “Postpartum Mother” AND “Intervention”. Data were refined using OpenRefine and analyzed using VOSviewer (v.1.6.16) to visualize co-occurrence networks, thematic clusters, and research trends.

Results: Three central clusters were identified: (1) anxiety related to the postpartum and breastfeeding period, (2) the role of hypnotherapy in autonomic and hormonal regulation, and (3) the influence of spirituality in maternal care. Hypnotherapy consistently showed effectiveness in reducing anxiety through physiological pathways. When spiritual dimensions were included, benefits expanded to emotional stability, personal meaning, and improved treatment participation, particularly in communities that prioritize spiritual and collective values. Although studies focused specifically on breastfeeding mothers are few, related postpartum evidence indicates strong potential for adaptation.
Conclusions: Spiritual hypnotherapy offers a promising, culturally sensitive approach to anxiety in postpartum and breastfeeding mothers. With limited options during lactation and rising interest in holistic care, this intervention warrants further research and policy attention.

Keywords: Spiritual hypnotherapy, breastfeeding, anxiety, postpartum

O-T07D-0120

Postpartum Blues Prevention Through Movement-Based Interventions To Support Infant Growth: A Vosviewer-Assisted Literature Review

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Introduction: Postpartum blues is a common emotional disturbance experienced by mothers in the early postpartum period. It manifests as anxiety, sadness, appetite loss, sleep disturbances, and breastfeeding difficulties, which can negatively affect infant growth due to reduced maternal responsiveness. While often self-limiting, some cases require intervention.
Objective: This study aims to explore types of movement-based interventions that have been reported to support the prevention or reduction of postpartum blues symptoms.
Methodology: This literature review was conducted by systematically searching scientific articles using the Publish or Perish software with the keywords "postpartum blues" and "prevention." Eligible articles were selected based on relevance, year of publication, and peer-reviewed status. A bibliometric analysis was performed using VOSviewer to identify recurring themes and intervention types across the selected literature.
Results: Various movement-based approaches were identified, such as yoga, Kegel exercises, tai chi, meditation, and breathing techniques. These interventions are reported to enhance mental well-being, reduce stress and depression, improve sleep quality, and strengthen the pelvic floor. Such improvements contribute positively to postpartum recovery and may help mitigate the risk of postpartum blues.
Conclusions: The findings suggest that movement-based interventions serve as effective non-pharmacological strategies to prevent or alleviate postpartum blues, indirectly supporting infant development by improving maternal mental health.
Keywords: baby growth; infant growth; postpartum blues; movement-based intervention; bibliometric analysis; VOSviewer

O-T07A-0143

Obesity-Stroke Awareness through the Lens of Young Adolescents

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The age of first stroke occurrences has become younger nowadays. This highlights the importance of knowledge and awareness of symptoms and appropriate measures towards stroke to reduce the morbidity and mortality. The aim of this study was to examine awareness and appropriate measures towards obesity-stroke among young adolescents. A quantitative cross-sectional study was conducted. The questionnaire contained demographic information, general information about stroke, and three dimensions of stroke awareness, which are symptoms, treatment and risk factors. A total of 201 respondents (40.3% males and 59.7% females) with average age 18.89 years participated in this study. There are 11.9% of the respondents had already looked after a patient with stroke. Meanwhile, 12.4% and 24.9% of the respondents had first degree relatives and second- or third-degree relatives, who had a stroke in the past, respectively. However, more than half of the respondents (51%) had no contact with patients with stroke. From the findings, the respondents with no contact with any stroke patient has the highest level of awareness towards symptoms. Meanwhile, respondents with first degree relatives had stroke are more aware of the stroke treatment. On the contrary, respondents with second- or third-degree relatives had stroke score higher in the awareness of risk factors. Regarding the obesity-stroke awareness, there is only 12 respondents agreed that obesity is the risk factors for stroke. Moreover, 12 out of 201 participants (5.97%) knew all stroke risk factors. The most known risk factor was high blood pressure, follows with unhealthy diet and high cholesterol. The study revealed that only 5.97% of the respondents aware that obesity is one of the risk factors of stroke. Effort should be made to educate the public, especially young adolescents about the obesity as one of the risk factors of stroke, so that public will benefit from the awareness.

O-T07D-0146

Crossing The Line: Incestuous Fantasies As A Sign Of Moral Crisis And Psychological Disturbance

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Background: Incest-themed sexual fantasies known as "fantasi sedarah" have emerged as a disturbing digital phenomenon in Indonesia, reflecting moral decay and potential psychological harm. This behaviour may indicate dysfunction.

Method: The analysts executed a narrative review was using 30 sources including peer-reviewed journals in psychology, digital culture studies, and neuroscience. The study examined case report, online discussions, and neuroscience to identify behavioural patterns and psychological profiles.

Results: The review reveals that individuals engaging in *fantasi sedarah* often share backgrounds of emotional neglect and exhibit psychopathologies like paraphilic disorders, narcissism, and dissociation. Neurological literature suggests that dysfunction in the prefrontal cortex and limbic system, which are regions tied to impulse control and moral judgment, may contribute to the distorted sexual cognition observed in *fantasi sedarah*.

Discussion: *Fantasi sedarah* represent both a psychological vulnerability and a societal failure in regulating digital content. We must prevent the normalization on incest fantasies to protect public morality and youth development.

Keynotes: digital deviance, incest fantasy, psychological trauma, moral disengagement, neuroethics, media regulation, Indonesia.

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

O-T07F-0149

Perceptions of Pregnant Women and Mothers of Stunted Children Regarding Food Allocation and Stunting Risk in Batak Families, Deli Serdang

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Stunting remains a complex and chronic nutritional issue in Indonesia, particularly in regions with strong cultural traditions such as the Batak community. One underexplored contributing factor is how food distribution practices within households affect the nutritional intake of pregnant women and young children. This study aimed to explore the perceptions and experiences of pregnant women and mothers of stunted children regarding food allocation within Batak families, and how these dynamics contribute to the risk of stunting.

A qualitative phenomenological approach was employed, with data collected through in-depth interviews with seven participants in Deli Serdang Regency, North Sumatra. Data were thematically analyzed using a reflective method.

Six major themes emerged: the meaning and prioritization of food distribution in Batak households; the influence of Batak cultural norms on food allocation; maternal perceptions of nutritional needs for themselves and their children; the role of other family members in food-related decision-making; economic constraints and coping strategies; and the impact of food distribution patterns on stunting risk. Findings reveal that patriarchal cultural norms, financial constraints, and limited maternal autonomy are interrelated factors that shape access to household nutrition.

Food distribution practices that overlook the nutritional needs of pregnant women and young children significantly increase the risk of stunting. Therefore, nutrition interventions in Batak communities should consider cultural norms, gender dynamics, and the empowerment of mothers in household economic decision-making.

Keywords: Maternal Perception, Stunting, Batak, Food Allocation

O-T07B-0171

Disparities in place of death among older palliative care recipients in Taiwan: A population-based analysis

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Background: Place of death (PoD) is a critical indicator of quality in end-of-life care, significantly impacting patients and their families. In Taiwan, how sociodemographic and care-related factors shape PoD among older palliative care users remains underexplored.

Methods: We conducted a population-based cross-sectional study using linked national claims and mortality data (2010–2020) in Taiwan. Individuals aged ≥65 who received palliative care before death were included. Multivariable logistic regression was used to identify factors associated with PoD (hospital, home, other).

Results: Among 177,403 decedents, 61.5% died in hospitals and 35.8% at home. Older age (OR: 1.29, 95% CI: 1.25–1.34), female sex (OR: 1.08, 95% CI: 1.05–1.10), rural residence (OR: 3.22, 95% CI: 3.13–3.31), cancer diagnosis (OR: 1.40, 95% CI: 1.36–1.45), and receipt of shared or home palliative care (OR: 3.93, 95% CI: 3.71–4.16) were associated with an increased likelihood of home death. Conversely, a higher insurance premium (OR: 1.12, 95% CI: 1.09–1.14) and care at a district hospital (OR: 1.33, 95% CI: 1.27–1.39) were linked to hospital death. Notably, non-cancer patients and those referred late were less likely to die at home, revealing systemic disparities.

Conclusion: Despite universal palliative care coverage, disparities in PoD persist by diagnosis, location, and socioeconomic status. Early palliative care referral and greater integration of shared and home care models may promote more equitable, preference-concordant end-of-life care. Policy efforts should target underserved groups, including non-cancer patients and those in urban settings, to reduce structural barriers to dying at home.

O-T07A-0172

Risk of road traffic collisions among people living with HIV: a population-based cohort study in Taiwan

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We aimed to investigate the risk of driver collisions in road traffic collisions among people living with HIV. This cohort study in Taiwan followed 34,201 people with HIV and 136,804 matched controls (without HIV) from 2015 to 2019 until the end of 2022. Collision events involving driver victims were identified by the Police-Reported Traffic Accident Registry. The incidence rate of collisions involving motorcycle and car driver victims was estimated under the Poisson assumption. The Cox proportional hazards regression was applied to estimate hazard ratios (HRs) for the association between HIV and collision risk. Over a follow-up period of up to eight years, people living with HIV had a higher incidence rate of motor vehicle collisions than controls (2.94 vs. 2.78 per 100 person-years), corresponding to a significantly elevated crude HR of 1.05 (95% CI, 1.02–1.08). However, after adjusting for potential confounders, including HIV complications, the association weakened. The elevated HR remained consistent after considering demographic and social characteristics, but after further adjustment for comorbidities, the adjusted HR was 0.98 (95% CI, 0.85–1.01), indicating no significant association. These findings indicate that while HIV status alone may not be a direct risk factor for driver collisions, underlying health conditions and complications could contribute to the observed differences. Future research should explore the role of comorbidities, medication effects, and behavioral factors on traffic collision risk among individuals living with HIV.

Keywords: cohort study, incidence, road traffic collisions, HIV, motorcycle

O-T07A-0177

The mediating effects of school connectedness and parent-child cohesion in the associations between negative life events and smartphone addiction among Chinese adolescents

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Background: The excessive smartphone use among adolescents has emerged as a public health concern worldwide. Although negative life events have been established as substantial risk factors for adolescent smartphone addiction, potential mediators in this relationship remain unclear.
Objective: This study aimed to examine the mediating roles of school connectedness and parent-child cohesion in the association between negative life events and smartphone addiction among Chinese adolescents.
Method: We recruited 16,029 adolescents from 4 schools from Henan Province in Central China, between November 2024 and January 2025. Smartphone addiction scale, adolescent life events checklist, parent-child cohesion scale, and school connectedness scale were used to assess smartphone addiction, negative life events, parent-child cohesion, and school connectedness. Structural equation model was conducted to investigate the mediation effects of school connectedness and parent-child cohesion on the relationship between negative life events and smartphone addiction.
Results: The prevalence of smartphone addiction was 34.99% (5,609/16,029). Negative life events predicted smartphone addiction directly (β=0.323, p<0.001) and indirectly through school connectedness and parent-child cohesion. Moreover, the sequential mediating effect was observed for parent-child cohesion to school connectedness

Conclusions: Smartphone addiction was widespread among Chinese adolescents. Parent-child cohesion and school connectedness could attenuate the detrimental impact of negative life events on smartphone addiction. Findings underscore the improvement of parent-child cohesion and the connection to the school would be beneficial to smartphone addiction prevention among Chinese adolescents who exposure to negative life events.
Keywords: Adolescents; Smartphone addiction; Negative life events

O-T07D-0178

The effect of adverse childhood experiences on mental health among Chinese adolescents: A moderated chain mediation model

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Background: Although adverse childhood experiences (ACEs) have been established as substantial risk factors for mental health among adolescents, the underlying mechanism in this relationship remain unclear. This study aimed to investigate the impact of ACEs on mental health among adolescents in China, with a focus on the chain mediating roles of NLEs and school connectedness, as well as the moderating role of resilience.

Method: We recruited 16,029 adolescents from 4 middle schools through stratified random cluster sampling in Shangqiu, China, between November 2024 and January 2025. The Childhood Trauma Questionnaire-Short Form, the Adolescent Self-rating Life Events Checklist, the School Connectedness Scale, the Connor-Davidson Resilience Scale and the Depression Anxiety and Stress Scale were used to measure ACEs, NLEs, school connectedness, resilience and mental health, respectively. The moderated mediation model was conducted to analyze the mediating effect of NLEs and school connectedness on the correlation between ACEs and mental health, and the moderating effect of resilience.

Results: ACEs significantly positively predicted mental health (β=0.193, 95%CI:0.181 -0.206), and also influence it through the mediating effect of NLEs(β=0.208, 95%CI:0.198-0.218), school connectedness(β=0.065, 95%CI:0.059-0.071) and their chain mediation(β=0.034, 95%CI:0.031-0.037), respectively, with accounting for 41.6%, 13.0%, and 6.8% of the total effect. Resilience moderated the relationship between ACEs and mental health (β=-0.076, 95%CI:-0.094--0.059).

Conclusions: ACEs directly affect mental health among adolescents, and indirectly affect it through NLEs and school connectedness. Resilience can buffer the impact of ACEs on mental health. Some intervention measures aimed at cultivating adolescents' positive coping style and improving their school connectedness and resilience should be provided for adolescents who were exposed to ACEs.

Keywords: Adverse childhood experiences; Mental health; Negative life events; School connectedness

O-T07A-0191

Adolescent mental health risk prediction using machine learning

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Background: The mental health problems among adolescents are trending toward younger ages, wider prevalence, and greater severity. This study explores the influencing factors of adolescent mental health and constructs predictive models based on three machine learning algorithms to aid early detection of mental health problems in adolescents.

Method: A total of 16029 adolescents from Shangqiu City, Henan Province, China, were selected by the stratified random cluster sampling. Validated scales were used to measure adolescents' mental health, negative life events, psychological resilience, smartphone addiction, etc. After exploring the influencing factors of adolescent mental health through univariate and multivariate analyses, predictive models were constructed based on Logistic Regression, Random Forest, and XGBoost algorithms, and their performances were compared. The optimal model was interpreted through SHAP analysis, and feature importance was ranked.

Results: The detection rates of depression, anxiety and stress was 20.4%, 33.8%, and 14.8%, respectively. Three machine learning models demonstrated good predictive performance (all AUC values > 0.8), and the XGBoost model exhibited the best predictive performance, with AUC values of 0.896, 0.855, and 0.891 for predicting adolescent depression, anxiety, and stress, respectively. SHAP analysis revealed that negative life events, smartphone addiction, and psychological resilience were the top three influencing factors in predicting the risk of adolescent depression, anxiety and stress

Conclusion: The detection rates of mental health problems among adolescents are high. The XGBoost model is the optimal model for predicting the risk of adolescent mental health. Negative life events, psychological resilience, and smartphone addiction are key predictors of adolescent mental health problems.

Keywords: Adolescents; Mental health; Machine Learning; Risk prediction

O-T07D-0201

Associations between depression and anxiety among Chinese adolescents: A network analysis

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Background: Depression and anxiety are common mental health problems among adolescents worldwide, with high levels of comorbidity. While existing research has extensively examined these conditions separately, the associations between their symptoms remain unclear.
Objective: This study aimed to construct the network structures of depression and anxiety to elucidate symptom-symptom associations among Chinese adolescents, and to investigate potential gender differences.
Methods: Using stratified cluster random sampling, 8,176 adolescents from Zhengzhou and Shangqiu cities in Henan Province, Central China, were recruited during April and May 2023. Depressive and anxiety symptoms were assessed using the 10-item Center for Epidemiologic Studies Depression Scale (CESD) and the 7-item Generalized Anxiety Disorder Scale (GAD), respectively. Symptom networks were constructed using network analysis. Central and bridge symptoms were identified based on their respective centrality indices, and gender differences were examined using network comparison tests.
Results: In the depression network, the symptoms identified as most central were low motivation (CESD-7), depressed mood (CESD-1), and fatigue (CESD-2). For the anxiety network, the most central symptom was uncontrollable worry (GAD-2), followed by excessive worry (GAD-3) and trouble relaxing (GAD-4). In the comorbid depression–anxiety network, low motivation (CESD-7), depressed mood (CESD-1), and trouble relaxing (GAD-4) stood out as central symptoms. Regarding bridge symptoms, fearfulness (CESD-10) was the most prominent, followed by irritability (GAD-6) and depressed mood (CESD-1). Significant gender differences were observed in global network strength (p=0.032) and structure (p=0.026).
Conclusion: Depression and anxiety demonstrate significant symptom-level associations as well as notable gender differences. Targeted interventions addressing both central and bridge symptoms, while considering gender-specific variations, are essential for effectively improving adolescent mental health outcomes.
Keywords: Depression; Anxiety; Network analysis

O-T07A-0205

The effect of negative life events on anxiety among Chinese adolescents: a moderated mediation model

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Background: Anxiety, as a common emotional disorder, has shown an increasing trend among adolescents in recent years. Negative life events have been considered risk factors for anxiety, little is known about the mediating and moderating effects in this association. Therefore, this study aimed to investigate the association between negative life events and anxiety, as well as the underlying mechanisms of this association among Chinese adolescents

Methods: A total of 8176 junior high school students in Zhengzhou and Shangqiu Cities of Henan Province were selected by stratified random cluster sampling. The Adolescent Self-rating Life Events Checklist (ASLEC), Parent-Child Cohesion Questionnaire (PCCQ), School Connectedness Scale (SCS), 10-item Connor-Davidson Resilience Scale (CD-RISC-10) and Generalized Anxiety Disorder-7 (GAD7) were used to assess the levels of negative life events, parent-child cohesion, school connectedness, psychological resilience and anxiety, respectively. Models 4 and 5 in SPSS PROCESS 3.5 were used to test the mediation and moderated mediation effects.

Results: Negative life events directly predicted anxiety among adolescents (β=0.393, P<0.001). Parent-child cohesion (β=0.032, 95%*CI*:0.025~0.038) and school connectedness (β=0.079, 95%*CI*:0.069~0.090) mediated the relationship between negative life events and anxiety. 20.98% of the total association between negative life events and anxiety was mediated by parent-child cohesion and school connectedness. Psychological resilience moderated the effect of negative life events on anxiety (β=-0.034, P<0.001)

Conclusion: Negative life events directly affect anxiety and indirectly predict anxiety through parent-child cohesion and school connectedness level. Psychological resilience can buffer the detrimental influence of negative life events on anxiety. Reducing the occurrence of negative life events and improving the levels of parentchild cohesion, school connectedness, and psychological resilience may be beneficial to adolescent mental health.

Keywords: Adolescents; anxiety; negative life events

O-T07B-0215

A Community Intervention Model Based On Tempeh As A Source Of Protein And Zinc To Increase Body Weight And Hemoglobin Of Underweight Toddlers

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Introduction: Malnutrition in toddlers, including underweight and anemia, remains a significant public health issue affecting physical and cognitive development, particularly in developing countries. *Tempeh*, a local plant-based protein source rich in zinc and bioactive compounds, has the potential to serve as an affordable, environmentally friendly, and culturally accepted nutritional intervention. This review aims to evaluate the effectiveness of plant-based protein particularly *tempeh* in improving body weight and hemoglobin levels in underweight toddlers.
Methods: This study used a systematic review design guided by the PRISMA approach. Relevant articles were searched through Google Scholar, ScienceDirect, and ProQuest using specific keywords. Inclusion criteria covered quantitative intervention studies on underweight children aged 1–5 years with outcomes related to body weight and/or hemoglobin levels. Fourteen eligible studies were included in the final synthesis.
Results: Plant-based protein interventions, especially those using *tempeh*, were found to improve body weight and hemoglobin levels in underweight toddlers. The bioactive components in *tempeh*, such as isoflavones, saponins, and *Rhizopus oligosporus* fermentation, enhance zinc bioavailability and iron absorption. Interventions with *tempeh*-based formulations showed improvements in key nutritional biomarkers including hemoglobin, albumin, prealbumin, ghrelin, and leptin. Intervention effectiveness was influenced by factors such as duration, micronutrient combinations, and family socioeconomic status.
Conclusion: *Tempeh* is a promising plant-based protein source for nutritional interventions targeting underweight toddlers. Beyond improving body weight and hemoglobin, *tempeh* enhances other critical nutritional biomarkers. Further community-based research is needed to explore innovative formulations such as *PELE nuggets* (a combination of *tempeh* and catfish) to assess synergistic effects in sustainably improving child nutritional status.
Keywords: Underweight toddlers, plant-based protein, *tempeh*, PELE nuggets

O-T07A-0216

Factors Influencing Depression Among Junior High School Students in Henan Province: Relative Dominance Analysis

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Background: Junior high school students experience significant physiological, psychological, and cognitive transformations. Depression has become increasingly prevalent among Chinese junior high school students, with incidence rates exhibiting a gradual escalation during the transition from early to mid-adolescence.

Methods: We conducted a cross-sectional survey in Central China from April to May 2023. Participants were recruited through stratified random cluster sampling. Initially, three schools were randomly selected in both Zhengzhou and Shangqiu cities of Henan Province. Subsequently, 8 to 10 classes were randomly sampled from Grades 7 to 9 at each school site. The survey recruited 8,264 participants. After excluding 88 respondents with missing outcome variables, the final analytic sample included 8,176 adolescents. The procedure was approved by the Ethics Committee of Zhengzhou University (ZZUIRB2023-218), and all participants and their parents provided informed consent prior to the study commencement. The Adolescent Self-Rating Life Events Check List, the 10-item Connor-Davidson Resilience Scale, the School Connectedness Scale, the Parent-Child Cohesion Questionnaire, the Self-Esteem Scale, and the 10-item Center for Epidemiological Studies Depression Scale were used to assess the levels of negative life events, psychological resilience, school connectedness, parent-child cohesion, self-esteem, and depression. Multiple linear regression analysis was used to explore the influencing factors of depression, and the dominance analysis was used to identify the order of magnitude of influencing factors.

Results: The detection rate of depression among junior high school students was 40.1%. Multiple linear regression analysis showed that being in the eighth grade (standardized β=0.021) and ninth grade (β=0.046), high levels of academic burden (β=0.099) and negative life events (β=0.246) were risk factors (P<0.05), while males (β=-0.084), living in rural areas (β=-0.043), middle family economic level (β=-0.034), psychological resilience (β=-0.117), school connectedness (β=-0.188), parent-child cohesion (β=-0.071), and self-esteem (β=-0.332) were protective factors of depression among junior high school students (P<0.05). The dominance analysis found that the predictive power of self-esteem (34.0%) was the highest, followed by negative life events (21.5%), school connectedness (20.6%), parent-child cohesion (15.2%) and psychological resilience (8.7%).

Conclusion: The detection rate of depression among junior high school students was high. The risk of depression among junior high school students can be reduced by improving their self-esteem, school connectedness, psychological resilience, and parent-child cohesion levels, as well as alleviating the adverse effects of negative life events.

Keywords: Junior High School Students; Depression; Influencing Factors; Dominance Analysis

O-T07D-0220

The lived experience and resilience of older adults with depression/anxiety during the COVID-19 pandemic in China: A descriptive phenomenology analysis

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Background: Depression among older adults is a major public health challenge facing China. Little is known about how the COVID-19 pandemic impacted older adults with depression/anxiety in China, especially in less economically developed regions. This study aims to explore the lived experience of this marginalized group during the pandemic in Jiangxi Province, China, with a particular focus on resilience.

Methods: A qualitative phenomenological design was employed. Through purposive sampling, nineteen older adults (aged 50 and above) with pre-existing depression/anxiety were recruited from two large teaching hospitals in Jiangxi Province. Data were collected through semi-structured interviews. Data were analyzed using the Colaizzi's approach.

Results: The lived experience of older adults with depression/anxiety during the pandemic could be summarized into four themes and eight sub-themes: (1) preventing infection (COVID-19 prevention information everywhere, everyone does this), (2) restrictions (assistance, adaptation, and no significant impact; stress, annoyance, and worry), (3) developed COVID-19 (symptom, recovery), and (4) uncertainty (various sounds, worsening health after COVID-19).

Conclusion: Findings indicate that the direct environment (rural/township/community) and local government are important factors in fostering resilience among older adults. In addition, appropriate intervention measures should be implemented to help older adults cope with emerging uncertainties and promote their physical and mental well-being.

Keywords: Depression; psychological adaptation; older adults; COVID-19; lived experiences; descriptive phenomenology

O-T07A-0225

The Role of Pushing Techniques in Minimizing Perineal Tears : A Systematic Review

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Introduction: Perineal tears during vaginal delivery are a prevalent maternal complication with potential long-term health consequences. Various pushing techniques including Valsalva, spontaneous, and open-glottis have been explored for their effectiveness in minimizing perineal trauma.

Method: A systematic review was conducted using databases such as PubMed, ScienceDirect, and Google Scholar to identify studies from 1993 to 2023. Eligible studies included randomized controlled trials, cohort studies, and systematic reviews analyzing the impact of pushing techniques on perineal tear incidence and maternal recovery outcomes. A total of seven eligible studies involving 4,333 participants were included, comprising five randomized controlled trials, one cohort study, and one controlled clinical trial.

Results: The review revealed that spontaneous pushing is most effective in reducing the risk and severity of perineal tears, especially third- and fourth-degree tears. Compared to Valsalva pushing, which is associated with higher perineal trauma, spontaneous pushing showed superior outcomes. Open-glottis pushing, though less frequently examined, indicated potential benefits in lowering intra-abdominal pressure and improving oxygenation, but further evidence is required.

Conclusion: Spontaneous pushing is the most beneficial technique for minimizing perineal tears and should be prioritized in obstetric care. The findings of this review can inform the development of evidence-based clinical guidelines, integration into antenatal education programs, and enhancement of healthcare provider training curricula. Implementing these strategies can optimize maternal outcomes, reduce perineal trauma, and improve postpartum recovery. More robust studies are needed to confirm the advantages of open-glottis pushing and assess its long-term effects on maternal health.

Keywords: Perineal tears, pushing techniques, spontaneous pushing, Valsalva pushing, open-glottis pushing, perineal trauma

O-T07A-0226

Psychological Distress and Associated Factors in Patients with Chronic Leg Ulcers: A Cross-Sectional Study from a Tertiary Care Setting in Sri Lanka

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Background: Chronic leg ulcers are long-standing wounds that can severely impact quality of life, particularly in low-resource settings. The psychological distress they cause often intersect with environmental stressors such poverty, functional limitations, and various clinical parameters. Despite growing recognition that psychological distress impairs wound healing and treatment adherence, mental health remains an underexplored component of wound care management in Sri Lanka. This study aims to determine the prevalence and associated factors of psychological distress among patients with chronic leg ulcers attending surgical clinics in Sri Lanka.

Methods: A cross-sectional study was conducted among 164 adults with leg ulcers of more than six weeks' duration attending specialized surgical wound-care clinics at the National Hospital of Sri Lanka. Distress was screened using General Health Questionnaire-12, with a locallyvalidated cut-off used to identify significant psychological distress. Sociodemographic and clinical data were collected via an interviewer-administered questionnaire.

Results: The cohort had a mean age of 61.2 years (SD 10.5); 53% were male. Ulcer types included venous (48.8%), diabetic (36.6%), and pure arterial (14.6%). The mean ulcer size was 5.1 cm (SD 3.8), with a mean duration of 28.5 weeks (SD 20.0). Significant psychological distress was observed in 73.8% of patients (95% CI 66.4-80.3). Distress was significantly associated with low household income ($p=0.029$), larger ulcer size (≥5.1 cm; $p=0.009$), and a reduction in perceived mobility ($p=0.010$).

Conclusion: The substantial mental health burden among patients with chronic leg ulcers, underscores the need for integrative health system strategies that include psychological support – guided by distress-associated factors – in wound care protocols, particularly in resource-limited settings such as Sri Lanka.

Keywords: Chronic leg ulcers, Psychological distress, General Health Questionnaire-12, Prevalence, Associated factors, Low-resource settings

O-T07C-0228

Impact of Social Media on E-Cigarette Use Among Middle and High School Students: A Quantitative Study

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Objectives: Electronic cigarettes (e-cigarettes) use has become a growing public health concern worldwide, with particularly high uptake among adolescents. This surge has paralleled the widespread adoption of social media among youth. This study aimed to examine the relationship between the frequency of social media use and e-cigarette consumption among U.S. middle and high school students.

Methods: Data from the 2022 National Youth Tobacco Survey (NYTS), comprising a nationally representative sample of 28,091 students, were analyzed. Survey-weighted logistic regression models were applied to assess the association between social media use frequency and current e-cigarette use, adjusting for demographic covariates (age, sex, race/ethnicity), school level, and household tobacco exposure. Potential effect modification by household tobacco exposure was also tested.

Results: Students who reported frequent social media use had a modest but statistically significant increase in the odds of current e-cigarette use (adjusted odds ratio [aOR] = 1.04; 95% confidence interval [CI]: 1.01–1.07). However, this association became non-significant among students who reported exposure to tobacco use in the home environment (aOR = 1.00; 95% CI: 0.94–1.06), suggesting an interaction between digital and household influences.

Conclusion: The findings highlight that social media may contribute to increased e-cigarette use among adolescents, but its influence is diminished in contexts where tobacco use is normalized within the household. Interventions aimed at reducing youth e-cigarette use should consider both digital media exposure and familial tobacco environments to effectively mitigate risk.

Keywords: e-cigarettes, adolescents, social media, survey, household tobacco exposure

O-T07B-0229

Peer Victimization and Aggressive Behavior in Chinese Adolescents: A Chained Mediation Model of Empathy and Prosocial Behavior

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Background: Aggressive behavior is highly prevalent during adolescence, exerting long-term negative effects on psychosocial adjustment. Research indicate that peer victimization increases the risk of aggressive behavior in adolescents. Empathy plays a dual role in fostering aggression and promoting prosocial behavior. This study aims to examine the impact of peer victimization on aggressive behavior, and explore the mediating roles of empathy and prosocial behavior.

Method: A total of 16,029 adolescents were recruited from 4 middle schools through stratified random cluster sampling in Shangqiu city, China, between November 2024 and January 2025. Data collection involved the following instruments: the Chinese version of the Olweus Victim Questionnaire, the Chinese version of the Buss-Perry Aggression Questionnaire (BPAQ),the Chinese version of the Interpersonal Reactivity Index-C (IRI-C), and the Strengths and Difficulties Questionnaire(SDQ). Multi-group analysis was conducted to examine gender differences in the mediation model.

Results: Peer victimization positively predicted aggressive behavior ($\beta = 0.287$, $P<0.001$). The indirect effect through empathy ($\beta = -0.019$, $P < 0.001$) were statistically significant, with a chained indirect effect from peer victimization to aggression behavior ($\beta = 0.002$, $P < 0.001$) Multi-group structural equation modeling revealed significant heterogeneity in mediation pathways across gender

Conclusions: The findings highlight the crucial role of empathy and prosocial behavior in mitigating the negative effects of peer victimization, providing a theoretical basis for interventions targeting adolescent aggressive behavior. Reducing peer victimization and enhancing empathy and prosocial behavior may effectively decrease the occurrence of aggressive behavior.

Keywords: aggressive behavior; empathy; peer victimization; prosocial behavior

O-T07B-0234

Empowering Mothers, Saving Generations: A Systematic Review of Interventions to Prevent Stunting

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Background: Child stunting continues to pose a critical global health challenge, especially in low- and middle-income countries, where gender inequality often intersects with nutritional deficits. Over the last five years, growing attention has been given to the role of women's empowerment in improving child health outcomes. However, a focused synthesis of recent international evidence is needed to inform current strategies and policies.
Objective: This review aims to systematically examine international peer-reviewed studies (2019–2024) that investigate the impact of women's empowerment on preventing stunting among children under five years old. It seeks to identify dominant empowerment dimensions, effective intervention strategies, and common barriers to implementation.
Methods: A systematic literature review was conducted using PRISMA guidelines. International journal articles published between January 2019 and April 2024 were retrieved from major academic databases and screened for relevance. Inclusion criteria focused on studies addressing women's empowerment and stunting outcomes. A total of 15 articles met the eligibility criteria, comprising both cross-sectional and interventionbased research designs. Thematic analysis was employed to synthesize empowerment components and their relationship to child nutritional outcomes.
Results: The majority of included studies (13 out of 15) reported statistically significant links ($p < 0.05$) between women's empowerment and reduced risk of child stunting. Key dimensions identified include maternal education, economic autonomy, decision-making power, and access to health and nutrition services. Effective interventions commonly adopted community-based or gender-sensitive approaches. Studies from Ethiopia, Bangladesh, Madagascar, India, and Nepal highlighted that empowerment contributed not only to improved child height-for-age indicators but also to enhanced dietary diversity and health-seeking behavior. Cultural norms, poverty, and access inequities remained significant implementation barriers.
Conclusion: Recent international evidence affirms that women's empowerment is a critical component in stunting prevention strategies. Programs that integrate education, economic strengthening, and agency-building—tailored to local contexts—demonstrate the greatest impact. Multisectoral and community-led initiatives should be prioritized to sustainably address child undernutrition through a gender equity lens.
Keywords: women's empowerment, stunting, child nutrition, maternal agency, gender equity

O-T07C-0235

A 17-year experience of capacity-building of African health professionals in a medical university in Japan

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Background: Asahikawa Medical University (AMU) in Japan has conducted an annual training program for African public health professionals since 2008, sponsored by the Japan International Cooperation Agency (JICA). We will report on the program's outcomes, including the instructors' follow-up visits and a health-related symposium in Africa.
Methods: The 7-week program consisted of lectures, exercises, and discussions, focusing on the healthcare system in Japan and management skills as a public health professional. It also included field visits to medically underserved municipalities in remote rural areas. At the end of the program, an action plan was drafted to enhance their health management upon returning home. Instructors also conducted follow-up visits to Africa and organized an environmental health symposium in Kenya. All the program information and participants' evaluations were collected and analyzed from the end-of-program surveys and final reports.
Results: A total of 176 participants from 29 countries, including nine observers, joined the program. Initially, the participants focused on infectious disease control and maternal and child health, then later expanded their interests to lifestyle-related diseases and environmental health. The overall content of the program was highly satisfactory; however, they expressed strong concerns about acquiring more skills in health management and leadership, as well as having free discussion time among themselves. During the post-training follow-up visits in nine countries, program instructors gathered feedback on the program and identified areas for improvement. The participants also successfully drafted and submitted the JICA-AMU Alumni Strategic Framework for 2025-2030 during the JICA-AMU environmental health symposium in Africa in 2025.

Conclusions: The program had a significantly positive impact on the capacity building of African public health professionals. This could also apply to Asian public health communities, and opportunities should be continuously provided by sharing and disseminating knowledge, skills, and experiences through mutual relationships via the established network.

O-T07F-0252

Operational Study of Stunting Reduction through Convergence Efforts in Indonesia: A Systematic Review

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Background: Stunting remains a major public health challenge in Indonesia, with WHO (2021) reporting that the country has the second highest stunting prevalence in Southeast Asia. The Indonesian government has promoted a convergence approach— cross-sector and cross-program collaboration— to address stunting effectively and sustainably.
Method: This study conducted a systematic review of 16 operational studies following PRISMA guidelines. Data were extracted from studies published between 2015 and 2025 that assessed the implementation of convergence strategies in stunting reduction efforts across Indonesia.
Results: Convergence interventions, involving health, education, and social sectors, demonstrated a measurable reduction in stunting prevalence, with significant declines observed in several regions such as Jombang Regency (from 20.1% in 2018 to 10.3% in 2021). Key success factors included strong local leadership, community participation, budgetary support, and data-driven planning. However, barriers were noted, such as weak cross-sector coordination, limited human resources, and insufficient data integration.
Conclusion: The review confirms that a cross-sectoral convergence approach is effective in reducing stunting when supported by strong governance and adequate resources. Strengthening local capacity, harmonizing policies, and improving multi-sector data systems are recommended to accelerate stunting reduction toward Indonesia's 2025 target.
Keywords: Convergence, cross-sector collaboration, stunting reduction, Indonesia.

O-T07A-0255

Low Back Pain Among Excavator Operators In Banten - Indonesia

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Background: Low Back Pain (LBP) can affect anyone. It impairs mobility and can influence quality of life, limit work activities, and affect mental well-being. LBP is a common condition and a leading cause of Years Lived with Disability (YLD). The Global Burden of Disease (GBD) Study systematically measures the health impacts of diseases based on age, gender, year, and location. It is estimated that by 2050, more than 800 million people worldwide will experience lower back pain. Excavator operators are at high risk of developing LBP due to prolonged sitting for up to 8 hours, with limited mobility and static postures. This study aims to investigate complaints of lower back pain among excavator operators.
Method: This quantitative study employed a cross-sectional design. A total of 60 excavator operators participated as respondents. The Oswestry Disability Index (ODI) was used to assess LBP complaints.
Result: All excavator operators reported LBP complaints, with 56.7% experiencing severe LBP and 43.3% mild LBP. Bivariate analysis revealed that factors associated with LBP included sleep quality (OR = 6.16; 95% CI: 1.99–22.98), exercise habits (OR = 5.38; 95% CI: 1.71–16.91), work-related stress (OR = 13.20; 95% CI: 3.61–48.23), and smoking habits (OR = 10.83; 95% CI: 3.24–36.27). In the final multivariate analysis, significant factors associated with LBP were exercise habits (OR = 5.42; 95% CI: 1.23–23.91), work-related stress (OR = 8.26; 95% CI: 1.86–36.54), and smoking habits (OR = 7.72; 95% CI: 1.80–33.01).
Conclusion: The prevalence of LBP among excavator operators is very high. Exercise habits and work-related stress are the most influential factors contributing to the occurrence of LBP. Smoking habits are also among the dominant contributors. Increasing exercise routines and implementing counseling programs may serve as effective strategies to mitigate work-related stress and prevent LBP.
Keywords: Low Back Pain, Excavator Operator, Exercise Habits, Work-Related Stress, Smoking Habits.

O-T07B-0270

Extension of the U-smile method with the Akaike information criterion for model selection in imbalanced binary classification

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Background: Imbalanced binary classification is a common machine learning task in both clinical public health research, where identifying rare outcomes is important. The Akaike information criterion (AIC) is a widely used model selection method that balances model quality and parsimony, but it provides a single global summary. In contrast, the U-smile method provides a class-stratified, residual-based evaluation of feature usefulness with its BA-RB-I coefficients. This study extends the U-smile method with class-stratified AIC for model selection in imbalanced binary classification.
Methods: We used Heart Disease dataset and synthetic data to simulate 7 imbalance levels (1%-99% of the event class, n=300). For each imbalance level, we fit a baseline logistic regression model and added candidate features one at a time (nested setting). For each new model, we cross-tabulated prediction changes by outcome class into 4 U-smile subclasses: improved/worsened predictions for non-events and events. For each of the 4 groups, we calculated the differences in AIC (ΔAIC), visualized them using U-smile plot of the stratified ΔAIC, and calculated class-specific net ΔAIC.
Results: The U-smile plots of the stratified ΔAIC clearly distinguished informative features (smiles) from non-informative ones (flatlines) across the whole imbalance range. At extreme imbalance levels (i.e., 1%, 99% of the event class), net ΔAIC showed improved model fit in the minority class (e.g., 2.5, 2.3) and reduced overfitting to the majority class (e.g., -0.6, -0.9, respectively), which were masked by global ΔAIC (e.g., 1.9, 1.4).
Conclusion: Extension of the U-smile method with class-stratified ΔAIC offers a novel, interpretable approach to feature and model selection in imbalanced binary classification. The U-smile method's class-stratified approach can be valuable for equitable modelling, particularly for underrepresented or vulnerable populations, by revealing the nuanced insights that are hidden by global model and feature selection methods.
Keywords: U-smile method; Akaike information criterion; binary classification; data imbalance; stratified model selection; stratified feature selection; interpretable machine learning; underrepresented populations; vulnerable populations

O-T07B-0272

The Critical Role of Disaster Knowledge in Enhancing Emergency Readiness among Coastal High School Students in Banten, Indonesia

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Background: Situated on the Pacific Ring of Fire, Indonesia faces a high frequency of natural disasters, making disaster preparedness a national priority. Students, particularly those in vulnerable coastal regions like Banten Province, represent a significant at-risk population. School-Based Disaster Preparedness programs aim to enhance resilience, but the relative importance of different contributing factors to student readiness remains a key area of investigation.
Objective: This study aimed to identify the most influential factor among disaster knowledge, warning systems, resource mobilization, and gender on the emergency readiness of high school students in a disaster-prone coastal area of Banten Province.
Methods: A quantitative, cross-sectional study was conducted with a sample of 334 high school students. Ethical approval for the study was obtained from Universitas Faletehan (No. 297-a/KEPK.UF/II/2025). Data were collected using a structured questionnaire based on LIPI-UNESCO developed by previous study. The instrument measures four key variables: Disaster Knowledge, Warning System, Resource Mobilization, and Emergency Readiness. Statistical analysis was performed using descriptive statistics, Pearson correlation, and multiple linear regression to determine the predictive strength of the independent variables on emergency readiness.
Results: The multiple regression analysis revealed that the model, including disaster knowledge, warning systems, resource mobilization, and gender, was statistically significant ($F(4, 329) = 46.191$, $p < .001$) and explained 36.0% of the variance in emergency readiness ($R^2 = .360$). All independent variables were significant predictors. Critically, Disaster Knowledge emerged as the most influential factor, with the highest standardized beta coefficient ($\beta = .289$, $p < .001$), followed by Warning System ($\beta = .236$, $p < .001$), Resource Mobilization ($\beta = .229$, $p < .001$), and Gender ($\beta = .200$, $p < .001$).
Conclusion: While structural and logistical factors like warning systems and resource mobilization are important, disaster knowledge is the most critical determinant of emergency readiness among high school students in this coastal context. These findings underscore the urgent need for educational interventions and curriculum enhancements that prioritize the development of deep, actionable disaster knowledge as the cornerstone of building a resilient future generation.
Keywords: Emergency Readiness, Disaster Knowledge, School-Based Disaster Reduction, Disaster Preparedness, High School Students, Banten

O-T07A-0278

The effect of negative life events on anxiety among Chinese adolescents: a moderated mediation model

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Background: Anxiety, as a common emotional disorder, has shown an increasing trend among adolescents in recent years. Negative life events have been considered risk factors for anxiety, little is known about the mediating and moderating effects in this association. Therefore, this study aimed to investigate the association between negative life events and anxiety, as well as the underlying mechanisms of this association among Chinese adolescents.

