14th IEA-SEA meeting &ICPH2022

Southeast Asia Regional Scientific Meeting of the International Epidemiological Association and International Conference on Public Health and Sustainable Development

22-25 November 2022
Mae Fah Luang University, Chiang Rai, Thailand

E-Abstract

- COVID-19
- MEDICAL TECHNOLOGY & INNOVATION
- NON-INFECTIOUS DISEASE & INJURY
- HIV AIDS & INFECTIOUS DISEASE
- HEALTH SYSTEM & DETERMINANT
- WOMAN & REPRODUCTIVE HEALTH
- BORDER & MINORITY HEALTH
- MENTAL HEALTH
- OCCUPATIONAL & ENVIRONMENTAL HEALTH
- PHYSICAL ACTIVITIES, EXERCISE & NUTRITION
- OTHER

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Conference Program and Book of Abstracts

The 14th Southeast Asia Regional Scientific Meeting of the International Epidemiological Association and International Conference on Public Health and Sustainable Development

(The 14th IEA-SEA Meeting and ICPH 2022)

22-25 November 2022

Heritage Chiang Rai Hotel, Chiang Rai, Thailand

School of Health Science, Mae Fah Lunag University, Thailand

This document was prepared by the scientific committee of the 14th Southeast Asia Regional Scientific Meeting of the International Epidemiological Association and International Conference on Public Health and Sustainable Development (The 14th IEA-SEA Meeting and ICPH 2022)

The 14th Southeast Asia Regional Scientific Meeting of the International Epidemiological Association and International Conference on Public Health and Sustainable Development (The 14th IEA-SEA Meeting and ICPH 2022)

22-25 November 2022

Heritage Chiang Rai Hotel, Chiang Rai, Thailand

Organizers:
Mae Fah Luang University (MFU)
International Epidemiological Association (IEA)
Southeast Asia Epidemiological Association (SEA-IEA)
World Health Organization (WHO)
International Organization of Migration (IOM)
Ministry of Public Health, Thailand (MOPH-Thailand)
Health Systems Research Institute (HSRI)
The Council of Community Public Health of Thailand
The Council of Public Health Education Institute of Thailand

Academic supporters:
Centers for Disease Control and Prevention (CDC)
United Nations Programme on HIV/AIDS (UNAIDS)

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The Council of Community Public Health, Thailand
Thailand Convention and Exhibition Bureau (TCEB)
The Center of Excellence for the Hill tribe Health Research (CEHR)
AstraZeneca (Thailand)

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Introduction

The 14th Southeast Asia Regional Scientific Meeting of the International Epidemiological Association and International Conference on Public Health and Sustainable Development (IEA-SEA 2022) is the major forum for public health and medical epidemiologists to share their experiences and good practices especially in prevention and control several global health threats including COVID-19, HIV, TB. In 2022, the conference is organized by the School of Health Science, Mae Fah Luang University which is ranked the 1st university in Thailand for four (4) consecutive years by Time Higher Education (THE) World University Ranking, and other key partners such as the Southeast Asia Epidemiological Association (SEA-IEA), World Health Organization (WHO), International Organization of Migration (IOM), Ministry of Public Health, Thailand (MOPH-Thailand), Health Systems Research Institute (HSRI), The Council of Community Public Health, Thailand, The Council of Public Health Education Institute of Thailand. Many organizations support scientific and excellent speakers to the conference such as the Centers for Disease Control and Prevention (CDC), United Nations Programme on HIV/AIDS (UNAIDS), etc. More than 15 keynote speakers from major health agencies in the world deliver their excellent information to the conference. In addition, more than 400 people participated in the conference with 150 excellent papers selected to present in the conference.

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Message from President of Mae Fah Luang University, Chiang Rai, Thailand

Chair Conference of 14th IEA-SEA Meeting and ICPH 2022

Dear Colleagues,

It is almost three years since the world was overcome by the pandemic of COVID-19, surely one of the critical disasters in our history. Very many lives have been lost from all sectors and territories of the world. The pandemic has had a massive effect on economies with worldwide economic recession. It is clear that we must plan for future pandemics, so to address these high impact health problems, we require a forum to share and exchange experience and knowledge among medical scientists, public health professionals and epidemiologists.