Methods: A total of 8176 junior high school students in Zhengzhou and Shangqiu Cities of Henan Province were selected by stratified random cluster sampling. The Adolescent Self-rating Life Events Checklist (ASLEC), Parent-Child Cohesion Questionnaire (PCCQ), School Connectedness Scale (SCS), 10-item Connor-Davidson Resilience Scale (CD-RISC-10) and Generalized Anxiety Disorder-7 (GAD7) were used to assess the levels of negative life events, parent-child cohesion, school connectedness, psychological resilience and anxiety, respectively. Models 4 and 5 in SPSS PROCESS 3.5 were used to test the mediation and moderated mediation effects.

Results: Negative life events directly predicted anxiety among adolescents (β=0.393, P<0.001). Parent-child cohesion (β=0.032, 95%*CI*:0.025~0.038) and school connectedness (β=0.079, 95%*CI*:0.069~0.090) mediated the relationship between negative life events and anxiety. 20.98% of the total association between negative life events and anxiety was mediated by parent-child cohesion and school connectedness. Psychological resilience moderated the effect of negative life events on anxiety (β=-0.034, P<0.001)

Conclusion: Negative life events directly affect anxiety, and indirectly predict anxiety through parent-child cohesion and school connectedness level. Psychological resilience can buffer the detrimental influence of negative life events on anxiety. Reducing the occurrence of negative life events and improving the levels of parentchild cohesion, school connectedness, and psychological resilience may be beneficial to adolescent mental health.

Keywords: Adolescents; anxiety; negative life events

O-T07C-0281

Premenstrual Syndrome in Nurses: Associations with Psychosocial and Behavioral Factors at a Regional Hospital in Makassar, Indonesia

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Premenstrual syndrome (PMS) is a cyclical disorder involving emotional and physical symptoms that can impair women's daily functioning and work productivity. Nurses, due to high job demands and irregular shifts, may be particularly vulnerable. Several factors—including age, occupational stress, sleep patterns, physical activity, and diet—are believed to influence PMS symptoms; however, evidence remains limited within the Indonesian healthcare context.

A cross-sectional analytical study was conducted using a quantitative approach. A total of 133 nurses at Daya Regional General Hospital in Makassar were selected through simple random sampling. Data were collected using validated instruments: the Shortened Premenstrual Assessment Form (SPAF) to assess PMS symptoms, the Perceived Stress Scale (PSS) for occupational stress, the International Physical Activity Questionnaire–Short Form (IPAQ-SF) for physical activity, the Pittsburgh Sleep Quality Index (PSQI) for sleep patterns, and a structured food frequency questionnaire for dietary habits. Univariate and bivariate analyses were performed using chi-square tests to examine the associations between variables.

The findings revealed significant associations between PMS and age ($p = 0.013$), occupational stress ($p = 0.019$), sleep patterns ($p = 0.005$), and dietary habits ($p = 0.014$). However, physical activity ($p = 0.338$) was not significantly associated with PMS.

This study confirms that age, stress, sleep quality, and diet are significantly associated with PMS symptoms in nurses. These findings contribute novel evidence from the Indonesian healthcare context and highlight the importance of incorporating menstrual health considerations into workplace policies—such as menstrual leave—to support female nurses' well-being and optimize workforce productivity.

O-T07B-0296

Strengthening Tobacco Control in Disaster Prone Region: A Scoping Review for the Indonesian Context

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Background: Natural disasters disrupt daily routines and health services, potentially escalating tobacco use—an urgent concern for disaster-prone settings such as Indonesia. This scoping review assessed what is known about smoking behavior and policy in disaster contexts to identify evidence gaps.
Methods: We searched ScienceDirect, PubMed, and Google Scholar through September 2024 for studies on natural disasters and smoking. Eligible studies examined at least one of three topics: (1) changes in smoking rates after a disaster, (2) associations between disaster-related stress and smoking, and (3) tobacco control policies in disaster settings. Data were extracted on country, disaster type, study design, population, and findings, and summarized narratively.
Results: Most studies were conducted in high-income countries, with limited evidence from Indonesia and other low- and middle-income settings. Two-thirds of studies reported increased smoking following disasters (66.7%). Among studies assessing stress, 90% found a positive association between disaster-related stress and smoking. No study evaluated tobacco control policies in disaster contexts (e.g., supply restrictions, cessation support, or marketing controls) during preparedness, response, or recovery.
Conclusions: Disasters are frequently followed by higher smoking rates and stress-related tobacco use, yet policy responses remain largely unexamined—particularly in Indonesia. Research is needed to map how cigarettes are distributed and promoted during emergencies and to test policy and service interventions—such as integrating cessation into disaster response, regulating distribution and sales, and ensuring access to nicotine-dependence treatment—across all phases of the disaster cycle.
Keywords: natural disaster; smoking; stress; tobacco use; tobacco control policy; Indonesia

Funding: Financial support of the GSU Postdoctoral Fellowship provided by the *Bloomberg Initiative to Reduce Tobacco Use* through the CDC Foundation with a grant from the Bloomberg Philanthropies.

Disclaimer: The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the CDC Foundation.

O-T07C-0299

Competency Of Caregivers Of Elderly People With Alzheimer's Disease

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The objective of this research is to study competency components of caregivers of elderly people with Alzheimer's disease. The research process consists of the following two phases: The first phase is the study of competency components. The key research informants are experts and persons involved with the care of elderly people with Alzheimer's disease classified into medical doctors, nursing instructors, professional nurses, patient's relatives, caregivers of elderly people, and entrepreneurs. Research data were collected by interviewing six of them and by focus group discussion involving nine of them. Issues of the data were concluded with the use of content analysis. The second phase is the confirmation of competency components. The research samples are 350 caregivers of elderly people. The employed research tool is an evaluation form to assess competency of caregivers of elderly people with Alzheimer's disease. Research data were analyzed with the use of confirmatory factor analysis of competency components.

The research findings reveal that competency of caregivers of elderly people with Alzheimer's disease consists of three components, namely, the knowledge component, the skills component, and the attitude component. All three components are consistent with the empirical data with consistent statistics being Chi-square=124.40, df=102, P-value=0.065, RMSEA=0.025, SRMR=0.027 ,CFI=1.00 ,GFI=0.96, AGFI=0.94.

Keywords: Competency of caregivers of elderly people; Alzheimer's disease

O-T07A-0329

Spatial clustering of tuberculosis and urban-rural differences in the impact of HIV co-infection on tuberculosis treatment failure in Lindi Region, Tanzania (2020-2024)

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Background: Tuberculosis (TB) remains a major public health challenge in Tanzania, particularly in rural and under-resourced regions such as Lindi. Understanding spatial distribution and identifying factors influencing treatment outcomes are critical for targeted interventions. This study examined spatial clustering of TB incidence and assessed urban–rural differences in the effect of HIV co-infection on TB treatment failure in the Lindi Region, Tanzania (2020–2024).

Methods: We conducted a retrospective ecological analysis using routinely collected TB surveillance data from health facilities in the Lindi Region. Spatial clustering of TB incidence and treatment failures was assessed using the Getis-Ord Gi* statistic. Logistic regression models identified predictors of treatment failure, initially including HIV co-infection, area type, sex, and age. Stratified multivariable analyses by area type were performed to assess associations between HIV co-infection and treatment failure.

Results: A total of 6,763 TB cases were reported during the study period, with a median incidence rate of 34.5 cases per 100,000 population (range: 14–61). Significant clustering of TB incidence rates was observed in Lindi District (Figure 1). In the overall model, HIV co-infection was significantly associated with treatment failure (aOR = 2.28, 95% CI: 1.72–2.98), while area type was not (aOR = 1.41, 95% CI: 0.97–2.13). Stratified analysis showed HIV co-infection was strongly associated with treatment failure in rural areas (aOR = 2.50, 95% CI: 1.87–3.31) but not in urban areas (aOR = 0.89, 95% CI: 0.25–2.41)

Conclusion: Spatial clustering of TB was observed, and HIV co-infection significantly increased treatment failure with stronger effects in rural clusters. Rural clusters exhibited higher TB treatment failure, reflecting limited access to care and weaker TB/HIV service integration. Spatial heterogeneity in TB burden and outcomes underscores the need for geographically targeted interventions, particularly in high-incidence clusters.

Keywords: Tuberculosis, HIV infections, Treatment failure, Cluster Analysis, Healthcare disparities, Tanzania.

O-T07B-0331

Factors Associated with Malaria Prevention Behaviors Among Residents in Endemic Areas of Tak Province, Thailand.

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Background: Malaria continues to pose a significant public health threat in Thailand, particularly in endemic areas such as Tak Province.
Objective: This study examined factors associated with malaria prevention behaviours among residents in Tak Province, Thailand.

Methods: An analytical cross-sectional study was conducted using a validated questionnaire among residents aged 18 and above in the border area of Khane Chue Subdistrict. Data were collected using interviewer-administered questionnaires that covered demographics, knowledge, health beliefs, and prevention behaviors. Chi-square test, Fisher's exact test, and multivariate logistic regression were used to detect associations.
Results: A total of 352 participants were recruited for the study. Malaria prevention behaviours were significantly associated with gender, history of self-malaria, house type, occupation, knowledge of malaria, perceived barriers, and perceived benefits. These associations were statistically significant (p-value ≤ 0.05).
Conclusion: This study identifies factors linked to malaria prevention behaviours in Tak Province. Policymakers and health authorities should enhance health education and promote community interventions to boost awareness and prevention efforts.
Keywords: Endemic, Malaria, Health Belief Model, Prevention Behaviour

O-T07A-0336

Analytical Study of Anemia Incidence in Pregnant Women at Parangia Community Health Center, Selayar Islands Regency, Indonesia

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Background: Anaemia is defined as a condition where the haemoglobin (Hb) level in the blood is lower than the normal value for groups of people according to age and sex. The study aimed to find out the relationship between the mother's knowledge, mother's age, and consumption of Fe tablets with the incidence of anaemia in pregnant women at the Parangia Public Health Center, Selayara Islands Regency in August-September 2021.

Methods: The research method used was a cross-sectional study with a total sample of 48 pregnant women who were taken using the total sampling method.

Results: The results showed that there was a relationship between the knowledge of pregnant women and the incidence of anaemia in pregnant women at the Parangia Community Health Center, Selayar Islands Regency (p=0.022). There is no relationship between the age of pregnant women and the incidence of anaemia in pregnant women at the Parangia Community Health Center, Selayar Islands Regency (p=0.462). There is a relationship between the consumption of Fe tablets and the incidence of anaemia in pregnant women at the Parangia Community Health Center, Selayar Islands Regency (p=0.000).

Conclusion: From these results, this study suggests that pregnant women remain active in participating in counselling at the Integrated Service Post or at the Community Health Center to increase their knowledge. It is recommended that pregnant women pay attention to the right age to experience pregnancy to avoid all the risks that arise during pregnancy. It is recommended that pregnant women regularly consume iron (Fe) tablets to avoid anaemia.
Keywords: anaemia; knowledge; age; consumption of Fe tablets; pregnant women

O-T07B-0338

Knowledge, Attitude, and Training Needs in Global Health: A Cross-Sectional Study of Vietnamese Medical Students

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Background: In the context of globalization, health issues are no longer confined by national borders, demanding a new generation of health professionals competent in global health (GH). To meet this demand, GH training has become a crucial component of medical education in many countries. However, scientific evidence in this field remains limited in Vietnam.

Objective: This study aimed to identify the current state of knowledge, attitudes, and training needs regarding GH, and to analyze related factors among students at the University of Medicine and Pharmacy, Ho Chi Minh City.

Methods: A cross-sectional descriptive study was conducted among undergraduate students from all academic years. Data were collected from June 2025 to August 2025. Participants were recruited through convenience sampling via an online survey, which was distributed by email and made accessible on campus via QR codes.

Results: A total of 532 students participated in the study. The findings revealed that a small proportion of students (7.3%) demonstrated good knowledge of GH. Regarding attitudes, 92% of students believed that GH knowledge is relevant to their future careers, and 84% expressed a need for GH training. Cost was identified as the primary barrier to participating in GH programs. Statistical analysis showed a very weak positive correlation between knowledge scores and the academic year, but no significant association was found with academic performance or prior experience in GH activities.

Conclusion: The majority of students exhibit a positive attitude and a high demand for GH education. However, their overall knowledge is limited and not strongly associated with their academic background. These findings underscore the urgent need to integrate GH content into the formal curriculum, complemented by financial support policies to meet the practical needs of students.

Keywords: global health training; medical education; medical students; knowledge; attitude; training needs.

O-T07A-0339

Trends in Alcohol-related Violence Injury Trends in Mongolia: An Interrupted Time Series Analysis

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Backgrounds: Alcohol-related violence injuries are a significant public health issue. In recent decades, alcohol consumption increased by 1.9 times over the past decades in Mongolia. Violence-related injuries are the third leading cause of injury morbidity among young adults, with 60 % of these injuries occurring under the influence of alcohol.
Objectives: To evaluate the trends in alcohol-related violence injury rates before, during and after lockdowns, focusing on the location of violence injury occurrence, in Mongolia**.**
Method: We conducted interrupted time-series analysis using data on violence-related injuries presented at hospitals across the country from January 2016 to December 2024 among patients aged over 20 years old. First, we calculated the monthly incidence rate per 10,000 population and further stratified it by sex, age groups and the location of the injury occurrence. We then regressed this data against the number of months after January 2016 (the beginning of the study), after November 2020 (when the lockdowns with and without alcohol bans were implemented), and after May 2021 (when the lockdowns were lifted).
Results: During the 9-year study, a total of 132,473 violence-related injuries were recorded, of which 71,549 (54%) were attributed to alcohol-related injuries, including 59,538 (83%) among males. Before the lockdowns, alcohol-related injury rates showed a slight decline, except for male group aged 20–29 years. During lockdowns, alcohol-related home injuries increased, but not significantly; however, no increase was observed among females during lockdowns with alcohol sales bans. Following the lockdowns, injuries started to increase by 0.9% per month among females aged 30–49 years.
Conclusions: In conclusion, the alcohol-related violence injuries in Mongolia highlight a concerning trend, particularly after the lockdowns. This study highlights the urgent need to address the underlying causes and mechanisms of these injuries to reduce their incidence.

O-T07B-0344

Miscarriage Risk Following Benzodiazepine Use During Pregnancy: A Meta-Analysis

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Background: Growing concerns have emerged regarding the safety of benzodiazepine use during pregnancy. This meta-analysis aimed to provide a clearer and more precise estimate of the miscarriage risk associated with benzodiazepine exposure, thereby informing and improving clinical decision-making.

Methods: PubMed, CINAHL, PsycINFO, Scopus, and Web of Science were searched from the inception of each database through February 10, 2025. The search followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. Studies examining the association between benzodiazepine use during pregnancy and the risk of miscarriage were included. Random-effects models were used for all analyses. Subgroup and sensitivity analyses were conducted. Publication bias was assessed using funnel plots and Egger's regression test.

Results: Our pooled analysis, which included data from over 5.7 million pregnant women, indicates that benzodiazepine use is associated with a 52% increased risk of miscarriage (OR, 1.52; 95% CI, 1.26–1.83). Both short-acting (OR, 1.63; 95% CI, 1.40–1.90) and long-acting (OR, 1.47; 95% CI, 1.04–2.08) benzodiazepines were associated with increased risk. Among the types of benzodiazepines, clonazepam was associated with a 93% increased risk of miscarriage (OR, 1.93; 95% CI, 1.48–2.53), followed by alprazolam (OR, 1.56; 95% CI, 1.26–1.92) and lorazepam (OR, 1.51; 95% CI, 1.28–1.78). Diazepam and bromazepam were not associated with an increased risk of miscarriage.

Conclusion: Benzodiazepine use during pregnancy is associated with an increased risk of miscarriage. These results underscore the need for careful consideration of the risks and benefits when prescribing benzodiazepines to pregnant women.

O-T07A-0346

Risk assessment of N-nitrosamine formation from nitrate and nitrite in leftover dishes of vegetables and processed meat

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N-nitrosamines (NAs) are classified by the International Agency for Research on Cancer (IARC) as Group 2A or 2B carcinogens and are linked to cancers of the liver, stomach, and colorectal. In the diet, vegetables and processed meats are major sources of nitrates/nitrites and amines, respectively; under high-temperature cooking or improper storage, these precursors can react to form NAs.

The study investigated the effects of co-cooking vegetables with cured meat, storage duration, and saliva contamination on nitrate, nitrite, and NAs levels, and evaluated the associated health risks. Spinach, cabbage, green pepper, and cured meat were stir-fried, and then stored for 0-72 h (with/without saliva), reheated, and analysed nitrate and nitrite by spectrophotometry; seven NAs—N-nitrosodimethylamine (NDMA), N-nitroso-pyrrolidine (NPYR), N-nitrosopiperidine (NPIP), N-nitrosodipropylamine (NDPA), N-nitrosodi-n-butylamine (NDBA), N-nitrosomethylethylamine (NMEA), and N-nitrosodiethylamine (NDEA) were quantified by UPLC-MS/MS.

Total NAs levels ranged from <1 ng/kg to 11.53 ng/kg, with cured meat showing the highest levels, primarily NDMA and NPYR. From 0 to 6 h of storage (cured meat and its composite dishes), NDMA levels increased while NPYR levels decreased. Levels of NPIP, NDPA, and NDBA were <LOQ in most sample, showing no clear trend, while NMEA and NDEA were not detected in any samples. Only cured meat showed notable saliva effects at 72 h, nitrate was lower in the saliva-added group, while NDMA showed no difference. Compared with 0-h non-saliva, NDMA was higher, indicating saliva during storage may promotes NDMA formation. For the spinach-cured meat composite dish, daily consumption of one serving resulted in nitrate exposure in children aged 3-6 years exceeding 100% of the ADI, and daily consumption of cured meat or its composite dishes yielded a lifetime cancer risk $>10^{-4}$, with NDMA as the main contributor. Taken together, reducing storage time, avoiding saliva contamination, and co-cooking with vegetables may mitigate NAs exposure.

Keywords: nitrite, nitrate, N-nitrosamines, storage duration, health risk assessment, UPLC-MS/MS

O-T07G-0353

How Knowledge Management Can Improve Employee Engagement: A Case Study at Hasanuddin University Hospital, Indonesia

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In 2022, the turnover rate in Hasanuddin University Hospital (HUH), a teaching hospital was more than 11%(the acceptable rate of turnover), while the employee engagement (EE) rate was at only 19.3%. Therefore, a strategy to boost positive employee engagement is required. This study aim is to determine the effect of knowledge management (KM) on employee engagement (EE) in HUH. The research used was a quantitative using a cross sectional design. The population were the employees of HUH. The sampling technique used was proportional sampling with a sample size of 238 respondents. Data analysis was conducted using the Spearman Rank Test. The results showed that KM has a positive and significant impact on employee engagement with a p-value of 0.001 ($p < 0.05$). In the dimensions of knowledge discovery, knowledge sharing and knowledge application there is a significant and positive influence on employee engagement with a p-value of <0.001, 0.002 and <0.001 respectively ($p<0.05$). While the knowledge creation dimension has no effect on employee engagement with a value of 0.200 ($p>0.05$). It can be concluded that KM has an effect on EE, however when the one of KM's dimension, knowledge creation was tested as a variable, it showed that there was no relationship with the engagement. This implied that knowledge creation itself cannot increase the employee engagement unless all the dimension of Knowledge management should be implemented then the employee engagement will increase.

Keywords: Knowledge Management, Employee Engagement, Turnover

O-T07B-0356

Do mothers' preconception health behaviours differ between the birth of a first and a second child?

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Background: Engaging in healthy behaviours before conception can improve outcomes in pregnancy and positively influence the future health of both the mother and child. Yet, little is known about whether mothers maintain these behaviours across pregnancies, particularly from the birth of a first and a second child. This study examined whether mothers' preconception health behaviours differ between the birth of a first and a second child.

Methods: We included 612 mothers from the Australian Longitudinal Study on Women's Health of women born in 1989-95. Mothers' preconception behaviours, characterised by taking folic acid and iodine supplements, healthy eating, physical activity, and avoiding alcohol consumption, smoking, and recreational drug use, were obtained from a self-reported survey. Generalised estimating equation models with binary and multinomial responses were used for the analyses.

Results: Mothers' preconception behaviours differed between their first and second pregnancies, with many mothers adopting more positive behaviours prior to the birth of a second child. Compared to their first pregnancy, mothers were more likely to report eating more healthily (OR 1.62; 95% CI: 1.18–2.22) and avoid alcohol consumption (OR 1.87; 95% CI: 1.33–2.63) in preparation for the second pregnancy. However, some health behaviours were less likely to be maintained prior to the birth of a second child; mothers were less likely to report taking folic acid before their second pregnancy (OR 0.62; 95% CI: 0.47–0.80).

Conclusions: More effective preconception health promotion across the reproductive life course, particularly folic acid supplementation prior to subsequent pregnancies is required.

Keywords: Preconception health, Pre-pregnancy care, Health behaviours, Birth orders.

O-T07D-0359

Mental Health Interventions for Resilient Fishermen : A Literature Review

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Background: Informal sector fishermen are disproportionately exposed to psychosocial stressors, including poverty, occupational hazards, and climate-related disruptions. However, mental health interventions specifically addressing their needs remain limited within public health programs.

Objective: This review synthesizes global evidence to guide the development of resiliencebased intervention models for fishing communities. The focus is to identify psychosocial risks, map resilience factors, and evaluate implementation challenges and opportunities relevant to public health practice.

Methods: A literature review synthesis of multidisciplinary studies from Asia, Africa, Europe, and the Americas was conducted. Priority was given to participatory, culturally embedded approaches and socio-ecological perspectives relevant to health systems. Identifying filters specified in literature query, literature in English from the years 2020 to 2025. Finding relevant literature for each query with applied filters 42 top literature found out of 1050. Reviewing citations & references to identify additional relevant works 67 relevant citations and references found. Sorting literature by relevance 109 top literature found. Creating literature review report from 50 highly relevant literature.

Results: Findings reveal that psychosocial risks are complex and interlinked with economic insecurity, environmental stress, and structural inequalities. Community driven, cocreated interventions show promise in strengthening both individual and collective resilience. Implementation is constrained by stigma, irregular work patterns, and limited resources but supported by community engagement and adaptive program design.

Conclusion: Strengthening culturally grounded, community-based resilience interventions can enhance mental health outcomes, reduce inequities, and inform sustainable public health strategies for informal sector fishermen globally.

Keywords: Mental health interventions; Informal sector fishermen; Community resilience; Psychosocial risks; Public health equity.

O-T07A-0365

Dietary Habits and Risk of Urolithiasis: A Community-Based Case-Control Study from Northeast India with Public Health Relevance

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Background: Urolithiasis poses a significant public health concern worldwide, with varied multifactorial risks in different populations. The present study examines the association of dietary habits with the risks of urolithiasis among the Meiteis of Northeast India.

Method: The study was a case-control design conducted on 191 cases and age- and sex-matched 191 controls. Data on the dietary habits were collected using a structured questionnaire. Cases were identified from the hospitals through specialists, and controls were recruited through a survey after confirming the random urine Ca/Cr ratio of less than 0.14. Association of the dietary habits with kidney stones were assessed through significant tests, and further AORs were calculated to measure the risk.

Results: Significant associations were observed between consuming meat, dried fish, eggs, fruits, pulses, boiled foods, milk, juice, and water and urolithiasis (p-value < 0.05). High consumption of meat (AOR 2.42) and dried fish (AOR 1.90), as well as low water intake (AOR 2.02), elevates the risk of kidney stone formation. In contrast, higher consumption of boiled foods, fruits, pulses, and other fluids can be protective against the formation of kidney stones.

Conclusion: This community-based study reaffirms that dietary habits are critical in developing kidney stones and seeks dietary awareness as a public health intervention to reduce the burden of urolithiasis.

Keywords: Urolithiasis, kidney stones, Meitei, diet, meat, water, public health, risk, relevance,

northeast India

O-T07D-0375

Prenatal depression comorbid with diabetes or hypertension and the risk of adverse neonatal outcomes

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Background: Depression during pregnancy frequently co-occurs with physical conditions such as diabetes and hypertension. These comorbidities may interact synergistically to increase the risk of adverse maternal and neonatal outcomes. However, their combined impact remains inadequately examined. This systematic review and meta-analysis aim to synthesise evidence on the association between prenatal depression comorbid with diabetes and/or hypertension and adverse obstetric and neonatal outcomes.

Methods: A comprehensive literature search was conducted across PubMed, Medline, Scopus, Web of Science, Embase, PsycINFO, and Google Scholar. Methodological quality was appraised using the Joanna Briggs Institute [1] tool. Random-effects meta-analyses were conducted using inverse-variance weighting. Subgroup, sensitivity, and publication bias analyses were also performed.

Results: Fourteen studies, comprising over 11 million participants, were included. Prenatal depression comorbid with hypertension was significantly associated with increased risks of preterm birth (OR = 2.09; 95% CI: 1.04–4.19), low birth weight (LBW) (OR = 2.08; 95% CI:

1.07–4.07), and small for gestational age (SGA)(OR = 1.34; 95% CI: 1.11–1.60). Additionally, comorbid prenatal depression and diabetes were associated with higher odds of cesarean section (CS) delivery (OR = 1.42; 95% CI: 1.36–1.47). These findings suggest comorbid conditions may synergistically amplify risk beyond their individual effects.

Conclusions: The findings highlight the heightened impact of prenatal depression comorbid with gestational diabetes or hypertension, increasing the risk of adverse birth outcomes such as preterm birth, LBW, SGA, and CS delivery. Integrated, early intervention addressing both mental and physical health is crucial to improving outcomes for mothers with prenatal depression and comorbid conditions, as well as their infants.

Keywords: Depression, Diabetes, Hypertension, Comorbidity, Neonatal Outcomes

O-T07F-0376

A Review on Urban-Rural Disparities in Food Insecurity and Nutritional Health

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Background: Food insecurity remains a persistent global challenge with profound implications for public health and sustainable development.

Methods: This review synthesizes its multifaceted nature by comparing the prevalence, determinants, and nutritional health impacts across rural and urban settings.

Results: In 2023, an estimated 2.33 billion people experienced food insecurity, with a higher prevalence in rural (31.9%) than urban (25.5%) populations, particularly in Africa, Asia, and Latin America. Rural food insecurity is largely driven by dependency on subsistence agriculture, inadequate infrastructure, and climate vulnerability, leading to diets reliant on nutrient-poor staples that cause undernutrition and micronutrient deficiencies. Conversely, urban food insecurity stems from market dependency and income instability, promoting consumption of ultra-processed foods and contributing to rising obesity and non-communicable diseases. This dichotomy creates a global triple burden of malnutrition, affecting both developing and developed regions.

Conclusions: Addressing these distinct yet interconnected challenges requires a shift from fragmented approaches to a comprehensive, integrated financial framework. Mobilizing public and private investment to strengthen food supply chains and enhance resilience is essential for ensuring equitable access to nutritious food and achieving the global goals of ending hunger and malnutrition.

Keywords*:* Urban, rural, food, insecurity, nutrition

O-T07A-0436

Multimorbidity and Associated Factors among Older Adults with Hypertension: Network Analysis Based on a Cross-Sectional Study in Rural China

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Background: Multimorbidity has become an increasingly serious public health issue, especially in the context of an aging society worldwide. Approximately over half of older hypertensive patients suffer from at least one additional disease. This study aimed to assess multimorbidity prevalence, examine the factors associated with multimorbidity, and identify central diseases among older adults with hypertension in rural China.

Methods: A cross-sectional study was conducted among 16,953 older adults (aged ≥65 years) with hypertension. Multimorbidity was defined as hypertensive participants with one or more chronic diseases. The analysis included demographic and health behavior variables, as well as clinical attributes. Logistic regression analysis was performed to examine influencing factors. A network analysis was used to identify core diseases and disease relationships.

Results: The prevalence of multimorbidity was 77.32%. Increased age (aOR: 0.98, 95% CI: 0.98-0.99), healthy physical activity (aOR: 0.77, 95%CI: 0.71-0.84), healthy diet quality (aOR: 0.73, 95%CI: 0.62-0.88), healthy sleep duration (aOR: 0.77, 95%CI: 0.71-0.83) were protective factors, while female (aOR: 1.27, 95%CI: 1.18-1.37), higher numbers of antihypertensive medicine (aOR: 1.48, 95%CI: 1.31-1.67 for 1; aOR: 1.89, 95%CI: 1.63-2.20 for 2), duration of hypertension (aOR: 1.03, 95%CI: 1.02-1.03) and higher BMI (aOR: 1.14, 95%CI: 1.12-1.15) were risk factors of multimorbidity. Network analysis revealed that biliary disease (strength: 1.347), vision impairment, and arthritis or rheumatism were central diseases. The correlation stability coefficient was 0.672. Chronic kidney disease and liver disease were showed the strongly correlation (edge weight: 1.538), followed by arthritis or rheumatism and stomach or other digestive disease.

Conclusion: The prevalence of multimorbidity was high among older adults with hypertension in rural area. Multimorbidity management plans should be tailored based on demographic variables, behavioral factors, and clinical attributes. The core diseases and strongly associated conditions are crucial for the precise intervention of hypertension in rural China.

Keywords: Multimorbidity, Older adults, Chronic disease, Hypertension, Network analysis

O-T07B-0441

The incidence of child marriage in Bangladesh: A demographic assessment and regional comparison across South Asia

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Background: Child marriage, defined as a union before the age of 18, remains a major public health and human rights concern. South Asia accounts for nearly half of the world's child brides, with Bangladesh consistently reporting the highest prevalence in the region. While determinants of child marriage are widely acknowledged, the influence of historical events and socio-economic transitions has not been studied.

Methods: We analyzed pooled data from all available Demographic and Health Surveys (DHS) across Bangladesh, India (Assam, West Bengal, Meghalaya, Mizoram, Tripura), Nepal, and Pakistan, covering women aged 8–49 years from 1960 to 2022. The incidence of child marriage was reconstructed using women's life histories. Trends in Bangladesh were interpreted alongside major historical milestones: the 1971 Liberation War, the 1974 famine, and the rise of the ready-made garment (RMG) industry from 1980 onward.

Results: In Bangladesh, incidence peaked at 37.4 per thousand (PT) in 1971, coinciding with the Liberation War, and remained high in the mid-1970s, when the 1974 famine likely accelerated early marriages as a coping strategy. Rates exceeded 35 PT through the 1980s but declined after the expansion of the RMG industry, which created employment-based incentives to delay marriage. By 2022, incidence had fallen to 9.2 PT. Regionally, Nepal peaked at 25 PT in 1992 before declining to 11 PT by 2018; Indian states showed moderate but fluctuating rates, with West Bengal reaching 29 PT in 1999. Pakistan consistently reported the lowest incidence, below 5 PT after 1995.

Conclusion: Conflict, famine, and industrial transformation have shaped the trajectory of child marriage in Bangladesh. Despite progress, Bangladesh continues to bear the highest burden in South Asia. Addressing persistent socio-economic vulnerabilities and strengthening gender empowerment remain critical for achieving SDG target 5.3 to end child marriage.

Keywords: Child marriage, Bangladesh, South Asia, DHS, historical events, women's health

O-T07D-0461

Development of a co-created infectious diseases module for public health and nursing students

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Infectious diseases pose a continuous risk and challenge, indicating the vital need for updated contextual educational materials for Public Health and Nursing Students. This developmental research aimed to create a needs-based, curriculum-aligned module on infectious diseases for Bachelor of Science in Public Health and Nursing students at Bataan Peninsula State University. There is a critical and urgent need for updated educational materials that are both relevant and engaging for future health professionals in the province given the increasing global interconnectedness and the recent public health crises. The Analysis, Design, and Development phases of the ADDIE model was used as framework in constructing the module. During the analysis phase, co-creation approach was utilized where feedback from students on the most relevant and significant topics were gathered through structured workshops. A panel of public health and subject matter experts then reviewed and polished the learner centred insights to align with the CMO No. 1 series of 2024 which stipulates the policies, standards, and guidelines for the BS Public Health program. The design phase structured the content into six (6) comprehensive chapters, which included pre-test questions to assess fundamental knowledge and reinforce learning objectives. In the final development phase, the module was developed and eventually validated by a peer review panel to achieve conten accuracy, proper instructional write-up, and overall pedagogical efficiency. The resulting module is a robust and validated instructional tool ready for future testing and application in the university. This initial phase of the study is a foundational effort, however excluding the Implementation and Evaluation phases, which are subjects for future research.

Keywords: co-creation, developmental research, infectious diseases module, public health

O-T07A-0471

Short-term Exposure to PM2.5 and Acute Lower Respiratory Infections (ALRIs) Mortality Among Adults in Thailand: Regional, Demographic, and Seasonal Analysis

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Background: Fine particulate matter ($PM_{2.5}$) is an environmental risk factor for acute lower respiratory infections (ALRIs). However, evidence on its impact on ALRI mortality in middle-income tropical countries remains limited. This study addresses the gap by investigating short-term associations between $PM_{2.5}$ exposure and ALRI mortality in Thailand, considering spatial, demographic, seasonal, and co-pollutant variations.

Methods: We analyzed 147,823 deaths due to ALRI (ICD-10: J09–J18, J20–J22) among adults aged ≥15 years recorded in Thailand during 2015 to 2019. Time-stratified case-crossover Poisson regression models were applied to estimate associations between daily $PM_{2.5}$ concentrations and ALRI mortality counts. Analyses were stratified by region, gender, age group, and season. Additional models evaluated combined exposure effects with other pollutants.

Results: Nationally, a 10 μg/m³ increase in daily $PM_{2.5}$ concentration was associated with a 1.1% increase in ALRI mortality risk at a single lag of 7 days [RR = 1.011; 95% CI: 1.0019–1.020], indicating delayed effects. Significant regional associations were observed in the Bangkok Metropolitan Region at lag 3 [RR = 1.0150; 95% CI: 1.0021–1.028] and in the Southern Region at lag 7 [RR = 1.036; 95% CI: 1.0039–1.068]. Females indicated stronger risk estimates at a 7-day lag, whereas males showed non-significant immediate effects. Although differences by age group were not statistically significant, the elderly group reported greater risk estimates than younger adults. The strongest associations occurred during the wet season (July–October). Combined exposure to $PM_{2.5}$ and NO_2 exacerbated mortality risks compared with $PM_{2.5}$ alone, particularly at longer lag periods.

Conclusions: Short-term $PM_{2.5}$ exposure is associated with higher ALRI mortality in Thailand, with differences between regions, seasons, and population groups. This evidence supports the need for stronger environmental health actions, including reducing emissions, controlling traffic pollution, issuing timely air quality warnings, and protecting people at higher risk.

Keywords: $PM_{2.5}$, Short-term exposure, Acute Lower Respiratory Infections, Mortality.

O-T07B-0477

Breastfeeding practices and its association with Breastfeeding Self-Efficacy and Work-based Breastfeeding Support among Working Lactating Mothers in Malaysia

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Background: Breastfeeding provides optimal nutrition and long-term health benefits, yet in Malaysia, nearly two-thirds of infants are not exclusively breastfed for six months. Despite gains in early initiation, working mothers face challenges in sustaining breastfeeding due to limited workplace support and low self-efficacy. This study examines breastfeeding practices and their associations with self-efficacy and workplace support among working mothers with children under two in a Maternal Child Health Clinic in Northern Malaysia.

Methods: A cross-sectional survey was conducted among working lactating mothers aged 20 years and older, excluding those with pregnancy or breastfeeding complications. Data on demographics, breastfeeding practices, self-efficacy, and workplace support were collected via a validated questionnaire. Breastfeeding self-efficacy was measured using the 14-item Breastfeeding Self-Efficacy Scale–Short Form (BSES-SF) on a 5-point Likert scale (scores 14–70), categorized as low to moderate (≤42), moderate to high (43–56), and high (57–70). Workplace support was assessed with the 10-item Workplace Breastfeeding Support Scale (WBSS) on a 7-point Likert scale (scores 10–70), classified as low to moderate (≤35) or moderate to high (36–70). Data were analyzed using SPSS 26.0.

Results: 286 participated (98.3% response rate), mostly skilled jobs (70.6%), followed by professionals (18.2%) and non-skilled workers (11.2%); low household income (27.6%), middle (47.9%), and high (24.5%). Among 211 mothers with infants ≤6 months, 46.4% exclusively breastfed and 53.6% mixed fed. Overall, 52.5% had low to moderate self-efficacy, and 66.1% reported low to moderate workplace breastfeeding support. Logistic regression showed a strong positive correlation between WBSS and BSES-SF ($r = .920$, $p < .001$), indicating that greater workplace support boosts maternal breastfeeding confidence.

Conclusions: Workplace breastfeeding support is essential, and policies to aid breastfeeding mothers and promote child health urgently need to be addressed.

Keywords: Working lactating mothers, breastfeeding practices, breastfeeding self-efficacy, workplace support, breastfeeding support.

O-T07B-0511

Nursing Clinical Competence in Resource-Limited Settings: A Study from Bac Giang, Vietnam

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Background: Nursing competence is essential for ensuring quality care and patient safety. However, nurses in mountainous and resource-limited areas often face challenges due to limited training opportunities and heavy workloads. In Vietnam, evidence on clinical practice competence and related factors in such contexts remains scarce. This study was conducted to assess the clinical practice competence of nurses and to explore factors associated with their competence in a mountainous area of Vietnam.

Method: This study employed a cross-sectional descriptive design using quantitative methods. The research was conducted from April to December 2023. The total sample size included all 356 clinical nurses working at 09 health centers in Bac Giang, a mountainous province in Vietnam. The questionnaire for evaluating clinical practice competence was based on the Basic Competency Standards for Vietnamese nurses. Data were entered into SPSS 26.0 and analyzed using descriptive statistics (percentage, mean) and logistic regression.

Results: Overall, 67.4% of nurses reported being confident in their clinical practice competence. Among the seven domains of nursing clinical competence, the proportion of nurses confident in "Collaboration with colleagues in patient care" was the highest (87.1%). The lowest level of confidence was reported in Patient health communication and education (62.4%), followed by “Prioritization and decision making in care based on patient needs” (70.2%) and “Effective communication and patient guidance on medication use” (71.9%). The study found statistically significant associations between overall motivation and participation in training courses with nursing practice competence (OR = 7.9 and 3.6, respectively; $p < 0.05$).

Conclusion: The proportion of nurses who felt confident in their clinical practice competence was relatively low. Nurses reported lacking confidence in their competence to communicate with patients, identify priorities based on patient needs, and ensure safe medication use. Motivation and participation in training were significantly associated with nursing competence.

Keywords: Nursing competence, nursing workforce, training, nurse, motivation.

O-T07G-0518

Number of Children and Elderly Health : The Interconnected Roles of Healthy Lifestyles and Children's Educational Attainment

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Background: The traditional Chinese belief that "more children, more blessings" contrasts with emerging evidence suggesting potential negative health impacts on the elderly associated with increased offspring. This study investigates how the number of children affects the health of older adults, with a specific focus on healthy lifestyles as a mediator and children's educational attainment as a moderator.
Methods: Utilizing data from 3,302 participants in China's 2018 Health-Related Quality of Life Survey for Older Adults, multidimensional health outcomes were assessed, including psychache, quality of life, and chronic disease count. Children's educational attainment was quantified using a standardized scoring system, while healthy lifestyles were evaluated through measures of physical activity, leisure engagement, dietary patterns, smoking, and drinking. Moderated mediation analysis was conducted using SPSS macro-PROCESS to explore the hypothesized pathways.
Results: The number of children demonstrated significant direct effects on quality of life ($\beta = -0.672$, $P < 0.001$), psychache ($\beta = 0.489$, $P < 0.01$), and number of chronic diseases ($\beta = 0.046$, $P < 0.001$). Healthy lifestyles partially mediated these associations, accounting for 14.83%, 11.41%, and 20.69% of the total effects, respectively. Furthermore, children's educational attainment moderated the relationships between number of children and both healthy lifestyles and quality of life.
Conclusions: The number of children impacts the health of older adults directly and indirectly through healthy lifestyles, while children's educational attainment mitigates these effects. These findings advocate for policies aimed at promoting educational equity, intergenerational support, and healthy aging to address health disparities among aging populations.
Keywords: Quality of life; Psychache; Number of children; Children's educational attainment; Healthy aging

O-T07B-0529

Effectiveness of Prolanis and Other Chronic Disease Management Programs for CKD Patients in Primary Health Services

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Background: Chronic Kidney Disease (CKD) is a growing public health issue, particularly in low and middle income countries where primary health care is vital for management. In Indonesia, the Chronic Disease Management Program (Prolanis) aims to improve health outcomes for CKD patients through education, monitoring, and interventions. However, the effectiveness of Prolanis compared to other management programs in primary care is not well defined. This literature review evaluates the effectiveness of Prolanis and other programs in enhancing clinical outcomes, compliance, and quality of life for CKD patients.
Method: This literature review was conducted using databases such as PubMed, Scopus, Web of Science, and Garuda for articles published from 2019 to 2025. Studies included were randomized controlled trials, quasi-experimental studies, and cohort studies that assessed Prolanis or other management programs for CKD patients.
Results: These findings indicate that managing chronic diseases in primary care is crucial for slowing the progression of chronic kidney disease (CKD) and preventing the associated increase in healthcare costs. The integration of digital technology, community mentoring, and multidisciplinary collaboration plays a significant role in enhancing the success of these management strategies. This highlights the need for a long-term research approach and more standardized evaluations to ensure a sustainable impact on CKD patients.
Conclusion: Chronic disease management programs, including Prolanis, effectively slow CKD progression in primary care. A holistic, collaborative approach can further strengthen outcomes, but long-term studies are needed to assess ongoing impacts on patients quality of life.
Keywords: Chronic Kidney Disease, Prolanis, Primary Health Care, Chronic Disease Management, Service Integration.

O-T07D-0542

Safeguarding Adolescents in Peer-Led Health Promotion: Lessons from a Smoking Prevention in Indonesia

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Introduction: Peer-to-peer approaches are increasingly used to prevent smoking uptake among adolescents, but concerns remain about unintended consequences for peer supporters, such as stigma, stress, or role-related burden. Ensuring participant safety is a critical component of ethical adolescent health promotion research. This study assessed possible harms associated with participation as peer supporters in a smoking prevention program in Indonesia.