I am the President of the Mae Fah Luang University, Thailand and am honored to support and organize the 14th Southeast Asia Regional Scientific Meeting of the International Epidemiological Association and International Conference on Public Health and Sustainable Development (14th IEA-SEA Meeting and ICPH 2022). On behalf of the conference committee, it is my great pleasure to invite you to join one of the largest conferences in the field of public health epidemiology and medicine in the world. The conference will provide opportunities for sharing information and good practice in public health, epidemiology and medicine, and valuable networking opportunities.

We are looking forward to a stimulating and highly productive meeting with the foremost medical scientists and epidemiologists from eleven (11) SEA-WHO country members and from countries around the world sharing knowledge, skill and practice in disease control and prevention.

The conference will be held in Chiang Rai, Thailand, between 23-25 November 2022.

We are looking forward to warmly welcoming you to the IEA-SEA&ICPH 2022.

Assoc.Prof.Dr.Chayaporn Wattanasiri

President, Mae Fah Luang University, Chiang Rai, Thailand

Chair, the 14th IEA-SEA meeting and ICPH 202

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Greetings from the President IEA

It gives me pleasure to extend hearty greetings to the organizers of 14th SEA-IEA regional meeting and welcome the distinguished delegates of this conference. The conference is being held at Mae Fah Luang University in the Northern Thailand during 23-25 Nov 2022. This conference is being presented by several international organizations such as Mae Fah Luang University; Ministry of Public Health Thailand; Health System Research Institute, Thailand; The Council of Community Public Health, Thailand; Thai Health Promotion Foundation, IEA-SEA, WHO-SEA. The host University named after Her Royal Highness Kings mother is an excellent place of learning blended with love and affection to people. The Scientific program committee has chosen COVID-19 as the main theme along with other pertinent problems and challenges to global public health which are significantly relevant.

The IEA has embarked upon volunteerism, regionalization and development of specific niche in our global effort to advance epidemiology towards equity in health for development. Hope this meeting will provide a platform to strengthen capacity in epidemiology in countries, through effective networking and partnership and will bring out solutions to common regional problems.

I congratulate all stake holders, particularly Prof Umesh Kapil Regional Councillor IEA-SEA and Dr. Tawatchai Apidechkul, Dean School of Health Science, Mae Fah Luang University, Director of the Centre of Excellence for Tribal Health Research, and Director Wellness Centre MFU for bringing out this scientific meeting.

I wish a grand success to the conference.

Chandra M Pandey, PhD, FSMS

President

International Epidemiological Association (IEA)

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Scientific Committee

Prof. Umesh Kapil, MD, Ph.D	Professor of Human Nutrition Unit, Regional Councilor- South East Asia-IEA	India
Prof. Mnasur Ahmad, MD, Ph.D	Professor & Advisor, Dept. of NCD Bangladesh University of Health Sciences	Bangladesh
Panithee Thammawijaya, MD, Ph.D	Director, Field Epidemiology Training Program, MOPH	Thailand
Prof. Janaki Vidanapathirana, MD, Ph.D	Ministry of Health	Srilanka
Prof. Suriyadeo Tripathi, MD	Director Moral Center (Public Organization)	Thailand
Prof. Defriman Djafri, PhD	Dean of the Faculty of Public Health at Universitas Andalas	Indonesia
Prof. Pradeep Aggarwal, MD, Ph.D	Professor of Department of Community and Family Medicine, All India Institute of Medical Science Rishikesh	India
Prof. Laura Rozek, Ph.D	Associate Professor, Georgetown University	United States
Prof. Sion Williams, Ph.D	Research Assistant Professor Director, Oncogenomics Core Facility	United Kingdom
Phanthanee Thitichai, MD, Ph.D	Epidemiologist at BoE, DDC, MOPH	Thailand
Prof. ChandraMani Pandey, MD, Ph.D	Professor of Sanjay Gandhi Post Graduate Institute of Medical Sciences, Department of Biostatistics & Health Informatics	India
Prof. Daniel B Ahquist, Ph.D	Assistant Professor, Cornell University, Development Sociology.	United States
Prof. Gill Windle, Ph.D	Professor of School of Medical and Health Sciences, Bangor University.	United Kingdom
Carlo Perrone, MD, MSc	Research Physician MORU Mahidol Oxford Tropical Medicine Research Unit	Italy

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Prof. Andrew UK Law, MPhil (Cantab), MD, Ph.D, FRCP (Canada), FAPA, FRCP(Edin)	Professor of Psychiatry and Vice Dean (International Student Services), Royal College of Surgeons in Ireland & University College Dublin	Malaysia
Betamariam Alemu Tiruneh, MHP	Professor of Johns Hopkins Center for Communication Programs (CCP) Ethiopia	Ethiopia
Montira Inkochasan, Ph.D	Senior Regional Migration Health Programme Assistant at International Organization for Migration, Regional Office for Asia and the Pacific	Thailand
Aiko Kaji, Ph.D	Project Development and Implementation Officer at International Organization for Migration, Regional Office for Asia and the Pacific, Vietnam	Japan
Prof. CM Singh, MD, Ph.D	Professor of all India Institute of Medical Sciences, Patna Department of Community Medicine	India
Prof. Dipl. Sportwiss Dirk Möller, Ph.D	Professor of Faculty of Economics and Social Sciences	Germany
Thanwadee Chantian, MD, Ph.D	Field Epidemiology Training Program	Thailand
Prof. Marc Van der Putten, Ph.D	Professor of Global Health in Global Mental Health at Thammasat University's Faculty of Public Health	France

Conference program

22 November 2022: Pre-conference workshop	
Registration	08.00-09.00
Effective health research design and implementation **Professor Karl Peltzer, Ph.D*, Professor Supa Pengpid, Dr.P.H****	09.00-12.00
Lunch	12.00-13.00
Critical points of a good research article preparation for publication **Professor Karl Peltzer, Ph.D*, Professor Supa Pengpid, Dr.P.H****	13.00-16.00

*Department of Psychology, Asia University, Taiwan University of the Free State, South Africa
**Department of Health Education and Behavioral Sciences Faculty of Public Health, Mahidol University, Bangkok, Thailand

23 November 2022	
Registration	08.00-08.30
Opening Ceremony Associate Professor Chayaporn Wattansiri, Ph.D *President, Mae Fah Luang University, Thailand*	08.30-09.10
Keynote speaker-I **"Current and future global and regional health challenges: Leaderships and strategies requirements for healthcare policy makers"** Manoj Jhalani *Director for Health System Development,* *World Health Organization South East Asia Region*	09.10-10.00
Coffee break	10.00-10.10
Keynote speaker-II **"Successful experiences in COVID-19 prevention and control in Thailand"** Sopon Iamsirithaworn, MD, Ph.D *Deputy Director-General of the Department of Disease Control Ministry of Public Health, Thailand*	10.10-11.00

23 November 2022	
Keynote speaker-III **"Global epidemiology and surveillance of HIV/AIDS"** Wolfgang Hladik, MD, Ph.D *Centers for Disease Control and Prevention (CDC/CGH/DGHA, USA),* *United States*	11.00-11.30
Keynote speaker-IV **"COVID-19 challenges and opportunities for physical activity promotion** **in Chinese older adults"** Professor Jia Han, Ph.D *Shanghai University of Medicine and Health Sciences, China*	11.30-12.00
Lunch Symposium *AstraZeneca*	12.00-13.00
Keynote speaker-V **"No one is safe until everyone is safe: the critical importance of migrant** **inclusion for healthy societies"** Patrick Duigan, MBBS, MPH&TM, DHA, DCH, DTM&H *Regional Migration Health Advisor* *International Organization for Migration, Regional Office for Asia and the* *Pacific, Thailand*	13.00-13.30
Keynote speaker-VI **"One Health as a key approach to a better health"** Victor Del Rio Vilas, DVM, Ph.D *University of Surrey, United Kingdom*	13.30-14.00
Oral presentation session 1 (4 parallel rooms)	14.00-14.30
Coffee break/ Poster session 1	14.30-15.00
Oral presentation session 2 (4 parallel rooms)	15.00-16.30
Gala dinner	18.00-21.00