Methods: Peer supporters in grade 8 junior high school were recruited and trained through a two-day training, followed by three follow-up sessions during implementation. At each follow-up point, peer supporters were asked about negative experiences related to their role, including being insulted, stigmatized, ignored, or overburdened. In addition, school-wide surveys asked students whether they had ever directed harm or insults toward peer supporters.

Results: No peer supporters reported experiencing harm, insults, or undue burden throughout the intervention period. A few peer supporters mentioned being ignored when peers were uninterested in smoking prevention messages; however, these instances were not perceived as harmful. School-wide survey responses corroborated these findings, with no reports of insults or harm directed toward peer supporters.

Conclusion: Close monitoring confirmed that serving as a peer supporter in this adolescent smoking prevention program did not result in harm or adverse experiences. Minor challenges, such as being

ignored, occurred but were manageable and not perceived as harmful. Proactive anticipation and systematic monitoring of unintended effects are essential to uphold ethical standards and safeguard student well-being in school-based interventions. These findings support the feasibility and safety of peer-to-peer approaches in adolescent health promotion when ethical safeguards are in place.

Keywords: peer-to-peer approach; adolescent smoking prevention; safeguards; unintended consequences

O-T07A-0572

Association of military aircraft noise exposure with mental well-being and sleep disturbance among people living near a military air base in Okinawa, Japan

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Background: Tens of thousands of people worldwide are exposed to military aircraft noise daily, but its health effects are understudied. Okinawa, Japan's southernmost prefecture, has Kadena U.S. air base which occupies 80% of the Kadena town. Therefore, we assessed the association of military aircraft noise exposure with mental well-being and sleep disturbance near the Kadena air base.
Methods: Between March and December 2024, we conducted a cross-sectional ecological survey of 394 residents in two communities of the Kadena town (A and B), and one of the Yaese town (C). According to the prefectural noise report and location of aircraft facilities, A, B and communities were considered as high-, low- and no-noise exposure areas, respectively. Using a self-administered questionnaire, we collected data on mental well-being assessed by WHO-5 and sleep disturbance assessed by Athens Insomnia Scale. The analysis was conducted using Fisher's exact test and multivariate logistic regression where age, sex and other covariates.
Results: The participants from A, B and C accounted for 33.2%, 27.4% and 39.3%, respectively. The highest prevalence of poor mental well-being was seen in A (38.2%), followed by B (36.1%) and C (21.9%). Likewise, the highest prevalence of sleep disturbance was seen in A (46.6%), followed by B (46.3%) and C (29.0%). A (AOR 1.84; 95%CI 1.05– 3.23) and B (AOR 1.94; 95%CI 1.05–3.56) residents showed the significantly higher odds of poor mental well-being compared to C residents. Similarly, A (AOR 1.98; 95%CI 1.17–3.35) and B (AOR 2.04; 95%CI 1.16–3.59) residents showed the significantly higher odds of sleep disturbance compared to C residents.
Conclusion: This study showed that residents with military aircraft noise exposure were significantly more likely to have poor mental well-being and sleep disturbance compared to residents without. This study emphasized the need to address military aircraft noise in Okinawa.
Keyword: aircraft noise, well-being, sleep disturbance, military base, Okinawa

O-T07A-0577

Association of Gut Microbiota with Linear Growth in 6-Month-Old Infants: A Follow-Up Study in Banggai, Indonesia

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Abstract

Background: Early infancy is a critical period for gut microbiota maturation and linear growth. Dysbiosis has been linked to growth faltering, but evidence from Indonesia is limited. Multiple micronutrient supplementation (MMS) during pregnancy improves maternal outcomes, while Moringa oleifera enriched with royal jelly (MRJ) has been proposed as an alternative. However, its impact on infant growth and gut microbiota has not been established. This study examined the relationship between gut microbiota and linear growth in six-month-old infants and compared outcomes between MRJ and MMS supplementation.

Methods: This follow-up of a double-blind randomized trial included 88 infants (MRJ = 42; MMS = 46) in Banggai, Indonesia. Data collection involved questionnaires, anthropometry, and stool samples. Nutritional status was assessed using length-for-age z-scores (LAZ). Abundances of major gut bacteria were quantified by qRT-PCR. Analyses included group comparisons, ROC curves, and linear regression.

Results: Stunting prevalence was lower in the MRJ than MMS (4.8% vs 15.2%) but the difference was not significant (p = 0.399). In addition, LAZ values was not significant between group (–0.58 ±1.01 vs –0.80 ±1.39, respectively for MRJ, MMS, p= 0,402). Stunted infants exhibited higher levels of *Lactobacillus* (8.73 log CFU/ml), *E. coli* (8.33 log CFU/ml), and *Clostridium* (7.65 log CFU/ml) compared with non-stunted infants. ROC analysis identified *Clostridium* (AUC = 0.702) and *E. coli* (AUC = 0.587) as potential biomarkers of stunting. Linear regression revealed significant associations

between *Clostridium* (β = –0.114; p = 0.017) and *Lactobacillus* (β = –0.163; p = 0.031) with LAZ, while other genera were not significant.

Conclusion: Gut microbiota composition was significantly associated with linear growth among six-month-old infants, with *Clostridium* emerging as a potential biomarker of stunting. A future study with a better design is recommended to assess the effect of MRJ versus MMS supplementation on linear growth.

Keywords: Gut microbiota; Infant growth; Stunting; Moringa oleifera; Multimicronutrient.

O-T07B-0583

Trends in sudden unexpected infant deaths mortality in Japan, Korea, and Taiwan, 2002-2021

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Background: Sudden unexpected infant death (SUID) is a major contributor to post-neonatal mortality, and variations in classification and certification can influence reported trends. The aim of the study is to examine trends in SUIDs and its three components in Japan, Korea, and Taiwan from 2002 to 2021.

Methods: We obtained records of infants <1 year old who died between 2002 and 2021 from the World Health Organization mortality database for Japan and Korea and government database for Taiwan. We used ICD-10 code R95 "sudden infant death syndrome (SIDS)", R99 "unknown/unattended/ unspecified cause (unknown)," and W75 "accidental suffocation and strangulation in bed (ASSB)," to define SUIDs. Mortality rates per 1000 live births for SUID and its components were calculated annually for each country. Joinpoint regression analysis estimated annual percent changes (APCs) to assess trends.

Results: A total of 10,838 SUIDs were identified from 2002 to 2021 (5743 in Japan, 3684 in Korea, and 1411 in Taiwan) with corresponding SUID mortality rates of 0.33 (0.28 in Japan, 0.44 in Korea, and 0.35 in Taiwan). In Japan, rates were stable until 2014, then declined with an APC of -4.9%. Korea saw a decline (APC = -5.7%) from 2002 to 2011, followed by an increase (APC = +4.2%) from 2011 to 2021, driven by rising unknown mortality (APC = +7.6% from 2010 to 2021) and prominent increase of ASSB mortality (APC = +12.8% from 2013 to 2021). For Taiwan, a persistent decreasing SUIDs mortality rates from 2002 to 2021 was noted with an APC of -2.2%.

Conclusion: The abrupt increase in ASSB mortality in Korea since 2013 may result from changes in coding or certification practices. Further studies are needed to confirm this hypothesis. Caution is advised when interpreting cross-country SUID mortality differences

Keywords: Sudden unexpected infant death, SIDS, ASSB

O-T07D-0605

Cognitive, Emotional, Psychological and Spiritual Predictors of Quality of Life: Evidence from Malaysian University Students

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Background: University students often face significant stressors that negatively affect their mental health and quality of life. Spiritual practices such as Quran memorization, together with coping strategies, may offer protection, while cognitive and emotional intelligence represent additional determinants of resilience. However, their combined influence on student well-being has not been fully examined. This study aimed to investigate the roles of IQ, EQ, stress, coping skills, and Quran memorization level in predicting quality of life among Malaysian university students.
Method: A cross-sectional study was conducted among Malaysian students aged 18–25 years from higher education institutions. Multistage random sampling was employed. Validated instruments included Raven's Progressive Matrices (Cognitive), USMEQi (Emotional Quotient), DASS-21 (Stress), Brief-COPE (Coping), and SF-36 (Quality of Life) were chosen. Data analyses using SPSS 27 included descriptive statistics, t-tests, ANOVA, and multivariate regression. Mediation analysis will also be explored to examine potential indirect pathways between predictors and quality of life.
Results: The results showed significant association ($p<0.05$) between predictors and Quality of Life.
Conclusion: Student quality of life is shaped by cognitive, emotional, psychological, and spiritual factors. Public health strategies in higher education should integrate resilience-building, emotional intelligence training, and spiritual support to strengthen student mental health.
Keywords: Quality Of Life, IQ, EQ, Stress, Coping, Quran Memorization, Public Health, University Students

O-T07A-0620

A Cross-Sectional Study On Assessment Of Infertility Causes And Their Association With Depression And Anxiety Among Reproductive Age Group Women In Tertiary Care Hospital, Osmania, Hyderabad, India

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Background: Infertility is a serious health issue worldwide, affecting 8%-10% of couples worldwide. 15 and 20 million (25%) are in India alone. According to a report by the WHO, one in every four couples in developing countries is affected by infertility.

Objectives:

1) To determine the Prevalence of infertility & to assess the factors influencing infertility.

2) To evaluate the association with depression and anxiety among reproductive age group women with infertility.

Methodology: This cross sectional study was conducted in government maternity hospital affiliated to Osmania Medical college.The research involved 160 women of reproductive age group 15-49 years who attended OPD for the infertility treatment and provided informed consent. A simple random sampling method was used to select participants. Data were collected using a predesigned questionnaire using PHQ-4 Scale. Data entry was completed using Excel, and the study variables were analysed for associations and comparisons of means using appropriate statistical methods.

Ethical Consideration: Applied for institutional ethical committee clearance

Result: Demographic factors significantly associated with infertility were higher education, employment, nuclear family, and high socioeconomic condition. We found Prevalence of infertility increases by aging, higher BMI, irregular menstrual pattern. 17 % of participants reported symptoms of anxiety and 20% reported symptoms of depression.The study is on-going and the data will be analysed after the completion of data collection. Results will be presented in the conference.

Conclusion: knowledge about the prevalence of infertility and its associated risk factors is important for health care providers and policy makers to design and implement policies related to prevalence and treatment of infertility. This study demonstrates high levels of anxiety and depression faced by women with delayed conception. To better support individuals and couples, we advocate for integration of psychosocial interventions to improve mental health outcomes

Keywords: Infertility, Reproductive age , Depression.

O-T07A-0625

Spatiotemporal Analysis of Substance Use Disorders in South Korea using Bayesian Hierarchical Modeling

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Background Substance use disorders (SUDs) encompass alcohol, tobacco, illicit drugs, and prescription medication misuse. In South Korea, alcohol dependence and rising drug misuse pose major health concerns, while little is known about their spatiotemporal distribution. Identifying regional and sex-specific disparities is critical to inform tailored prevention strategies.
Methods We conducted a retrospective, population-based study of individuals aged 15 years and older diagnosed with SUDs from 2009 to 2023 using the National Health Insurance Service database. Standardized incidence ratios (SIRs) were estimated by sex and age group, and exploratory spatial data analysis was performed to assess clustering. Bayesian hierarchical spatiotemporal models with Poisson likelihood were fitted using the Integrated Nested Laplace Approximation (INLA), and relative risks (RRs) with 95% credible intervals were derived. Exceedance probabilities were mapped to highlight high-risk areas.
Results Marked spatiotemporal heterogeneity was observed between sexes. Among males, elevated SIRs were widespread across northeastern, central, and southern regions in 2009 but became more localized by 2019, particularly in the Seoul metropolitan area and northeastern districts. Among females, high-risk areas shifted progressively southward, from northern regions in 2009, to central inland areas in 2014, and southern and coastal districts by 2019. Bayesian modeling confirmed significant clustering and highlighted distinct sex-specific risk patterns.
Conclusion This study presents the first nationwide spatiotemporal analysis of SUDs in South Korea. Findings reveal shifting and sex-specific high-risk regions, underscoring the need for regionally and demographically tailored public health interventions.
Keywords: substance use disorders, spatiotemporal epidemiology, Bayesian hierarchical model, standardized incidence ratios, South Korea

O-T07D-0636

From Prison to Home, Staying Healthy

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Background: Incarceration is a public health issue. The burden of disease and other health conditions are greater in prison than in the general community; this is a global phenomenon. More specifically, from substance use and mental health disorders to tuberculosis and HIV, all are more prevalent in prisons. Screening, diagnosis, and treatment can improve an individual's health status during incarceration. And with Thailand having the 5th highest incarceration rate in the world (of countries with over 100,000 incarcerated individuals) and the fact that over 90% of incarcerated people are eventually released, it is critically important for both public safety and public health to support a smooth transition home. An effective post-release linkage to care program is key to this success. These programs not only improve or maintain individual health, but also reduce reincarceration and ensure stronger public and community health

Methods: Working to develop and/or evaluate models of prison post-release linkage to care in over 20 countries and 30 U.S. states, we have gathered data and information on various components of effective models. We will briefly describe these models, their strengths and challenges, and considerations for global adaptations, by drawing on specific examples from South Africa, Thailand, and the United States.

Results and Discussion: There are key components to effective linkage models. Examples include: 1) pre-release planning; 2) immediate release support within the first 24-48 hours after release; 3) assistance with both health-related care and other life needs, such as income, transportation, housing, government identification card, family reunification, etc.; and 4) ongoing post-release support. Using a harm reduction approach with peers (people with lived experience) has been shown to increase effectiveness.

O-T07D-0678

Factors Associated With Stress, Anxiety And Depression Among Medical Officers And House Officers In Universiti Malaya Medical Centre (UMMC)

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Introduction: The mental health of healthcare workers (HCWs) is a critical determinant of a resilient health system. This study aimed to determine the prevalence of, and factors associated with stress, anxiety, and depression among Medical Officers (MOs) and House Officers (HOs) at a major tertiary care center in Malaysia.

Methods: We conducted an online cross-sectional study of 246 participants using the Research Electronic Data Capture (RedCap) application. Validated questionnaires, including the Brief Job Satisfaction Measure II, Sleep Quality Scale, and the Depression Anxiety and Stress Scale 21 (DASS-21), were utilised. Data were analysed using SPSS Version 29, with multiple logistic regression performed to identify significant predictors of mental health outcomes.

Results: Our findings reveal high prevalence rates: 28.4% for stress, 32.5% for anxiety, and 29.7% for depression. Significant predictors included age, with younger HCWs (25-29 years) having higher odds of stress (aOR: 1.67, 95% CI: 1.02-2.73), and gender, with females showing higher odds of anxiety (aOR: 2.03, 95% CI: 1.20-3.43). Marital status was significantly associated with anxiety (aOR: 1.45, 95% CI: 1.05-2.01). Occupational factors were also significant: less experienced HCWs and those in high-acuity departments like Emergency and Surgery had increased odds of stress (aOR: 1.82, 95% CI: 1.10-3.01) and depression (aOR: 1.93, 95% CI: 1.12-3.31). Extended working hours (aOR: 2.21, 95% CI: 1.38-3.55) and poor sleep quality (aOR: 2.45, 95% CI: 1.52-3.95) were also significant risk factors. The association between smoking or vaping and higher odds of stress and anxiety (aOR: 1.77, 95% CI: 1.08-2.89) supports the self-medication hypothesis.

Conclusion: This study emphasises the urgent need for evidence-based, targeted mental health interventions for MOs and HOs, focusing on high-risk groups. The findings advocate for the proactive development of comprehensive mental health support systems within healthcare institutions to enhance workforce sustainability and improve patient care.

Key words: Medical Officer, House Officer, Stress, Anxiety, Depression

O-T07A-0716

Lagged Associations Between Aedes Surveillance Indices on Dengue Incidence in Kota Bharu, Malaysia: A Distributed Lag Non-Linear Modeling Approach

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Background: Dengue fever continues to pose a major public health concern in many tropical countries, including Malaysia. Although Aedes surveillance indicators—such as egg counts, larval counts, and the Ovitrap Index (OI) are routinely collected to monitor vector populations, their utility in predicting dengue outbreaks remains inadequately characterized. This study aimed to assess the lagged association between these indices and dengue incidence using a Distributed Lag Non-Linear Modeling (DLNM) framework in District of Kota Bharu, Kelantan, Malaysia.

Methods: Weekly data on laboratory-confirmed dengue cases and Aedes surveillance indices were obtained from three sentinel sites across Kota Bharu for the year 2025. The three indices—egg count, larval count, and Ovitrap Index were modelled separately using DLNM under a quasi-Poisson regression framework, accounting for non-linear relationships and delayed effects up to six weeks. Contour plots were generated to visualize the bidimensional effects of index level and lag time on relative risk (RR).

Results: The Ovitrap Index emerged as the strongest and most consistent predictor of dengue risk. Values equal to or exceeding 50 were significantly associated with increased relative risk (RR > 1.2), particularly within the 2–5-week lag period. In contrast, egg and larval counts displayed weak, inconsistent, and statistically non-significant associations across lag structures. Egg counts showed mild undulating patterns centered around RR ≈ 1, while larval counts exhibited a non-linear U-shaped pattern with mid-range suppression and elevated risks at low and high ends, suggesting the absence of a clear dose-response relationship.

Conclusion: These findings reinforce the Ovitrap Index—specifically values ≥50—as a robust early warning indicator for impending dengue transmission. Integration of OI-based thresholds into public health surveillance systems can enhance outbreak prediction and guide timely vector control measures.

Egg and larval indices may benefit from augmentation with climatic and environmental variables to improve predictive value.

Keywords: Aedes Surveillance, Sentinel, Dengue, Ovitrap Index

O-T07C-0718

Findings from a Qualitative Investigation into the SocioCultural Drivers Behind Perception and Acceptability of Presumptive Treatment for Bacterial STIs in High-Risk Groups.

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Background: Bacterial sexually transmitted infections (STIs) such as gonorrhoea, syphilis, and chlamydia are increasing at an exponential rate in Australia despite prevention efforts. Early evidence suggests that Doxycycline prophylaxis (Doxy-PEP/PrEP) demonstrates strong efficacy against syphilis and chlamydia, however, insights into socio-cultural acceptability and provider readiness is limited. Our recently published survey data of Queensland consumers and healthcare providers found Doxy-PrEP acceptability highest among HIV-PrEP users and older populations. We subsequently undertook qualitative research to explore social, cultural, and ethical factors influencing uptake and adherence to safe, equitable, and culturally appropriate Doxy-PrEP implementation.

Method: In-depth semi-structured interviews were conducted with 20 participants. The participants were recruited online and comprised three population groups, including Indigenous Australians, gay/MSM men, and heterosexual or pan/bisexual young people between the ages of 18 and 29 years. Transcripts were uploaded into NVivo 12 Software to assist with data management. Analysis and data collection occurred concurrently, with analysis drawing upon the thematic analysis approach of Braun and Clarke and Charmaz's grounded theoretical approach.

Results/Conclusions: Findings from the study gave rich insights into the reasons why all three groups are reducing condom use, including reduced concerns around STI transmission when the fear of pregnancy and HIV/AIDS becomes negligible due to PEP and PrEP use and improved contraceptive devices. Some interviews point to CIS, heterosexual women and transgender men being potentially more willing to take the Doxy-PrEP than young CIS heterosexual men. Interestingly, there was a tendency in the Indigenous group to be more concerned about STI transmission than pregnancy, but also some mistrust of medicine in general. The data also produced themes that gave explanations such as trust and familiarity for sexual risk taking, as well as details on fear of antimicrobial resistance and who and why different groups trust with information about improving their sexual health

Keywords: Core Public Health and Other Issues.

O-T07B-0737

Estimation of Excess Mortality Associated with Influenza and Respiratory Syncytial Virus in South Korea, 2011-2019

Jung Hun Lee[1], **Kyeong Beom Kim[1]**, Seyul Park[1], Byung Chul Chun[1]

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Background: Influenza and Respiratory Syncytial Virus (RSV) are common respiratory viral pathogens. While influenza disease burden has been well studied, RSV has received less attention in epidemiology. However, the disease burden of RSV is significant, especially in children and the elderly.

Objective: To estimate excess mortality of influenza and RSV in South Korea from 2011 to 2019.

Method: This nationwide time-series modelling study used national mortality data and virus surveillance data from 2011 to 2019. We estimated weekly cause- and age-specific excess mortality rates associated with influenza and RSV by using a negative binomial regression model. The model accounted for lagged effects of RSV and influenza circulation, seasonality, and long-term time trends.

Results: Over the study period, a total of 2,220,138 deaths that occurred in South Korea were included in the analysis. We estimated a total of 17,489 influenza-attributed and 4,981 RSV-attributed respiratory excess deaths from 2011 to 2019. Among children younger than 5, the annual excess respiratory mortality rate per 100,000 population was 0.1 (95% CI: -0.1, 0.3) for influenza and 0.1 (95% CI: -0.1, 0.3) for RSV. In adults aged 65 or older, the respiratory mortality rate for influenza was substantially higher at 30.2 (95% CI: 26.1, 34.4) compared to 7.6 (95% CI: 3.8, 11.5) for RSV.

Conclusion: Our findings reveal a substantial, under-recognized mortality burden from RSV in adults aged 65 or older. This burden is concentrated on the elderly, with the impact prominent on all-cause and respiratory mortality compared to circulatory-specific mortality. These results underscore the need for targeted public health interventions, such as vaccination, to protect the older adult population from RSV

Keywords: Influenza, Respiratory Syncytial Virus (RSV), excess mortality, time series analysis, negative binomial regression

POSTER
Presentation

November 6 (Thu), 2025

POSTER

Presentation List

1.Disease Control & Health Education

Nov6, 13:00-17:30

1.1-NCD Pandemic and Injury Prevention

1.2-Emerging and Re-emerging Diseases

1.3-Vaccination Strategies and Community Engagement

1.4-Behavioral Health and Health Literacy

Committee: Zulkarnain, (Prof. Dr., University of Malaya, KualaLumpur, Malaysia)
Thapakorn Ruanjai, (Dr., School of Health Science, Mae Fah Luang University, Thailand)
Weerapong Thanjangreed(Lecturer, School of Health Science, Mae Fah Luang University, Thailand)

Room: Poster area

P-T01A-0194 **Developing a Prediction Model for 30-Day Mortality Among Older Riders Involved in Motor Vehicle Crashes in. Taiwan**

Ming-Chuan Hsu

Department of Public Health, College of Medicine, National Cheng Kung University, Taiwan

P-T01A-0207 **Characteristic and Disease Burden Post-COVID Syndrome in a Malaysian Public Hospital**

Aniza Ismail

Faculty of Medicine, Universiti Kebangsaan Malaysia, Malaysia

P-T01A-0214 **Global Mapping of Early Diagnostic Tools for Alzheimer's Disease: Integrating Bibliometric Analysis, SWOT Strategy, and a Novel Relative Effectiveness Index**

Khalilullah

Master's Degree in Clinical Science, Chulalongkorn University, Indonesia

P-T01A-0672 **Dynamic Pulse Pressure Trajectories Within 24 Hours After Endovascular Treatment and Outcome in Acute Large Vessel Occlusion Stroke**

Jingping Sun

Municipal Central Hospital and Fifth Affiliated Hospital of Wenzhou Medical College, China

P-T01A-0712 **Father Involvement as a Breastfeeding Father in Preventing Postpartum Blues in the Indigenous Community of Tana Toa Village, Kajang District, Bulukumba Regency, Indonesia**

Andi Zulkifli

Department of Epidemiology, Faculty of Public Health, Hasanuddin University, Indonesia

P-T01A-0728 **The Relationship Between Self-Efficacy and Self-Care Management in Hypertensive Patients Participating in the PROLANIS at Nur Asy Syifaa Clinic, Makassar City, in 2025**

Ridwan Mochtar Thaha

Faculty Of Public Health, Universitas Hasanuddin, Indonesia

P-T01A-0735 **Emerging severe fever with thrombocytopenia syndrome (SFTS) in Thailand: a One Health scoping review**

Varangkana Thaotumpitak
Department of Microbiology, Faculty of Public Health, Mahidol University, Thailand

P-T01B-0160 **Accuracy of ICD-10-CM Diagnosis Codes for Identifying COVID-19 Cases Using Administrative Claims Data in Taiwan**

Wei-Lun Chang
Center for Big Data Analytics and Statistics, Chang Gung Memorial Hospital, Taiwan

P-T01B-0634 **The Role of Treatment Observers (PMO) and Health Worker Support on the Success of Pulmonary Tuberculosis Treatment**

Putri Pratiwi
Faculty of Public Health, Hasanuddin University, Indonesia

P-T01C-0294 **Comparing vaccination, virus infection risk, and infection-related death risk during the COVID-19 pandemic between individuals with and without disabilities**

Pei-Tseng Kung
Asia University, Taiwan; China Medical University Hospital, China Medical University, Taiwan

P-T01C-0469 **Epidemiological patterns of communicable diseases among basic education students in Balanga City, Bataan, Philippines during the pre- and post-pandemic periods**

Jennifer Maquiling
Health Information Management Department, Bataan Peninsula State University-Main Campus, Philippines

P-T01C-0470 **Effectiveness of BNT162b2 Vaccine Against Emergency Department Visits and Moderate-to-Severe COVID-19 Among Adolescents in Taiwan**

Wei-Lun Chang
Center for Big Data Analytics and Statistics, Chang Gung Memorial Hospital, Taiwan

P-T01D-0131 **Comparison of salient beliefs elicited based on varying levels of leisure time physical activity among university students**

Chung Gun Lee
College of Education, Seoul National University, Republic of Korea

P-T01D-0184 **Effect of Promoting Health Literacy Programs on LeptospirosisPreventive Behaviors Among People in Wang Maprang Nuea Subdistrict, Wang Wiset District,Trang Province**

Surachat Damkaew

Wangwiset Hospital, Thailand

P-T01D-0413 **Association between fruit and vegetable intake, dietary supplement use, and health literacy in Koreans**

Seul Ki Choi
Graduate School of Urban Public Health, University of Seoul, Republic of Korea

P-T01D-0463 **Association between online FOMO and Substance Use Behaviors among Taiwanese Adolescents**

Wan-Yi Lin
Graduate Institute of Health Behaviors and Community Sciences, College of Public Health, National Taiwan University, Taiwan

P-T01D-0596 **Predictors of Happiness Among Nursing Students in Malaysia: A Cross-Sectional Study**

Wah Yun Low
Department of Social and Preventive Medicine, Faculty of Medicine, Universiti Malaya,Malaysia

P-T01D-0669 **Community Salt Preferences in and Their Implications for Household Availability and Quality of Iodized Salt**

Safrullah Amir
Nutrition Department, Public Health Faculty, Hasanuddin University, Indonesia

2.Life Cycle & Health

Nov6, 13:00-17:30

2.1-Physical Activity, Exercise, and Nutrition

2.2-Childhood Health and Early Intervention

2.3-Aging Populations and Chronic Disease

Committee: Mohamed Nashrudin bin Naharudin, (Dr., University of Malaya, Malaysia)
Ratakorn Aimkosa, (Dr., School of Health Science, Mae Fah Luang University, Thailand)
Theerasak Boonwang, (Asst.Prof.Dr., School of Health Science, Mae Fah Luang University, Thailand)

Room: Poster area

P-T02A-0179 **Association between Percutaneous Endoscopic Gastrostomy versus Nasogastric Tube Feeding and All-cause Mortality in Patients with Dementia: A U.S. Retrospective Cohort Study**

Yuan-Tsung Tseng
College of Medicine, National Cheng Kung University, Taiwan

P-T02A-0181 **Racial Disparity in Mortality among Patients with Vitamin D Deficiency: A U.S. Retrospective Cohort Study**

Chun-Hsiang Wang
Department of Hepatogastroenterology, Tainan Municipal Hospital, Taiwan

P-T02A-0186 **The result of motivated to change behavior 2E1F program in obesity risk chronic disease group of Ban Naipong Tambon health promoting hospital, Wangwiset, Trang.**

WISITPOLN THEPMANEERAT
School of Nursing, Sukhothaithammathirat University, Thailand

P-T02B-0183 **Promoting Reproductive Health and Safeguarding Maternal and Infant Health: Taipei City's Healthy Fertility Policy**

Yu-Fen Kao
Department of Health, Taipei City Government, Taiwan

P-T02B-0439 **Factors Associated With Knowledge and Attitudes Regarding Neonatal Jaundice Among Primigravida Mothers in a Tertiary Care Hospital in Colombo, Sri Lanka.**

Sumadu Senadeera
Faculty of Medicine, University of Colombo, Sri Lanka

P-T02B-0440 **Maternal Health and Behavior of Advanced Maternal Age Mothers in the United Arab Emirates: The Mutaba'ah Study**

Souha Alabboud
Institute of Public Health, College of Medicine and Health Sciences, United Arab Emirates University, United Arab Emirates

P-T02B-0447 **Association between food insecurity and dietary diversity among undernourished preschool children in rural Bangladesh**

Md Imam Hasan Limon
Department of Social and Preventive Medicine, Faculty of Medicine, University of Malaya, Malaysia

P-T02B-0601 **Termination of pregnancy after non-invasive prenatal test (NIPT) for common aneuploidy: A systematic review and meta-analysis**

Suphamitr Thavorncharoensap
Suankularb Wittayalai School, Thailand

P-T04B-0780 **Personal-social factors associated with increased risk of anemia prevention behaviour among school-aged girls in an urban Indonesian: A cross-sectional study**

Healthy Hidayanty
Nutrition Science Department, Hasanuddin University, Indonesia

P-T02C-0293 **Association of the pattern of hemoglobin A1C trajectories with risk of stroke, acute myocardial infarction, and dialysis in patients with type 2 diabetes mellitus in Taiwan**

Wen-Chen Tsai
China Medical University, Taiwan

P-T02C-0397 **Milk and Dairy Product Intake and Objectively Measured Sleep Apnea Indices: The Fukuoka Epidemiological Study of Atherosclerosis**

ATSUSHI SATOH
Laboratory of Epidemiology and Prevention, Kobe Pharmaceutical University, Japan

P-T02C-0415 **Protective Effects of Employment on Mental Health and Mortality in the Elderly in Taiwan: A Nationwide Population-based Study**

Yu-Chia Chang
Department of Long Term Care, National Quemoy University, Taiwan

P-T02C-0668 **The Role of Learning Engagement and Social Participation in Reducing Aging Anxiety among Older Adults: Evidence from Taiwan**

Mei-Hua Wu

Institute of Health Policy and Management, College of Public Health, National Taiwan University, China

P-T02C-0752 **Prevalence and Factors Associated with Intrinsic Capacity Decline Among Older Adults in a Rural Thai Community: Application of the WHO ICOPE Framework**

Nattawat Kammang
Faculty of Public Health, Naresuan University, Thailand

3.Community, Health Equity and Migrant Health

Nov6, 13:00-17:30

3.1-Health Equity for Minority, Elderly, and Vulnerable Populations

3.2-Gender Equity in Health Systems

3.3-Violence Prevention and Community Safety

Committee: Mahalul Azam, (Prof. Dr., Department of Public Health, Faculty of Medicine, Universitas Negeri Semarang, Indonesia)
Suphaphorn Utsaha, (Asst.Prof., School of Health Science, Mae Fah Luang University, Thailand)
Anuwat Aunkham, (Dr., School of Health Science, Mae Fah Luang University, Thailand)

Room: Poster area

P-T03A-0302 **Scaling Up Strategies for a Community-Based Exercise Program for Older Adults: A Descriptive Study**
Ryosuke Shigematsu
School of Health and Sport Sciences, Chukyo University, Japan

P-T03A-0304 **A Research on Social Systems with Attention to Caregiver Support in Japan's Super-Aging Society**
Eiji SATOH
Utsunomiya University, Japan

P-T03A-0325 **Dengue Prevention for Vulnerable Populations in Southeast Asia: A Scoping Review**
Hlaing Win Aung
School of Health Science, Mae Fah Laung University, Thailand

P-T03A-0380 **Dementia Knowledge, Social Comfort, and Community Cohesion as Predictors of Helping Intentions: Evidence from Taipei City Study**
Duan-Rung Chen
Institute of Health Behaviours and Community Sciences, National Taiwan University, Taiwan

P-T03A-0544 **Food Insecurity and Diabetes Self-Management in Unserved and Underserved Rural Households in General Mamerto Natividad, Nueva Ecija, Philippines**
Charles Daniel Medina
Department of Medical Technology, Wesleyan University-Philippines, Philippines

P-T03A-0651 **Can Home-Based WASH Facilities and Parental Support Improve Menstrual Hygiene Behavior Among Students with Disabilities?: A Study in Special Schools in Makassar, Indonesia**
Arif Anwar
Faculty of Public Health, Hasanuddin University, Indonesia

P-T03B-0435 **Expanding Access of Care for Non-Communicable Diseases Through Community-Based Programs: A Demographic and Clinical Analysis Before and After the Clinic Without Walls Program in the Marshall Islands**

Wei-Hung Wang
Taiwan Health Center, Shuang Ho Hospital Taipei Medical University, Taiwan

P-T03B-0472 **Obesity as Social Class? Evidence of Socioeconomic Inequality and Polarisation in Korea**

Jongnam Hwang
Division of Social welfare and Health administration, Wonkwang University, Republic of Korea

P-T03C-0491 **Flying In to Bridge the Gap: A Five-Year Evaluation of Primary Healthcare Delivery Through Flying Doctor Service in Resource-Limited Remote Areas of Sabah, Malaysia**

Wen-Li Tee
Public Health Development Sector, Public Health Division, Sabah State Health Department, Ministry of Health, Malaysia

4.Environmental & Occupational Health

Nov6, 13:00-17:30

4.1-Climate Change and Environmental Health
4.2-Occupational Health in Evolving Work Environments
4.3-Gig Worker Health
4.4-Urbanization and Pollution Control

Committee: Tomonori Ishigaki, (Dr., National Institute for Environmental Studies (NIES), Japan)
Weerayuth Siriratruengsuk, (Dr., School of Health Science, Mae Fah Luang University, Thailand)
Vivat Keawdounglek, (Asst.Prof.Dr., School of Health Science, Mae Fah Luang University, Thailand)

Room: Poster area

P-T04A-0316 **Impact of Heavy Metal Exposure on the Prevalence of Metabolic Syndrome in Korean Adults: Insights from the 4th Korean National Environmental Health Survey**

Huiyang Zhao
Department of Food and Nutrition, Chung-Ang University, China

P-T04A-0368 **Workplace violence mediated the associations between occupation types and smoking among female workers in Taiwan**

Su-Wei Wong
Institute of Health Behaviors and Community Sciences & Department of Public Health, College of Public Health, National Taiwan University, Taiwan

P-T04A-0437 **The Impact of Workplace Violence on Alcohol Dependence: Psychological Distress as a Mediating Pathway among Taiwanese Employees**

Chieh-Yu Li
Institute of Health Behaviors and Community Sciences, College of Public Health, National Taiwan University, Taiwan

P-T04A-0510 **Correlation of spatial and temporal distribution between PM2.5, with inflammatory eye disease and dermatitis using QGIS**

Anuttara Hongthong
School of Health Science, Mae Fah Luang University, Thailand

P-T04A-0526 **The Distribution Of Microplastics From The Final Disposal Site In Highland Communities In Chiang Rai Province, Thailand**

Noppharit Sutthasil
School of Health Science, Mae Fah Luang University, Thailand

P-T04A-0554 **Assessment of Noise Exposure and Its Association with Hearing Impairment Among Tricycle Drivers in a Municipality in Bataan**

Cherry Lou Dizon
Health Information Management Department, Bataan Peninsula State University, Philippines

P-T04A-0568 **Factors Influencing Carbon Footprint Emissions Footprint: An Analysis of a Road Freight Transport Service Company**

Nuttakan Playmuang
School of Public Health,Walailak University, Thailand

P-T04A-0602 **Investigative Study And Environmental Health Risks Of Microplastic Exposure In Well Water Near The Batang Arau River Basin, Padang City, 2025**

Farida Lovenzy
Environmental Health, Faculty of Public Health, Andalas University, Indonesia

P-T04A-0603 **Environmental Health Risk Analysis of Microplastics Exposure Through Fish Consumption in The Community of Batang Arau Urban Village, Padang City in 2025**

Dara Dynanty
Environmental Health, Faculty of Public Health, Andalas University, Indonesia

P-T04A-0613 **Indoor Air Quality Assessment in University Teaching Laboratories: Compliance with ESPReL Standards**

Nitima Nulong
Occupational Health and Safety, School of Public Health, Walailak University, Thailand

P-T04A-0771 **Ecological Risk Assessment: Developing Standardized Test Methods for Microplastics in Thai Environmental Matrices for Long-term Monitoring**

Woraprapa Sriyotai
Standard Development Center, Institute of Standard Development and Conformity Assessment, Department of Science Service, Thailand

P-T04B-0174 **Public–Private Collaboration in Creating a Smoke-Free Environment: 2025 Taipei Smoke-Free Lunar New Year Festival**

Fang-Yuan HSU
Department of Health, Taipei City Government, Taiwan

P-T04B-0290 **Associations of occupational sedentary behavior with individual and organizational perceptions among Japanese office workers**

Rina Miyawaki
Meiji University, Japan

P-T04B-0300 **Satisfaction and Sanitation of Beauty Salon Surroundingof Mae Fah Luang University, Chiang Rai, Thailand**

Vivat Keawdounglek
School of Health Science, Mae Fah Luang University, Thailand

P-T04B-0516 **Prevalence and Postural Risk Factors of Work-Related Musculoskeletal Disorders Among Stone Crushing Plant Workers**

Siriluk Veerasakul
School of Public Health, Walailak University, Thailand

P-T04B-0693 **Association Between Psychosocial Work Conditions and Self-Medication for Work-Related Injuries or Illnesses: A National Cross-Sectional Study in Taiwan**

I-Hsin Chang
Graduate Institute of Health Behaviors and Community Sciences, College of Public Health, National Taiwan University, Taiwan

P-T04B-0772 **Occupational and Subsector Differences in Cardiovascular Disease Risk among Transportation Workers**

Juyeon Oh
Department of Public Health, Graduate School, Yonsei University, Republic of Korea

P-T04B-0503 **Evaluation of workload in university kitchen workers by using real time physical monitoring**

Yoko Aiba

Department of Health and Nutrition, Osaka Aoyama University, Japan

P-T04C-0759 **Interaction of Job Insecurity and Diabetes Mellitus Severity on the Risk of Cardiovascular Disease**

Heejoo Park
Department of Public Health, Graduate School Yonsei University, Republic of Korea

P-T04C-0763 **Worker Protection in the Algorithmic Era: Algorithmic Justice and Tax-Based Insurance Systems for the Gig Economy**

Jian Lee
Department of Public Health, Graduate School, Yonsei University, Republic of Korea

P-T04D-0127 **Allergy Patterns Among University Students at A Public University in the United Arab Emirates**

Ali Artaman
Department of Health Sciences, Zayed University, United Arab Emirates, United Arab Emirates

P-T04D-0204 **A Cross-Sectional Study of Commuting Time, Residential Floor Area, Insomnia, and Daytime Sleepiness Among Residents of the Tokyo Metropolitan Area**

Daisuke Matsushita
Department of Living Environment Design, Graduate School of Human Life and Ecology, Osaka Metropolitan University, Japan

P-T04D-0393 **Immune Health Risks of Endocrine-Disrupting Chemicals: Evidence from Bisphenol A and Azole Derivatives**

Jun-Mo Kim
Functional Genomics & Bioinformatics Laboratory, Department of Animal Science and Technology, Chung-Ang University, Republic of Korea

P-T04D-0455 **Modeling Healthy Island Indicators through Settlement Areas, Public Facilities, and Infrastructure: A LISREL-Based Analysis in South Sulawesi, Indonesia**

Nurul Syahriani Salahuddin
Faculty of Public Health, Hasanuddin University, Indonesia

P-T04D-0520 **The study of factors affecting Indoor air quality in hospitals and its effect on healthcare worker's health, Phuket province.**

Rosarin Huasing
School of Public Health, Walailak University, Thailand

P-T04D-0574 **Food sanitation situation in primary school, Case Study Mueang Suphanburi District Suphanburi Province, Thailand**

Kunthida Kingsawad
Sirindhorn College of Public Health, Faculty of Public Health and Allied Health Science, Praboromrajchanok Institute, Thailand

P-T04D-0599 **Factors associated with mental well-being among adult people in Okinawa, Japan**

SAE KAWAMOTO
Graduate School of Health Sciences, University of the Ryukyus, Japan

5.Health Policy & Systems

Nov6, 13:00-17:30

5.1-Health System Strengthening and Determinants of Health
5.2-Health Promotion and Literacy
5.3-Global Health Security and Pandemic Preparedness
5.4-Health Insurance and Public Health Financing

Committee: Nitra Kitreerawootiwong, (Assoc. Prof. Dr., Faculty of Public Health, Naresuan University, Thailand)
Sirinan Suwannaporn, (Dr., School of Health Science, Mae Fah Luang University, Thailand)
Anusorn Udplong, (Asst.Prof., School of Health Science, Mae Fah Luang University, Thailand)

Room: Poster area

P-T05A-0153 **Proposing National Diagnostic Reference Levels for Computed Tomography in Jordan: A Multicentre Study in West Asia**

Abdel-Baset Bani Yaseen
School of Clinical Sciences, Faculty of Health, Queensland University of Technology, Australia

P-T05A-0354 **Island Health Services in the Disruptive Era: Case Study of Kodingareng Island Health Center**

Amran Razak
Faculty of Public Health, Hasanuddin University, Indonesia

P-T05A-0536 **Estimated Reduction of Medical Expenditures in Japan: An Analysis from the Perspective of OTC Drugs**

Tomoya Myojin
Department of Community Health and Preventive Medicine, Hamamatsu University School of Medicine, Japan

P-T05A-0608 **Unmet Need And Fertility Across Indonesia: Exploring Local Determinants Using Geographically Weighted Regression**

Soenarnatalina Melaniani
Department of Epidemiology, Biostatistics, Population Studies, and Health Promotion, Faculty of Public Health, Universitas Airlangga, Indonesia

P-T05A-0643 **A Scoping Review of the Smart Healthy City Concept and Key Elements**

Moonyoung Cha
Industry-Academic Cooperation Foundation, Myongji College, Republic of Korea

P-T05A-0691 **Cost analysis of the Personalized Intensive Lifestyle Modification Program (PILM) for a working population at risk of non-communicable diseases (NCDs) in Thailand**