24 November 2022	
Registration	08.00-09.00

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24 November 2022	
Keynote speaker-VII **"National strategic for improvement healthcare delivery system in Thailand"** Nopporn Chuenklin, MD, Ph.D *Director of Health System Research Institute, Thailand*	09.00-09.30
Keynote speaker-VIII **"HIV/AIDS in SEA and Pacific: Challenges and Regional Strategies Required"** Ye Yu Shwe, MD, MA *UNAIDS Asia Regional Office*	09.30.-10.00
Keynote speaker: IX **"Public health education: Role redirection and adjustment of the university during health crisis"** Professor Sathirakorn Pongpanich, Ph.D *Chulalongkorn University, Thailand*	10.00-10.30
Keynote speaker-X **"HIV/AIDS: Past, present, and future:- Lessons from Japan"** Professor Seiji Okada, MD, Ph.D *Kumamoto University, Japan*	10.30-11.00
Keynote speaker-XI **"Virus inactivated or mRNA COVID-19 vaccine? A head-to-head comparison in Hong Kong"** Assistant Professor Chris Mok, Ph.D *The Jockey Club School of Public Health and Primary Care* *The Chinese University of Hong Kong, Hong Kong*	11.00-11.30
Keynote speaker-XII **"Anemia in South East Asian countries-Need for adopting revised strategies"** Professor Umesh Kapil, MD, Ph.D *Consultant, IEA, India*	11.30-12.00
Lunch	12.00-13.00
Keynote speaker-XIII **"Social-Ecological Approaches to understanding emerging global health challenges"** Bruce A Wilcox, Ph.D *Visiting Professor, Department of Entomology, Kasetsart University, Bangkok* *Senior Scientist, Global Health Group International, Berlin*	13.00-13.30

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24 November 2022	
Panel Discussion Senior IEA-SEA Expert	13.30-14.30
Coffee break/ Poster session 2	14.30-15.00
Oral presentation session 3 (4 parallel rooms)	15.00-16.30
Delegates gathering	18.00-20.00

25 November 2022	
Registration	08.00-09.00
Oral presentation session 4 (4 parallel rooms)	09.00-09.30
Coffee break	09.30-10.00
Oral presentation session 5 (4 parallel rooms)	10.00-12.00
Lunch	12.00-13.00
Oral presentation session 6 (4 parallel rooms)	13.00-14.30
Coffee break/ Poster session 3 (4 parallel rooms)	14.30-15.00
Closing ceremony	15.00-16.30

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Pre-conference Workshop

Professor Karl Peltzer is a Chair Professor in the Department of Psychology, Asia University, Taiwan, and former visiting professor at the ASEAN Institute for Health Development, Mahidol University, Salaya, Thailand. He is a behavioural scientist and an expert in the prevention and control of communicable and non-communicable chronic conditions. Professor Peltzer's research programme focuses on health promotion, risk behaviour and disease prevention, and socio-behavioural interventions on public health subject areas of alcohol, tobacco, cancer, tuberculosis and HIV control, nutrition, physical activity, hypertension, mental health, injury and violence prevention in low- and middle-income countries, including Africa and Asia. He has more than 800 peer reviewed journal articles, 17 authored or co-authored books, 4 edited books, 60 book chapters and 185 paper presentations at mainly international conferences.

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Supa Pengpid is a Professor at Department of Health Education and Behavioural Sciences, Faculty of Public Health at Mahidol University Thailand. Pengpid obtained Master of Sciences in Public Health and Doctor of Public Health (health Behaviour and Health Education) from Mahidol University, and Master of Business Administration from Regenesys Business School, South Africa. Pengpid work experiences included Professor at Department of Social and Behavioural Health Sciences(2005-2007) and Professor and Head of The Department of Health System Management and Policy at the National School of Public Health, South Africa (2008-2012), served as the Director of ASEAN Institute for Health Development (2013-2017) and Professor (2017-2022) of ASEAN Institute for Health Development, Mahidol University (2013-2022). She has published more than 500 international articles (in areas of health behaviour, health promotion, health psychology and public health interventions) 12 books, and supervised completed 55 post-graduates' students. Pengpid is a globally recognized as Public Health Expert in areas of Health Behaviours, Health Education, Health promotion, determinants of health, health behaviours and public health interventions, leadership and health system management. Pengpid recognition and contribution in the field of public health development through international conferences presentation, workshop, keynote speakers, academics and research collaborations and visited more than 45 countries. Pengpid was rated as World Top 2 % Scientist in year 2021 by Stanford University.

Program of Pre-conference Workshop

Effective health research design and implementation (09.00-120.00 am)

The objective of this workshop is to highlight, share, discuss and guidance techniques, strategies and tips related to health research design and implementation.

Overview of topics to be presents and discusses

- Research strategies 360°; set up career path and aligning your research areas
- Using checklists for research design and implementation.
- Cross-sectional and longitudinal examples of research designs and implementation.
- Presentation of research designs and implementation by participants.
- Discussion and suggestions for research designs and implementation.

Critical points of a good research article preparation for publication (01.00-04.00 pm)

The objective of this workshop is to provide special personal techniques used for preparing academics publications.

- Crucial aspects of a good research article, such as research gap, design, and scope of the paper, approach to analysis, presentation and discussion of results, journal selection, checklists, submission, and revision will be exemplified in topical health issues.
- Presentation of a good research article by participants.
- Discussion and suggestions for a good research article preparation for participants' projects or drafted articles.

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Keynote speakers

Mr.Manoj Jhalani

Mr.Manoj Jhalani is director of department of UHC/Health System at the Regional Office for South-East Asia (SEARO), World Health Organization (WHO). He has been a member of Indian Administrative Service and has an experience of over three decades in designing and implementing public policies and programmes of socio-economic development particularly in the health sector. He also has been been a member of Indian Administrative Service and has an experience of over three decades in designing and implementing public policies and programmes of socio-economic development particularly in the health sector. Between March 2012 to November 2019, he served as Joint Secretary, Additional Secretary and then Special Secretary, Ministry of Health and Family Welfare, Govt. of India. He was also the Mission Director of the National Health Mission that is the largest public health programme in the world. November 2019 to date- he is working as the Director, Department of UHC/Health Systems, Regional Office for South-East Asia, World Health Organization, New Delhi. He has co-authored several papers in the area of health systems and policy that have been published in leading journals, and has many awards and accomplishments to his credit including the UN Inter-agency Task Force award for his outstanding contribution towards addressing NCD challenge in India.

"Current and future global and regional health challenges: Leaderships and strategies   requirements for healthcare policy makers"

Global and regional health challenges:

Escalating climate events and climate change, increasing frequency and severity of pandemics, escalating humanitarian challenges, rise of anti-microbial resistance, as well as demographic and epidemiological changes, including ageing, urbanization, and rise of non-communicable disease are putting significant strain on health systems in the Region. Increased demand of the health system is arising during a period of significant economic stress and uncertainty. Growing inequities and slow march towards UHC are major concerns.

The above challenges cannot be met under conditions of low public spending on UHC, with a selective and limited vision of Primary Health Care. The escalating regional and global health challenges also require greater cooperation across health agencies and partners, across sectors, and importantly, across jurisdiction/nations.

Leadership among healthcare policy makers:

Public health is ultimately a political choice. Moreover, the neglect of population health represents both a market and a state failure. There is real danger that lessons from the pandemic will be ignored; and the cycle of neglect and panic is repeated. There is also a need to address the social, environmental, and commercial determinants of health with greater focus, as well as to raise the priority of health in public and political discourse. For all of the above we need leadership that has:

1. Ability to advocate, negotiate and build partnerships with stakeholders holding varying interests, towards advancing the health priority.

2. Clarity on the role and power of governments, markets, professional bodies and communities.

3. Futuristic vision and cognitive skills to understand emerging challenges and underlying determinants, with identification of opportunities to better prepare our systems to address current and future challenges

4. Implementation abilities to effectively execute what is planned

Strategies to be adopted at national and global level :

The WHO's strategic priorities are highly relevant at national and global levels. These include:

1. Promoting health and well-being and preventing disease by addressing its root causes;

2. Reorient health systems towards primary health care, as the foundation of universal health coverage (and health-SDGs and health security);

3.Strengthen the systems and tools for epidemic and pandemic preparedness and response at all levels, underpinned by strong governance and financing to ignite and sustain those efforts, connected and coordinated globally by WHO;

4.Harnessing the power of science, research innovation, data, and digital technologies as critical enablers

Furthermore, we need to ensure policies that build required technological and state capacity across nations, particularly to implement the proven cost-effective strategies, and increase the avenues for cross country and intra-country collaboration and sharing of knowledge/pathways.