Utoomporn Wongsin
Department of Public Health Administration, Faculty of Public Health, Mahidol University, Bangkok, Thailand

P-T05B-0348 **How Educational Inequality Among Rural Residents Relates to Healthy Lifestyle Behaviors in Later Life: Evidence from the Northern China Lifestyle Medicine Cohort Baseline**

Qingyong Lu
College of Public Health, Zhengzhou University, China

P-T05B-0407 **The Utilization of Telemedicine Services among Adolescents in Makassar**

Dian Saputra Marzuki
Faculty of Public Health, Universitas Hasanuddin, Indonesia

P-T05B-0433 **Family, Culture, and Autonomy in End-of-Life Care Preferences: A Comparative Study of Thailand, Taiwan, and the United States**

Duan-Rung Chen
Institute of Health Behaviours and Community Sciences, National Taiwan University, Taiwan

P-T05B-0519 **A Needs Assessment of Colorectal Cancer Care Delivery in Bhutan from a Health Systems Lens**

Chuan De Foo
Duke NUS Medical School, Singapore

P-T05B-0522 **Factors Related to the Implement and Outcome of Child Marriage Prevention Program in Lao PDR: A Case Study**

Kaede Tabira
Department of Global Health, Graduate School of Health Sciences, University of the Ryukyus, Japan

P-T05B-0557 The Value of Retired Nurses as Healthcare System Managers in Long-Term Care for Dependent Elderly in Communities

Lalita Kaewwilai
Department of Public Health Nursing, Faculty of Public Health, Mahidol University,Thailand

P-T05B-0590 Cross-Cutting Gaps and Priorities in AMR (Food Chain Focus): A Qualitative Analysis from Selected Local Government and National Agencies

Miko Balisi
Mindanao State University – General Santos, Philippines

P-T05C-0515 Toward an Integrated Framework of Child and Parent Well-being: A Scoping Review

Malshani L. Pathirathna
Department of Health Policy, National Center for Child Health and Development, Japan

P-T05D-0327 Analysis of Service Quality Using SERVQUAL to Improve Patient Satisfaction in Standard Inpatient Class

St Rosmanely
Faculty of Public Health, Hasanuddin University, Indonesia

P-T05D-0476 Out of Pocket Health Expenditure among Insured Households in a Semi Urban Region of Western India

Moksharthi Sharma
Department of Community Medicine, Sardar Patel Medical College, India

P-T05D-0778 Navigating COVID-19: Association between public perceptions of preventive measures and delayed or foregone care among Korean young and middle-aged adults in the early phase of the pandemic

Jongnam Hwang
Division of Social welfare and Health administration, Wonkwang University, Republic of Korea

6.Future Society & Health

Nov6, 13:00-17:30

6.1-Precision Medicine and Personalized Health Solutions

6.2-Medical Technology and Artificial Intelligence in Health Care

6.3-Health Informatics, Telehealth, and Smart Health Care

Committee: Mohamed Nashrudin bin Naharudin, (Dr., University of Malaya, Malaysia)
Ratakorn Aimkosa, (Dr., School of Health Science, Mae Fah Luang University, Thailand)
Theerasak Boonwang, (Asst.Prof.Dr., School of Health Science, Mae Fah Luang University, Thailand)

Room: Poster area

P-T06A-0749 **Toward Reusable EGFR DNA Biosensors: A Feasibility Study of Probe Reutilization for Lung Cancer Staging Diagnostics**

Phatpitcha Taemkhornburee
The Newton Sixth Form, SiamScape,Thailand, Thailand

P-T06B-0465 **Rapid molecular detection of Isoniazid-Resistant Mycobacterium tuberculosis by recombinase polymerase amplification combined with nucleic acid lateral flow immunoassay**

Priyakorn Khwansirikul
Department of Microbiology, Faculty of Medicine, Khon Kaen University, Thailand

P-T06B-0480 **Challenges and Opportunities of AI in Medical Technology for Public Health Outcomes in Thailand: A Systematic Review**

Thanyaporn Direksunthorn
School of Medicine, Walailak University, Thailand

P-T06B-0513 **Opportunities and Challenges of Bataan Health Sectors Towards an IT-Enabled Services**

LYDIA PINILI
Health Information Management Department, Bataan Peninsula State University, Philippines

P-T06B-0618 **Evaluation of Line Probe Assay for Detecting Rifampicin- and Isoniazid-Resistant TB in Northeastern Thailand**

Jaluporn Chumpol
The Office of Disease Prevention and Control 7 Khon Kaen, Department of Disease Control, Ministry of Public Health, Thailand

P-T06B-0694 **BALIKLAKAS: A Technology-Driven Approach to Post-Injury Monitoring and Recovery**

MARIA LOLITA MASANGCAP
College of Computer Studies, Bataan Peninsula State University, Philippines

P-T06C-0482 **Analysis of the Current Status of Digital Health Curriculum Operations at Korean Universities**

Hakyung Jung

Industry-Academic Cooperation Foundation, Myongji College, Republic of Korea

7.Core of Public Health and Other Issues

Nov6, 13:00-17:30

7.1-Epidemiology

7.2-Statistics

7.3-Behavioral Science and Leadership

7.4-Mental Health and Environmental Stress

7.7-Public Health Education and Training

Committee: Mahalul Azam, (Prof. Dr., Department of Public Health, Faculty of Medicine, Universitas Negeri Semarang, Indonesia)
Suphaphorn Utsaha, (Asst.Prof., School of Health Science, Mae Fah Luang University, Thailand)
Anuwat Aunkham, (Dr., School of Health Science, Mae Fah Luang University, Thailand)

Room: Poster area

P-T07A-0347 **Factors associated with suicidal ideation and attempt among nursing students in two Muslim-majority country in Asia: A cross-sectional study**

Wen Ting Tong

P-T07A-0578 **Burden of Disease Studies in the Middle East and North Africa Region: A Systematic Review**

Simy Mathew

Institute of Public Health, College of Medicine and Health Sciences, United Arab Emirates University, Al Ain, United Arab Emirates

P-T07B-0403 **Comparing Changes in Perceived Environments and Their Impact on Physical Activity in Taiwan, 2011–2021**

I Wen Chou

Institute of Health Behaviors and Community Sciences, National Taiwan University, Taiwan

P-T07B-0405 **Ambient temperature and neonatal mortality and preterm births in Bangladesh: Identifying the critical windows of susceptibility**

Zin Wai Htay

National Institute for Environmental Studies, Japan

P-T07B-0497 **Height, Not Stunting Category, Predicts Later Cognitive and Income Outcomes: Evidence from the Indonesia Family Life Survey (1997–2014)**

Tiopan Sipahutar

Public Health Department, Universitas Respati Indonesia, Indonesia

P-T07B-0500 **Outbreak Of Diphtheria In Polewali Mandar Regency In 2025**

Muhammad Hamdan Sirih
Faculty of Public Health, Hasanuddin University, Indonesia

P-T07B-0541 **Breastfeeding Practices Beyond Six Months and Maternal Health Indicators among Postpartum Mothers in Malaysia**

SANGEETHA SUNDARARAJAN
Department of Allied Health Sciences, Faculty of Science, Universiti Tunku Abdul Rahman, Malaysia

P-T07B-0571 **Effectiveness of Mix-and-Match Vaccination in Prevention of SARS-CoV-2 Among Older Adults in Taiwan: A Population-based Emulation Test-Negative Control Study**

Huang Yu-Tung
National Center for Geriatrics and Welfare Research, National Health Research Institutes, Taiwan

P-T07B-0592 **Predictors of Happiness Among Nursing Students in Malaysia: A Cross-Sectional Study**

Wen Ting Tong
Department of Primary Care Medicine, Faculty of Medicine, Universiti Malaya, Malaysia

P-T07B-0627 **AI Literacy, Social Status, and Wellbeing: The Moderating Role of Health Literacy**

Duan Rung Chen
Institute of Health Behaviours and Community Sciences, National Taiwan University, Taiwan

P-T07C-0532 **Impact of COVID-19 restrictions on health and well-being in the United Arab Emirates**

Sami Shaban
College of Medicine and Health Sciences, POBox 15551, United Arab Emirates University, United Arab Emirates

P-T07D-0517 **Role of loneliness and personal social capital within the connection between family structure and depression, anxiety and co-morbidity among older adults: A moderated mediation analysis**

Wenji Qiu
Department of Epidemiology and Health Statistics, School of Public Health, Fujian Medical University, China

P-T07D-0560 **Factor affecting to mental health in Thai undergraduate student**

Puangtong Inchai
Research and Foreign Affairs Division, Faculty of Medicine, Burapha University, Thailand

P-T07D-0562 **The efficacy of support for preventing social isolation and loneliness among community-dwelling older adults using communication robots: A single-group pre- and post-test**

KANA KAZAWA
Department of Nursing, Faculty of Health Sciences, Okayama University, Japan

P-T07G-0422 **Physical Education Specialist Assignment and Illness-Related Absenteeism: A One-Year Observational Difference-in-Differences Study in Japanese Elementary Schools**

Takayuki Ueno
Research Team for Social Participation and Healthy Aging, Tokyo Metropolitan Institute for Geriatrics and Gerontology, Japan

P-T07G-0579 **Public Awareness and Attitudes Towards Aphasia and Its Rehabilitation in Malaysia**

Auni Syafiqah Roslan
Faculty of Health Sciences, National University of Malaysia, Kuala Lumpur, Malaysia

POSTER

Presentation Abstract

1.Disease Control & Health Education

O-T01A-0123

Associations between Dynapenic Obesity and Cognitive Disorder: Mediating Role of Physical Activity and Depressive Disorders

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Abstract

Background: This study aimed to explore the association between dynapenic obesity and cognitive disorder, and examine the dual mediating role of physical activity (PA) and depressive disorders in this association among elderly hypertension (HTN) patients.
Method: This is a nationally representative cross-sectional study from July 2023 to March 2024 among elderly HTN patients aged 65 years and older. Data were collected using a structured questionnaire that assessed socio-demographic characteristics, PA, mental health, dynapenic obesity, and cognitive disorder. Structural equation modeling was employed to explore the mediating role of PA and depressive disorders in the relationship between dynapenic obesity and cognitive disorder. Additionally, subgroup and sensitivity analyses were performed to validate the robustness of the findings.
Results: The study included 9,568 elderly HTN patients. The prevalence of cognitive disorder in this population was 15.67% (95% confidence interval [CI]: 14.94%-16.40%). After adjusting for potential confounders, a significant positive association was observed between dynapenic obesity and cognitive disorder (adjusted odds ratio [aOR]=1.320, 95%CI: 1.173-1.486). Mediation analysis indicated that PA and depressive disorders partially mediated the relationship between dynapenic obesity and cognitive disorder, accounting for 18.36% and 2.39% of the total effect. This association remained consistent across different age groups (all $P < 0.05$). Sensitivity analysis further confirmed the robustness of the main findings (aOR: 1.256, 95%CI: 1.146-1.378; aOR: 1.260, 95%CI: 1.149-1.383).
Conclusion: Dynapenic obesity is a significant risk factor for cognitive disorder, and PA and depressive disorders plays a crucial mediating role in this association among elderly HTN patients.

P-T01D-0131

Comparison of salient beliefs elicited based on varying levels of leisure time physical activity among university students

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Abstract

Objective: According to the Theory of Planned Behavior, it is strongly recommended that researchers identify beliefs about the target behavior that are salient within the target population before developing behavior change programs. These salient beliefs can be elicited by conducting elicitation study in a representative sample of the target population. Using the elicitation study, this study aimed to compare leisure-time physical activity beliefs between South Korean university students who are classified as active and those who are inactive based on whether they meet the recommended level of physical activity. The goal was to identify important differences and explore potential reasons behind these differences.

Methods: Two elicitation studies (semi-structured interview) were conducted to identify modal salient beliefs regarding leisure-time physical activity. Participants were categorized as active (34 university students engaging in at least 150 minutes of leisure-time physical activity per week) or inactive (37 university students engaging in less than 150 minutes of leisure-time physical activity per week). A total of 34 active students and 37 inactive students were randomly recruited to participate in semi-structured face-to-face interviews. Beliefs mentioned by over 30% of participants were considered modal salient beliefs.

Results: Approximately 35% of the participants were female, and the mean age was 22.09 years. The analysis revealed differences in the beliefs of active and inactive students. These differences indicate that the belief structures regarding leisure-time physical activity participation are not homogeneous between the two groups. One control belief that emerged exclusively among active students was 'having an exercise partner or a sport club makes it easy', and four behavioral beliefs were also identified exclusively among active participants (i.e., 'enhances appearance', 'improves mental health', 'improves physical health', and 'causes injury').

Conclusions: The findings suggest that active and inactive students hold distinct belief structures regarding leisure-time physical activity. Future elicitation studies should explicitly compare these groups to better identify factors that could promote PA participation among inactive individuals.

P-T01B-0160

Predictive Values of ICD-10-CM Diagnosis Codes for Identifying COVID-19 Cases Using Administrative Claims Data in Taiwan

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Abstract

Background: Accurate identification of COVID-19 cases is essential for real-world studies related to COVID-19. Although ICD-10-CM codes are widely used in administrative claims data, their validity relative to laboratory-confirmed infections in Taiwan has not been fully established. This study aimed to evaluate the predictive accuracy of ICD-10-CM code U07.1 for identifying COVID-19 cases in Taiwan.
Methods: We conducted a cross-sectional study linking National Health Insurance claims data with SARS-CoV-2 RT-PCR results from the Chang Gung Research Database, Taiwan's largest multi-institutional electronic medical records database. We included patient encounters in 2022 where RT-PCR testing was performed during outpatient, emergency, or inpatient visits. Patients without test results within 7 days following outpatient/emergency visits or during hospitalization were excluded. We identified COVID-19 cases using ICD-10-CM code U07.1, confirming RT-PCR positivity as the reference standard. We calculated positive predictive value (PPV) and negative predictive value (NPV) overall and stratified the results by clinical setting, period, gender, and age group.
Results: Among 127,300 encounters, U07.1 yielded a PPV of 95.5% (95% CI, 95.0%–95.9%) and an NPV of 76.7% (95% CI, 76.5%–77.0%). PPV ranged from 89.7% in the inpatient setting to 99.3% in the emergency setting, while NPV ranged from 41.3% in the outpatient setting to 85.7% in the emergency setting. Both PPV and NPV were higher in July–December (96.3% and 86.0%) than January–June (94.2% and 72.9%). The PPVs exceeded 95.1% in both sexes, while the NPV was higher in males compared to females (78.8% vs. 74.4%). PPV was highest in individuals <20 years (98.4%) and lowest in those 20–40 years (93.2%); NPV ranged from 63.5% (20–40 years) to 87.4% (≧80 years).
Conclusion: ICD-10-CM code U07.1 demonstrates high positive predictive accuracy and moderate negative predictive accuracy for identifying COVID-19 cases in Taiwan, supporting its use in claims-based research.
Keywords: COVID-19, ICD-10-CM, accuracy, validation

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T01D-0184

Effect of Promoting Health Literacy Programs on Leptospirosis Preventive Behaviors Among People in Wang Maprang Nuea Subdistrict, Wang Wiset District,Trang Province

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Abstract

The landscape of Wangwiset District in Trang Province had the highest incidence rate of leptospirosis in the province (with an incidence rate of 18.37 per 100,000 population). which course of increases exposure to pathogens and the likelihood of contracting leptospirosis.
The objective was to evaluate the effectiveness of a health literacy promotion program on leptospirosis prevention behaviors.
This study employed a quasi-experimental design with two groups, pre-test and post-test. The sample consisted of 52 residents divided into two groups of 26. Villages were selected by random draw to determine experimental and comparison groups. The experimental group received the health literacy promotion program, which included:1. Readiness to learn, 2. Awareness of the severity of the disease, 3.The "4 Reductions" strategy: reducing rats, reducing exposure, reducing mortality, and reducing outbreaks, 4.Developing skills to access information, 5.Community follow-up, and 6. Knowledge exchange and activity summary. for health literacy and preventive behavior sections were 0.92 and 0.84, respectively. Data were analyzed using descriptive statistics, Paired t-test, Independent t-test, and Mann-Whitney U test.
Results showed that the experimental group significantly improved in health literacy (Mean difference = 13.88, 95% CI: 8.32–19.24) and preventive behaviors (Mean difference = 9.23, 95% CI: 7.64–10.82). Post-intervention comparisons between the experimental and comparison groups indicated that the experimental group had significantly higher health literacy scores (Mean difference = 6.77, 95% CI: 1.17–12.37) and preventive behavior scores (Mean difference = 2.42, 95% CI: 0.55–4.40).
Therefore, health professionals should apply the program to promote health literacy towards leptospirosis preventive behavior in the area of responsibility of the hospital and nearby to promote and prevent the occurrence of leptospirosis.
Keywords: Health Promotion, Health literacy, Self-protection, Leptospirosis

P-T01A-0194

Developing a Prediction Model for 30-Day Mortality Among Older Riders Involved in Motor Vehicle Crashes in Taiwan

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Abstract

Background: There has been limited research on the mortality risk of older motorcycle riders after motor vehicle crashes (MVCs). This study aims to develop and compared two prediction models for 30-day mortality risk among older rider victims. One model was based on all victims (population-based), and the other one was based on only the victims visiting emergency room (hospital-based).
Method: We conducted a cohort study using Taiwan's Police-Reported Traffic Accident Registry (2019-2021), Taiwan Death Registry, and National Health Insurance database (2016-2021). Two cohorts were established: the population-based sample of 64,986 older two-wheeler riders involved in crashes (784 deaths within 30 days) and the hospital-based sample of 54,968 riders admitted on the same day or one day after MVCs (430 deaths). The primary outcome was 30-day all-cause mortality. Predictive variables included injury severity, demographics, comorbidities, behavior, and environmental factors. Logistic regression models assessed predictors, with model performance evaluated using the area under the receiver operating characteristic curve (AUC).
Results: The results show that, in the population-based sample, crashes occurring during early morning hours, side-impact collisions, and chest injuries were significant predictors of 30-day mortality. However, these factors were not significant in the hospital-based sample, indicating that differences in data capture. Both population and hospital-based models showed acceptable predictive ability, with AUCs of 0.76 and 0.86, respectively. A prehospital screening tool based on population-based data demonstrated effective early risk estimation at the crash scene.
Conclusion: After comparing the prediction models based on population- and hospital-based samples, our study found that the hospital-based model performed better, primarily due to the inclusion of the Injury Severity Score (ISS), a strong predictor of mortality. Nevertheless, the population-based model still demonstrated practical value by supporting timely early warning and appropriate interventions, enhancing trauma care for older riders, ultimately improving post-crash outcomes in the aging population.

P-T01A-0207

Characteristic and Disease Burden Post-COVID Syndrome in a Malaysian Public Hospital

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Abstract

Background: Post-COVID syndrome (PCS) is a condition where patients continue to experience symptoms for more than 12 weeks after the onset of COVID-19 infection, without an alternative medical explanation. This study aimed to identify the characteristics and disease burden of PCS patients in Malaysia.

Method: A cross-sectional study was conducted at a public hospital in Malaysia, which serves as a referral centre for COVID-19 cases. Patients with persistent symptoms who had been followed up between 1st August 2023 and 31st December 2023 were invited to participate. A validated structured questionnaire was used to collect data on sociodemographic, socioeconomic factors and PCS clinical presentations.

Results: A total of 220 patients met the inclusion criteria. An estimated 63.6% of COVID-19 survivors experienced PCS. Among the PCS patients, 129 (58.6%) were male, a mean age of 53 years (SD = 12.87), and 142 (64.5%) were Malays. Most were married (85.9%) and had a household income between RM2,209 and RM4,849 (40.9%). A significant portion had a history of ICU admission (30.5%) and comorbidities (75.0%), including hypertension (47.4%), diabetes mellitus (32.4%), and lung diseases (8.2%). The majority were non-smokers (73.2%).

Conclusions: This study found that approximately two-thirds of COVID-19 patients developed PCS. The characteristics of PCS patient was middle-aged, an ex-smoker, and had underlying conditions such as hypertension and diabetes. These findings highlight the long-term impact of COVID-19 and emphasize the need for continuous follow-up and comprehensive management to improve the quality of life of PCS patients. The identified characteristics provide a useful baseline for designing targeted and effective intervention programs.

Keywords: Post-COVID Syndrome, Malaysian Public Hospital, disease burden

P-T01A-0214

Global Mapping of Early Diagnostic Tools for Alzheimer's Disease: Integrating Bibliometric Analysis, SWOT Strategy, and a Novel Relative Effectiveness Index

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Abstract

Background: Alzheimer's disease (AD) remains a leading cause of dementia worldwide, yet early detection strategies are diverse, inconsistently applied, and often context-dependent. There is a need to map and evaluate these approaches to identify evidence gaps and guide implementation in diverse populations and health system settings.

Objective: To systematically map early diagnostic modalities for AD, assess their population and comorbidity coverage, evaluate their relative effectiveness, and explore strategic feasibility using a bibliometric-SWOT framework.

Methods: We conducted a comprehensive bibliometric analysis of publications from 2015 to 2025 on early diagnostic and screening modalities for Alzheimer's disease, retrieved from the Scopus database. Included studies were categorized by primary modality (e.g., biomarkers, neuroimaging, scoring, functional tests), supporting techniques (e.g., machine learning, blood-based, anthropometric), target population age group, and comorbid conditions. A novel Relative Effectiveness Index (REI) and adjusted REI were developed to synthesize the strength and consistency of evidence across 108 unique modality–population–comorbidity combinations. A co-occurrence network of author keywords was analyzed using VOSviewer, producing seven thematic clusters that reflected major research foci. Additionally, chord diagrams were used to visualize methodological pairings and disease targeting, while a SWOT analysis contextualized early detection strategies across high-income (HIC) and low- and middle-income country (LMIC) settings.

Results: A total of 1,451 studies were analyzed. Chord diagrams revealed that biomarkers and neuroimaging were predominantly applied in elderly populations (n=909 and n=882, respectively) and in comorbidities such as Parkinson's disease (n=22 and 17), diabetes (n=21 and 17), and stroke (n=18 and 15). Scoring tools were most common in studies involving depression (n=20) and cardiovascular disease (n=16). Functional tests, though least utilized overall, showed niche applications in Parkinson's disease (n=6) and epilepsy (n=4). Supporting modalities such as blood-based techniques and machine learning were frequently paired with biomarkers (n=1608 and 302, respectively) and neuroimaging (n=764 and 783), reflecting a shift toward non-invasive and precision diagnostics. Thematic cluster analysis further supported these trends, revealing research concentrations on neurodegenerative mechanisms, AI-based neuroimaging, and blood biomarker discovery. Adjusted-REI showed that

neuroimaging in elderly populations was the highest (1.03), while machine learning–integrated diagnostics consistently outperformed others across modalities (adjusted REI > 1.1). Conversely, combinations involving younger populations, anthropometric methods, or certain comorbidities (e.g., cardiovascular disease) yielded zero adjusted REI, indicating major evidence gaps. The comprehensive SWOT analysis revealed that while scoring tools remain accessible and interpretable, biomarker and neuroimaging-based strategies provide greater diagnostic precision but face barriers in cost and implementation, particularly in LMICs.

Conclusion: This is the first integrative evidence map of early detection tools for Alzheimer's disease, highlighting both well-supported strategies (e.g., neuroimaging in elderly, ML-integrated diagnostics) and critical gaps (e.g., younger populations, multimorbid cases). The novel Relative Effectiveness Index and SWOT framework enable prioritization of feasible, high-impact tools for diverse health systems, supporting more equitable and evidence-based AD screening initiatives.

Keywords: Alzheimer's disease; bibliometric analysis; early detection; neurodegenerative disorder; Relative Effectiveness Index

P-T01C-0294

Comparing vaccination, virus infection risk, and infection-related death risk during the COVID-19 pandemic between individuals with and without disabilities

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Abstract

Background: Previous studies showed people with disabilities had a higher risk of severe illness or death than the general population. It has been recommended to prioritize vaccination for people with disabilities. The objectives of this study were to understand the vaccination status and virus infection risks in people with or without disabilities during the COVID-19 pandemic and to compare the risk of developing severe symptoms and the risk of death within 90 days after virus infection between these two groups.

Methods: This was a retrospective matched-cohort study, using the National Health Insurance Research Database and "COVID-19 Vaccination, Diagnosis, and Death File" as data sources. The study population consists of individuals with disabilities and those without disabilities. A total of 2,453,402 participants were selected by propensity score matching with a ratio of 1:1. We used the Cox proportional hazard model with the competing risk approach to examine the vaccination status and logistic regression analysis with generalized estimating equations to explore the risk of COVID-19 infection. For those infected, we assess the risk of developing severe symptoms and estimate the risk of death within 90 days after infection between these two groups.

Results: After controlling for relevant variables, compared to people without disabilities, the vaccination rate of people with disabilities was 0.88 times (95%CI: 0.87-0.89) and the odds ratio for the risk of COVID-19 virus infection was 1.14 times (95%CI: 1.13-1.15). For those infected, the odds ratio for the risk of developing severe symptoms in people with disabilities was 2.78 times (95%CI: 2.66-2.90), and the risk of death within 90 days after infection had a hazard ratio of 1.92 (95% CI: 1.84-2.00) compared to those without disabilities.

Conclusion: Comparing to people without disabilities, people with disabilities had a lower vaccination rate for COVID-19 and had a higher risk of COVID-19 virus infection, severe conditions, and mortality.

Keywords: Disabilities; COVID-19; Vaccination; COVID-19 virus infection; Infection-related mortality.

P-T01D-0413

Association between fruit and vegetable intake, dietary supplement use, and health literacy in Koreans

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Abstract

Background: Many people consume dietary supplements (DS) despite the health benefits of fruits and vegetables (FV) and limited evidence of positive impacts of DS on health. Health literacy (HL) may influence dietary choices, with higher HL potentially leading to better FV intake over DS use. This study aimed to investigate the relationship between HL, FV intake, and DS use.
Methods: We analyzed data from the 2023 Korea National Health and Nutrition Examination Survey, including 5,120 adults. FV intake was assessed using 24-hour dietary recall. DS use was defined as taking DS for more than two weeks in the past year. Participants were categorized into four FV-DS groups based on whether they met the FV intake recommendation and used DS: FV&DS (meeting FV intake recommendation and using DS); FV-only (only meeting FV intake recommendation); DS-only (only using DS); and None (neither meeting FV intake recommendation nor using DS). HL was measured using the Health Literacy Index for the Community and categorized as low, moderate, or high. Multinomial logistic regression analyses were conducted to examine the association between HL and the four FV-DS groups.
Results: The proportion of meeting FV intake was not significantly different by HL level. The proportion of DS users was highest in the high HL group (72.8%) and lowest in the low HL group (62.5%) ($p<0.001$). Multinomial logistic regression showed that individuals with moderate or high HL had significantly higher odds of belonging to the FV+DS or DS-only groups compared to the None group. However, HL was not significantly associated with being in the FV-only group.
Conclusion: Contrary to our hypothesis, individuals with higher HL tended to more rely on DS over FV. This suggests a need for deliberate efforts to develop strategies that effectively communicate accurate information about FV intake and DS.

P-T01D-0463

Association between online FOMO and Substance Use Behaviors among Taiwanese Adolescents

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Abstract

Background: Contemporary adolescents grow up in a highly internet-dependent digital era, where online platforms play a central role in social interaction and self-presentation. Studies suggested Fear of Missing Out (FOMO) during online activities may lead adolescents to engage in substance use behaviors due to concerns about missing peer activities or gaining peer attention. However, empirical evidence on the associations between online FOMO and substance use behaviors among Taiwanese youth remains limited.
Methods: Using Wave 1 data from a national representative survey (Taiwan i-Generation Panel Study, TIGPS) , seventh graders across Taiwan were extracted for this study (n=4,684). Self-reported online FOMO scores and past six-month substance use behaviors, including smoking, e-cigarette use, alcohol consumption, and betel nut chewing were considered in analyses. Logistic regression models were applied to examine the association between online FOMO and substance use behaviors, adjusting for sociodemographics and family factors.
Results: After controlling for gender, school performance, and family factors, each one-unit increase in FOMO was associated with higher odds of smoking (OR = 1.09, $p<.05$), e-cigarette use (OR = 1.11, $p<.01$), and alcohol consumption (OR = 1.14, $p<.001$) in the past six months, while no significant association was observed for betel nut chewing.
Conclusions: This study provides empirical evidence on the association between online FOMO and substance use among Taiwanese adolescents. With online trends shifting rapidly and stochastically nowadays, offering a foundation for contemporary digital health education and cultivating self-worthiness could curb FOMO and thus in turn alleviate risk behaviors such as substance use among young teens. keywords: FOMO, substance use behaviors

P-T01C-0469

Epidemiological patterns of communicable diseases among basic education students in Balanga City, Bataan, Philippines during the pre- and post-pandemic periods

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Abstract

In the Philippines, communicable diseases is a significant public health risk in elementary and secondary schools due to decentralized health systems, close proximity and varied hygiene practices. Its patterns among school-aged children were altered as conventional disease surveillance was disrupted by COVID-19 pandemic and new health protocols emerged. This retrospective descriptive research seeks to identify the epidemiological trends of communicable diseases among basic education students in the Department of Education (DepEd) Schools Division of Balanga City, Bataan, Philippines with the aim targeting public health interventions. Data disease prevalence during the pre-pandemic period (School Year 2019–2020) and the post-pandemic years (School Years 2023–2025) from DepEd Division, City Health Office (CHO) and school clinics were compared. Also, data on disease frequency, geographic distribution, and demographic breakdown were collected for key diseases. Descriptive statistics and comparative analysis were conducted. It was revealed that during the post-pandemic period, prevalence of typhoid fever, severe acute respiratory infections (SARI), dengue, and pertussis generally declined due to new school-based health protocols and heightened awareness among students. However, there was a resurgence and reported slower decline of measles and rotavirus due to disruptions in routine immunization. In the city of Balanga, the communities of Puerto Rivas Ibaba, Itaas, and Lote were found to be consistent hotspots for communicable diseases. For dengue, SARI, typhoid fever, and pertussis, males have a higher percentage of cases while females for chickenpox and measles. Children aged 1–10 years were the most affected group due to lower immunity and high exposure in school settings. It is recommended that targeted school health programs be developed while strengthening vaccination catch-up campaigns, hygiene promotion and barangay-level surveillance.

Keywords: Balanga City, basic education, communicable diseases, epidemiological patterns, pre- and post-pandemic

P-T01C-0470

Effectiveness of BNT162b2 Vaccine Against Emergency Department Visits and Moderate-to-Severe COVID-19 Among Adolescents in Taiwan

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Abstract

Background: BNT162b2 was the first COVID-19 vaccine authorized for adolescents in Taiwan in September 2021, yet real-world evidence among adolescents remains limited. This study evaluated the effectiveness of two doses of BNT162b2 in preventing COVID-19–related emergency department (ED) visits and moderate-to-severe illness among adolescents.

Methods: In this population-based cohort, three national databases were linked: the National Immunization Information System, the National Infectious Disease Reporting System, and National Health Insurance claims data. Adolescents aged 12–17 years who completed the two-dose primary series of BNT162b2 between September 22, 2021, and February 28, 2022, were classified as vaccinated; those with an incomplete series were unvaccinated. Outcomes were assessed for 180 days, from days 14–194 after the second dose in the vaccinated group and from January 17 to July 15, 2022 in the unvaccinated group. Subjects who died or had SARS-CoV-2 infection before follow-up were excluded. Follow-up stopped 14 days after any change in vaccination status: in the vaccinated group after receiving a third dose, and in the unvaccinated group after receiving a first or second dose. Propensity score weighting balanced baseline characteristics, and vaccine effectiveness (VE) with 95% confidence intervals (CIs) for COVID-19–related ED visits and moderate-to-severe illness was estimated using logistic regression. Subgroup analyses were conducted by sex, Pediatric Comorbidity Index (PCI), and catastrophic illness.

Results: A total of 963,413 adolescents were included (814,222 vaccinated; 149,191 unvaccinated; 52.0% male; mean age, 15.1 years). COVID-19–related ED visits occurred in 0.3% of the vaccinated and 0.6% of the unvaccinated adolescents, corresponding to a VE of 50.4% (95% CI, 46.9%–53.7%). Moderate-to-severe illness occurred in 0.04% and 0.2%, respectively, yielding a VE of 72.5% (95% CI, 66.8%–77.2%). VE was higher in males, those with higher PCI scores, and those with catastrophic illness.

Conclusion: Two doses of BNT162b2 significantly reduced COVID-19–related ED visits and moderate-to-severe illness among adolescents, supporting its protective role, particularly in high-risk groups.

Keywords: BNT162b2, vaccine effectiveness, adolescents

P-T01D-0596

Predictors of Happiness Among Nursing Students in Malaysia: A Cross-Sectional Study

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Abstract

Background: Happiness matters, especially for those preparing to care for others. However, nursing students often face intense academic workloads, emotional stress, and demanding clinical training, which can compromise their well-being. This study examined psychological and demographic predictors of happiness among nursing students in Malaysia.

Methods: A cross-sectional survey using universal sampling was conducted from October to November 2024, among native nursing students at two public institutions in Kuala Lumpur, Malaysia. Data was collected via an online questionnaire including socio-demographic items (age, sex, ethnicity, religion, sexual identity, marital status, family background, current residence, level of study, perceived academic performance, health status, perceived chronic conditions, and history of suicide in family), the Orientations to Happiness questionnaire, the Brief COPE Scale, and the Perceptions of Academic Stress Scale. Bivariate analyses (independent sample T test, ANOVA, and Pearson correlation test) were conducted to examine factors associated with total happiness score. Factors that were found to be significant were later included in the subsequent multiple linear regression analysis to determine the predictors of happiness.

Results: Of the 387 students invited, 316 responded (response rate: 81.7%). After excluding seven international students, 309 were included in the final analysis. Most participants were aged 18–24, heterosexual, single, from well-off families, reported good academic performance, good perceived health, no chronic conditions, and no family suicide history. Bivariate analyses identified significant associations between happiness scores and sex, level of study, perceived academic performance, perceived academic stress, and coping skills. Multiple linear regression revealed that perceived academic performance and problem-focused coping were significant predictors of higher happiness scores.

Conclusion: Academic confidence and the use of problem-focused coping strategies are key drivers of happiness among nursing students' well-being in Malaysia. Targeted interventions to strengthen these factors may enhance student well-being in nursing education.

Keywords: happiness, nursing students, coping strategies, Malaysia, mental health

P-T01B-0634

The Role of Treatment Observers (PMO) and Health Worker Support on the Success of Pulmonary Tuberculosis Treatment

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Abstract

Tuberculosis (TB) is a chronic infectious disease caused by *Mycobacterium tuberculosis* and remains a global public health problem. One of the TB control strategies involves the participation of Treatment Supervisors (Pengawas Minum Obat - PMO) to ensure patient adherence. This study aims to evaluate the role of PMOs in the treatment success of pulmonary tuberculosis patients in the working area of the Mattiro Bulu Community Health Center (Puskesmas), Pinrang Regency.

This quantitative study used a survey design with a total sample of 151 respondents. Data were collected through questionnaires and analyzed using the chi-square test and multiple logistic regression. Ethical approval was obtained from the relevant institution and all respondents provided informed consent.

The results showed that the role of the PMO (p=0.000), patient actions (p=0.000), and health worker support (p=0.049) were significantly associated with the success of pulmonary tuberculosis treatment. Multiple logistic regression analysis identified that the role of the PMO (Exp.B=0.014) and patient actions (Exp.B=0.149) were the variables most influential on treatment success.

This study confirms the importance of optimizing the role of PMOs and health worker support in pulmonary TB control programs. The results provide practical implications for improving the quality of TB eradication program implementation in line with the Sustainable Development Goals (SDGs) targets.

P-T01D-0669

Community Salt Preferences in and Their Implications for Household Availability and Quality of Iodized Salt

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Abstract

Background: Iodized salt consumption plays a vital role in preventing Iodine Deficiency Disorders (IDD). Iodine is an essential micronutrient required for thyroid hormone synthesis, which regulates metabolism, growth, and brain development. Inadequate intake may lead to IDD, manifesting as goiter, thyroid dysfunction, impaired cognitive performance, and stunted growth. In Indonesia, despite the government's Universal Salt Iodization (USI) program, challenges remain in its implementation. Household salt preferences are often driven by knowledge, price, labeling, and availability rather than nutritional content. This creates risks of insufficient iodine intake, particularly in salt-producing areas where bulk, non-fortified salt is cheaper and more accessible.

Objective: To analyze community preferences in salt selection and their implications for the availability and quality of iodized salt at the household level.

Methods: This cross-sectional study was conducted in Bontorannu Village, Bangkala Subdistrict, Jeneponto Regency, one of Indonesia's major salt-producing areas. A total of 93 households were randomly selected from 1,367 households. Variables observed included knowledge, family income, price perception, labeling, and accessibility of iodized salt. In addition, iodine content was measured using the Yodina Test to assess the quality of household salt.

Results: The majority of respondents were 31–60 years old (72%), high school graduates (37%), and housewives (89%). Sixty-three percent demonstrated poor knowledge, 71% expressed negative attitudes toward iodized salt, 71% perceived its price as high, and 59% reported difficulty accessing it. Only 28% of households had iodized salt available. Significant associations were found between knowledge, attitude, price perception, accessibility, and label-checking behavior with the availability of iodized salt ($p < 0.05$).

Conclusion: Community preferences in salt selection are significantly associated with the availability and quality of iodized salt at the household level. Strengthening education and improving affordable access to iodized salt are essential to prevent IDD and its consequences.

Keywords: Iodized Salt, Iodine Deficiency Disorders, Fortification, Universal Salt Iodization

P-T01A-0672

Dynamic Pulse Pressure Trajectories Within 24 Hours After Endovascular Treatment and Outcome in Acute Large Vessel Occlusion Stroke

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Abstract

Background: Endovascular treatment serves as the standard therapy for acute ischemic stroke with large vessel occlusion. However, significant heterogeneity exists in patient outcomes. Pulse pressure reflects arterial stiffness and cerebral perfusion stability. The impact of its dynamic changes on the prognosis remains unclear. Our study employed Group-Based Trajectory Modeling to identify patterns of pulse pressure trajectories, aiming to provide a more precise basis for prognostic prediction.
Methods: This retrospective cohort study included patients with anterior circulation ischemic stroke with large vessel occlusion. Blood pressure data were collected per hour within 24 hours after Endovascular treatment. Pulse pressure trajectories were identified by the group-based trajectory model. The functional outcome was measured on the modified Rankin scale score at 90 days.
Results: A total of 298 patients were included. The group-based trajectory model identified three trajectories: Low-stable (44.6%), Moderate-increasing (38.3%), and High-increasing (17.1%). In unadjusted analyses, compared to the moderate-increasing group, subjects in the high-increasing group had a significantly increased risk of an unfavorable outcome (odds ratio, 2.15 [95% confidence interval, 1.19-3.88]). After adjusting for baseline characteristics and treatment-related variables, the difference between the moderate-increasing group and the high-increasing group was not significant (adjusted odds ratio, 1.14[95% confidence interval, 0.59-2.20]), and the low-stable group had a significantly worse functional outcome compared with moderate-increasing group (adjusted odds ratio, 1.68 [95% confidence interval, 1.03-2.73]).
Conclusion: Ischemic stroke patients follow distinct pulse pressure trajectories within 24 hours after endovascular thrombectomy. Sustained moderate pulse pressure is associated with a favorable outcome.
Keywords: pulse pressure; stroke; thrombectomy; GBTM

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T01A-0712

Father Involvement as a Breastfeeding Father in Preventing Postpartum Blues in the Indigenous Community of Tana Toa Village, Kajang District, Bulukumba Regency, Indonesia

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Background: Postpartum blues is a mild emotional disturbance that often occurs among mothers after childbirth, particularly within the first week. If left unrecognized and untreated, it can develop into more serious psychological problems. Support from partners, especially the father's role as a breastfeeding father, plays a crucial part in maternal emotional well-being. In traditional communities such as the Ammatoa Kajang, the father's role is shaped by cultural values and a social system that distinctly separates male and female responsibilities.
Objective: This study aimed to explore the meaning, barriers, and potential of fathers' roles in preventing postpartum blues among breastfeeding mothers within the Ammatoa culture in Tana Toa Village, Kajang District, Bulukumba Regency.
Methods: A qualitative phenomenological approach was employed, analyzed using Colaizzi's method. Informants included traditional leaders, healthcare workers, and husbands of postpartum mothers, selected through purposive sampling. Data were collected through in-depth interviews and focus group discussions, then analyzed thematically.
Results: Five main themes emerged: (1) the meaning of the father's role after childbirth, (2) understanding of postpartum blues, (3) husband-wife communication after childbirth, (4) barriers faced by fathers in providing support, and (5) expectations of the father's role. Findings revealed that, although cultural norms strictly define gender roles, there is space to redefine the father's role as an emotional and spiritual companion during the postpartum period. This role aligns with the values of kamase-mase (living modestly), kalumannyang (humility), and amaradekang (maintaining harmony and balance with nature), while still upholding the teachings of pasang ri Kajang.
Conclusion: The role of fathers as breastfeeding fathers in the Ammatoa indigenous community can be strengthened through culturally grounded and progressive approaches. Community-based education rooted in local wisdom is essential to empower fathers as protectors, caregivers, and emotional stabilizers for their wives, thereby helping to prevent postpartum blues.

Keywords: postpartum blues, breastfeeding father, paternal role, Ammatoa culture, husband–wife communication, local wisdom.

P-T01A-0728

The Relationship Between Self-Efficacy and Self-Care Management in Hypertensive Patients Participating in the PROLANIS at Nur Asy Syifaa Clinic, Makassar City, in 2025

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Abstract

Background: Hypertension is a chronic disease that requires long-term management through effective self-care. A key psychological factor that significantly contributes to the success of self-care management is self-efficacy, which is defined as an individual's belief in their ability to perform the behaviors necessary to manage their health condition. Proper self-care management is critical to prevent complications associated with hypertension.**Objective**: This study aimed to examine the relationship between self-efficacy and self-care management among hypertensive patients at Klinik Nur Asy Syifaa, Makassar City.**Methods**: A quantitative approach with a cross-sectional design was employed in this study. A sample of 106 respondents was selected using simple random sampling. Data were collected through questionnaires and analyzed using the Spearman's rho test.**Results**: The analysis showed that the majority of respondents had a high level of self-efficacy (93.4%) and good self-care management (75.5%). A significant relationship was found between self-efficacy and self-care management, with a p-value of 0.000 ($p < 0.05$). Further analysis of the self-efficacy dimensions (magnitude, generality, and strength) and the self-care management dimensions (self-integration, self-regulation, interaction, monitoring, and adherence) indicated a generally positive association, although not all relationships reached statistical significance.**Conclusion**: There is a significant relationship between self-efficacy and self-care management among hypertensive patients. Higher self-efficacy is associated with better self-care management behavior in controlling hypertension.