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Dr Sopon Iamsirithaworn

Dr Sopon Iamsirithaworn received medical doctor degree in 1994 from Mahidol University, and then completed the two-years training under the International Field Epidemiology Training Program (FETP), Thailand in 1999. He also completed MPH and PhD in Epidemiology from University of California in 2006. Dr Sopon is widely recognized as one of the most outstanding field epidemiologists, not only in Thailand but also in Southeast Asia region. He has extensive experiences in the fields of public health and epidemiology. Right after graduation from medical school, he served as the director of Laem Ngob District Hospital, Ministry of Public Health, Thailand. Soon later, he joined the Department of Disease Control, Ministry of Public Health, and has served many important roles such as being the Director of International Field Epidemiology Training Program, being the Director of Institute for Urban Disease Prevention and Control, Co-Director of Thailand Ministry of Public Health - U.S. CDC Collaboration, and Director of Division of Communicable Diseases. Currently, he serves as the Deputy Director General of the Department of Disease Control, Ministry of Public Health, Thailand. Regarding academic performances, he published more than 50 articles in international journals and has been involved in various research projects domestically and internationally. During the COVID-19 pandemic, he served as the incident commander of the Emergency Operating Centre of the Department of Disease Control, Ministry of Public Health. He played vital role in implementing numerous public health measures in halting the pandemic. Moreover, he is a key player behind the strategy of massive vaccine rollout in Thailand, which is undoubtedly recognized as an one of the most effective measures that help avoid deaths and morbidities in the Thai population.

"Successful experiences in COVID-19 prevention and control in Thailand"

Wolfgang Hladik

Wolfgang Hladik is chief of the Epidemiology and Surveillance Branch, Division of Global HIV and TB, at the US Centers for Disease Control and Prevention in Atlanta, Georgia. He studied medicine in Vienna, Austria, holds a public health-related Master's degree (London School of Hygiene and Tropical Medicine) and acquired a PhD degree at the University of Amsterdam. He started working with CDC in 1999, from 2005 to 2012 he worked in Uganda for the in-country CDC program. He returned to Atlanta in 2012 where he led the Key Population HIV Surveillance Team and later assumed the branch chief position for the entire surveillance branch.

"Global epidemiology and surveillance of HIV/AIDS"

This presentation will explore the current state of the global and regional HIV epidemics, including burden of HIV disease, HIV incidence, and mortality among people living with HIV. Trends will be examined as well as the contributions to the epidemic by high risk groups and the general populations. Also explored will be the epidemiology of HIV acquisition and transmission. Further, this presentation will introduce key concepts of HIV surveillance, its role in informing global and national HIV estimates as well as current standards and best practices in HIV surveillance. The history of HIV surveillance will be reviewed briefly and an attempt will be made to outline future HIV surveillance priorities and systems in order to meaningfully inform programming and policy.

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Professor Jia Han

Professor Jia Han is a registered physiotherapist in Australia, and he is also a biomedical engineer and a researcher in scientific and clinical domains. He obtained his Bachelor of Engineering and Master of Biomedical Engineering from Tongji University, China, then studied for the degrees of Master of Physiotherapy and PhD in Health Science at the University of Canberra (UC), Australia. In 2017, Dr Han was appointed Professor of Physiotherapy and Sports Rehabilitation at the Shanghai University of Sport (SUS), leading the first Master of Physiotherapy program in China. In 2022, he joined Shanghai University of Medicine and Health Sciences (SUMHS), where he has been appointed Professor in Physiotherapy, Director of the Bachelor of Physiotherapy Program, and Academic Leader of Rehabilitation Science. He also holds adjunct professor positions at the University of Canberra and Swinburne University of Technology. Professor Han's primary research focus is on the proprioceptive mechanisms underlying human movement control. He has nearly 100 peer-reviewed national and international publications and has attracted over $1.3 million in competitive research funding. He is currently the leading investigator of 2 international collaborative research programs on lower limb proprioception in neuromusculoskeletal disorders. Dr Han is an Associate Editor of the Journal of Science and Medicine in Sport, one of the leading journals in sports medicine and sports science; he also serves on the China Physiotherapy Association (CPA) as the Vice President of National Sport physiotherapy Committee and the senior member of China Council of Physical Therapy Program Directors (CCPTPD).