P-T01A-0735

Emerging severe fever with thrombocytopenia syndrome (SFTS) in Thailand: a One Health scoping review

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Abstract

Severe fever with thrombocytopenia syndrome (SFTS) is a recently emerged, potentially fatal vector-borne disease in Thailand, first reported in 2019. It is caused by Bandavirus with severe clinical manifestations, including acute febrile illness (AFI), thrombocytopenia, leukopenia, and multi-organ dysfunction. Understanding the epidemiology of SFTS within a One Health framework, encompassing human-animal-environment interactions, is essential; however, evidence in Thailand remains fragmented. This scoping review aimed to synthesize available evidence on SFTS epidemiology in Thailand from a One Health perspective. A systematic search of PubMed, Scopus, and Google Scholar for studies published since 2019 identified seven eligible articles reporting human, animal, or vector SFTS prevalence or genotyping. In Thailand, human cases were predominantly reported in Bangkok, surrounding provinces, and Northeastern regions. Among patients with AFI, 1.31% (n=41/3,137) tested positive for SFTS virus (SFTSV), while serosurveillance of anti-SFTSV IgG in healthy individuals and patients with AFI was 0.53% (5/940) and 2.3% (61/2,647), respectively. Clinical presentation commonly included AFI with platelet count <110,000 cells/μL and neutropenia. Cases occurred year-round, without clear seasonality. Domesticated animals, including dogs (23.81%, n=110/462) and cats (100.0%, n=3/3) were IgG positive indicating prior exposure, though only one dog from Chonburi province tested positive for SFTSV RNA. Rodents (genus Rattus, Mus, and Bandicota) showed positivity to SFTSV (1.08%, n=11/1,019), suggesting potential reservoir roles. Rhipicephalus sanguineus ticks were negative (n=0/443), while SFTSV-positive chiggers (1.4%, n=8/573) were reported, mainly genus Gahrliepia. Some of SFTSV-positive chiggers were detected on virus-free rodents, s indicating limited vector-borne blood transmission. Genotypic analysis revealed human infections with SFTSV genotypes B and D, whereas genotypes D and J3 were identified in rodents and a dog in Chonburi, respectively, indicating potential zoonotic linkage. This review highlights fragmented epidemiological data in Thailand, emphasizing the need for integrated human-animal-vector surveillance to guide risk assessment and One Health interventions.

P-T02A-0179

Association between Percutaneous Endoscopic Gastrostomy versus Nasogastric Tube Feeding and All-cause Mortality in Patients with Dementia: A U.S. Retrospective Cohort Study

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Abstract

Background: For dementia patients requiring enteral nutrition, the comparative impact of percutaneous endoscopic gastrostomy (PEG) versus nasogastric (NG) tubes on mortality remains uncertain. This study aimed to compare all-cause mortality between these two feeding methods in a real-world cohort.

Method: We conducted a retrospective cohort study using data from the TriNetX US Collaborative Network. We identified patients with dementia who received their first PEG or NG tube between 2005 and 2023. After excluding those with a prior history of aspiration pneumonitis, the final cohorts comprised 943 patients receiving PEG and 1,865 receiving an NG tube. Patients were followed from their index event until death, for up to 10 years, or until the study's administrative end date of July 2025. We used a multivariate Cox model to compare all-cause mortality risk, adjusting for baseline demographic data, lifestyle factors, socioeconomic circumstances, comorbidities, and medication use.

Results: After multivariate adjustment, the results showed no statistically significant difference in mortality risk between the PEG and NG tube groups (HR = 1.02; 95% CI = 0.90–1.15; p=0.754). Significant predictors of increased mortality included older age (HR = 1.03; 95% CI = 1.03–1.04), male sex (HR = 1.21; 95% CI = 1.08–1.36), type 2 diabetes mellitus (HR = 1.15; 95% CI = 1.02–1.30), chronic kidney disease (HR = 1.14; 95% CI = 1.01–1.28), and chronic obstructive pulmonary disease (HR = 1.24; 95% CI = 1.09–1.42).

Conclusion: In this cohort of patients with dementia, the choice of PEG versus NG tube for enteral feeding did not significantly influence all-cause mortality over an up to 10-year follow-up period. Feeding tube decisions should therefore consider other factors such as patient comfort, caregiver burden, and specific clinical contraindications. Patient-intrinsic factors like age and comorbidities remain the strongest predictors of mortality.

Keywords: Dementia, Percutaneous Endoscopic Gastrostomy, Nasogastric Tube, all-cause mortality\

P-T02A-0181

Racial Disparity in Mortality among Patients with Vitamin D Deficiency: A U.S. Retrospective Cohort Study

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Abstract

Background: Vitamin D deficiency is a prevalent global health issue associated with increased mortality risk. While racial differences in vitamin D metabolism and levels are known, their impact on long-term mortality remains unclear. This study investigated racial disparities in mortality among White, Black, and Asian patients with vitamin D deficiency.

Method: In this retrospective cohort study using the TriNetX network, we identified patients with vitamin D deficiency (serum 25(OH)D: 20–30 ng/mL) diagnosed between 2000–2023, stratified by race: White (n=3,313,222), Black (n=474,874), and Asian (n=127,143). Patients were followed for up to 10 years or until July 2025. A multivariate Cox proportional hazards model was utilized to assess mortality risk, using the Asian cohort as the reference group. The model was adjusted for a comprehensive set of baseline covariates including: demographic data, lifestyle and socioeconomic factors, comorbidities, and medication use.

Results: After adjusting for baseline covariates, both White and Black patients had a significantly higher risk of long-term mortality compared to Asian patients. The adjusted hazard ratio (HR) for White patients was 1.27 (95% CI, 1.25–1.28; $p<0.001$), and for Black patients was 1.38 (1.31–1.45; $p<0.001$). Other major predictors doubling the mortality risk included cirrhosis of liver (3.01; 2.72–2.97), neoplasms (2.45; 2.41–2.49), and chronic kidney disease (2.24; 2.19–2.29).

Conclusion: In a large U.S. cohort of patients with vitamin D deficiency, significant racial disparities in 10-year mortality exist. White and Black individuals have a substantially higher risk of death compared to their Asian counterparts, even after accounting for various potential confounders. These findings highlight the need for further research into the underlying mechanisms driving these disparities and may inform the development of race-specific public health strategies and clinical guidelines related to vitamin D management.

Keywords: Vitamin D Deficiency, Racial Disparities, Mortality.

P-T02B-0183

Promoting Reproductive Health and Safeguarding Maternal and Infant Health: Taipei City's Healthy Fertility Policy

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Abstract

In Taipei City, the trend toward delayed marriage and childbearing has become increasingly pronounced, with the average age at first marriage and women's reproductive age rising year by year. This demographic shift has led to a persistent decline in birth rates. In 2023, the average age at first marriage in Taipei reached 34.4 years for men and approximately 32.6 years for women, both exceeding national averages. The city's total fertility rate declined to 0.97, underscoring the severity of its population decline. To mitigate the health risks associated with advanced maternal age, the Taipei City Government has actively implemented and refined a wide range of maternal and child health policies. These policies include integrated support services spanning the preconception, prenatal, and postpartum stages, aiming to foster a supportive and childbearing-friendly environment.

Since 2010, Taipei City has implemented the "Good Pregnancy" assistance program through interdepartmental collaboration, integrating resources from the health, social welfare, and education sectors to create an environment supportive of childbearing and childrearing. Centered on maternal and infant health, the assistance program has continually refined and enhanced related services through a streamlined, end-to-end care model that links systems across the preconception, pregnancy, and postpartum stages. This integrated approach aims to provide comprehensive support for women of reproductive age throughout pregnancy, childbirth, and early parenting.

1. Preconception Stage: Preparing for Healthy Pregnancy
2. Pregnancy Stage: Ensuring Healthy Pregnancy
3. Postpartum Stage: Care and Parenting Support

In Taipei City, the total fertility rate increased from 0.845 in 2022 to 0.97 in 2023, surpassing the national average of 0.86. In 2023, the number of newborn infants reached 16,027, representing a 10.32% increase compared to 2022. Additionally, 1,621 women of reproductive age underwent preconception health checkups, and the utilization rate for subsidized Down syndrome screening among pregnant women reached 55.6%. The city's integrated, end-to-end maternal care model helped reduce anxiety related to pregnancy planning and improved overall awareness of health management.

Through comprehensive maternal health services and supportive environment for women and children, the Taipei City Government has continuously enhanced maternal and infant well-being. The city remains committed to further optimizing its fertility support policies and strengthening societal support for maternal and infant health to encourage greater fertility intentions among residents and advance sustainable urban development.

P-T02A-0186

The result of motivated to change behavior 2E1F program in obesity risk chronic disease group of Ban Naipong Tambon health promoting hospital, Wangwiset, Trang.

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Abstract

Background: The Overweight or obesity was listed a risk factor for people with chronic diseases such as diabetes, hypertension. An idea health intervention program to preventing was the 2E1F motivation program to manage their obesity.

Objective: The purposes were to study health behaviors regarding health care according to the 2E guidelines before and after participating in health behavior modification program according to 2E1F guidelines and to study comparing body mass index and waist circumference before and after active participating program and evaluate satisfaction with participation in the program

Methods: This study was mixed methods descriptive and quai-experimental research. The samples included 52 people, the group sample as an extra motivation for 20 days, if they will have done decreases their weight be promotion weight ratio 1 kg/ 30 baht and their finishing exercise get 1 point/ 10 baht then total them point to change be the coupon to discount the cargo in convenient store and chosen population by the purposive sampling, who had a BMI of more than 23.5, age 35-50 years old, The participants signed a consent agreement form to participate in program for three weeks. The tools used for the program were 3 part and data were analyzed using mean, standard deviation, percent and statistical and analytical pair simple t-test.

Results: the research participants food consumption behavior and exercise behavior before and after joining the program were 39.76±1.32 and 49.97±1.42. The comparison results of the average BMI before and after participating in the program found that the research participants had an average BMI before and after participating in the program of 30.01±0.97 and 28.93±1.12. Their satisfaction to join the program was at a good level, (X-bar=4.75, SD= 0.24).

Conclusions: The 2E1F program to be an inspiration with their family and neighbors. The practician in program can controlled their weight were re-check exercise time every day and follow up their food diary by visiting their home too much. The knowledge and attitude were the important attack to practice between they have active and be inspiration to empowerment with their family and neighbors.

Keywords: Motivation, changing behavior program, 2E1F, Obesity, BMI

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P-T02C-0293

Association of the pattern of hemoglobin A1C trajectories with risk of stroke, acute myocardial infarction, and dialysis in patients with type 2 diabetes mellitus in Taiwan

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Abstract

Background: Diabetes is a prevalent chronic disease, and effective blood glucose control is key for disease monitoring and improving outcomes. Prior research focused on single-point observations, with limited studies examining the trajectory control. This study aimed to estimate long-term hemoglobin A1c (HbA1c) trajectories among patients with type 2 diabetes enrolled in the Pay-for-Performance (P4P) program. Furthermore, the study explored the impact of different HbA1c trajectory patterns on the risks of stroke, acute myocardial infarction (AMI), and dialysis.

Methods: The National Health Insurance Research Database was used for this study. Patients newly enrolled in the P4P program between 2013 and 2015 were included, with HbA1c trajectories tracked for three years. The study observed outcomes until the end of 2021. The Group-Based Trajectory Model was employed to classify HbA1c trajectory subgroups and depict changes over time. A Cox proportional hazards model accounting for competing mortality risks was applied to assess the impact of different HbA1c trajectories on the risk of stroke, AMI, and dialysis.

Results: A total of 89,510 patients were included in the study, and seven HbA1c trajectory groups were identified, ranging from the lowest HbA1c (Group 1) to the highest (Group 7). Compared with Group 1, patients with high HbA1c levels had significantly higher risks. Specifically, individuals in Group 6 (HbA1c >8%) and Group 7 (HbA1c >9%) had a significantly increased risk for stroke, AMI, and dialysis. Notably, a higher risk for AMI was also observed in Group 5 (HbA1c >7.4%).

Conclusion: Long-term poor glycemic control is significantly associated with increased risks of stroke, AMI, and dialysis. Greater attention should be given to glycemic control pattern, particularly in reducing the risk of AMI. While the P4P program is beneficial, these findings highlight the need for more targeted interventions for patients with high HbA1c pattern to avoid the risk of severe complications.

Keywords: diabetes mellitus; hemoglobin A1c; Group-Based Trajectory Model; stroke; acute myocardial infarction; dialysis; pay-for-performance programfactors, health, physical activity, and psychological and environmental factors. Multilevel mixed-effects linear regression models with school district as a random effect were applied.

Results: The number of participants in each category was as follows: no use (n = 11,583), started use (n = 2,267), stopped use (n = 2,249), and continuous use (n = 5,511). During follow-up, 4,644 individuals (21.5%) received LTC certification. Continuous public transportation users had significantly lower cumulative LTC costs than non-users (−80,417 yen [≈ −731 USD at 1 USD = 110 JPY]; 95% CI: −125,586–−35249).

Conclusion: Being a continued user of public transportation was associated with lower cumulative LTC costs. Maintaining access to and encouraging consistent use of public transportation could help contain LTC costs, supporting the integration of transportation and aging policies.

P-T02C-0397

Milk and Dairy Product Intake and Objectively Measured Sleep Apnea Indices: The Fukuoka Epidemiological Study of Atherosclerosis

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Background: Previous studies have suggested that dairy product intake is associated with better subjective quality of sleep. However, evidence from large-scale cohort studies using objective sleep indices is scarce. We aimed to investigate the association between the intake of dairy products and objectively measured sleep apnea indices in Japanese population.

Method: This study included 930 adults aged 40 years and older who underwent both the national health check-up and our additional examinations in Fukuoka city. Frequency of milk, yogurt, and butter intake was assessed using a food frequency questionnaire and categorized into three groups: rarely/never, <7 times/week, and ≥7 times/week. After excluding those with missing data on dairy products or sleep indices, the analyses included 652 participants for milk, 664 for yogurt, and 633 for butter. Apnea-hypopnea index (pAHI), and respiratory disturbance index (pRDI) were measured overnight at home using an ambulatory device (WatchPAT®). Analysis of covariance was used to compare sleep apnea indices across intake groups, adjusting for age, sex, and other lifestyle-related risk factors.

Results: The mean (standard deviation: SD) age of the participants was 63.6 (9.5) years, and 436 (46.9%) were men. For yogurt intake, moderate group (<7 times/week) showed lower pAHI and pRDI compared to the rarely/never group, but this trend was not statistically significant. Similarly, for butter intake, the moderate group had significantly lower pAHI compared to the rarely/never group after adjusted for age and sex (p=0.048). However, after adjustment for the other covariates, the association lost significance (p=0.082). No significant associations were observed for milk intake.

Conclusion: Age and sex adjusted association between moderate butter consumption and favorable sleep apnea indices was observed in Japanese. Yogurt consumption had similar, but non-significant trend. Further investigation on overall diet patterns and sleep indices is warranted.

Keywords: Milk, Dairy, Sleep Apnea, Cohort.

P-T02C-0415

Protective Effects of Employment on Mental Health and Mortality in the Elderly in Taiwan: A Nationwide Population-based Study

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Abstract

Background: Employment plays a crucial role in promoting mental health and reducing mortality risk among older adults. However, limited evidence exists on the protective effects of employment against mental health disorders, suicide, and all-cause mortality in aging populations in Taiwan.

Methods: This nationwide population-based study analyzed 4,110,765 individuals aged 65 years and older in 2022. Multiple logistic regression was conducted to evaluate the risk of major depressive disorder (MDD), suicide, and all-cause mortality among elderly individuals with employment, adjusting for sex, age, urbanization, comorbidities, and polypharmacy.

Results: Compared with unemployed elderly individuals, those who were employed exhibited lower rates of MDD (1.20% vs. 2.19%), suicide (0.24% vs. 0.29%), and all-cause mortality (1.05% vs. 3.52%). After adjusting for confounding variables, employment status remained a protective factor, with adjusted odds ratios (aOR) consistently favoring the employed group, particularly among higher-income elderly. In the employed higher-income subgroup, the aOR was 0.64 (95% CI: 0.62–0.67) for MDD, 0.95 (95% CI: 0.88–1.04) for suicide, and 0.46 (95% CI: 0.44–0.48) for all-cause mortality. Additionally, males had a lower risk of MDD (aOR = 0.79; 95% CI: 0.78–0.80) and suicide (aOR = 0.95; 95% CI: 0.91–0.98) compared to females but exhibited a higher risk of all-cause mortality (aOR = 1.23; 95% CI: 1.22–1.25).

Conclusion: Employment significantly protects elderly individuals from MDD and all-cause mortality, underscoring its value in promoting healthy aging. Public health strategies should prioritize interventions targeting unemployed elderly populations to mitigate adverse mental health and mortality outcomes.

Keywords: Elderly; Employment; Major Depressive Disorder; Suicide; All-cause Mortality

P-T02B-0439

Factors Associated With Knowledge and Attitudes Regarding Neonatal Jaundice Among Primigravida Mothers in a Tertiary Care Hospital in Colombo, Sri Lanka.

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Background: Neonatal jaundice is among the commonest causes of hospital readmissions in the first week of life and contributes significantly to global neonatal morbidity and mortality. As the primary caregiver of the newborn, mothers play a vital role in early detection and promptly seeking medical care.

Methods: A descriptive cross-sectional study with an analytical component was conducted among 123 consecutively sampled primigravida mothers visiting antenatal clinics at a tertiary care hospital, utilising an expert-validated, interviewer-administered questionnaire. Scores were calculated for knowledge and attitudes, and the respondents were categorised into two groups (cut-off at 50%). Normality of the scores was assessed using the Shapiro-Wilk test. Associations were analysed using the chi-square test and Pearson's correlation.

Results: Majority of the respondents were of Sinhalese ethnicity and the mean age was 28, reflecting national demographics. The majority (n=74, 60.2%) displayed poor knowledge, while conversely 87%(n=107) displayed good attitudes regarding neonatal jaundice. Misconceptions regarding exposure to sunlight as suitable treatment (n=82, 66%) were also noted. Factors associated with better knowledge ($p<0.05$) were Sinhala ethnicity, ability to speak or read Sinhala, completion of secondary education and receiving advice regarding neonatal jaundice in antenatal classes. The Shapiro-Wilk test failed to show evidence of non-normality for both knowledge score ($W=0.988$, p-value=0.329) and attitude score ($W=0.988$, p-value=0.380). A moderate positive linear correlation was found between knowledge and attitudes ($r(121)=0.502$, $p<0.001$).

Conclusions: The majority had good attitudes but poor knowledge regarding neonatal jaundice. The study highlighted the need to improve awareness and correct misconceptions, which could delay proper treatment. Since language and advice during antenatal clinics were found to affect knowledge significantly, adding supplementary Tamil language instruction during antenatal visits may improve awareness.

Keywords: Neonatal jaundice, mothers

P-T02B-0440

Maternal Health and Behavior of Advanced Maternal Age Mothers in the United Arab Emirates: The Mutaba'ah Study

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Abstract

Introduction: Despite extensive research on Advanced Maternal Age (AMA) pregnancies, population-based data from the UAE are limited. This study estimates AMA prevalence and explores the sociodemographic and maternal health characteristics among AMA (35-39 years), Very Advanced Maternal Age (VAMA, 40-44 years), and Extremely Advanced Maternal Age (EAMA, ≥45 years) mothers using data from the Mutaba'ah Study.

Methods: A cross-sectional analysis was conducted using baseline data from pregnant women enrolled in the Mutaba'ah Study at two major hospitals in Al Ain. Data were collected through self-administered questionnaires. Participants were categorized into the three AMA subgroups, and their sociodemographic and maternal health characteristics were compared.

Results: Of 13,404 recruited pregnant women, 30.5% (4,092) were classified as AMA (≥35 years). Compared to younger women, AMA mothers generally had higher education, were more likely to be employed, initiated antenatal care earlier, used contraceptives, and underwent infertility treatment. They also reported lower passive smoking exposure and childbirth anxiety but had higher rates of self-reported diabetes and a history of gestational diabetes. Among the AMA subgroups, advancing age was associated with decreased employment, educational attainment, childbirth anxiety and perceived social support. Conversely, high parity (≥5) increased with age, a trend most pronounced in EAMA mothers. The EAMA subgroup also demonstrated higher rates of infertility treatment, more frequent antenatal care, and an increased prevalence of diabetes.

Conclusion: This study provides valuable insights into the distinct profiles of AMA pregnant women in Al Ain, UAE. These findings can help policymakers and healthcare providers formulate targeted reproductive health policies to better meet the needs of this population.

Keywords: advanced maternal age (AMA), very advanced maternal age (VAMA), Extremely Advanced Maternal Age (EAMA), maternal health profile and behavior trends, cohort study.

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T02B-0447

Association between food insecurity and dietary diversity among undernourished preschool children in rural Bangladesh

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Abstract

Introduction: Food insecurity and undernutrition have been pressing issues worldwide, particularly in lower-middle-income countries (LMICs). Food insecurity influences dietary diversity scores (DDS), which are a proxy indicator of nutrient adequacy. Although preschool years are a dynamic time for cognitive and physical development, little is known about their intricate relationship in rural Bangladesh. Hence, this study aims to determine the association between food insecurity and dietary diversity among preschoolers in rural Bangladesh.

Methods: Using cluster random sampling, a cross-sectional survey was conducted from April to July 2025 among 425 children (3-5 years) attending preschool in Nesarabad subdistrict. Data on socio-demographic characteristics, household food insecurity and 3-day diet history were collected, and anthropometric measurements of both mothers and children were taken. Dietary diversity score was determined using the 3-day diet history, and undernutrition was determined by anthropometric measurement using the WHO-Anthro software.

Results: Among the participants, undernutrition- stunting, wasting and underweight are 37.2%, 13.4% and 29.9% respectively. Both food insecurity and dietary diversity increase the likelihood of stunting and underweight, while only food insecurity predicts wasting. Food insecurity significantly lowers the DDS (β Coefficient: -2.02, S/E: 0.22, p-value: <0.0001). Dietary diversity partially mediates the food insecurity to undernutrition pathway for all forms.

Conclusion: The study findings offer an intricate interplay between food insecurity and dietary diversity among preschoolers. Addressing food insecurity as well as nutrition education to improve dietary diversity could be helpful to mitigate undernutrition in this vulnerable population in rural areas.

Keywords: undernutrition, food insecurity, dietary diversity, preschool, Bangladesh

P-T02B-0601

Termination of pregnancy after non-invasive prenatal test (NIPT) for common aneuploidy: A systematic review and meta-analysis

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Abstract

Background: Non-invasive prenatal testing (NIPT) is increasingly used worldwide for the early detection of fetal chromosomal abnormalities. It serves as a valuable resource in the context of family planning. Its accuracy in detecting trisomy 13 (T13), trisomy 18 (T18), trisomy 21 (T21), and sex chromosome aneuploidies (SCAs) is well established. Nevertheless, its influence on reproductive decisions was unclear. This study aims to summarize the global impact of NIPT on pregnancy termination decisions and assess how regional differences shape reproductive choices.
Methods: A systematic search was conducted in PubMed, Scopus, and Embase from inception to 20 June 2025 without language restriction. Studies were included if they reported NIPT-positive pregnancies and subsequent pregnancy termination decision for T13, T18, T21, or SCAs (45,X; 47,XXY; 47,XXX; 47,XYY). Termination rates were extracted and pooled using random effect model. Subgroup analysis by region was also conducted.
Results: Of the total 494 studies identified from all sources, 50 individual studies were included. The pooled termination rate for T21 was estimated at 74.7% (95%CI: 57.3%, 92.0%, I2 =99.86%). On the other hand, the pooled termination rates for Trisomy 13 and 18 were estimated at 67.2% (95%CI: 51.6%, 82.8%, I2 =88.93%) and 74.1% (95%CI: 58.7%, 89.4%, I2 =98.04%), respectively. For sex chromosome aneuploidy, the termination rate was lower than autosomal aneuploidy ranging from 11.6% (95%CI: 6.7%, 16.5%) for 47,XXX to 57% (95%CI: 41.1%, 72.9%) for 47,XXY. For subgroup analysis, the termination rate was substantially higher in Asia than Western region for all aneuploidy types.
Conclusion: NIPT strongly influences reproductive decision. Asian countries report higher termination rates across all aneuploidy syndromes, suggesting the influence of cultural, ethical, and healthcare system factors. These findings underscore the need for culturally sensitive genetic counseling and regionally tailored policy guidance to support informed reproductive decision-making and family planning after NIPT implementation.
Keywords: NIPT, pregnancy termination, aneuploidies, Non-invasive prenatal testing, Mailing address

P-T02C-0668

The Role of Learning Engagement and Social Participation in Reducing Aging Anxiety among Older Adults: Evidence from Taiwan

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Abstract

Background: Aging anxiety poses a significant challenge globally, particularly for older adults. This study investigates the relationships between learning engagement, social participation, and aging anxiety, highlighting potential pathways to mitigate this anxiety.

Methods: A cross-sectional survey of 992 participants was conducted in Taiwan. The Anxiety About Aging Scale (AAS) and learning engagement indices were adopted. Hayes's Process Model was used to examine the relationships.

Results: The number of learning programs and the duration of participation in learning significantly mitigated aging anxiety directly and indirectly through social participation. The mediating role of social participation was particularly notable for the subscale of fearing old people in AAS. These findings align with recent research underscoring the psychosocial benefits of sustained education and active social interactions.

Conclusion: Lifelong learning and social participation are essential strategies for alleviating aging anxiety. Policies promoting accessible and diverse learning opportunities integrated with community-based activities can bolster mental health in aging populations.

Keywords: Older adults, Aging anxiety, Learning engagement, Social participation, Mediation analysis

P-T02C-0752

Prevalence and Factors Associated with Intrinsic Capacity Decline Among Older Adults in a Rural Thai Community: Application of the WHO ICOPE Framework

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Abstract

Background: Advancing age leads to a decline in intrinsic capacity (IC), affecting functional ability and quality of life among older adults. This study applied the WHO Integrated Care for Older People (ICOPE) framework to examine the prevalence and factors associated with IC decline among community-dwelling older adults in a rural Thai district.

Methods: A cross-sectional study was conducted among 320 adults aged ≥60 years residing in Lan Krabue District, Kamphaeng Phet Province. The sample size was calculated using a finite population proportion, and participants were randomly selected using probability proportional-to-size sampling. Data were collected through a demographic and health questionnaire and the WHO ICOPE Screening Tools covering eight IC domains: cognitive, locomotive, vitality, vision, hearing, psychological, and care and social support needs. Descriptive statistics determined prevalence, and multiple logistic regression identified associated factors.

Results: Of the 320 participants, 70.3% were female, with a mean age of 67.25 ± 5.82 years. The prevalence of decline in at least one IC was 69.8%, with visual capacity most frequently impaired (52.2%), followed by cognitive capacity (34.4%). Age, sex, education attainment, underlying disease with medication use, and care and social support needs were significantly associated with IC decline. Multiple logistic regression analysis showed that, compared with participants aged 60–64 years, age 65–69 years (AOR = 2.35; 95% CI = 1.24–4.43), 70–74 years (AOR = 6.70; 95% CI = 2.79–16.13), ≥75 years (AOR = 6.91; 95% CI = 2.09–22.86), female sex (AOR = 2.06; 95% CI = 1.13–3.78), and health and social care needs (AOR = 3.46; 95% CI = 1.96–6.10) were significant predictors of IC decline.

Conclusion: Older adults in rural Thai community are at risk of IC decline, emphasizing the importance of routine screening and tailored interventions to support healthy aging and functional ability.

Keywords: Integrated Care for Older People (ICOPE), Intrinsic Capacity, Functional Ability, Aging Society, Healthy Aging

P-T03A-0302

Scaling Up Strategies for a Community-Based Exercise Program for Older Adults: A Descriptive Study

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Abstract

Background: Square-Stepping Exercise (SSE) is an evidence-based exercise program designed for older adults. While SSE is proven to be effective in preventing falls, improving cognitive function, and promoting social engagement, scaling up SSE in community settings is challenging. This study aimed to identify, prioritize, and map strategies for scaling up SSE in a Japanese municipality using an implementation science framework.

Methods: The study was conducted in Suzuka City, Mie Prefecture, Japan, in 2024, where SSE has been implemented as a government-led long-term care prevention program since 2013. To identify barriers and potential strategies to scale-up the SSE across the city, an interview guide was developed based on the WHO/ExpandNet "Nine Steps for Scaling Up" framework, and semi-structured interviews were conducted with stakeholders, including municipal staff, social welfare council personnel, and certified SSE volunteer leaders. Based on the interview data, we analyzed and identified barriers and potential strategies for each framework step. The identified potential strategies were discussed in stakeholder consensus meetings and prioritized based on importance and feasibility. Finally, a logic model was developed to link the strategies to the anticipated implementation and health outcomes.

Results: Thirteen interviews with 24 stakeholders (seven staff and 17 SSE leaders) generated 55 potential strategies. Seven of these strategies were prioritized, falling into four categories: re-engaging dormant SSE leaders, enhancing SSE leader capabilities, further disseminating SSE, and revising regulations. The logic model links the strategies to improved outcomes.

Conclusion: These strategies and the logic model are grounded in stakeholders' practical knowledge. Implementing and evaluating these strategies could help more older adults maintain mobility and social connections through SSE. This would support independent living in their communities. This study presents an approach to developing and scaling up strategies and corresponding logic models for government-led programs for older adults, which could be applicable to similar initiatives.

P-T03A-0304

A Research on Social Systems with Attention to Caregiver Support in Japan's Super-Aging Society

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Abstract

Japan is facing an aging society, and by 2050, the total population is expected to decrease from approximately 120 million to 100 million, with the percentage of elderly people rising to 37.7% of the total population. A system for providing public services to the elderly is being established, but the number of family members and relatives who support the elderly (hereinafter referred to as "caregivers") is also expected to increase. Support for caregivers has been established as a national policy in 2024.

The purpose of this study was to extract predictions of the number of caregivers from digital data recording the actual use of public nursing care services.

The target area consisted of 15 regional cities with populations ranging from 10,000 to 150,000. The percentage of elderly people aged 65 and over ranged from a minimum of 24% to a maximum of 43%. In one city analysed in the sample, the population was 120,000, with approximately 30,000 elderly people aged 65 and over, and approximately 4,200 people using nursing care services per month. Among the care service users, 2,640 were receiving services at home while staying at home. Of these, 271 were elderly individuals classified as having difficulty living independently due to physical limitations.

Since these 271 elderly persons are unable to live alone, it is hypothesized that there is always a caregiver in the home or in the neighbourhoods. We visualized the geographical distribution of the elderly based on their address information.

Conduct similar analyses in 14 other regional cities and categorize the regions. In regions where there is a high concentration of elderly people with caregivers, there is a need for centers and systems to support caregivers. Consider ways to create a healthy and sustainable social system to support these caregivers.

P-T03A-0325

Dengue Prevention for Vulnerable Populations in Southeast Asia: A Scoping Review

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Abstract

Dengue fever remains a pressing public health challenge in Southeast Asia, where climatic, socioeconomic, and environmental factors sustain ongoing transmission. Health education is widely recognized as a cornerstone of prevention, yet its effectiveness among marginalized populations such as ethnic minorities, informal settlers, and migrant workers.Barriers including language differences,limited media access,low health literacy,and weak community engagement continue to hinder the uptake of preventive behaviours.

A total of 2,107 records from PubMed, Scopus, and ScienceDirect (2014–2025) were imported into Rayyan. After removing 609 duplicates, 1,643 records were screened by title and abstract. A manual search of WHO websites and Google Scholar added 59 gray literature sources, of which 13 were excluded. After screening, 203 studies were selected for full-text review. 118 studies and 46 gray literature documents were kept for data extraction, which was done by three reviewers using Google Sheets.

Most studies looked at community-based programs for dengue prevention in Southeast Asia, especially in poor urban areas. These programs often combined mosquito control (such as cleaning water containers, using larvicides, and waste management) with health education and community involvement. Many programs showed positive results, like fewer mosquito breeding sites, better cleaning practices, and stronger community participation. Women's leadership and local health workers played an important role in making these programs successful. However, there were also big challenges, such as poor water supply, weak waste management systems, limited funding, and uneven government support. Few studies focused on vulnerable groups like migrants, LGBTQIA+ people, and elderly populations. Many reports also lacked long-term evaluation,cost-effectiveness analysis, and standardized methods to measure success.

Equity-focused,community-led approaches demonstrate strong potential for enhancing dengue prevention among marginalized populations in Southeast Asia. Addressing systemic service gaps and ensuring culturally appropriate, sustainable interventions will be critical for long-term impact. The final synthesis and comprehensive findings will be completed before the conference and presented during the session.

Keywords: dengue prevention, marginalized populations, vulnerable populations, health education, Southeast Asia, scoping review

P-T03A-0380

Dementia Knowledge, Social Comfort, and Community Cohesion as Predictors of Helping Intentions: Evidence from Taipei City Study

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Abstract

Objective: Taiwan is undergoing a rapid demographic shift toward a super-aged society, resulting in a growing number of individuals with dementia residing within community settings. Public understanding of dementia and social comfort in engaging with affected individuals are essential components in building dementia-friendly communities. Since 2017, the Taiwanese central government has implemented the Dementia Care Service Program under the Long-Term Care (LTC) 2.0 framework, encouraging local governments to establish dementia-friendly communities and care programs. In response, Taipei City initiated the development of community-based dementia services. In March 2020, the Taipei City Department of Health announced 24 community dementia care sites. As of 2025, Taipei City is implementing 50 dementia-focused programs. However, although these projects provide equal access to institutional resources, participation in dementia-focused initiatives varies across communities in Taipei City, with some communities responding proactively and others not. This difference indicates disparities in local capacity, awareness, and willingness to engage.This study investigates associations between dementia knowledge, social comfort in engaging with people with dementia, and community cohesion and helping intentions for people with dementia in Taipei City.

Methods: A cross-sectional online survey was administered to residents across 12 districts and 456 villages of Taipei City (95% of all villages), yielding 6,500 valid responses. The questionnaire comprised the Dementia Knowledge Assessment Scale–Simplified (DKAS-s), the Dementia Attitudes Scale–6 (DAS-6) to measure social comfort, the Sense of Community Index 2 (SCI-2) as an indicator of community cohesion, four items assessing prosocial behavioral intentions toward individuals with dementia, and demographic variables.

Results: While dementia knowledge alone does not directly enhance helping intentions toward people with dementia, both social comfort and perceived community cohesion do exert direct positive effects. However, dementia knowledge can indirectly promote helping intentions by increasing social comfort. Furthermore, community cohesion slightly attenuates the relationship between social comfort and helping intentions, suggesting a diffusion of responsibility within a cohesive community context.

Conclusion: Enhancing public knowledge of dementia and fostering social comfort in interactions with individuals living with dementia are critical to encouraging dementia-friendly behaviors. Furthermore, strengthening community cohesion contributes to increased prosocial engagement. These findings underscore the importance of integrating dementia education with community-based strategies to promote inclusive and supportive environments for people with dementia.

P-T03B-0435

Expanding Access of Care for Non-Communicable Diseases Through Community-Based Programs: A Demographic and Clinical Analysis Before and After the Clinic Without Walls Program in the Marshall Islands

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Abstract

In April 2024, the Republic of the Marshall Islands launched the Clinic Without Walls (CWW) program, which delivered free medical services targeting non-communicable diseases (NCDs) into outlying communities, with the aim of improving accessibility to care. This study evaluates patient demographics and clinical markers before and after CWW implementation, assessing the program's impact on healthcare engagement.

We conducted a retrospective cohort study using de-identified data from the Chronic Disease Electronic Management System from October 2010–March 2025. Patients were grouped as Before Program (October 2010-March 2024; n=3,644) and After Program (April 2024-March 2025; n=707). We compared demographics, biometric data, comorbidities, and medication prescribed. Statistical analyses included chi-square tests, independent samples t-tests, or Mann–Whitney U tests. Significance was set at $p<0.05$.

NCD-related visits increased significantly after CWW implementation, exceeding pre-COVID levels. Patients seen After Program were younger (57.8 vs. 60.8 years, $p<0.001$), with similar gender distribution. Low-density lipoprotein levels were lower (104 vs. 119 mg/dL, $p<0.001$), but hemoglobin A1c, systolic, and diastolic blood pressure were higher, suggesting previously undiagnosed cases were now captured. Diagnoses of comorbidities rose significantly ($p<0.001$), as did prescriptions for medications ($p<0.001$).

The CWW program improved NCD care access, especially among previously undiagnosed and untreated younger populations. Free care and community outreach led to increased diagnosis and treatment. Further follow-up is needed to assess long-term outcomes. Limitations include retrospective design and unmeasured confounders.

Keywords: non-communicable diseases, health promotion, community health, diabetes, hypertension, Marshall Islands

P-T03B-0472

Obesity as Social Class? Evidence of Socioeconomic Inequality and Polarisation in Korea

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Abstract

Obesity has emerged as a significant public health challenge and a potential marker of social stratification. Existing evidence has shown persistent socioeconomic inequalities in obesity in Korea; however, less attention has been paid to whether obesity itself operates as a boundary of social class. This study examines the extent of obesity-related inequality and explores whether the distribution of body mass index (BMI) exhibits polarisation patterns suggestive of class-like clustering.

Data were drawn from the Korea National Health and Nutrition Examination Survey (1998 and 2019–2021). The Concentration Index (CI) was used to quantify income-related inequalities in obesity, and decomposition methods were employed to identify their main contributors. In addition, polarisation indices, including the Esteban–Ray and Wolfson indices, were applied to assess whether BMI distribution indicates emerging social divisions beyond inequality.

Findings demonstrate persistent pro-poor inequalities in obesity, with lower-income women disproportionately affected, while men showed a reversed concentration toward higher-income groups. Over time, polarisation metrics revealed a shift from a continuous gradient toward clustering that resembles class demarcations, indicating that obesity is becoming more deeply embedded within Korea's stratification system. Education and income consistently contributed to these disparities, with gendered dynamics amplifying the observed patterns.

These results suggest that obesity in Korea should not be viewed solely as an individual health outcome but also as a manifestation of social class. Addressing obesity, therefore requires multi-level strategies that move beyond behaviour change and clinical interventions to tackle the structural determinants of health, including unequal access to education, income security, and cultural resources. Such an approach highlights the need for integrated public health and social policy responses that simultaneously confront health risks and social inequality.

Keywords: obesity; social class; socioeconomic inequality; concentration index; polarisation

P-T03C-0491

Flying In to Bridge the Gap: A Five-Year Evaluation of Primary Healthcare Delivery Through Flying Doctor Service in Resource-Limited Remote Areas of Sabah, Malaysia

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Background: Health equity remains a persistent challenge in geographically isolated and underserved regions. Sabah is a state characterized by mountainous terrain and dense rainforest, numerous indigenous and rural communities lack consistent access to essential health services. The Flying Doctor Service (FDS) aims to bridge this healthcare divide by delivering primary care to remote villages inaccessible by land or river routes. This study evaluates the five-year performance of the Sabah FDS from 2019 to 2023, focusing on service coverage, population reach and its role in promoting health equity for vulnerable populations.

Method: An evaluation was conducted using service records and health information returns. Quantitative data included client attendance, ICD-10 diagnostic categories, maternal and child health (MCH) indicators, and dental care statistics were analysed descriptively to identify patterns in health service utilization.

Results: Over 5 years, the FDS served 13 localities across 4 districts, reaching 13,078 clients. Outpatient care dominated service utilization, with 7,520 new cases, most commonly nonspecific symptoms and respiratory conditions. MCH coverage was modest, with limited antenatal, postnatal, and child health consultations, while school health activities were minimal due to reliance on district school health teams. Dental services served 1,353 clients, mainly through dental examinations and extractions. Despite logistical and environmental constraints, the FDS remains a crucial provider of healthcare in Sabah's interior. The recent introduction of satellite internet in several villages offers an opportunity for telemedicine integration, potentially enhancing continuity of care and optimizing consultation time.

Conclusion: The Sabah FDS demonstrates an adaptive outreach model promoting health equity in resource-limited, disruptive settings. It reduces geographic disparities and serves as a lifeline for indigenous and rural communities. Future efforts should explore telehealth integration to extend service reach, optimize consultation time, and build resilience in primary healthcare delivery for vulnerable populations.

Keywords: Rural health, Health equity, Flying doctor service, Primary healthcare, Sabah, Malaysia

P-T03A-0544

Food Insecurity and Diabetes Self-Management in Unserved and Underserved Rural Households in General Mamerto Natividad, Nueva Ecija, Philippines

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Background: Food insecurity (FI) compromises diabetes self-management (DSM) and glycemic outcomes, with prior studies linking it to poor adherence, elevated HbA1c, and hypoglycemia-related hospitalizations (Seligman et al., 2010; Gucciardi et al., 2014; Casagrande et al., 2022). To inform SDG 2 (Zero Hunger) and SDG 3 (Good Health and Well-Being), this study assessed FI in geographically isolated and disadvantaged area (GIDA) households and examined its association with household diabetes and DSM.

Method: A cross-sectional survey of 310 rural households was conducted. FI was measured using a 10-item composite scale (1–5, higher=worse; security items reverse-coded) adapted from HFIAS (Coates et al., 2007; Angeles-Agdeppa et al., 2021). Household diabetes was based on reported cases. Among diabetic households (n=71), DSM was measured with a 10-item composite, defining poor DSM as the top tertile. Modified Poisson regressions with robust errors estimated risk ratios (RRs) (Zou, 2004).