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"COVID-19 challenges and opportunities for physical activity promotion in Chinese older adults"

Research has shown that COVID-19 has a profound impact on physical activities in different populations. Older adults, especially thoese with chronic diseases, need regular physical activity to maintain and improve their physical and psycological wellbeing. This presentation shows what challenges and opportunities that COVID-19 has brought to Chinese older adults. Specifically, Chinese older adults have had a benefit from a fast developing tele supervision system that can help them to promote physical activities at home.

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Patrick Duigan

Patrick Duigan,

Regional Migration Health Advisor

International Organization for Migration, Regional Office for Asia and the Pacific, Thailand

Dr Patrick Duigan, MBBS, MPH&TM, DHA, DCH, DTM&H, has been working in the field of migration health for the past 12 years in a range of humanitarian and development settings. He is currently serving as the Regional Migration Health Advisor with the International Organization for Migration's (IOM) Regional Office for Asia and the Pacific, based in Bangkok. In this capacity, he provides support and advice to IOM Country Missions, governments and local, regional and global partners to promote the migration health agenda across the Asia Pacific. Dr Duigan completed medical school in Australia and has undertaken graduate study in Public Health, Tropical Medicine, Humanitarian Assistance and Child Health with Adelaide University, James Cook University, LSHTM, Liverpool School of Topical Medicine. Dr Duigan has worked in numerous countries in bot humanitarian and development settings including Australia, Papua New Guinea, Cambodia, Myanmar, Haiti, Philippines, Nepal and Thailand on a range of migrant and refugee health related programs including those addressing Disaster and Public Health Emergency Response, TB, HIV and Malaria Programming, Health System Strengthening approaches, recovery and analysis and development of migration health policies. He has co-authored several publications on migrant health including those appearing in the British Medical Journal, SEARO journal of Public Health and the Health and Human Rights Journal.

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"No one is safe until everyone is safe: the critical importance of migrant inclusion for healthy societies"

Dr Del Rio

Dr Del Rio is a veterinarian by training with more than 20 years' experience in infectious diseases epidemiology and control. Dr Del Rio also holds an MBA, MSc in Epidemiology and PhD in epidemiology and disease surveillance. He has worked in multiple countries (e.g. Spain, UK, Uzbekistan, Brazil, India) and organizations (e.g. UK's Dpt for Environment, Food and Rural Affairs, WHO regional offices in the Americas and southeast Asia) and is most interested in biosurveillance and risk management. Dr Del Rio is now working with the Community Readiness and Resilience Unit at WHO-HQ in the development of community adapted risk and vulnerability assessments.

"One Health as a key approach to a better health"

Dr Del Rio will be discussing the elements of one health's value proposition (both hard and soft components from efficiency to timeliness, equity, and including benefits of improved coordination and awareness), possible approaches to measure this value (e.g. via multi-function optimization, portfolio approaches), and avenues to contribute to an overarching enhanced health.