Findings: Mean FI was 2.43 (SD 0.65); 22.9% of households reported diabetes, and poor DSM prevalence was 32.4%. In regression analyses, household head age predicted diabetes presence (RR 1.022/year; 95% CI 1.006–1.038; p=0.006), while FI was not significant. By contrast, FI strongly predicted poor DSM (RR 2.47 per 1-point increase; 95% CI 1.28–4.78; p=0.007). Sensitivity tests confirmed this: clustered SEs (RR 2.67; 95% CI 1.86–3.83) and FI tertiles showing monotonic risk—mid vs low (RR 1.80), high vs low (RR 6.41). These patterns parallel Philippine data linking FI to poor diet quality (Angeles-Agdeppa et al., 2022) and rural–urban disparities (dela Luna & Bullecer, 2020).

Conclusion: FI was not independently related to diabetes presence but showed a strong, dose–response association with poor DSM. Addressing FI through food and medication affordability and nutrition access is essential to advancing SDG 2 and SDG 3 in GIDA communities.

Keywords: food insecurity; diabetes; self-management; rural health; SDG 2; SDG 3; Universal Health Care

P-T03A-0651

Can Home-Based WASH Facilities and Parental Support Improve Menstrual Hygiene Behavior Among Students with Disabilities?: A Study in Special Schools in Makassar, Indonesia

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Abstract

Background: Menstrual hygiene is an important aspect of adolescent health, especially for female students with disabilities who often face various barriers in accessing adequate facilities and support. Although there has been an increase in attention to inclusive education, available evidence on factors influencing menstrual hygiene practices in this population remains limited. This study explores the correlation between the availability of WASH (Water, Sanitation, and Hygiene) facilities at home and school, social support from parents/caregivers, and menstrual hygiene behavior among female students with disabilities at special schools (Sekolah Luar Biasa;SLB) in Biringkanaya District, Makassar City.

Methods: This study was conducted using a cross-sectional approach involving female students with disabilities enrolled in special schools. Data were collected through a questionnaire adapted from the WHO (WASH questionnaire) and previous studies. The instrument was administered to female students and/or their caregivers. Pearson and Spearman correlation analyses were used to explore the relationship between menstrual hygiene behaviors and three independent variables: WASH facilities at home, WASH facilities at school, and social support from parents/caregivers.

Results: The findings showed a significant positive correlation between menstrual hygiene behavior and social support from parents/caregivers ($r = 0.555$, $p < 0.001$), as well as the availability of WASH facilities at home ($r = 0.349$, $p = 0.010$). Conversely, the availability of WASH facilities at school did not show a significant correlation with menstrual hygiene behaviors ($r = -0.175$, $p = 0.211$).

Conclusion: This study emphasizes the crucial role of home-based WASH infrastructure and parental support in improving the quality of menstrual hygiene practices among female students with disabilities. Strengthening these aspects can contribute to improving the health status and educational participation of this marginalized group.

Keyword: menstrual hygiene, disability student

4.Environmental & Occupational Health

P-T04D-0127

Allergy Patterns Among University Students at A Public University in the United Arab Emirates

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Abstract

Background: Allergic diseases are among the most common chronic health conditions globally, with rising prevalence affecting quality of life and healthcare systems. However, data on allergy patterns in the Gulf region remain limited. This pilot study explored the prevalence and impact of allergy symptoms among undergraduate students at a public university in the United Arab Emirates.

Method: A cross-sectional online survey was conducted in February 2024 among undergraduate students from all colleges. Participants were invited, and a total of 31 students responded. Descriptive statistics and fisher's exact tests were used to assess associations between allergy symptoms and various factors.

Results: Out of 31 participants, 26 (83.9%) were female. The most commonly reported allergy triggers were dust (n = 24), air pollution (n = 18), and animals (n = 18). 11(35.5%) students reported a history of hospital admission due to allergies. In the 12 months before the survey, 25 (81%) students reported missing 1–3 days of classes due to allergy symptoms. The most common household size was 10–12 members (n = 12; 38.7%). A total of 26 (83.9%) students reported experiencing at least one allergy symptom, with itchy nose being the most common (n = 25; 80.6%). Experiencing at least one allergy symptom was significantly associated with interference in daily activities (Fisher's exact p = 0.005) and sleep at night (p = 0.042). However, no significant associations were found with exam performance, participation in social gatherings, college attendance, or extracurricular activities. A significant association was observed between larger household size and the occurrence of shortness of breath (p = 0.014).

Conclusion: This pilot study highlights a high burden of allergy symptoms among university students. The findings emphasize the need for larger-scale studies and the development of comprehensive allergy and immunology research within university clinics and referral hospitals.

Keywords: Allergenic disease, undergraduate students, cross-sectional, shortness of breath, itchy nose

P-T04B-0174

Public–Private Partnership for Tobacco Control: The First Smoke-Free Taipei Lunar New Year Festival 2025

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Abstract

According to the World Health Organization, establishing smoke-free environments not only protects non-smokers from secondhand smoke but also enhances smokers' motivation to quit. To promote a healthy and comfortable environment for Lunar New Year Festival shopping, Department of Health, Taipei City Government collaborated with relevant municipal agencies (including Taipei City Government Office of Commerce), the Dihua Business District Development Promotion Association, and Chief of Village etc. to jointly launch the first-ever designated 2025 Taipei Smoke-Free Lunar New Year Festival.

The initiative was guided by the five action areas of the Ottawa Charter for Health Promotion, emphasizing the development of healthy public policies. In accordance with the Tobacco Hazards Prevention Act, the festival site was designated as a no-smoking area. The Department of Health, Taipei City Government engaged in cross-sector collaboration to construct a supportive environment, effectively utilizing delegated inspection authority to enforce regulations and assisting the business district in implementing autonomous management practices. Additionally, diverse outreach strategies were employed to enhance awareness among vendors and the general public, while also strengthening interdepartmental communication and administrative efficiency within the city government.

The initiative deterred 273 instances of smoking behavior,inspected and enforced penalties on 17 smokers.Media coverage of the initiative was entirely positive. Survey results indicated that 91.8% of respondents expressed overall satisfaction with the 2025 Taipei Smoke-Free Lunar New Year Festival, demonstrating strong public support.

Smoke-free policies require collective engagement. The Department of Health, Taipei City Government continues to apply empowerment-based strategies to expand the promotion of smoke-free outdoor environments citywide, contributing to the development of a smoke-free and healthy city.

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T04D-0204

A Cross-Sectional Study of Commuting Time, Residential Floor Area, Insomnia, and Daytime Sleepiness Among Residents of the Tokyo Metropolitan Area

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Abstract

Introduction: While urban residences offer advantages in commuting time, they are associated with a less favorable living environment than suburban residences. Understanding how housing location and size influence insomnia symptoms and daytime sleepiness can inform housing selection and supply strategies. This study examined whether commuting time and residential floor area predict insomnia and daytime sleepiness, whether these associations are attenuated by demographic/socioeconomic factors, and how commuting time and residential floor area are interrelated.

Methods: In September 2024, we conducted an online survey involving 2,000 employed individuals, aged 40–59 years, commuting to Tokyo workplaces, selected by stratified random sampling. Commuting time was calculated using a route search system based on home and workplace postal codes and commute modes. Insomnia and daytime sleepiness were assessed using the Athens Insomnia Scale (AIS) and Epworth Sleepiness Scale (ESS). Associations among sleep outcomes, commuting time, and demographic/socioeconomic factors were analyzed using bivariate logistic and multivariate linear regression with propensity score matching.

Results: We analyzed 1,757 valid responses. Even after adjusting for covariates, longer commuting times predicted insomnia and daytime sleepiness, whereas small residential floor area predicted insomnia. Shorter commutes improved sleep, suggesting a trade-off between commuting time and floor area. For a 95 m² home, a 52-minute commute was associated with exceeding the AIS insomnia cutoff.

Conclusion: Reducing commuting time and optimizing housing location and size trade-offs may help mitigate commuter insomnia.

Keywords: commuting time; insomnia; daytime sleepiness; sleep quality; urban living

P-T04B-0290

Associations of occupational sedentary behavior with individual and organizational perceptions among Japanese office workers

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Abstract

Background: Sedentary behavior (too much sitting) is associated with adverse health outcomes. Office workers often spend long hours sitting at work. Previous studies have indicated that environmental interventions such as sit–stand desks reduce sitting time. However, insufficient individual and organizational perception might be a barrier to behavioral change. This study examined the associations between occupational sedentary behavior and individual and organizational perceptions of sedentary behavior.

Methods: Data were analyzed for 1,200 Japanese office workers who responded to an Internet-based cross-sectional survey. Occupational sedentary behavior (total sedentary time and sedentary bout at work) was assessed using the Work-related Physical Activity Questionnaire. Perceived health risks of sedentary behavior (1 item, dichotomized) and perceived organizational acceptability of reducing sitting at work (9 items, Cronbach's $\alpha = 0.84$, dichotomized at median) were assessed. Covariates included sex, age, company size, employment type, self-rated health, smoking, BMI, and working hours. Linear regression analysis was used.

Results: Mean sedentary time at work was 388.9 min/day (80.7 ± 15.3% of working hours), and mean sedentary bout was 46.0 ± 26.3 min. Overall, 88.3% perceived health risks of sedentary behavior, and 46.1% perceived their organization as supportive. Individual perception was not associated with either total sedentary time or sedentary bout. Perceiving the organization as supportive was negatively associated with total sedentary time ($\beta = -14.3$, 95% CI: −23.3 to −5.4) and sedentary bouts ($\beta = -5.2$, 95% CI: −8.3 to −2.1).

Conclusions: Most Office workers recognized the health risks of excessive sitting but still spent most of their workday sitting. Organizational support for reducing sitting was associated with shorter total sedentary time and sedentary bouts. In addition to environmental interventions and implementation research, health communication strategies to foster supportive workplace norms and culture are needed to effectively reduce sedentary behavior.

Key words: Sedentary behavior, Occupational health, Work environments, Organizational perception, Health communication

P-T04B-0300

Satisfaction and Sanitation of Beauty Salon Surrounding of Mae Fah Luang University, Chiang Rai, Thailand

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Abstract

This cross-sectional study examined hygiene practices of beauty salons and student satisfaction at Mae Fah Luang University (MFU). A total of 390 undergraduate students were randomly surveyed using a validated questionnaire (Cronbach's alpha = 0.940). For hygiene assessment, 27 salons were selected using Taro Yamane's formula at 90% confidence. Samples from beauticians' hands, combs, scissors, towels, and tap water were tested for *Escherichia coli* and *Staphylococcus aureus*. No contamination was found in tap water, combs, scissors, or towels. *S. aureus* was absent from all hand samples; however, *E. coli* was detected on beauticians' hands in 8 salons (30%). These findings underscore the need to promote proper seven-step handwashing and good personal hygiene, particularly using clean towels for hand drying.

Keyword: Sanitation, Beauty Salon, Satisfaction

P-T04A-0316

Impact of Heavy Metal Exposure on the Prevalence of Metabolic Syndrome in Korean Adults: Insights from the 4th Korean National Environmental Health Survey

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Abstract

Background: Heavy metal exposure has been linked to the development of metabolic syndrome (MetS), yet the combined effect of multiple heavy metal and their interactions with dietary and lifestyle factors on MetS remain relatively limited.
Objective: The study investigated the association between heavy metal exposures and MetS in Korean adults.
Methods: Data were derived from the fourth Korean National Environmental Health Survey, encompassing 2,981 participants aged 19–82 years with complete data on heavy metal levels (lead, cadmium, and mercury), MetS components (waist circumference, glycated hemoglobin [HbA1c], triglycerides, high-density lipoprotein cholesterol [HDL-C], blood pressure), and relevant covariates. Heavy metal concentrations were categorized into tertiles. Multivariate logistic regression models were used to estimate the association between heavy metal tertiles and MetS after adjusting for demographics, lifestyle factors (body mass index, education, smoking, alcohol consumption, physical activity, and total energy intake), dietary habits (fish consumption), and behavioral factors (food containers).
Results: Elevated blood lead levels were significantly associated with MetS (OR=1.59, 95% CI: 1.21–2.10; P=0.0030), high triglycerides, and hypertension. Urinary mercury was associated with abdominal obesity, whereas urinary cadmium was associated with high glucose and low HDL-C levels. Blood mercury was associated with hypertension. Fish and shellfish consumption influenced the relationship between mercury exposure and MetS risk.
Significance: Blood lead exposure is significantly associated with MetS in Korean adults, with additional heavy metals contributing to individual MetS components. Dietary sources of heavy metals may raise MetS risk, highlighting the need for further longitudinal studies to confirm the causal relationships.

P-T04A-0368

Workplace violence mediated the associations between occupation types and smoking among female workers in Taiwan

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Abstract

Background: Among female workers, smoking was discovered to be prevalent in certain occupations e.g. service industries. Studies also suggested that workplace violence may be linked to smoking as coping mechanism among females. Since females often experience unique vulnerabilities in workplaces due to gender-specific roles or occupation-specific violences, the pathways from different occupation types through workplace violences to smoking warrant further studies. This study explored associations between occupational types and smoking, and how experiences of workplace violence mediate associations among Taiwanese female workers.

Method: Female workers aged 18 and above were extracted from the 2016 and 2022 Survey of Perceptions of Safety and Health in Work Environment in Taiwan (n=11,089). Four generalized structural equation models were conducted to examine the associations between occupation types (19 categories) and past-month smoking, mediated by four workplace violence experiences (physical, verbal, psychological, or sexual) and controlled for sociodemographics, occupational characteristics, and year.

Results: Experiencing verbal abuse mediated the association between working in Arts, Entertainment, and Recreation and smoking among females (20.77% effect mediated, Sobel's $p<.01$). Experiencing verbal or psychological abuse were found to be associated with higher likelihood of smoking among female workers (OR=1.71, 1.68, both $ps<.05$). Among nineteen occupational categories, female workers in Arts, Entertainment, and Recreation were more likely to smoke (OR=3.30, $p<.001$), whereas Healthcare and Social Workers were less likely (OR=0.50, $p<.05$), compared to those in Manufacturing. Neither association nor mediation between experiencing sexual harassment or physical violence and smoking was observed.

Conclusion: The significant role of psychological and verbal abuse highlights the urgent need for workplace interventions that address both forms of abuse among female workers. Findings suggest tailored prevention and intervention strategies targeting high-risk occupations (e.g. Arts, Entertainment, and Recreation) and their abusive work environments could be instrumental in reducing smoking rates and improving workplace well-being for female workers.

P-T04D-0393

Immune Health Risks of Endocrine-Disrupting Chemicals: Evidence from Bisphenol A and Azole Derivatives

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Abstract

Background
Endocrine-disrupting chemicals (EDCs), such as bisphenol A (BPA) derivatives and azole compounds, are widespread in daily life. Beyond hormonal disruption, recent evidence suggests they may impair immune function, posing significant public health risks.

Objectives

This study evaluated how BPA and azole derivatives affect immune regulation through receptor interactions and gene expression changes.

Methods

Molecular docking, dynamics simulations, and binding free energy analyses were performed to assess EDC interactions with androgen, glucocorticoid, and estrogen receptors. Transcriptomic profiling of exposed human immune cells was analyzed for differentially expressed genes and enriched pathways.

Results

Several BPA analogs and azole derivatives showed strong receptor-binding affinities, comparable to endogenous ligands. Transcriptomic analysis revealed alterations in cytokine signaling, oxidative stress response, and adaptive immunity pathways. Integration of computational and transcriptomic data demonstrated a consistent link between receptor-binding strength and immune gene dysregulation.

Conclusions

Our findings provide mechanistic evidence that BPA and azole derivatives disrupt immune homeostasis via receptor-mediated transcriptional changes. This highlights the need for stronger environmental monitoring and public health strategies to reduce EDC exposure, particularly among vulnerable groups such as children, pregnant women, and agricultural workers.

Keywords: EDCs; Bisphenol A; azole derivatives; immune health; transcriptomics; public health.

P-T04A-0437

The Impact of Workplace Violence on Alcohol Dependence: Psychological Distress as a Mediating Pathway among Taiwanese Employees

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Abstract

Background: Workplace violence is a critical public health concern that can adversely influence workers' health and behaviors. While prior studies have linked work-related stress to alcohol dependence, limited research has examined workplace violence as a distinct stressor shaping drinking behaviors, particularly among Taiwanese employees. The underlying mechanisms of this association also remain insufficiently understood. To address these gaps, this study examined the links between workplace violence and alcohol dependence, the impact of multiple exposures, and the mediating role of psychological distress.

Method: Employed workers aged 15 and above were drawn from the 2016 Survey of Perceptions of Safety and Health in Work Environment in Taiwan (n=17,757). Logistic regressions and mediation analyses using natural effect models with bootstrap variance estimation were conducted to examine the association between workplace violence (physical, verbal, psychological, or sexual) and alcohol dependence, with psychological distress as mediator, controlling for sociodemographics.

Results: Mediation analysis showed that workers who experienced verbal abuse were more likely to risk alcohol dependence (OR=1.41, p<.01) and had elevated psychological distress (β=2.52, p<.001). Increased psychological distress was also associated with a higher risk of drinking dependence (OR=1.09, p<.001). Mediation analysis showed that psychological distress partially explained the association between verbal violence and alcohol dependence (38.6% effect mediated, Sobel's p<.05). Physical, psychological, and sexual abuse were not observed to have similar associations in mediation. Experiencing verbal or psychological abuse had higher odds of alcohol dependence (OR=1.76, 1.70, ps<.001, respectively) when considered independently.

Conclusion: Psychological distress partially mediates the association between verbal abuse and alcohol dependence, emphasizing the role of mental health in pathways linking workplace violence to alcohol dependence among Taiwanese. Early detection of workers' psychological distress and policy initiatives that enhance occupational wellness, strengthen corporate accountability, and improve access to psychological support are essential to reduce alcohol-related harms and foster healthier working environments.

Keywords: Workplace violence, Alcohol dependence, Psychological distress

P-T04D-0455

Modeling Healthy Island Indicators through Settlement Areas, Public Facilities, and Infrastructure: A LISREL-Based Analysis in South Sulawesi, Indonesia

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Abstract

Island populations face unique public health issues that are closely linked to settlement conditions, the adequacy of public facilities, and the availability of basic infrastructure. In South Sulawesi, Indonesia, unequal access to safe water, inadequate wastewater systems, limited waste management, and substandard housing conditions remain barriers to achieving "Healthy Island" standards. This research seeks to construct a structural model of the main determinants of healthy islands by examining the roles of settlement areas, public facilities, and infrastructure through confirmatory factor analysis using the LISREL approach.

A cross-sectional study was conducted in five selected districts on the island of South Sulawesi with a total of 196 respondents. Data collection focused on four core indicators representing aspects settlement areas, public facilities, and infrastructure: individual and public clean water supply, wastewater disposal, waste management, and housing and settlements. These indicators were treated as latent variables and tested for construct validity and reliability through confirmatory factor analysis, while model fit was evaluated using standard model fit indices.

The results show that all four indicators contribute significantly to the settlement and infrastructure construct (t value > 1.96). Among these indicators, housing and settlement indicators provide the strongest contribution (loading factor = 0.88, $R^2 = 0.78$), while clean water supply has the lowest contribution (loading factor = 0.61, $R^2 = 0.37$). The goodness of fit evaluation indicates that the model performance is acceptable, with CFI (0.93) and IFI (0.94) values meeting the criteria.

The model highlights housing and settlement conditions as the most critical determinants of healthy island status, followed by wastewater and waste management. These findings provide evidence-based insights for policymakers to prioritize infrastructure development in island communities. Integrating settlement and infrastructure improvement into public health planning is essential to achieving sustainable healthy island development in Indonesia.

Keywords: Healthy Island, Settlement, Infrastructure

P-T04B-0503

Evaluation of workload in university kitchen workers by using real time physical monitoring

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Abstract

Background: Kitchen work is associated with various occupational health problems, including stiff neck and shoulders, lower back pain, and other issues. These conditions are believed to result from the physical and psychological workload inherent in kitchen tasks. However, the specific types of kitchen work that contribute to workload remain unclear. This study aimed to evaluate workload in kitchen settings through real-time physical monitoring.

Method: Five female kitchen workers at a university participated in the study. Their mean age was 51.0 ± 9.8 years, and their average work experience was 4.6 ± 1.2 years. Primary tasks included cooking, cutting, plating, meal provision, and cleaning. Workload was assessed using real-time measurements of physical activity intensity and heart rate. Physical activity intensity was evaluated using Metabolic Equivalents (METs) recorded via wearable activity monitors. Stress levels were assessed using the Low Frequency/High Frequency (LF/HF) ratio obtained from wearable heart rate monitors. Participants self-recorded the types of tasks performed on the day of measurement

Results: The average METs during work ranged from 2.4 to 2.6. Task-specific METs were as follows: cooking 2.1–2.5, cutting 1.9, plating 2.4, meal provision 0.9–2.9, and cleaning 1.1–2.6. The average LF/HF ratio during work ranged from 1.4 to 2.1. Task-specific LF/HF values were cooking 2.0–2.7, cutting 2.5, plating 1.6, meal provision 0.9–1.2, and cleaning 1.1–2.2.

Conclusion: Although overall METs and LF/HF values were not so high, real-time waveform patterns varied depending on the type of task. Real-time workload monitoring may clarify the relationship between specific kitchen tasks and workload, thereby contributing to improved work management based on actual working conditions.

Key word: Kitchen work, Workload, Metabolic Equivalents (METs), Low Frequency/High Frequency (LF/HF)

P-T04A-0510

Correlation of spatial and temporal distribution between $PM_{2.5}$ with inflammatory eye disease and dermatitis using QGIS

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Abstract

Chiang Rai Province, located in northern Thailand, experiences high levels of seasonal air pollution each year due to its mountainous geography combined with forest fires, agricultural waste burning, and incinerator use for waste management. Fine particulate matter ($PM_{2.5}$) has been linked to eye irritation manifesting as redness, itching, and allergic conjunctivitis as well as skin conditions such as itching and allergies.

This study aimed to examine the correlation between $PM_{2.5}$ concentrations and human health outcomes, specifically inflammatory eye diseases and dermatitis, using temporal and spatial distribution analyses in Geographic Information Systems (GIS). For spatial distribution, the inverse distance weighting (IDW) interpolation method was applied to assess the spatiotemporal distribution of $PM_{2.5}$, inflammatory eye disease, and dermatitis at different time scales. Monthly average $PM_{2.5}$ data were obtained from Thailand's Pollution Control Department, while data on inflammatory eye disease and dermatitis were collected from the Ministry of Public Health for the years 2021–2023.

The results indicated that monthly average $PM_{2.5}$ concentrations increased from January to April, peaking during the hot season each year and consistently exceeding Thailand's national ambient air quality standard of 37.5 μg/m³. Cases of inflammatory eye disease and dermatitis were particularly concentrated in Chiang Rai's city centre. The correlation between $PM_{2.5}$ and inflammatory eye disease was 0.310, 0.176, and 0.008 in 2021, 2022, and 2023, respectively, with the highest R^2 observed in 2021 (0.310), indicating that 31% of the variance in eye disease cases could be explained by $PM_{2.5}$. The correlation between $PM_{2.5}$ and dermatitis were 0.023, 0.298, and 0.025 across the same years, suggesting a weak association overall.

In conclusion, $PM_{2.5}$ in Chiang Rai shows a seasonal trend with moderate correlation to eye disease, while its weak link to dermatitis indicates the need for long-term studies including other environmental and behavioural factors.

Keywords: $PM_{2.5}$, conjunctivitis, dermatitis, GIS, Chiang Rai

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T04B-0516

Prevalence and Postural Risk Factors of Work-Related Musculoskeletal Disorders Among Stone Crushing Plant Workers

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Abstract

Work-related musculoskeletal disorders (WMSDs) are the most prevalent occupational health issue in Thailand and the leading cause of work capacity loss. This cross-sectional study aimed to determine the prevalence of WMSDs among workers in a stone crushing plant and to examine the association between work postures and musculoskeletal symptoms. A total of 86 workers were assessed using the Standard Nordic Questionnaire to identify musculoskeletal complaints and the Ovako Working Posture Analysis System (OWAS) to evaluate ergonomic risks. Body composition was measured using a Body Composition Analyzer, and data were analyzed through descriptive statistics and the Chi-square test. Among the participants, 87.21% were male, 44.19% had 2–5 years of work experience, and most worked 6–8 hours per day. Additionally, 51.16% were smokers, 56.98% had a history of COVID-19 infection, and 63.95% had non-standard body. The average body fat percentage was 16.37% ± 1.13, and the average bone mass was 2.76 kg ± 0.14. All participants reported musculoskeletal symptoms affecting multiple body regions. The most frequently reported pain areas were the lower back (55.81%), shoulders (46.51%), and upper back (46.51%). The top three ergonomic risk factors included repetitive movements (52%), prolonged static postures (42%), and exposure to vibration (42%). Significant associations were found between specific postures and WMSDs. Lower back pain was linked to lifting weights over 20 kg ($p = 0.001$). Shoulder pain was associated with sitting upright, twisting or bending sideways, working with arms below shoulder level, and squatting or standing with knee angles <150° (p-values ranging from 0.008 to 0.032). Upper back pain was related to trunk bending/twisting, squatting or standing with knee angles <150° ($p < 0.001$), and lifting heavy loads ($p = 0.008$). These findings highlight the need for ergonomic interventions, posture training, scheduled rest breaks, and routine health monitoring to reduce WMSD risks.

Key words: Stone crushing industry, Ergonomic risk factors, Work-related musculoskeletal disorders

P-T04D-0520

The study of factors affecting Indoor air quality in hospitals and its effect on healthcare worker's health, Phuket province.

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Abstract

This study aimed to evaluate indoor air quality (IAQ) in a hospital in Phuket Province and to examine factors associated with IAQ and building-related symptoms (BRS) among staff. Data were collected through building surveys, IAQ monitoring in four departments, and health assessments of 32 workers. Univariable and multivariate analyses were conducted to identify significant associations.

The measurements revealed that particulate matter exceeded the standard, with PM10 in 75.0% of samples and PM2.5 in 50.0%. Regarding health outcomes, 37.5% of staff reported no symptoms, 21.9% met the criteria for BRS, and the remainder reported varying symptoms across one or more systems. PM2.5 was significantly associated with building maintenance and cleanliness. Additional factors related to BRS included work characteristics, duration of indoor exposure, and environmental parameters such as temperature, humidity, carbon dioxide, and unpleasant odors. Indoor pollution sources, particularly photocopiers and servers, also contributed to symptom occurrence.

The findings highlight the critical role of IAQ management in hospitals. Regular building maintenance, effective dust control, regulation of thermal comfort, and mitigation of indoor pollutant sources are essential to reduce the risk of BRS and protect worker health. Beyond health protection, improving IAQ can also enhance workplace efficiency and safety. These results provide evidence to support preventive strategies and policies for IAQ improvement in hospitals, ultimately promoting occupational health and sustainable well-being.

Keywords: Indoor Air Quality (IAQ), Occupational health

P-T04A-0526

The Distribution Of Microplastics From The Final Disposal Site In Highland Communities In Chiang Rai Province, Thailand

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Abstract

This study investigated the occurrence, types, and characteristics of microplastics (MPs) in soil associated with waste management sites in highland communities of Chiang Rai, Thailand. Four sites of local authorities were selected based on the waste management practices and highland geographical conditions which consists of: 1) MP site, MY site, BD site and MC site. Sampling was conducted from August to October 2024. Soil samples were collected at 0–5 cm depth using quadrat-based random sampling, while water samples were obtained only from BD site, where a landfill is located near a natural water source.

Laboratory analysis involved drying, sieving, density separation with NaCl, organic matter digestion via wet peroxide oxidation, and microscopic examination (40× magnification) to classify MPs by shape (lines, fragments, films, chips, pellets) and color (red, black, blue, green, brown). Fourier Transform Infrared Spectroscopy (FTIR) was used to identify polymer types. MPs were categorized into three size ranges: 1–5 mm, 300 µm–1 mm, and 20–300 µm.

Results revealed MPs in the 1–5 mm and 300 µm–1 mm size range in all sites, but none in the 20–300 µm range. The highest abundance of 300 µm–1 mm MPs occurred in BD, while MP recorded the highest 1–5 mm MPs. FTIR confirmed MPs in all samples, predominantly polystyrene (PS) and polypropylene (PP). In water samples from BD, MPs were also detected, indicating potential leaching from landfill sites.

The findings suggest that open dump in highland communities contribute to MP contamination in surrounding soil and water, with implications for environmental quality and potential entry into the food chain. The study highlights the need for improved waste management strategies, such as source separation and landfill containment, alongside public awareness campaigns to reduce plastic use and prevent further MP pollution in highland ecosystems.

P-T04A-0554

Assessment of Noise Exposure and Its Association with Hearing Impairment Among Tricycle Drivers in a Municipality in Bataan

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Abstract

Tricycle, a motorized vehicle consisting of a motorcycle with a sidecar attached to it, is widely used as transportation in the various provinces in the Philippines. Tricycle drivers are exposed to prolonged and intense noise from various sources, putting them at a high risk for noises-induced hearing loss (NIHL). This study aims to explore the relationship between self-reported noise exposure and the prevalence hearing impairment symptoms among tricycle drivers in a municipality in Bataan, a province located in the Central Luzon region of the Philippines.To carry out this cross-sectional study, a structured survey administered to 100 tricycle drivers. The survey had three main sections. The first part gathered data such as such as age, years of service, average daily working hours and use any form of hearing protection. The second part assessed the driver's self-perceived noise exposure levels, asking drivers to rate noise intensity and identify major sources of noise, including their tricycle engine sounds, other vehicles (car, trucks, buses), horns/sirens and noise from the surrounding environment. The third part included a checklist to identify the common hearing-related issues, such as ringing, buzzing sounds in their eras, experienced temporary hearing loss, ask people to repeat themselves and turning up the volume of cell phones, radios, television louder than others. The majority of them (85% of the participants) worked long hours, averaging 8 to 12 hours per day, in what they described to be noisy environment. The most frequent complaints of hearing impairment were tinnitus (ear ringing) and trouble hearing conversations in noisy environments, with over 60% of the drivers reporting at least one symptom. Furthermore, the study discovered a positive correlation between the duration of driver's service, their tricycle driving experience and the prevalence of these symptoms. These findings highlight that prolonged exposure to high levels of noise in their work environment contributes to auditory health problems. The results suggest that the tricycle driving shows a significant and often unacknowledged occupational health risks in Philippines' transportation sector. The noticeable self-reported hearing symptoms among the participant underscores the urgent need of attention. The study concludes recommendation for the implementation of public health campaigns to raise awareness of noise-induced hearing loss and advocates for the providing hearing protection devices to reduce the risks faced by these essential workers. The findings from this study can guide policymakers and health organizations in creating effective health and safety programs for tricycle drivers and similar informal labor sectors.

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P-T04A-0568

Factors Influencing Carbon Footprint Emissions Footprint: An Analysis of a Road Freight Transport Service Company

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Abstract

This study aims to evaluate the carbon footprint (CFP) resulting from road freight transport activities and to analyze the relationship between factors affecting carbon emissions in logistics service company. The road transport sector is one of the most significant contributors to greenhouse gas emissions, particularly due to the high number of operators and vehicles. The study utilized secondary data from 2023, covering operations in 12 provinces in southern Thailand. Data were collected from 96 trucks, including both own fleet and subcontracted vehicles. The data were collected by using transport logs, fuel consumption records, and operational characteristics of the companies, such as fuel efficiency, load weight, load factors, vehicle type, route characteristics, and vehicle speed. The results indicated that the trucks emitted approximately 6,975 tons of carbon dioxide equivalent (tCO2e) in 2023. Statistical analysis showed that vehicle speed, fuel consumption, and travel distance were significantly correlated with the carbon footprint ($p < 0.001$). Higher speed, longer distances, and higher fuel consumption increased emissions, whereas higher load weight was associated with lower emissions ($p < 0.01$). Effective route management and the use of supportive transport technologies can help reduce emissions. These findings serve as a baseline year for Carbon Footprint for Organization (CFO) and can be applied to design green logistics strategies, supporting sustainable logistics practices in Thailand's transport sector.

Keywords: carbon footprint, road freight transport, green logistics, greenhouse gas, truck

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T04D-0574

Food sanitation situation in primary school, Case Study Mueang Suphanburi District Suphanburi Province, Thailand

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Abstract

Diarrhea and food poisoning situation in school was slightly high especially in primary school at Suphan Buri province. There had more diarrhea cluster. This aimed to study food sanitation situation.

This was a cross-sectional study. Samples were collected by stratified sampling method including primary school in Suphan Buri province amount 50 and a food handler 89 persons. Food sample was 200 sample including plate, drinking water, hand which contaminated. The data was collected from SAN questionnaire and test kit. The data was analyzed by using descriptive statistics.

This study shown more than half of primary school under a sanitation standard (86.00%) especially did not have a sanitation training course (83.10%). Most of food handler had higher knowledge (96.60%) and good practice (92.14%). Most of food did not have physical contaminated (88.50%) but found coliform bacteria in drinking water (24.00%).

Therefore, local government and public health office should be preparing training course of food sanitation by standard. They will being promote a practice sanitation by a media such as VDO, clip or poster in the food court. They should be preparing a monitoring measurement about food sanitation in primary school to improve a standard to be continue and sustainable.

Keyword: Food handler Food sanitation Food contaminated test

P-T04D-0599

Factors associated with mental well-being among adult people in Okinawa, Japan

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Abstract

Background: Well-being is an important aspect of quality of life. However, factors affecting mental well-being among the adults in Okinawa remain understudied. In Okinawa, heavy reliance on cars often leads to traffic congestion, which can increase stress and negatively affect health. Such daily stressors may in turn influence overall well-being. This study aimed to identify factors associated with mental well-being among adults in Okinawa, Japan

Methods: We conducted a self-administered questionnaire survey with 150 students at an university and 174 workers at three municipality offices in the northern part of Okinawa between June and July, 2025. The mental well-being was measured by WHO-5. The exposure variables included age, sex, self-rated health condition, economic situation and experience of traffic congestion. Fisher's exact test was used to assess the association between the mental well-being and exposure variables. The exposure variables with significant association were included in a multiple logistic regression model.

Results: Approximately half of the participants (51.2%) reported experiencing traffic congestion daily when commuting. The majority (61.4%) perceived their current economic situation as "so-so. Fisher's exact test showed the significant association of mental well-being with self-rated health condition ($p<0.001$) and economic situation ($p<0.001$). Multiple logistic regression analysis showed that people who rated their health status "normal" (OR: 3.92, 95%CI: 2.17-7.06) and "bad/very bad" (OR: 5.81, 95%CI: 2.37-14.3) were significantly more likely to have poor mental well-being compared to those who rated their health status "good/very good". Additionally, people who perceived their economic situation "comfortable/very comfortable" (OR: 0.397, 95%CI: 0.16-0.98) were significantly less likely to have poor mental well-being.

Conclusion: The present study showed that better self-rated health and lower economic status were strongly associated with mental well-being. It suggests that perceived health conditions and socioeconomic factors are important to develop an effective strategy to enhance the quality of life.

Keywords: Well-being, Traffic congestion, Cross-sectional study, Japan

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T04A-0602

Investigative Study And Environmental Health Risks Of Microplastic Exposure In Well Water Near The Batang Arau River Basin, Padang City, 2025

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Abstract

Microplastics (MPs) are contaminants resulting from plastic waste degradation and have become a global concern due to their potential long-term health impacts from accumulation in the human body. Batang Arau is the most polluted river and the area with the highest waste accumulation in Padang City, increasing the risk of MPs entering drinking water sources, including well water. This study aimed to assess the level of environmental health risk due to MPs exposure through well water consumption among residents of Batang Arau Subdistrict. This research utilized the Environmental Health Risk Analysis (EHRA) approach between January and July 2025, including 98 respondents and 34 well water samples. Two liters of well water were filtered using a 100 µm plankton net, followed by initial filtration, oxidation, solid separation, and particle identification. MPs polymers were identified using FTIR-ATR spectroscopy, and the Polymer Hazard Index (PHI) was calculated to represent all samples in the study area. MPs were detected in all well water samples with an average abundance of 29.61 particles/L and concentration of 0.00981 mg/L. The particles appeared as fragments (4–700 µm), fibers (20–2,472 µm), and films (20–968 µm). FTIR-ATR analysis revealed the polymer composition order: PE > PET > PS > PVC = PP. Realtime intake exposure analysis resulted 0.00025 mg/kg/day, while lifetime exposure was 0.00030 mg/kg/day. The average realtime and lifetime RQ values were 0.00025 and 0.00030 for PS; 0.00023 and 0.00032 for PE in males; and 0.00063 and 0.00070 for PE in females. The PHI calculation was 310.89 (Level III). Risk characterization of MPs exposure through well water consumption indicated that PS and PE polymers were in the safe category (RQ < 1). However, the PHI value was in the moderately high hazard category. Therefore, using alternative drinking water sources is recommended to minimize potential health risks from well water contaminated with MPs.

Keywords: Microplastics, EHRA, Well Water, River Basin

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T04A-0603

Environmental Health Risk Analysis of Microplastics Exposure Through Fish Consumption in The Community of Batang Arau Urban Village, Padang City in 2025

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Abstract

Microplastics (MPs) are plastic particles that are less than 5 mm in size, act as pollutants and pose a serious threat to human's health. The Batang Arau Urban Village is an area with high fishing activity that is also polluted with plastic waste. The community is potentially exposed through the consumption of marine fish that accumulates microplastics from local waters. This study aimed to analyze the health risks of microplastic exposure through marine fish consumption in the Batang Arau Urban Village community. This study used the Environmental Health Risk Analysis (EHRA) method to measure the level of health risk effects, conducted from January to July 2025 in the Batang Arau Urban Village area. Community samples was collected using multistage sampling technique, involving 104 respondents and samples of three types of fish from the community's largest consumption, totaling six fishes. MPs concentrations were calculated based on the number, shape, and size of particles identified using microscope, as well as the type of polymer identified using FTIR-ATR spectrophotometer. The polymer composition detected include: PS > PP > PE & PET > PA & PC & PES; with an average MPs concentration of 1.5305 mg/kg. Realtime and lifetime exposure intakes analysis shown average values of 0.0031 mg/kg/day and 0.0019 mg/kg/day. The RQ values obtained represent two polymers: PS (realtime: 0.0065, lifetime: 0.0039); PE for males (realtime: 0.0008, lifetime: 0.0004); and PE for females (real-time: 0.0014, lifetime: 0.0009). The risk assessment of microplastic exposure through marine fish consumption in Batang Arau Urban Village is categorized as no risk (RQ<1) for the two types of polymers (PS and PE). However, MPs particles are still found in consumed marine fish, indicating that mitigation efforts should remain focused on controlling pollution sources through plastic waste reduction.

Keywords: EHRA, Microplastics, Fish Consumption, FTIR Spectroscopy

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T04A-0613

Indoor Air Quality Assessment in University Teaching Laboratories: Compliance with ESPReL Standards

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Abstract

The objective of this research was to assess indoor air quality in teaching laboratories and evaluate compliance with ESPReL standards for ventilation and air conditioning engineering. A cross-sectional descriptive design was employed, surveying 154 laboratories at one point in time and categorizing them into four groups based on laboratory type. Sample size was determined using Taro Yamane's formula. Each laboratory was assessed using an ESPReL checklist related to ventilation and air conditioning standards. Post-teaching air quality measurements revealed that temperature complied with the standard in 9 rooms (31.0%) but failed in 20 rooms (69.0%). Relative humidity met the standard in 13 rooms (44.8%) but not in 16 rooms (55.2%). Carbon dioxide concentration complied in 26 rooms (89.7%) but not in 3 rooms (10.3%). Formaldehyde gas met the standard in 6 rooms (66.7%) but exceeded the limit in 3 rooms (33.3%). Carbon monoxide levels were within the standard in all 9 rooms (100%). Both total microbial count and total bacterial count met the standard in 8 rooms (100%). However, despite partial compliance with ESPReL criteria, concentrations of formaldehyde, carbon monoxide, PM2.5, and PM10 particles did not meet the Department of Health's 2022 notification on indoor air quality in public buildings. This finding indicates inconsistency between certain ESPReL standards and the national health regulations. The results highlight the need to improve ventilation and air conditioning systems in teaching laboratories to ensure compliance with both ESPReL standards and the Department of Health's regulations. Strengthening air quality management in such environments is essential for protecting the health and safety of students and staff.

P-T04B-0693

Association Between Psychosocial Work Conditions and Self-Medication for Work-Related Injuries or Illnesses: A National Cross-Sectional Study in Taiwan

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Abstract

Background: Self-medication for work-related injuries and illnesses is a critical labor health issue, as it can obscure underlying conditions, delay treatment, and heighten long-term risks. The Job Demand-Control (JDC) model suggests that high job demands and low decision latitude increase psychosocial distress and foster coping behaviors such as self-medication. However, little research has examined how psychosocial work conditions shape self-medication in the context of work-related health problems. This study aimed to examine these associations among Taiwanese workers.

Methods: The study analyzed data from 4,009 workers (≥15 years old and covered by national labor insurance) included in the 2022 Survey of Perceptions of Safety and Health in the Work Environment. Multivariable logistic regression assessed associations between psychosocial work conditions (measured by the job demand-control model) and self-medication for work-related injuries or illnesses, adjusting for sociodemographic and health-related factors.

Results: After adjusting for gender, age, education level, and smoking condition, higher job demand was significantly associated with a greater likelihood of self-medication for work-related injuries or illnesses (OR=1.14, p< .001). In contrast, decision latitude showed no significant association. The odds of self-medication were higher with mild to severe somatic symptoms (ORs ranged from 2.49 to 3.04, p= .002~.009). Conversely, the 35 to 44 group and 45 to 54 groups (OR=0.31 and OR=0.46, respectively) and exercising 2-4 times per week (OR=0.50, p= .005) were significantly associated with lower odds of self-medication.

Conclusions: Higher job demand emerged as key psychosocial risk factor for self-medication for work-related health issues, with decision latitude offering no protective effect. Somatic symptoms were the strongest predictor, while regular exercise was protective. Workplace policies should prioritize strategies aimed at managing high job demands and promoting physical activity to foster safer medication practices and enhance worker well-being.

Keywords: Job Demand-Control Model, Self-medication, Mental health

P-T04C-0759

Interaction of Job Insecurity and Diabetes Mellitus Severity on the Risk of Cardiovascular Disease

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Abstract

Background: Diabetes mellitus, a key risk factor for cardiovascular disease (CVD), is increasingly prevalent due to westernized lifestyles. Low socioeconomic status, particularly employment instability, is a critical but understudied factor that may heighten CVD risk in diabetic patients. This study aims to investigate the impact of employment instability on CVD risk among individuals with diabetes.

Methods: Using Korean National Health Insurance Service data, we identified diabetic workers aged 40–50 years with continuous employment in 2009–2010. Job insecurity was categorized annually from 2012–2016. The primary endpoint, incident CVD or all-cause mortality, was tracked from January 2011 to December 2023. Cox proportional hazards models estimated adjusted hazard ratios (HRs) with 95% confidence intervals (CIs). The interaction between the number of oral antidiabetic drug classes last taken and job insecurity on the composite outcome was assessed using the additive interaction approach via relative excess risk due to interaction (RERI).

Results: After exclusions, 128,704 individuals (107,071 men, 21,633 women; mean age 49.1 and 50.0 years, respectively) were analyzed. Over a 13-year median follow-up, employment instability interacted significantly with diabetes severity (by oral antidiabetic medication count). In men with unstable jobs, CVD risk HRs were 1.41 (95% CI: 1.33–1.48) for 1–2 agents and 2.19 (95% CI: 1.99–2.42) for ≥3 agents compared to stable employment, with a synergistic RERI of 0.34 (95% CI: 0.11–0.57). In women, HRs were 1.48 (95% CI: 1.29–1.70) and 2.63 (95% CI: 2.11–3.28) for 1–2 and ≥3 agents, respectively, but RERI was non-significant (0.36, 95% CI: -0.26–0.99).

Conclusions: Job instability markedly increases CVD risk in diabetic patients, especially men with advanced diabetes on multiple oral antidiabetic agents, highlighting the need to integrate medical and socioeconomic factors into cardiovascular prevention strategies.

Keywords: Job insecurity, Diabetes mellitus, Cardiovascular disease, Employment instability, Interaction

P-T04C-0763

Worker Protection in the Algorithmic Era: Algorithmic Justice and Tax-Based Insurance Systems for the Gig Economy

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Abstract

Background: The expansion of the digital platform economy and advances in artificial intelligence (AI) and algorithmic technologies are fundamentally transforming employment structures and work practices. Boston Consulting Group (BCG, 2018) projects that 4-45% of workers may become platform workers, with 11-50% relying on it as their primary income source. The International Labour Organization (ILO, 2021) reports that digital labor platforms have grown fivefold over the past decade, emphasizing the need for new policy measures. However, algorithms prioritize efficiency and profitability, often compromising worker health and fairness. Algorithmic justice aims to reduce bias and inequity in algorithmic systems while protecting worker rights and health through fairness, transparency, accountability, inclusivity, and safety. This study reinterprets algorithmic justice from an occupational health perspective, analyzes health and fairness issues among gig economy workers, and proposes an algorithm tax and algorithm-dependent insurance system.

Methods: This study conducted a literature review to analyze the health and fairness impacts of algorithms in the gig economy and applied principles of algorithmic justice to occupational health. Key literature including BCG (2018), ILO (2021), Buolamwini & Gebru (2018), and Yoon (2023) were reviewed to identify algorithm-related health issues: trade-offs between economic success and health, effort-reward uncertainty, unreliable performance evaluations, and inaccurate attribution of responsibility. Health problems among Korean gig workers were identified through existing research and analysis of Korean Working Conditions Survey data. Korea's AI Basic Act (scheduled for 2026) and the EU AI Act (2021-2024) were analyzed to explore legal and institutional solutions. The

feasibility of algorithm tax and insurance systems was theoretically examined based on robot tax and social insurance literature.

Results: Reinterpreting algorithmic justice from an occupational health perspective yields five core principles: (1) fairness (avoiding discriminatory outcomes based on gender, age, race, or disability; prohibiting underestimation of health risks or excessive workload assignment to specific worker groups), (2) transparency and explainability (transparent decision-making processes in task allocation, wage determination, and performance evaluation; enabling workers to challenge decisions), (3) human oversight and accountability (mandatory human review of algorithmic decisions; clear responsibility attribution when harm occurs), (4) robustness and safety (stable algorithm operation under predictable conditions; prohibition of unreasonable risks to worker health and safety), and (5) respect for human and labor rights (guaranteeing fundamental rights including non-discrimination, equality, privacy, data protection, and worker autonomy).

In the gig economy, algorithms drive task allocation, wage determination, and performance evaluation but create health and fairness problems: (1) trade-offs between economic success and health (e.g., accident risks for delivery workers), (2) stress from effort-reward uncertainty, (3) unreliable performance evaluations based on subjective customer feedback, and (4) unjust responsibility attribution due to system failures. AI applications in occupational health (health management, risk prediction, job placement) carry risks including privacy violations, data bias, and excessive labor demands.

Health problems among Korean gig workers were confirmed: the 2020 Korean Working Conditions Survey showed that 30% of platform workers work over 60 hours weekly, and accident fatality rates for delivery workers are three times higher than general workers (Occupational Safety and Health Research Institute, 2022). The Korea Institute for Health and Social Affairs (2023) reported that 25% of gig workers face economic activity constraints due to health shocks, with depression prevalence at 5.2% compared to 3.8% among all workers. Analysis of 2023 Korean Working Conditions Survey data revealed that platform workers face higher risks of health problems (OR: 1.17, 95% CI: 0.96-1.42) and sleep disorders (OR: 1.58, 95% CI: 1.20-2.07) compared to non-platform workers.

As solutions, algorithmic justice strengthens principles through fairness, transparency, and human-centered design; algorithm tax reinforces corporate social responsibility; and algorithm-dependent insurance systems provide health and financial safety nets. Korea's forthcoming AI Basic Act and Personal Information Protection Act provide legal foundations, but specific policies are needed to address social insurance blind spots for platform workers.

Conclusion: In the gig economy, algorithms compromise worker health and rights through trade-offs between economic success and health, effort-reward uncertainty, unreliable performance evaluations, and inaccurate responsibility attribution. Algorithmic justice addresses these issues through fairness, transparency, accountability, inclusivity, and safety, promoting ethical algorithm design that protects worker wellbeing. Algorithm tax and algorithm-dependent insurance systems mitigate negative algorithmic impacts by providing financial and health safety nets. Through integrated legal, institutional, technological, and ethical approaches and collaboration among stakeholders (workers, platform companies, governments, healthcare and insurance providers, researchers), a technological ecosystem ensuring health equity and fairness for gig workers can be established. This study proposes convergence of occupational health and algorithmic justice, emphasizing the necessity of policy development for platform worker protection.

P-T04A-0771

Ecological Risk Assessment: Developing Standardized Test Methods for Microplastics in Thai Environmental Matrices for Long-term Monitoring

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Abstract

Microplastics (MPs) have become widespread contaminants across various environmental matrices, including freshwater, sediment, soil, and biota. Their persistence, diverse physical forms, and ability to carry toxic additives and co-contaminants pose significant ecological risks. In Thailand, the research projects have evolved from documenting MP occurrence to evaluate the potential dangers by MPs in soil, water and the atmosphere using index-based approaches such as Risk Index, Pollution Load Index and Potential Ecological Risk Index. However, gaps remain in chronic toxicity data, field-lab integration, metric harmonization, and interlaboratory validation. This project investigates the development of ecological risk assessment (ERA) frameworks for MPs in Thailand. Peer-reviewed research published between 2015 and 2025 were analyzed, examining trends in MP detection, exposure quantification, ecotoxicological testing, risk modeling, and standardization efforts. We also proposed the polymer risk index due to MPs found in seawater and beach sediment samples collected from the study site, Lipe Island, in the Andaman region. The risk index uses the toxicity or the hazard score (S_n) of polymers as a risk assessment indicator for MPs. By using FTIR microscopic technique, identification of microplastics in seawater near Lipe Island were polyvinyl chloride (PVC), polyurethane (PU), polyethylene (PE), and polyethylene terephthalate (PET). Furthermore, most microplastics found in the sediment samples collected from the Lipe beaches were polyvinylidene chloride (PVDC), PU, polyacrylate, PE, and polypropylene (PP). The previous MP data ranked from the highest (PVC) to lowest (PP) toxicity or S_n of polymers. Development of matrix-specific standardized test protocols, certified reference materials, and harmonized metrics for exposure and hazard alignment will promote more accurate and policy-relevant ecological risk assessments of MP pollution. This project lays the groundwork for bridging laboratory research with field-based management of MP pollution in Thailand's diverse ecosystems.

Keywords: Microplastics, Ecological Risk Assessment, Standardized Methods, Thailand, Long-term Monitoring, Risk index, Exposure Metrics

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P-T04B-0772

Occupational and Subsector Differences in Cardiovascular Disease Risk among Transportation Workers

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Abstract

Background: Cardiovascular disease (CVD) remains a leading cause of morbidity and mortality worldwide. Although the transportation industry is recognized as a high-risk sector for CVD, differences across its subsectors and occupational groups have not been well characterized. This study examined variations in CVD risk among subsectors and occupations within South Korea's transportation industry to identify high-risk groups.

Method: Using nationally linked data from the Korean National Health Insurance Service and Employment Insurance databases, we conducted a retrospective cohort study of male workers aged 35–54 years who were continuously employed in the same industry and occupation during 2012 and participated in the national health screening program in 2012–2013. The index date was January 1, 2013, and incident CVD cases were defined as hospitalizations identified through ICD-10 codes. Participants were followed until 2022. Age-standardized incidence rates, standardized incidence ratios (SIRs), and population-attributable fractions (PAFs) were calculated across industries.

Results: Among 2,300,512 eligible participants, the transportation industry had the highest age-standardized incidence rate of CVD (558.9 per 100,000 person-years) and the largest PAF (1.49%) across all industries. Within this sector, driving-related occupations showed the highest SIRs, particularly in land transport and freight subsectors, whereas aviation-related occupations had lower CVD incidence and more favorable health profiles.

Conclusion: Considerable variation in CVD risk exists across subsectors and occupations within the transportation industry. Targeted, occupation-specific prevention strategies are warranted, especially for drivers who exhibit elevated risk.

P-T04B-0780

Personal-social factors associated with increased risk of anemia prevention behaviour among school-aged girls in an urban Indonesian: A cross-sectional study

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Abstract

Background: Iron deficiency anemia among adolescents is one of the public health issues worldwide. One of prevention effort has been implemented was iron supplementation program. However, the compliance level of this program was still low. This study aimed to explore personal, behaviour, and social factors of compliance level of consumption iron supplementation among school-aged girls.

Methods: A cross-sectional study involved 8th and 9th grade female students from six Junior High School in Makassar City, South Sulawesi Province of Indonesia. A total 425 sample were selected through simple random sampling technique. Anemia status collected using Hemoque 301 of 5 ml capillary blood sampling. Knowledge, attitude, self-motivation, and self-efficacy, behaviour and social determinants collected using a validated questionnaire. Chi-square test and regression logistic performed to analyse the data.

Results: Mean age of respondents are 13.68 ± 0.64 years. A total of 28% adolescents girls suffer for anemia, of which 20%, 7.3%, and 0.7% had mild, moderate, and severe anemia, respectively. Only 56% adolescents consumed Iron Folic Acid (IFA) supplementation when they received this program at school. In multivariate analysis, high level of mothers' education was significantly associated with increased risk of tablet IFA consumed (Prevalence Ratio [PR]: 3.059; 95% CI: 1.160 - 8.069) and occupation of mothers was associated with increased risk of tablet IFA consumed (PR: 2.075; 95% CI: 1.146 - 3.757) among adolescents' girls. High self-efficacy was significantly associated with increased risk of tablet IFA consumed (PR: 2.331; 96% CI: 1.009 - 5.388) among adolescents' girls with anemia, whereas high self-motivation was associated with increased risk of tablet IFA consumed (PR: 2.639; 96% CI: 1.557 - 4.472) among adolescents' girls without anemia.

Conclusions: Increasing self-motivation and self-efficacy in taking iron supplement is warranted to improve adolescent girls' coverage of this supplementation, which can be achieved through nutrition education involving parents.

Keyword: Anemia, self-motivation, self-efficacy, Iron Folic Acid, Supplementation

5.Health Policy & Systems

P-T05A-0153

Proposing National Diagnostic Reference Levels for Computed Tomography in Jordan: A Multicentre Study in West Asia

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Abstract

Background: The increased use of computed tomography (CT) has raised concerns about patient radiation exposure. Diagnostic reference levels (DRLs) play a crucial role in optimising radiation dose while maintaining diagnostic quality. In Jordan, the absence of officially established national DRLs across a wide range of CT procedures may contribute to dose variability between healthcare facilities.
Methods: A multicentre, retrospective study was conducted across 10 hospitals in Jordan, involving 4310 adult patients (aged 18–96 years). Radiation dose metrics, including volume volumetric CT dose index ($CTDI_{vol}$) and dose length product (DLP), were collected from Picture Archiving and Communication Systems (PACS) and Radiology Information Systems (RIS). The proposed national DRLs were derived from the 75th percentile of the distribution of median $CTDI_{vol}$ and DLP values from each hospital. Stepwise multiple regression analysis was performed to identify factors contributing to dose variability.
Results: Marked dose variations were observed across hospitals. Head routine non-contrast CT demonstrated the highest median $CTDI_{vol}$ (65 mGy) and DLP (1572 mGy·cm), while high-resolution chest CT exhibited the lowest ($CTDI_{vol}$: 12 mGy; DLP: 230 mGy·cm). The product of mAs was identified as the most significant predictor of dose across all CT examinations. When compared to international DRLs, Jordan's CT dose levels were generally within acceptable ranges, though L-spine CT showed higher than average values.
Conclusion: This study proposes the first national DRLs for 14 common CT examinations in Jordan, based on data collected from hospitals across the country. These benchmarks support dose optimisation, promote standardised protocols, and highlight the need for continuous radiographer training. Future initiatives should expand DRL development to paediatric populations and integrate dose tracking into national quality frameworks.

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T05D-0327

Analysis of Service Quality Using SERVQUAL to Improve Patient Satisfaction in Standard Inpatient Class

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Abstract

In this study, we aimed to evaluate patient satisfaction with inpatient services following the implementation of the Standard Inpatient Class (KRIS) policy at Dr. Tadjuddin Chalid Hospital, one of the designated pilot project hospitals. Within the context of ensuring equitable healthcare access for all participants of the National Health Insurance (JKN) program, our objective was to determine the relationship between service quality dimensions and patient satisfaction to address gaps identified in existing literature on KRIS outcomes.

This quantitative cross-sectional study was conducted from May to June 2025 at Dr. Tadjuddin Chalid Hospital, Makassar. A total of 174 BPJS Health patients were selected using the Isaac and Michael table with a 10% margin of error. Data were collected through a SERVQUAL-based questionnaire and analyzed using correlation techniques. Ethical approval was obtained from the Health Research Ethics Committee of Dr. Tadjuddin Chalid Hospital, and participants provided informed consent.

The primary outcome of the study was the level of patient satisfaction, which showed a significant positive correlation with all five service quality dimensions—reliability, responsiveness, assurance, empathy, and physical evidence. Empathy had the highest correlation coefficient (r = 0.770), followed by responsiveness

(r = 0.577), reliability (r = 0.510), assurance (r = 0.506), and physical evidence (r = 0.338).

Our study contributes to understanding patient satisfaction in the context of KRIS implementation by highlighting the importance of empathy and responsiveness. These findings provide insights for improving both interpersonal and facility-based service quality to support the successful nationwide implementation of KRIS

P-T05B-0348

How Educational Inequality Among Rural Residents Relates to Healthy Lifestyle Behaviors in Later Life: Evidence from the Northern China Lifestyle Medicine Cohort Baseline

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Abstract

Background: Educational inequality affects health, but its link to healthy lifestyles in rural older adults in low-resource settings is underexplored. This study aimed to evaluate educational attainment and healthy lifestyles in rural Chinese adults aged 65 and older, analyze the association with Healthy Lifestyle Score (HLS), and explore variations across lifestyle behaviors.

Method: We used baseline data from the Northern China Lifestyle Medicine Cohort (July 2023-January 2024) in Ningjin (Shandong), Jia County (Henan), Delingha (Qinghai), and Linkou (Heilongjiang). Adults aged 65 and older with hypertension or diabetes in the National Basic Public Health Service program were included. Data on sociodemographics, health behaviors, and health status were collected via interviews and verified by physical exams. A composite HLS (range: 0-7) was based on seven lifestyle indicators. Linear and logistic regression assessed associations between education and HLS or specific behaviors. Propensity score matching (PSM) estimated adjusted HLS differences between illiterate and non-illiterate participants.

Results: Among 10,459 adults (57.2% female), 34.0% were illiterate. Mean HLS was 4.69 (SD=1.24). Each educational attainment increase added 0.17 points to HLS (95% CI: 0.14-0.20). Higher education was linked to healthy diet (OR=1.15), sleep (OR=1.17), physical activity (OR=1.18), and leisure activity (OR=1.34), but negatively with non-drinking (OR=0.82). PSM indicated that illiterate participants had lower HLS (4.59, 95% CI: 4.55-4.63) than non-illiterate participants (4.89, 95% CI: 4.84-4.93), with a net difference of 0.30 points.

Conclusion: These findings indicate educational attainment among rural Chinese older adults is low, with moderate engagement in healthy lifestyle behaviors. Higher educational attainment is associated with healthier lifestyle choices, suggesting that strengthening rural education through targeted policies and increased investment can play a key role in improving population health and advancing the long-term goal of healthy aging.

Keywords: Educational inequality; Healthy Lifestyles; Older adults; Rural China.

P-T05A-0354

Island Health Services in the Disruptive Era: Case Study of Kodingareng Island Health Center

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Abstract

Island communities experience health disparities due to isolation, weak infrastructure, and limited transport. This era of digitalization and evolving health needs presents both challenges and opportunities. This study explores the dynamics of island health services through the case of the Kodingareng Community Health Center (Puskesmas) in Makassar City, Indonesia. The paper aims to identify systemic barriers, highlight adaptive innovations, and propose hybrid strategies for resilient and equitable health service delivery.

A qualitative case study was conducted through document review, literature synthesis on island health and telemedicine, and secondary observation at the health center. Data were collected via in-depth semi-structured interviews with 10 health workers, 5 community leaders, and 15 local residents (n=30). Thematic analysis was used to identify systemic barriers, adaptive practices, and opportunities for innovation.

Key barriers included limited electricity supply, high turnover of health workers, weather-dependent referral logistics, and limited funding. Adaptive practices emerged: the use of community health cadres, social media-based health promotion, and nutrition programs based on local foods (fish, seaweed, and sea cucumbers). A proposed hybrid model integrates renewable energy for cold chain sustainability, telemedicine for specialist access, and community-based health initiatives aligned with the WHO Healthy Islands vision.

The Kodingareng case highlights the need for resilient island health systems that integrate digital innovation, renewable energy, and community empowerment. Scaling this hybrid model could provide a strategic pathway to strengthen health equity across Indonesia's archipelago and beyond.

Keywords: Healthy Islands, disruptive era, primary healthcare, telemedicine, renewable energy.

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T05B-0407

The Utilization of Telemedicine Services among Adolescents in Makassar

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Abstract

Introduction: Telemedicine is a technology-based healthcare service that enables effective and efficient remote medical consultations, particularly for people in remote areas. The use of telemedicine in Indonesia is increasing, including among adolescents such as high school students in Makassar. Therefore, it is important to assess the factors influencing the acceptance of this technology using the Unified Theory of Acceptance and Use of Technology (UTAUT). This research aims to investigate the utilization of telemedicine services among adolescents in Makassar City.

Methods: This study employed a cross-sectional design. The sample consisted of 332 respondents from SMA Negeri 5 Makassar, SMA Negeri 21 Makassar, SMA Negeri 1 Makassar, SMA Negeri 4 Makassar, and SMA Negeri 16 Makassar. Participants were selected using an accidental sampling technique. Data analysis was conducted using univariate and bivariate statistical tests.

Results: Significant relationships were found between performance expectancy, effort expectancy, social influence, and facilitating conditions with the usage behavior of telemedicine services among adolescents in Makassar (all $p < 0.001$). Additionally, performance expectancy and social influence, moderated by gender, were also significantly related to telemedicine use in this group ($p = 0.039$ and $p < 0.001$). However, no significant relationship was found between effort expectancy based on gender and telemedicine use ($p = 0.808$).

Conclusion: Performance expectancy, effort expectancy, social influence, and facilitating conditions are related to telemedicine use among adolescents in Makassar. Gender acts as a moderating variable influencing the relationship between performance expectancy and social influence with telemedicine utilization.

Keywords: Application; Technology; Health services; Telemedicine

P-T05B-0433

Family, Culture, and Autonomy in End-of-Life Care Preferences: A Comparative Study of Thailand, Taiwan, and the United States

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Abstract

Objective: Cultural and societal values profoundly shape end-of-life (EOL) decision-making across countries. In Thailand, collectivist traditions and Buddhist beliefs encourage deference to family and reluctance to discuss death openly. In Taiwan, Confucian values emphasize filial piety and family-centered care, often placing decision-making responsibility on relatives. In contrast, the United States prioritizes individual autonomy in medical decisions, including EOL care. These cultural orientations are reflected in national policies: Thailand's 2007 National Health Act and Taiwan's 2019 legislation both recognize Advance Directives (ADs), yet public adoption remains limited. In the U.S., the Patient Self-Determination Act (1990) reinforced patients' rights to make autonomous healthcare decisions, contributing to broader awareness and use of ADs. Despite these legal frameworks, cultural beliefs remain the dominant influence on EOL behaviors and preferences. The purpose of this study is to examine how cultural values influence individuals' preferences and attitudes toward EOL decision-making in Thailand, Taiwan, and the United States.

Methods: Between August and December 2022, a cross-national survey was conducted using snowball sampling to recruit adults aged 18 and older from Thailand (n = 1,727), Taiwan (n = 2,064), and the United States (n = 337). Participants responded to three hypothetical EOL scenarios—terminal cancer, severe brain damage, and end-stage dementia—assessing willingness to withdraw or withhold life support, openness to EOL discussions, and trust in family decision-making.

Results: Thai participants were the least open to discussing EOL care and more likely to prefer continuing life support in terminal situations. Both Thai and Taiwanese participants were more inclined than U.S. participants to involve their families in decision-making. However, Taiwanese respondents expressed less confidence that family choices would align with their own wishes. U.S. participants were more likely to express comfort with personal decision-making in EOL contexts, reflecting cultural emphasis on autonomy.

Conclusion: Cultural values play a role in shaping attitudes toward EOL care across countries. While U.S. respondents showed greater alignment with autonomy-based decision-making, Thai and Taiwanese participants reflected more family-oriented and relational approaches. Effective promotion of advance care planning must consider these cultural differences to support meaningful, person-centered EOL care.

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T05D-0476

Out of Pocket Health Expenditure among Insured Households in a Semi Urban Region of Western India

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Abstract

Background: In an attempt to attain the ambitious goal of Universal Health Coverage, India has expanded social health protection through various health insurance schemes at national, state, individual and employer level. Yet, Out-of-Pocket Expenditure (OOPE) still continues to cause financial hardships in growing economies. The study aimed to estimate and compare OOPE among households covered by publicly funded and employment-based insurance in a semi-urban region of a Western state of India. Rajasthan is India's largest state in area, forming a major part of Western India, which also boasts of highest health insured households in the country.

Methods: This community-based cross-sectional study was conducted on 340 households from a semi-urban field practice area of Ajmer district in Rajasthan, India after obtaining ethical clearance from the institutional ethical committee. Data about the OOPE were collected using a semi-structured questionnaire and classified under transport, in-patient, out-patient, non-prescription drugs, and miscellaneous heads. Households were grouped as publicly funded schemes, employment-based insurance, or uninsured. Non-parametric tests were applied to compare the OOPE. There are no conflicts of interest.

Results: The findings of this study show that households continued to OOPE, despite the presence of multiple social health protection schemes, with variation across scheme types. Out of the surveyed households, 98.8% were insured. Median OOPE was found to be lower among households with publicly funded schemes in comparison to those covered by employment-based insurance, while the uninsured households reported highest burden. Statistically significant differences were observed in OOPE for non-prescription drugs ($p<0.001$), transport ($p=0.002$), diagnostics ($p<0.001$) and total expenditure ($p=0.003$, while in-patient and outpatient services contributed minimally due to free coverage.

Conclusion: Insurance schemes reduce but do not eliminate OOPE, which still comprise of a significant burden to low- and middle-income groups and impede their growth, further hindering the country's overall development. Expanding coverage beyond hospitalisation to ancillary and indirect costs is essential to reduce OOPE and strengthen comprehensive financial protection.

Keywords: Out-of-Pocket Expenditure (OOPE), Social health protection, Financial protection, Health Insurance, Universal Health Coverage, Semi-urban, Western India

P-T05C-0515

Toward an Integrated Framework of Child and Parent Well-being: A Scoping Review

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Abstract

Interest in children's well-being is growing across various fields, particularly in health, medicine, and welfare. International organizations such as the United Nations Children's Fund (UNICEF) and the Organisation for Economic Co-operation and Development (OECD) have developed frameworks to measure child well-being. However, existing models often underrepresent the interdependent nature between child and parent well-being, particularly in non-Western cultural contexts with strong family interconnectedness. This scoping review aims to identify factors influencing child and/or parent well-being worldwide and, through these factors, to derive key components for a more integrated framework for parenting households.

We conducted a scoping review following PRISMA guidelines. Database searches (Medline, Embase, Cochrane, CINAHL, PsycINFO, Eric, SSCI) yielded 6,139 articles, of which 331 studies met the inclusion criteria. Studies were eligible for inclusion if they reported individual, family, social, economic, environmental, or policy-level factors significantly associated with child, parent, or child–parent well-being. Title/abstract and full-text screening was conducted independently by two reviewers using Covidence systematic review software. Extracted factors were synthesized into well-being components, qualitatively grouped into broader categories, and mapped against the UNICEF child well-being framework to identify overlaps, gaps, and emerging domains.

Our synthesis identified a wide range of components commonly used to measure well-being, many aligning with UNICEF child well-being components. Importantly, more specific components were identified for the outcome level, activities level, and relationship level within the UNICEF framework. Conversely, no components were identified for the policy level, and no new components emerged for the context level.

The findings of this study suggest that child and parent well-being are closely interrelated and that it is important to consider child and parent well-being as a unified concept for future policy development. Further studies will be required to identify factors and develop programs influencing these components to enhance child and parent well-being.

Keywords: Child well-being, Parent well-being, Integrated framework

P-T05B-0519

A Needs Assessment of Colorectal Cancer Care Delivery in Bhutan from a Health Systems Lens

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Abstract

Background: Cancer caused 19.3 million new cases and 10.0 million deaths globally in 2020. Colorectal cancer (CRC) is the third most common cancer and second leading cause of cancer death. Bhutan (population ~0.7 million) reported 2,744 new cancers in 2014–2018; age-adjusted incidence was 76.4/100,000 (males) and 101.7/100,000 (females). Local data suggest CRC is an increasingly important cause of morbidity and mortality. Although the Bhutan Cancer Control Strategy (2019–2025) and the National Cancer Control Programme (2020) provide a national framework, CRC-specific policies and services remain limited.

Methods: We conducted a systematic review of peer-reviewed literature, policy documents, technical reports, and public datasets relevant to CRC services and health-system reforms in Bhutan. To complement the desk review, we performed 15 semi structured interviews across clinical, administrative and policy stakeholders. Data were thematically analysed and synthesised into a conceptual mapping of barriers and enablers along the CRC pathway.

Results: We identified three consistent system gaps**:** (1) No organised, population-based CRC screening programme; limited public awareness and absence of CRC-specific policies within existing national frameworks. (2) Insufficient diagnostic and treatment capacity**,** including constrained colonoscopy access, under-resourced pathology (turnaround and ancillary testing), and limited colorectal surgical and oncological expertise—especially outside the national referral hospital.colonoscopy access, under-resourced pathology (turnaround and ancillary testing), and limit (3) Fragmented referral and follow-up systems**,** contributing to delays across the pathway and sparse CRC-specific data to guide planning.

Stakeholders highlighted missed opportunities to embed CRC priorities (governance, financing, workforce development, pathology, surveillance) within ongoing cancer and UHC reforms. We mapped six intervention domains—leadership/governance; cost-effective prevention; evidence-based screening and early detection; people-centred service delivery; integrated palliative care; and surveillance/research—with actionable entry points.

Conclusions: Strengthening CRC control in Bhutan requires CRC-specific policy integration and phased implementation: establish sustainable screening pathways (e.g., FIT with targeted colonoscopy), expand endoscopy and pathology capacity, formalise referral standards, and add CRC indicators to routine surveillance. These findings inform a context-appropriate implementation framework to reduce late presentation and improve CRC outcomes.

Keywords: health systems, health policy, cancer

P-T05B-0522

Factors Related to the Implement and Outcome of Child Marriage Prevention Program in Lao PDR: A Case Study

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Abstract

Child marriage is a global public health issue, with dire consequences at the individual and societal levels. Since 2016, the Government of Lao PDR, with support from United Nations Population Fund(UNFPA) and others, has been implementing the Nang Noi Program, which engages communities in developing and implementing strategies to combat child marriage. While scientific papers have been published evaluating similar projects in Egypt and Zambia, limited evidence on the factors of project implementation was shown. Especially in ethnically diverse regions such as Laos, where there is a large disparity between urban and rural areas, it is important to identify the implementation factors and ensure that the program is being implemented effectively. The purpose of this study is to identify the factors related to the implementation and outcomes of the Nang Noi program at Lao PDR. A qualitative case study were carried out by using primary data collected through Key Informant Interviews (KIIs). A total of 19 KIIs were conducted across five levels: central government, partner organizations, provincial, district, and village levels. Participants were selected through purposive sampling from institutions that have planned or implemented the Nang Noi program. The relevant program documents—including project reports, guidelines, and News papers—were obtained from stakeholders involved in the intervention. The collected data were analyzed using deductive and inductive content analysis methods using Whitman's conceptual framework as a reference flame. As a result, the following promoting factors: a multi-sector approach, cross-sector collaboration in the central level, and leadership of champions as drivers at the central level, were clarified to implement the program. Obstacles include lack of budget and time in provincial and district level, and ethnic customs in the communities were identified. Based on these findings, the following improvements are considered necessary for future advancement. Moving forward, it is essential to integrate the fragmented approaches currently being implemented separately by each sector at provincial and district levels to achieve greater efficiency and effectiveness. Additionally, cultivating champions and engaging development partners are considered necessary in any level such as province and district.

56th APACPH2025
Mae Fah Luang University Chiang Rai, THAILAND
The Asia Pacific Academic Consortium for Public Health Conference

P-T05A-0536

Estimated Reduction of Medical Expenditures in Japan: An Analysis from the Perspective of OTC Drugs

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Abstract

Background: In Japan, medical expenditures are rising due to population aging and medical advances. The national health insurance system in Japan is mainly based on social insurance, with partial copayments. For costly treatments such as cancer or designated intractable diseases, public subsidies reduce the patient burden. Prescription drugs usually require a physician's prescription, but some medications—such as certain anti-allergic drugs, NSAIDs, and H2 blockers—can be purchased at pharmacies without a prescription after pharmacist consultation. These are referred to as switch OTC drugs. From the perspective of cost containment, Japanese government is considering excluding switch OTC drugs from prescription coverage. In addition, most prescription data are now digitized and stored in the National Database of Health Insurance Claims (NDB). This study evaluated the potential impact on medical expenditures if switch OTC drugs were no longer prescribed by physicians, using the NDB.

Methods: We analyzed the NDB Open Data for the period from April 2021 to March 2022. Prescription volumes and expenditures were calculated from the number of prescribed units and drug prices. Eligible drugs were those that had the same active ingredient and dosage as OTC drugs, and for which the maximum permitted dosage was identical between prescription drugs and switch OTC drugs.

Results: A total of 399 products representing 42 active ingredients were identified. The total prescription volume was approximately 13.2 billion tablets, with drug expenditures amounting to JPY 154.6 billion (USD 1,059 million).

Discussion: Given that insurance premiums and public funds account for about 90% of Japan's total medical expenditure, a reduction of approximately USD 954 million in drug costs could be expected. Additional savings may arise from decreases in prescription issue and consultation fees. However, physicians may shift to prescribing alternative drugs, so careful policy design will be required when implementing such changes.

P-T05B-0557

The Value of Retired Nurses as Healthcare System Managers in Long-Term Care for Dependent Older Adults in Communities

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Abstract

Background: Thailand is transitioning into a super-aged society, with a significant increase in the older adult population. This demographic trajectory underscores the pressing requirement for scalable and sustainable long-term care (LTC) systems to address the needs of dependent older adults. At the same time, the healthcare system faces critical workforce shortages, particularly in nursing. Retired nurses represent an underutilized but highly qualified resource, with professional expertise and strong community familiarity, present an opportunity to address these gaps. This study explores the value of retired nurses as community healthcare managers in LTC systems for dependent older adults.

Method: This mixed-method study was conducted in three provinces: Petchaburi, Suratthani, and Nonthaburi. Two LTC models were tested: (1) the Individual Model, with retired nurses managing LTC independently with local health teams, and (2) the Team Model, where they collaborated with physiotherapists and multidisciplinary partners. Participants included retired nurses, dependent older adults, informal caregivers, community committee members, and family caregivers. Data collection involved questionnaires, in-depth interviews, and focus group discussions. The CIPP model was used for evaluation, analyzing context, input, process, and product outcomes.

Results: Findings demonstrate that retired nurses contributed substantially as LTC managers, engaging in needs assessment, individualized care planning, coordination with multidisciplinary partners, and outcome monitoring. The Individual Model proved effective in rural and semi-urban areas, while the Team Model achieved greater impact in urban contexts. Significant improvements were observed in Older adults health behaviors, activities of daily living (ADL) scores ($p<0.05$), and overall quality of life. Family caregivers also reported high levels of satisfaction. Challenges included limited training in advanced care management and difficulties in adapting to telehealth during the COVID-19 pandemic.

Conclusion: Retired nurses can effectively bridge workforce shortages and enhance the quality of community-based LTC. Policy implications include establishing formal LTC manager roles, scaling training programs for retired nurses, and integrating LTC services into community health systems. These measures align with Thailand's strategic agenda for active aging and sustainable healthcare development.

Keywords: Retired nurses; Long-term care; Dependent older adults; Workforce shortage; Policy development

P-T05B-0590

Cross-Cutting Gaps and Priorities in AMR (Food Chain Focus): A Qualitative Analysis from Selected Local Government and National Agencies

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Abstract

Introduction: Despite maturing AMR policy frameworks, persistent gaps across governance levels hinder risk management and control along the food chain. This abstract integrates national and local findings to identify systemic bottlenecks and actionable priorities.

Methodology: Meta-synthesis of the national policy review and multi-city local assessment using a convergent thematic approach. Codes were mapped to the AMR pathway (antimicrobial use, residues, resistance) and to enabling systems (labs, data, enforcement, communication).

Results: Five cross-cutting gaps emerged:

Data silos and weak interoperability across health, agriculture, and regulatory databases prevent a unified view of antimicrobial resistance (AMR) risks along the food chain. Routine LGU-to-national reporting for AMR indicators is limited, leading to patchy visibility, delayed analyses, and missed opportunities for coordinated action.

Laboratory capacity and method-validation gaps persist, particularly for routine antimicrobial-residue screening in processed foods and for resistance profiling in downstream nodes such as processing plants, retail outlets, and food service. Inconsistent protocols and quality assurance further undermine data reliability and comparability across sites.

Enforcement remains asymmetric. Documentation checks are generally strong, but risk-based testing is limited, and escalation pathways from non-compliance to sanctions or recalls are unclear. This weakens deterrence and results in uneven follow-through on identified violations.

Significant blind spots exist in private and informal trade. Bagsakan or private terminals and many MSME processors operate with variable hygiene logistics, including cold-chain management, wastewater handling, and solid-waste practices. These gaps reduce traceability and increase unmonitored AMR risks.

Resources at the LGU level vary widely. Differences in staffing, training, and logistics for sample collection and transport lead to uneven implementation and reporting. Lower-capacity LGUs struggle to maintain sample integrity and timeliness, which limits the overall effectiveness of AMR surveillance and control.

Conclusion: Closing these gaps requires a phased, feasible package: (i) stand-up a shared One Health AMR/food-safety data layer with common identifiers and automated LGU feeds; (ii) fund regional lab networks to offer standardized residue and resistance assays with external quality assessment; (iii) mandate risk-based sampling at high-volume nodes and link results to transparent, time-bound enforcement; (iv)

extend oversight to private terminals and MSMEs via targeted permitting incentives and compliance ladders; and (v) invest in digital traceability and basic market infrastructure (cold chain, sanitation, wastewater controls). Taken together, these steps will shift the system from paper-based assurance to evidence-driven AMR risk control.

P-T05A-0608

Unmet Need And Fertility Across Indonesia: Exploring Local Determinants Using Geographically Weighted Regression

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Abstract

Background: Unmet need for family planning remains a critical driver of fertility in Indonesia. National statistics, however, often conceal substantial regional disparities. Mapping the geographical variability of fertility determinants can guide locally tailored reproductive health policies.
Objective: To analyze regional variation in the relationship between unmet need and fertility, and to compare model performance between classical regression and geographically weighted regression (GWR).
Methods: This study used data from the 2017 Indonesian Demographic and Health Survey (SDKI). Unmet need was modeled against desired variable of women who have not worked for 12 months, Average ideal number of children for married women, Average ideal number of children for all women, Desired fertility rate, Total fertility rate, Exposure to family planning via the internet and Age at first marriage. Classical regression and GWR models were compared using adjusted R^2 and Akaike Information Criterion (AICc). Local coefficient variability was assessed to identify region-specific effects.
Results: The GWR model demonstrated superior fit (AICc = 196.8 vs 199.0; R^2 = 0.59 vs 0.43 for classical regression), capturing spatial heterogeneity in unmet need. Significant local determinants included desired fertility, total fertility, ideal number of children (married and all women), exposure to family planning via internet, and age at first marriage. Spatial variability was confirmed across provinces, indicating that fertility determinants differ geographically.
Conclusion: Geographical mapping of fertility determinants highlights regional disparities in unmet need for family planning in Indonesia. GWR offers stronger explanatory power than classical regression, supporting the need for localized strategies rather than uniform national policies.

Keywords: unmet need, fertility, family planning, geographical variability, Indonesia

P-T05A-0643

A Scoping Review of the Smart Healthy City Concept and Key Elements

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Abstract

Background: Healthy Cities emphasize health, equity, and citizen participation, while Smart Cities prioritize ICT-driven efficiency and sustainability with limited focus on health equity. To bridge these approaches, the concept of a Smart Healthy City is required, yet its definition and components remain underexplored.

Objective: This study aimed to define the concept of a Smart Healthy City and identify its key components through comparative analysis.

Methods: A scoping review was conducted following Tricco et al.'s framework and the PRISMA-ScR checklist. Literature published between 2014 and 2024 was searched in DBpia, RISS, and PubMed. Eleven studies on Healthy Cities, 36 on Smart Cities, 11 on Smart Healthy Cities, and two WHO documents were analyzed by conceptual definitions and structural elements.

Results: Smart Healthy Cities emerged as a model positioned at the intersection of Healthy and Smart Cities. Compared with Healthy Cities, they maintain values of health, equity, participation, and policy integration while incorporating ICT. Compared with Smart Cities, they adopt efficiency and sustainability while placing health and equity at the policy core. Thus, a Smart Healthy City is "an urban model that uses ICT and data-driven technologies to integrate health, equity, and sustainability." Five components were identified: (1) ICT infrastructure, (2) multi-level governance among governments, health institutions, ICT enterprises, and civil society, (3) policy goals linking health, equity, and sustainability, (4) citizen participation combining communities and digital platforms, and (5) equity and accessibility addressing digital and health gaps.

Conclusion: This study establishes a conceptual foundation for Smart Healthy Cities, offering a framework to integrate health and urban policy. Future work should validate the model through case studies and indicators.

Keywords: Smart Healthy City, Smart City, Healthy City, Scoping Review

P-T05A-0691

Cost analysis of the Personalized Intensive Lifestyle Modification Program (PILM) for a working population at risk of non-communicable diseases (NCDs) in Thailand

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Abstract

Thailand has demonstrated strong government commitment and innovative community-based models in the prevention of noncommunicable diseases (NCDs). National strategies have integrated NCD services into primary care, with support from village health volunteers and health promotion hospitals to expand preventive care. Sustainable financing mechanisms, such as the Thai Health Promotion Foundation, have strengthened nationwide campaigns targeting lifestyle-related risks. However, a gap remains between mass public health interventions and personalized prevention strategies, particularly in reaching high-risk individuals effectively. To ensure the long-term feasibility and policy integration of such a system, comprehensive cost analysis is essential. This study aims to estimate cost analysis of the Personalized Intensive Lifestyle Modification Program (PILM) among the working population in Thailand who are at risk of developing noncommunicable diseases (NCDs).

This cross-sectional retrospective study applied the activity-based costing (ABC) method to estimate the cost of Personalized Intensive Lifestyle Modification/Coaching Program in Thailand. A total of 12 organizations participated, comprising eight hospitals, three healthcare institutions under municipal authorities, and one public institute. Cost data for fiscal year 2023 were collected, including information on service activities, expenditures, and service-related statistics.

The findings indicated that there were 477 participants in this program. Labor cost accounted for the majority of spending (63%), followed by capital cost (29%), and material cost (8%), respectively. The unit cost per participant each program ranged between USD 24.97 and USD156.71, with an average of USD 83. It depended on the services available in any every given setting. This study highlighted the significance of targeted intensive lifestyle modifications and offered essential insights for budgetary planning and management within Thailand's universal health system for customized behavior modification, which could potentially decrease the prevalence of non-communicable diseases (NCDs).

Keywords: Cost analysis, Personalized Intensive Lifestyle Modification, NCDs

P-T05D-0778

Navigating COVID-19: Association between public perceptions of preventive measures and delayed or foregone care among Korean young and middle-aged adults in the early phase of the pandemic

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Abstract

The COVID-19 pandemic has had a profound impact on healthcare systems worldwide, leading to significant disruptions in healthcare services and an increase in delayed and foregone care. South Korea has been no exception. While the importance of public perceptions of COVID-19 on use of healthcare services has been recognized, how such perceptions shapes healthcare-seeking behaviour remains underexplored in the Korean context. The aim of this study was to examine the association between individual perceptions of public health measures and instances of delayed or foregone care during the early phase of the pandemic in 2020.

This study utilized data from the 2020 Korean Happiness Survey (KHS), a nationally representative cross-sectional dataset. The analysis included a total number of 11,307 respondents, aged 19–64, who completed both the general and COVID-19 modules of the survey. To assess delayed or foregone care, self-reported responses were used. Public perceptions of COVID-19 measures were categorised into four groups based on reported trust and understanding. The impacts of public perception of the preventive measures on delayed and foregone care were assessed by logistic regression analyses, which were adjusted for sociodemographic, health status, and COVID-19-related characteristics.

The results of this study revealed that Korean adults, who both understood and trusted COVID-19 preventive measures, had significantly lower odds of delayed or foregone care (OR: 0.49, 95% CI: 0.36–0.65) as compared to those who lacked both. Chronic conditions, worsened health status, and lower income were associated with higher probability of health services disruption.

These findings highlight that both cognitive and affective dimensions of public perception played a key role in shaping the use of healthcare services during the public health crisis. During future public health emergencies, strengthening public trust and risk communication should be considered to mitigate health services disruption.

Keywords: COVID-19; delayed care; forgone care; public health measures; Korea

6.Future Society & Health

P-T06B-0465

Rapid molecular detection of Isoniazid-Resistant Mycobacterium tuberculosis by recombinase polymerase amplification combined with nucleic acid lateral flow immunoassay

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Abstract

Tuberculosis (TB) is a global public health problem caused by *Mycobacterium tuberculosis* (MTB) and Mycobacterium tuberculosis complex (MTBC). Thailand is classified by the World Health Organization (WHO) as one of the 14 countries with a high TB burden. Currently, only 59% of estimated TB cases in Thailand are detected and reported. This reflects the limitations of existing diagnostic methods, as some patients experience delayed or inaccessible treatment, leading to continued transmission within the community, particularly of multidrug-resistant tuberculosis. In this study, we developed a rapid molecular diagnostic method for detecting isoniazid-resistant MTB using recombinase polymerase amplification (RPA) combined with nucleic acid lateral flow immunoassay (NALFIA). The study focuses on targeting common resistance-associated mutations in the *katG* gene, a key marker of isoniazid resistance. Optimization was performed by adjusting various parameters, including reaction temperature. To evaluate diagnostic performance, RPA was compared with polymerase chain reaction (PCR), the gold standard method. The amplified products were visualized by both agarose gel electrophoresis and NALFIA, for rapid field-applicable readout. This study contributes to the development of a novel molecular diagnostic tool that is rapid, specific, sensitive, and isothermal, requiring for specialized instruments. The method shows significant promise for improving the early detection of drugresistant TB, particularly in resource-limited settings.

P-T06B-0480

Challenges and Opportunities of AI in Medical Technology for Public Health Outcomes in Thailand: A Systematic Review

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Abstract

Background: AI in medical technology promises to transform public health through improved diagnosis, surveillance, and care delivery. The Asia-Pacific region, including Thailand, has seen rising adoption of health AI, but its impact on public health outcomes remains poorly understood. This review examines how AI-enabled medical technologies have influenced public health outcomes in Asia-Pacific, focusing on Thailand.

Methods: We searched PubMed, Scopus, and Web of Science (2015–2025) for peer-reviewed studies of AI interventions (e.g., diagnostics, treatment planning, patient monitoring, health system management) reporting health or system outcomes in Asia-Pacific. Inclusion criteria targeted studies reporting improvements in accuracy, access, efficiency, or equity; non-regional or non-health outcome papers were excluded. A total of 60 studies met inclusion criteria (8 randomized trials, 35 observational, 17 other designs). Data on AI methodologies (machine learning, natural language processing, robotics), application domains, outcomes, and reported barriers were extracted.

Results: Machine learning (particularly deep learning) predominated, with limited use of natural language processing and robotics. AI was applied in diagnostics, disease surveillance, treatment planning, patient monitoring, and health system optimization. Many interventions improved diagnostic accuracy and care efficiency, often outperforming human benchmarks. Several studies noted enhanced health care access via telemedicine and AI-assisted screening in underserved areas, indicating potential equity gains. In Thailand, an AI for diabetic retinopathy screening achieved 95% specialist-level accuracy, enabling broader early detection. However, evidence of population-level impact remains limited, and barriers persist: inadequate digital infrastructure, workforce training gaps, data privacy concerns, and ethical issues (e.g., bias) hinder implementation.

Conclusion: AI interventions show promise for improving public health in Asia-Pacific by increasing accuracy, access, and efficiency. To ensure these gains are equitable, policymakers should strengthen digital infrastructure, human capacity, and data governance frameworks, enabling ethical integration of AI into regional health systems.

Keywords: Artificial Intelligence; Public Health; Asia-Pacific; Thailand; Health Systems

P-T06C-0482

Analysis of the Current Status of Digital Health Curriculum Operations at Korean Universities

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Background: The expansion of digital health has increased the need for changes in health-related academic curricula; however, analyses of university operations and course structures remain limited. This study examines the current status of digital health curricula and course offerings in Korean universities to understand the evolving landscape of health-related education and to provide implications for establishing new departments in developing countries.

Method: In 2025, a search of the Higher Education Disclosure Portal using digital health-related keywords identified 44 universities, from which 20 departments were selected based on inclusion criteria. From April to June, curriculum data were collected from university websites. This descriptive study of digital health-related curricula employed a mixed-methods approach, combining quantitative and qualitative analyses.

Results: Analysis of 20 departments revealed that courses were classified into 16 domains. Medical Records & Information had the highest average number of subjects (7.15), followed by Basic Medicine, Software/Programming, and Data Management. Domains such as Digital Healthcare (1.2), Artificial Intelligence (1.6), Health Education (0.55), and Healthcare Marketing & Tourism (0.5) had relatively low representation.

Conclusion: This study examined Korean universities' digital health-related departments to identify the current status of curricula. While Medical Records & Information courses were prevalent, Digital Health and Artificial Intelligence courses were comparatively limited. Based on the 2025 undergraduate program review, these findings offer valuable baseline information for exploring future curriculum improvements and serve as a starting point for digital health curriculum development in Asia.

Keywords: Digital Health, Curriculum, University

Acknowledgement: This research was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF) through the ODA International Cooperation Leading University Project (Grant No. 2023H1A7A2A02000081).

P-T06B-0513

Opportunities and Challenges of Bataan Health Sectors Towards an IT-Enabled Services

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Background: The rapid integration of information technology (IT) into healthcare delivery has created both significant opportunities and pressing challenges for local health sectors. This study investigates the readiness of Bataan's health sector to transition toward IT-enabled services, using insights from the Area-Based Skills Mapping with Industry Consultation, of the Baseline Survey for the Official Development Assistance Project of the Korean Government to the Philippines through Myongji College and Bataan Peninsula State University under the Leading
University Project for International Cooperation 2023-2028 entitled "Enhancing Health Information Management Education Capacity of Bataan Peninsula State University in the
Republic of the Philippines"
Findings reveal that the health sector has begun embracing IT in operations, service delivery, and data management, with 100% of sector respondents acknowledging the adoption of digital processes in transactions and 60% reporting active engagement with big data. Moreover, 90% noted substantial evolution in service delivery that underscores the need for IT-enabled systems, while institutions increasingly prioritize IT literacy in recruitment.
Despite these opportunities, the study also identifies persistent challenges that hinder the full realization of IT-enabled healthcare services. The most pressing issues include a shortage of highly specialized and skilled professionals (reported by 40–50% of respondents), limited training centers and facilities to meet skill demands (60%), and a non-responsive curriculum that fails to equip graduates with the required competencies (20%). Additionally, workforcerelated constraints such as unattractive compensation packages (70%), location disadvantages (40%), and employee migration to overseas opportunities (30%) exacerbate local manpower shortages. These conditions highlight the sector's difficulty in responding to rapid technological innovations, with 50% of respondents admitting struggles in adapting to new trends.
The study concludes that while Bataan's health sector stands at the cusp of digital transformation, systemic issues in workforce readiness, training, and institutional support remain barriers. To maximize opportunities, coordinated strategies involving government, industry, and educational institutions are essential. These should focus on upgrading digital infrastructure, enhancing health workforce training, and aligning curricula with IT-enabled healthcare needs. Such measures can position Bataan as a provincial leader in resilient, technology-driven healthcare delivery.
Keywords: IT-enabled services, Health Sectors, service delivery

P-T06B-0618

Evaluation of Line Probe Assay for Detecting Rifampicin- and Isoniazid-Resistant TB in Northeastern Thailand

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Abstract

Background: Drug-resistant tuberculosis (TB) remains a major obstacle to global TB elimination. Multidrug-resistant TB (MDR-TB), defined by resistance to rifampicin (RIF) and isoniazid (INH), leads to delayed diagnosis, ineffective treatment, and persistent transmission. Monoresistance further complicates management. Conventional phenotypic drug susceptibility tests (DST) are reliable but time-consuming. WHO-recommended rapid molecular tests, including GeneXpert, Line Probe Assay (LPA), and real-time PCR, provide faster results but require validation in real laboratory settings.

Methods: Between February and September 2025, 452 sputum samples were analyzed at the Tuberculosis Laboratory, Office of Disease Prevention and Control 7, Khon Kaen, Thailand. Participants included 340 men (75.2%) and 112 women (24.8%), with a mean age of 55.4 years (SD 15.1; range 11–93). All samples underwent both LPA and phenotypic DST for RIF and INH resistance.

Results: LPA demonstrated excellent accuracy compared with DST. For RIF-resistant TB, sensitivity and specificity were 100% and 99.8% ; for INH-resistant TB, 90.9% and 97.9% . Concordance was observed in 13 MDR-TB cases, 2 RIF-monoresistant, and 47 INH-monoresistant cases, with 1 and 8 discordant cases for RIF and INH, respectively. Prevalence was 2.9% for MDRTB, 0.4% for RIF-monoresistance, and 11.7% for INH-monoresistance, highlighting the high rate of INH resistance in the study area.

Conclusion: LPA is a rapid, highly accurate, and specific alternative to DST, enabling timely detection of MDR-TB and INH/RIF-resistant isolates, supporting prompt treatment decisions, and reducing transmission. Unlike Xpert, which detects only RIF resistance, LPA simultaneously identifies INH resistance, enhancing cost-effectiveness and clinical utility. These findings underscore the value of implementing molecular methods for simultaneous detection of INH/RIF resistance to strengthen TB control programs in Thailand and other high TB-burden settings, providing evidence-based guidance for early diagnosis and optimal patient management.

Keywords: Tuberculosis, Multidrug-resistant TB, Rifampicin and Isoniazid resistance, Line Probe Assay, Drug susceptibility testing

P-T06B-0694

BALIKLAKAS: A Technology-Driven Approach to Post-Injury Monitoring and Recovery

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Abstract

The growing demand for effective post-injury monitoring and patient care has led to the development of BalikLakas: A Technology-Driven Approach to Post-Injury Monitoring and Recovery which is a mobile and web-based application intended to assist patients throughout their rehabilitation following injuries. By offering a dependable platform for monitoring patient progress, ensuring timely consultations, and providing precise medical advice, the application serves as a reliable tool for post-injury recovery.

BalikLakas offers a range of functionalities designed to strengthen the connection between patients and practitioners while streamlining the recovery process. Among its core features are a digital clipboard for diet plans, workout routines, medical prescriptions, and health tips, complemented by a dynamic news feed that shares valuable medical updates. The system further supports appointment scheduling-both online and in-person as well as virtual consultations via video conferencing, and direct messaging for addressing patient concerns. Added convenience is provided through user registration with QR codes and real-time updates via SMS notifications.

The system was developed using technologies such as PHP, MySQL, CSS, Visual Studio Code, Android Studio, Jitsi, and Adobe Photoshop, compatible with both Android and Windows platforms. It was built using following hardware devices: computers, routers, smartphones, and printers. The ISO 25010 software quality model guided its evaluation, focusing on criteria like functional suitability, performance, compatibility, usability, reliability, security, maintainability, and portability. BalikLakas obtained a grand mean rating of 4.42, classified as Very Good, meeting all specified functional and testing standards.

Overall, BalikLakas emerges as an efficient solution for post-injury monitoring, enabling healthcare professionals to provide personalized and reliable care while allowing patients to save time and resources. Its versatile features, coupled with positive evaluation results, confirm its readiness for implementation. The system offers a valuable contribution to technology-enabled healthcare services and supports the improvement of community wellbeing.

P-T06A-0749

Toward Reusable EGFR DNA Biosensors: A Feasibility Study of Probe Reutilization for Lung Cancer Staging Diagnostics

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Abstract

Lung cancer is one of the most commonly reported cancers worldwide and is associated with one of the lowest survival rates. Mutations in the epidermal growth factor receptor (EGFR) gene are strongly associated with non-small cell lung cancer (NSCLC) and represent one of its most important biomarkers. Detecting these mutations is critical for accurate diagnosis and effective treatment planning. Rapid, precise, and minimally invasive detection tools are essential to support timely treatment decisions and improve patient outcomes. Biosensors offer a promising alternative to conventional methods by providing a simple, rapid, and reliable platform with the potential to transform cancer diagnostics and management. This study reports the development of a DNA-based biosensor that employs a quartz crystal microbalance (QCM) combined with liquid biopsy for EGFR detection. Detection was achieved through hybridization between DNA samples containing EGFR mutations and immobilized EGFR probes. The main focus was the evaluation of DNA probe reutilization. After hybridization on QCM chips, the electrode surfaces were treated with various concentrations of NaOH under different durations, and resonance frequency shifts were measured to assess probe reusability and stability. The results showed that 5-minute treatments were ineffective, producing only minimal frequency decreases across all concentrations. The most effective regeneration occurred at 0.1-1 M NaOH for 10-15 minutes, which allowed efficient target removal. These results indicated that both chemical concentration and treatment duration are critical for probe reutilization. Optimizing these parameters ensures consistent biosensor performance, extends chip usability, and improves cost-effectiveness. This study demonstrates the feasibility of a QCM-based liquid biopsy as a reliable diagnostic tool for NSCLC and shows its potential to improve accessibility and sustainability in cancer diagnostics within public health systems.

7.Core of Public Health and Other Issues

P-T07A-0347

Factors associated with suicidal ideation and attempt among nursing students in two Muslim-majority country in Asia: A cross-sectional study

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Background: This study aims to determine the prevalence of past-year suicidal ideation, and lifetime attempt among nursing students in Malaysia and Indonesia, and its risk factors.
Methods: A cross-sectional study design was utilised. An online questionnaire was administered to nursing students from four public institutions in Kuala Lumpur, Malaysia, and Indonesia from October to November 2024. The questionnaire comprised of questions on sociodemographic data, the Suicide Behaviour Questionnaire-Revised scale, The Meaning in Life Questionnaire, the Brief COPE Scale, and the Perceptions of Academic Stress Scale. Binary logistic regression analysis was performed.
Results: A total of 626 students were included in the analysis. The prevalence of students with past-year suicidal ideation, and lifetime suicide attempt was 30.9%, and 4.6% respectively. Those who perceived themselves to have only satisfactory ($p < 0.001$), or poor or very poor health status ($p = 0.04$), and those with chronic conditions ($p < 0.002$) had a higher odd to have past-year suicidal ideation. Those who were non-heterosexual or were unsure of their sexual identity ($p = 0.04$), those who perceived themselves to have poor or very poor health ($p=0.004$), and those with chronic condition ($p=0.001$) were more likely to have attempted suicide.
Conclusion: Healthcare and university authorities can take necessary steps such as promotion of mental health, making mental health services and support accessible for students, promote healthy lifestyle and regular health screening and services, and resilience-based education in nursing curricula to address the issue of suicide ideation and attempt among nursing students.
Keywords: Suicidal ideation, suicide attempt, mental health, nursing students, university students, Asia

P-T07B-0403

Comparing Changes in Perceived Environments and Their Impact on Physical Activity in Taiwan, 2011–2021

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Introduction: Worldwide, 31% of adults and 54% of Taiwanese adults fail to meet the recommended activity levels. Physical activity reduces the risk of non-communicable diseases and improves mental health. Several studies have shown that physical activity is influenced not only by individual factors but also by perceptions of natural, built, and social environments. However, these associations may change as societies evolve, highlighting the importance of examining recent trends.

Methods: This study analyzed data from the 2011 and 2021 health and medical care modules of the Taiwan Social Change Survey (TSCS), a nationally representative survey conducted by Academia Sinica. Perceived environmental indicators were categorized into three domains: natural, built, and social. Logistic regression models assessed associations between these perceptions and physical activity, and compared changes across the ten-year interval.

Results: In 2011, logistic regression analysis revealed that the perceived social environment was positively associated with physical activity (OR = 1.21, p = .026), whereas the natural environment was negatively associated (OR = 0.85, p = .033); the built environment was not significant. Age, male gender, and higher education were also significant predictors. However, in 2021, by contrast, none of the three environmental domains or demographic factors demonstrated significant associations with physical activity, indicating that the previously observed relationships had disappeared mainly over the decade.

Discussion: The declining influence of environmental perceptions may reflect broader societal changes. Advances in technology have altered social interaction, reducing the role of neighborhood ties, while growing awareness of air pollution and environmental risks has encouraged indoor exercise as a safer alternative. Future studies should adopt objective measures of physical activity to improve accuracy and comparability. Also, integrating psychosocial, cultural, and policy factors to understand evolving determinants of physical activity in Taiwan.

P-T07B-0405

Ambient temperature and neonatal mortality and preterm births in Bangladesh: Identifying the critical windows of susceptibility

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Background: Previous studies examined associations between ambient temperature and neonatal mortality or preterm birth, but rarely susceptibile periods during pregnancy.
Objectives: To examine the effects of ambient temperature on neonatal mortality and preterm birth, and identify gestational windows of increased vulnerability.
Methods: We used data from the 2022 Bangladesh Demographic and Health Survey (DHS), including singleton live births between 2016 and 2022 (n = 17,326). Daily gridded 2-meter temperature data (2015–2022) were linked to each respondent using geocoordinates for primary sampling unit. Early neonatal mortality was defined as death within the first 7 days of life, and preterm birth as delivery before 37 completed gestational weeks. We applied distributed lag non-linear models (DLNM) with Cox proportional hazards regression using gestational week as the time scale, adjusting for month of conception, year of birth, maternal education, residence, and child sex. The risk of neonatal mortality or preterm birth with exposure to temperature at each gestational weeks were estimated. Cumulative temperature effects were assessed in a separate model using mean temperature exposure during entire pregnacy.
Results: A total of 311 early neonatal deaths and 1,402 preterm births were recorded. No significant association was observed between cumulative temperature exposure and neonatal mortality. However, elevated risks for preterm birth were observed for both high temperatures (99th percentile (27.5°C) vs median (25.0°C), Hazard Ratios (HR): 4.34; 95% Confidence Interval (CI): 3.49–5.39) and low temperatures (1st percentile (22.8°C) vs median (25.0°C), HR: 1.46; 95% CI: 1.12–1.92), throughout entire pregnancy. Critical gestational periods were identified for preterm birth: 28–35 weeks for heat exposure and 31–35 weeks for cold exposure.
Conclusion: Exposure to extreme heat or cold during late gestation is associated with increased risk of preterm birth. Preventive strategies should prioritize pregnant women in their third trimester during periods of temperature extremes.
Keywords: Neonatal mortality, Preterm birth, Ambient temperature, Bangladesh

P-T07G-0422

Physical Education Specialist Assignment and Illness-Related Absenteeism: A One-Year Observational Difference-in-Differences Study in Japanese Elementary Schools

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Background: The Comprehensive School Physical Activity Program (CSPAP) is a multicomponent framework that promotes students' physical activity through quality physical education (PE), activity opportunities during and outside school hours, staff involvement, and family/community engagement. The assignment of PE specialists can promote CSPAP, and its fitness benefits have been well-documented. However, evidence on educational outcomes remains limited. Absenteeism is associated with adverse academic performance, long-term health risks, and social disadvantages. This study examined whether assigning PE specialists to elementary schools in Japan reduced illness-related absenteeism.

Methods: We conducted a one-year, two-wave longitudinal study among 5th-grade students (N=997) from 10 public elementary schools in Okinawa, Japan (2022–2023). Three schools (n=237) introduced a PE specialist (intervention), while seven schools (n=760) served as matched controls. Students were excluded for lack of consent, missing attendance records, unspecified sex, or school transfer, leaving 148 in intervention schools and 570 in control schools. The primary outcome was the annual number

of illness-related absent days from school records. Covariates included sex, birth month, health room use, resilience, self-rated health, subjective economic hardship, school financial aid, family support and school connectedness. We estimated the intervention effect using a linear mixed-effects model with random intercepts for individuals, including a group × time interaction term.

Results: In 2022, mean illness-related absenteeism was 2.59±4.50 days in intervention schools and 3.21±5.86 in controls (difference = -0.62, $p = 0.233$). In 2023, the means were 2.58±5.61 vs 5.49±9.67 (difference = -2.91, $p < 0.001$). In the linear mixed-effects model, students in intervention schools had significantly fewer illness-related absences than those in control schools (-1.96 days, 95% CI: -3.66 to -0.26).

Conclusion: While previous research has emphasized CSPAP's role in promoting physical activity and fitness outcomes, our findings provide new evidence that CSPAP can also contribute to reducing illness-related absenteeism among elementary school children.

Keywords: physical education specialists, school absence, elementary school students

P-T07B-0497

Height, Not Stunting Category, Predicts Later Cognitive and Income Outcomes: Evidence from the Indonesia Family Life Survey (1997–2014)

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Stunting is impaired linear growth due to undernutrition, recurrent infections, and limited psychosocial stimulation. It is linked to higher morbidity and mortality, later-life NCD risk, lower educational/economic attainment, and delays across cognitive, language, and sensorimotor domains. It aimed to (1) describe differences in mean height among three nutritional status categories; (2) assess association between nutritional status and height with cognitive performance, annual income, and degenerative (non-communicable) diseases; and (3) model risk factors for cognitive score, income, and body mass index. This study used secondary data from the Indonesia Family Life Survey (IFLS), a longitudinal study conducted in 1997 (baseline), 2000, 2007, and 2014. The cohort included 1,937 children measured in 1997 and followed through 2014. Bivariate analyses used two-way ANOVA with Duncan's post-hoc test; multivariable relationships were examined with multiple linear regression. All analyses were performed in R. There were no statistically significant differences—by childhood nutritional status category—in mean height, mean BMI, mean annual income, or the prevalence of diabetes, hypertension, and hypercholesterolemia (p-values >0.05). School attendance patterns were similar across all three nutritional-status groups. Increased height was associated with better cognitive test scores ($p<0.05$; correlation magnitudes were comparable across nutritional-status groups) and with higher annual income ($p<0.05$). Other planned bivariate associations could not be evaluated due to insufficient endline data. In multivariable models, factors independently associated with cognitive level were height, weight, BMI, education, and stunted status (all $p<0.05$; $R^2=18.05\%$). Predictors of annual income were age, maternal occupation, and severe stunting status ($p<0.05$; $R^2=21.4\%$). Predictors of BMI were 2014 income, 2014 disease history, polio immunization status, and maternal BMI and hemoglobin ($p<0.05$; $R^2=24.9\%$). In this longitudinal IFLS cohort, linear growth (height) showed modest positive associations with later cognitive performance and income, whereas categorical stunting status did not distinguish mean anthropometric or NCD outcomes. Socioeconomic and maternal factors contributed meaningfully to cognitive, income, and BMI variation, although overall model explanatory power was limited.

Keyword: stunting Indonesia; stunting; linear growth; stunting cognitive; IFLS

P-T07B-0500

OUTBREAK OF DIPHTHERIA IN POLEWALI MANDAR REGENCY IN 2025

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Background: In 2025, a clinically compatible diphtheria case was reported in the 16th week, followed by another in the 19th week in Kalawa. An investigation was conducted at Massenga Community Health Center involving local surveillance officers, health staff, and FETP students.
Methods: A descriptive study was conducted in April–May 2025. Data collection included interviews, questionnaires, and laboratory tests from suspected cases and close contacts showing fever, painful swallowing, pseudomembrane, or grayish tonsils.
Results: The index case was a 10-year-old child with incomplete immunization (missed full DPT/Hb-Hib at 18 months and incomplete Dt at school). Specimens collected after antibiotics tested negative, but close contacts were positive for toxigenic diphtheria. Immunization coverage declined: DPT/Hb-Hib was 93.1% in 2022, 80.9% in 2023, and 36.3% in 2024. Booster coverage fell from 86.6% in 2022 to 6.2% in 2024. BIAS Dt/Td rates also dropped from 81% in 2022 to 36.5% in 2024.
Conclusion: The outbreak was linked to incomplete immunization and declining coverage below 95%. Strengthening Complete Basic Immunization (CBI), booster programs, and timely Outbreak Response Immunization (ORI) are essential. Prompt treatment of cases and contacts is critical to prevent transmission.
Keywords: Outbreak, Diphtheria, Immunization, Polewali Mandar

P-T07D-0517

Role of loneliness and personal social capital within the connection between family structure and depression, anxiety and co-morbidity among older adults: A moderated mediation analysis

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Background: Prior research shows family structure impacts elderly mental health, yet the underlying mechanism is unclear. This study assesses the roles of loneliness and personal social capital in the link between family structure and mental health among older adults.

Methods: A total of 2,537 valid samples from the China's Health-Related Quality of Life Survey for Older Adults 2018 were included. Loneliness was measured by 8-item UCLA loneliness scale. Personal social capital by 16-item Personal Social Capital Scale. Depression and anxiety by 90-item Symptom Checklist 90. Five family structure variables (parental/marital status, and number of children, grandchildren, siblings) were recorded. Relationships between these variables were examined through moderated mediation analysis with SPSS macro-PROCESS.

Results: Parental status had significant direct impacts on depression ($\beta = 0.1164$, $P < 0.001$) and anxiety ($\beta = 0.0868$, $P < 0.01$), with loneliness mediating 29.33% and 33.64%. Marital status directly impacted depression ($\beta = 0.0736$, $P < 0.01$), with loneliness mediating 52.97%. Loneliness completely mediated the association between marital status and anxiety. The number of siblings directly influenced depression ($\beta = -0.0726$, $P < 0.001$) and anxiety ($\beta = -0.0753$, $P < 0.001$), with loneliness mediating 6.44% and 5.68%. Personal social capital moderated the relationships of parental status with loneliness, of the number of siblings with loneliness, and of marital status with mental health.

Conclusions: Family structure affects elderly mental health directly or via loneliness, moderated by social capital. Governments should prioritize mental health prevention for high-risk elderly, and social capital-enhancing interventions are useful.

Keywords: Family structure, Loneliness, Personal social capital, Anxiety, Depression

P-T07C-0532

Impact of COVID-19 restrictions on health and well-being in the United Arab Emirates

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Background: Restrictions during COVID-19 have potentially impacted the well-being of individuals where lockdown was applied. The United Arab Emirates (UAE) was one of the leading countries in implementing the lockdown international guidelines.
Aim: To identify the impact of COVID-19 on changes to exercise and general physical activity, changes to consumption of various foods, potential weight gain, and differences in smoking habits among individuals during the COVID-19 UAE quarantine.
Methods: A cross-sectional analytical study used a quantitative electronic questionnaire sent by the Ministry of Health and Prevention to collect data on the health and well-being of a UAE sample population. 2,362 responses were received to questions on physical activity, eating habits and tobacco use, before, during, and after COVID-19 lockdown. Descriptive statistical analysis was used for demographic data and changes in health and well-being. Paired t-test was used to show the changes in dietary habits.
Results: This study reveals concerning changes in health risk behaviors during COVID-19 lockdown in UAE. Physical activity levels declined across mild, moderate and vigorous ranges in most participants. Alarmingly, sedentary behavior dramatically increased with 71% of participants spending an average of 4-8h per day sitting and over 54% of participants spending more than 4h watching TV on an average day during lockdown. Fast-food consumption and snacking rose, hence weight gain was observed in over 53% of participants. Smoking habits, especially cigarette smokers worsened, with 45.2% reporting an increase in cigarette smoking, 16.8% an increase in shisha smoking and 35.3% an increase in smoking other tobacco products. These unfavorable behaviors during confinement could have serious long-term health consequences.
Conclusion: This study demonstrates that long periods of home quarantine may have led to unhealthy consequences that increase the risk of developing disease. This study highlights these health impacts and recommends strategies and policies that can encourage healthy habits.

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P-T07B-0541

Breastfeeding Practices Beyond Six Months and Maternal Health Indicators among Postpartum Mothers in Malaysia

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Breastfeeding plays a vital role in supporting maternal and child health. Health monitoring remains important during lactation, particularly for mothers who continue breastfeeding beyond six months up to two years. However, maternal haemoglobin status, blood pressure regulation, and body mass index (BMI) during prolonged breastfeeding are less frequently examined. This study aimed to investigate breastfeeding practices, haemoglobin levels, blood pressure, and BMI among mothers breastfeeding between 6 and 24 months. A cross-sectional study was conducted among 105 mothers (response rate of 75%) aged between 20–44 years recruited from a government health clinic in Northern Malaysia. Data were collected through face-to-face interviews and one-time measurements of BMI, haemoglobin, and blood pressure. Most respondents were Malay (77.1%), and a majority (72.4%) had tertiary education. More than half (54.3%) were employed, while 31.4% were full-time housewives. In terms of infant age, 72.4% of mothers breastfed children aged 6–12 months, while only 11.4% continued until 19–24 months, indicating a reduction in prevalence after one year. Feeding practices showed that 52.4% practiced mixed feeding, breast milk and complementary foods. Nearly half of the mothers were overweight (47.6%), and 23.8% were obese. Normal haemoglobin levels (≥11.0 g/dL) were found in 85.7% of mothers, while 14.3% had mild anaemia. Blood pressure was largely within normal limits, though 14.3% had systolic hypertension, and 2.9% had diastolic hypertension. No significant associations were found between breastfeeding practices and maternal haemoglobin, BMI, or blood pressure. These findings suggest that breastfeeding beyond six months may help sustain maternal health indicators, though further studies with larger populations in other regions of Malaysia are recommended.

Keywords: Breastfeeding, haemoglobin, blood pressure, BMI, maternal health

P-T07D-0560

Factor affecting to mental health in Thai undergraduate student

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Background: Children and adolescents in Southeast Asia are especially vulnerable to mental health problems, with the region recording the second-highest global suicide rate after Europe. In Thailand, the average suicide rate is 6 per 100,000 people. Nearly one-third of Thai students report high stress levels, often linked to health-risk behaviours. This stress is associated with a 40% increase in bipolar disorder and depression, elevating suicide risk. This study aimed to (1) assess the mental health status of Thai university students, (2) identify factors influencing mental health, and (3) examine the relationship among multidimensional social support, resilience quotient (RQ), and student adjustment.
Methods: A correlational descriptive study was conducted from November 2022 to March 2023. The sample included 1,032 undergraduate students from a university in eastern Thailand, selected using simple random sampling based on the Craigie and Morgan formula. Data were collected through online questionnaires, promoted via university representatives. Descriptive statistics were used for baseline analysis, and canonical correlation analysis was applied to explore relationships among variables.
Results: Most students reported high levels of multidimensional social support (mean = 5.31, SD = 1.52). RQ scores were within the normal range (mean = 57.83, SD = 6.76), and adjustment scores were high (mean = 4.37, SD = 0.77). Mental health (DASS) results indicated normal levels of stress, depression, and anxiety. Correlations among resilience, adjustment, and multidimensional social support variables ranged from 0.121 to 0.854 ($p < 0.01$), showing positive associations. Mental health variables showed negative correlations ($r = 0.182–0.884$, $p < 0.01$). The first canonical function showed a significant correlation ($r = 0.572$, $p < 0.001$), explaining 86.08% of variance.
Conclusion: Multidimensional social support, resilience, and adjustment significantly predict mental health outcomes among Thai students. Educational institutions should strengthen support systems to enhance student well-being and reduce psychological risk..

P-T07D-0562

The efficacy of support for preventing social isolation and loneliness among community-dwelling older adults using communication robots: A single-group pre- and post-test

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Objectives: This interventional study examined whether promoting self-care and enhancing family and community connections using conversational AI robots could reduce the risk of social isolation and loneliness among older adults living in the community.
Methods: Twenty community-dwelling older adults who reported reduced social interaction participated in a two-month intervention beginning in 2024. First, nurses assessed cognitive, mental, physical and oral functions, and the results were shared with the participants and their families. Then, educational and behavioural goals were set in four self-care areas: (1) connecting with people; (2) stimulating cognitive function and improving sleep; (3) enhancing physical function; and (4) improving oral function. Communication robots encouraged daily preventive actions and supported community engagement. The primary outcomes were loneliness (UCLA Loneliness Scale) and frequency of going out. Secondary outcomes included tongue pressure, tongue and lip function, and grip strength. Data were collected at baseline and after two months, and analysed using t-tests.
Results: All 20 participants completed the intervention. The UCLA Loneliness Scale showed an improving trend, though the frequency of going out remained unchanged. There was a significant improvement in tongue and lip function, while there were no changes in tongue pressure and grip strength. Satisfaction was high, with 72.4% of participants reporting satisfaction with the educational interventions and 86.6% feeling a sense of security in daily life.
Conclusions: Support using communication robots may promote psychological well-being, improve oral function, and encourage behavior modifications among older adults at risk of social isolation and loneliness. These findings suggest the potential for AI-assisted interventions to complement community-based nursing care.

P-T07B-0571

Effectiveness of Mix-and-Match Vaccination in Prevention of SARS-CoV-2 Among Older Adults in Taiwan: A Population-based Emulation Test-Negative Control Study

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Background: Due to the vaccine shortage during the COVID-19 pandemic, Taiwan faced a situation of mix-and-match vaccination. This study aims to analyse the protective effectiveness of mix-and-match vaccination among adults aged 65 and older in Taiwan.

Methods: A population-based emulation test-negative control study design was employed. We collected all study subjects' COVID-19 test claims from the National Health Insurance research database between April 1, 2022, and September 30, 2022, and linked them to the National Infectious Disease Reporting System to confirm the positive or negative test results. Next, they retrospectively followed the mix-and-match vaccination status via the National Immunization Information System dataset. The observational study period was set from 180 days prior to the COVID-19 test after 3rd (booster) COVID-19 vaccination, and/or for unvaccinated individuals to the test day. Vaccine effectiveness (VE) with 95% confidence intervals (CIs) for COVID-19 breakthrough infection, severe illness, and death was estimated using logistic regression.

Results: A total of 460,479 individuals aged 65 or older were included and were classified into eight groups based on the combinations of vaccines they received. After adjusting for age, sex, and underlying chronic conditions, the VE against severe illness ranged from 67.4% to 86.9%, while the VE against death varied from 60.7% to 89.8%. Overall, regardless of the vaccine combination, COVID-19 vaccination significantly reduced the risks of severe illness and mortality among older adults.

Conclusion: The COVID-19 vaccination has provided protective benefits for older adults in reducing the risks of severe disease and death. Although we find that the three-dose Moderna regimen demonstrated the highest level of VE. However, any other mix-and-match vaccinated group shows significant protective effects compared to the unvaccinated group.
Keywords: mix-and-match, vaccine effectiveness, older adult

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P-T07A-0578

Burden of Disease Studies in the Middle East and North Africa Region: A Systematic Review

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Introduction: In the Middle East and North Africa (MENA) region, changing demographic and epidemiological profiles have resulted in a diverse and shifting burden of disease. While Global Burden of Disease (GBD) estimates provide broad insights, national burden of disease (NBD) estimates offer country-specific data for tailored health policies and resource allocation. This systematic review aims to identify the national burden of disease studies in the MENA region, which use DALYs as the primary outcome measure.

Methods: PubMed, Scopus, Web of Science, and EMBASE electronic databases were searched for literature published from 1993 till 2023, reporting national-level DALY, YLL or YLD estimates calculated using national or regional databases/registries of diseases, injuries or risk factors in the MENA region. Studies using GBD estimates, or other global databases were excluded. Title/abstract, full-text screening, and quality assessment using Standardized Reporting of BoD studies (STROBOD) were done by two independent reviewers, with disagreements resolved by a third one. Studies were collated by country, population, sources of mortality and morbidity data, disability weights and life tables used, YLL, YLD and/or DALY reported.

Results: Out of 3089 screened studies, 11 studies were included; one was multi-country and 10 were single-country studies. Six studies discussed non-communicable diseases, two communicable diseases, two injuries and one multiple diseases. Mortality data were mainly derived from vital statistics, registries of Ministry of Health. Morbidity data were obtained mostly from the Ministry of Health, surveys, disease registries, hospital medical records and discharge summaries. There were variations in terms of incidence or prevalence-based approaches, disability weights and life tables used.

Conclusion: Only a low number of national BoD studies are available in the MENA region. There is also a need for consistency of data sources and methods used to ensure comparability between countries.

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P-T07G-0579

Public Awareness and Attitudes Towards Aphasia and Its Rehabilitation in Malaysia

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Aphasia, caused by brain damage that disrupts language processing, profoundly affects communication and daily living. Individuals with aphasia face difficulties in self-expression, reduced autonomy, and loss of independence. When public awareness is limited, these challenges are compounded by stigma, social isolation, and restricted access to rehabilitation. Despite these impacts, aphasia remains under-recognized in many countries, including Malaysia.

This study examined public awareness and attitudes toward aphasia and its rehabilitation in Malaysia, and explored sociodemographic factors associated with these outcomes. A crosssectional online survey was conducted with 268 participants, using a 5-point Likert scale to assess awareness and attitudes. The survey included 12 items adapted from validated instruments, with content validity confirmed through expert review (I-CVI: awareness = 0.556– 0.778; attitude = 0.800–1.000). Data were analysed using descriptive statistics, independentsamples t-tests, Spearman's correlation, and binary logistic regression.

Participants demonstrated moderate awareness (M = 3.65, SD = 0.46), with 31.95% showing low awareness and 68.05% showing high awareness. Attitudes were generally positive (M = 4.03, SD = 0.58), with 87.22% displaying supportive views toward aphasia and its rehabilitation. Prior knowledge of aphasia significantly predicted both higher awareness
($t(266) = 2.300$, $p = .022$) and more positive attitudes ($t(266) = 2.604$, $p = .010$). Regression analyses indicated that awareness was significantly influenced by age, race, education, and occupation, while attitudes were more strongly associated with age and gender.

These findings underscore the importance of targeted, culturally sensitive awareness initiatives to enhance public understanding and support for people with aphasia. Strengthening awareness and fostering positive attitudes can reduce stigma, promote inclusion, and improve the overall well-being of individuals living with aphasia in Malaysia.

Keywords: Aphasia, awareness, attitudes, demographic factors, Malaysia

P-T07B-0592

Predictors of Happiness Among Nursing Students in Malaysia: A Cross-Sectional Study

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Background: Happiness matters, especially for those preparing to care for others. However, nursing students often face intense academic workloads, emotional stress, and demanding clinical training, which can compromise their well-being. This study examined psychological and demographic predictors of happiness among nursing students in Malaysia.

Methods: A cross-sectional survey using universal sampling was conducted from October to November 2024, among native nursing students at two public institutions in Kuala Lumpur, Malaysia. Data was collected via an online questionnaire including socio-demographic items (age, sex, ethnicity, religion, sexual identity, marital status, family background, current residence, level of study, perceived academic performance, health status, perceived chronic conditions, and history of suicide in family), the Orientations to Happiness questionnaire, the Brief COPE Scale, and the Perceptions of Academic Stress Scale. Bivariate analyses (independent sample T test, ANOVA, and Pearson correlation test) were conducted to examine factors associated with total happiness score. Factors that were found to be significant were later included in the subsequent multiple linear regression analysis to determine the predictors of happiness.

Results: Of the 387 students invited, 316 responded (response rate: 81.7%). After excluding seven international students, 309 were included in the final analysis. Most participants were aged 18–24, heterosexual, single, from well-off families, reported good academic performance, good perceived health, no chronic conditions, and no family suicide history. Bivariate analyses identified significant associations between happiness scores and sex, level of study, perceived academic performance, perceived academic stress, and coping skills. Multiple linear regression revealed that perceived academic performance and problem-focused coping were significant predictors of higher happiness scores.

Conclusion: Academic confidence and the use of problem-focused coping strategies are key drivers of happiness among nursing students' well-being in Malaysia. Targeted interventions to strengthen these factors may enhance student well-being in nursing education.

Keywords: happiness, nursing students, coping strategies, Malaysia, mental health

P-T07B-0627

AI Literacy, Social Status, and Wellbeing: The Moderating Role of Health Literacy

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Background: Artificial intelligence (AI) literacy, defined as individuals' knowledge, skills, and confidence in understanding and interacting with AI systems, has emerged as a vital competency in the digital age. As AI technologies become embedded in daily life, AI literacy not only facilitates practical engagement but also serves as a symbolic asset, enhancing perceived social status and influencing well-being. This study examines the mechanisms by which AI literacy impacts well-being, with a focus on the mediating role of perceived social status and the moderating role of health literacy.
Methods: Data were drawn from a cross-sectional online survey of 2,721 adults in Taiwan. AI literacy was measured using a validated scale that encompassed awareness, usage, evaluation, and ethical understanding of AI. Perceived social status was assessed using a self-rated social ladder scale, while well-being was evaluated through the Human Flourishing Index, covering happiness, health, meaning, and social relationships. Hayes' PROCESS Macro (Model 15) was used to test a moderated mediation model, assessing whether perceived social status mediates the relationship between AI literacy and well-being, and whether health literacy moderates both the direct and indirect effects.
Results: AI literacy was positively associated with perceived social status, which in turn was significantly associated with well-being, indicating that AI literacy is increasingly perceived as a status symbol. Notably, health literacy moderated these effects. Individuals with limited health literacy experienced more direct improvements in well-being from AI literacy, while those with adequate health literacy benefited primarily through enhanced social status.
Conclusion: These findings underscore the multifaceted psychosocial impacts of AI literacy and the importance of tailoring digital literacy efforts to account for individual differences in health literacy. Promoting AI literacy in equitable and context-sensitive ways may support both social recognition and well-being.
Keywords: Artificial intelligence literacy; Perceived social status; Health literacy; Well-being


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THANK YOU
for
YOUR VALUED
CONTRIBUTIONS
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