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Dr. Nopporn Cheanklin

Dr. Nopporn Cheanklin is currently the Executive Director of the Health Systems Research Institute (HSRI). After awarded his degree of Doctor of Medicine from Faculty of Medicine, Prince Songkla University, Thailand. Dr. Cheanklin continued his professional in Orthopaedic Surgery, Preventive Medicine, and Family Medicine from the Medical Council of Thailand. He also received his Master of Public Health Methodology from Universite Libre De Bruxelles, Belgium and Master of Public Administration from National Institute of Development Administration, Thailand. Lately in 2020 Dr. Nopporn Chuenklin awarded The Honorary Degree of Honorary Doctor of Medicine from Walailak University, Nakhon srithammarat, Thailand. Dr. Cheanklin started his career as a medical doctor for the government at Phatthalung Hospital and later became the first orthopedist in Patthalung. In 1995 he was appointed to be a Deputy Provincial Chief Medical Officer (PCMO) in Preventive Medicine in Patthalung Province and became the Provincial Chief Medical Officer in Yala Province in 1997. He then worked as the Provincial Chief Medical Officer in Phranakhon Si Ayutthaya, Chomporn, Suratthani, and Nakhonsrithammarat, accordingly. In 2009 he moved to Bangkok for a position of Deputy Director-General at the Department of Disease Control, Ministry of Public Health where he had presented numbers of significant outstanding tasks and initiated numbers of important campaigns, such as, the Control of Alcohol Beverage and Tobacco Consumption, Work on Control of Non-Communicable Diseases and Prevention of Accident Injury including Work on Diseases derived from Career and Environment Campaigns. In 2012, he was selected as Outstanding Alumni for the Occasion of 40th Anniversary of Faculty of Medicine, Prince Songkla University specialized in Social and Institute Public Service and also

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chosen as Outstanding Alumni at Prince Songkla University for career achievement in the same year. In 2015 he was appointed to be the Managing Director of the Government Pharmaceutical Organization (GPO) where he was challenged to manage the Government Enterprise organization. He became the Executive Director of the Health Systems Research Institute (HSRI) on July 9th, 2018, right after retired from the GPO. His first era in HSRI there were many challenging and opportunities for him. His management and work here were highly appreciated therefore he was chosen to be the Executive Director of the Health Systems Research Institute for the 2nd term. He then started his second term here since July 9th, 2021.

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Dr Ye Yu Shwe

Dr Ye Yu Shwe is graduated as a medical doctor and holds master's degree in Population and Reproductive Health Research. As a public health specialist, he has more than 18 years of in-country and international experience in both clinical and programmatic aspects of HIV and health response. Before joining UNAIDS, he worked with UNICEF East Asia and Pacific Regional Office, International Rescue Committee, World Vision Foundation of Thailand, and Médecins Sans Frontières (MSF) Holland. In his current position at UNAIDS Regional Office as Strategic Information Officer - he provides technical assistance to national AIDS programmes and partners in HIV modelling and estimation, generation and use of strategic information for evidence informed advocacy and response.

"HIV/AIDS in SEA and Pacific: Challenges and Regional Strategies Required"

Asia and the Pacific is home to 6 million people living with HIV and the second largest HIV epidemic in the world. Across the region, over 96% of new HIV infections are among key populations and their sexual partners, and more than one quarter of new infections are among young people aged 15 to 24 years. Some countries in the region are making significant progress in controlling the epidemic while others are experiencing the expanding or resurging epidemics. The latest data indicates that 2 million people living with HIV in the region are not receiving life-saving antiretroviral treatment, and only 60% of people living with HIV are achieving HIV viral suppression to enjoy the healthy lives they deserve. To address these significant HIV service gaps, the region must intensify the focused response on key populations, harness the modernized HIV service delivery, eliminate the barriers to enabling HIV response and ensure the sustainable HIV financing. Tackling inequalities and ensuring the right to health for all must be at the core of the HIV response.

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Sathirakorn Pongpanich

Sathirakorn Pongpanich, Ph.D. is a professor in Health Economics and the Dean at the College of Public Health Sciences, Chulalongkorn University. He is invited to be a visiting professor at many universities and School of Public Health around the world and has served as thesis external examiner since 2000. He is the author and editor of 3 books, as well as numerous research articles. He conducted many researches in Public Health for Thailand Ministry of Public Health, Thai Health Promotion Foundation, World Health Organization (WHO) and others. His areas of interest include One Health, Sciences, Technologies and Innovations in Public Health, Cost of Treatment of Diseases, National Health Account, Tobacco Reduction Campaign, Negotiation and Public Health Administrations, Free Trade Agreement on Health etc. He is, as well, known as one of experts in negotiation who is participating in important national and international negotiation arenas and offering negotiation training to health professionals in South and Southeast Asian region.

Public Health Education: Role Redirection and Adjustment of Public Health Professionals and universities during Health Crisis

No questions asked how important Public Health Professionals were during COVID 19 pandemic. COVID-19 pandemic has had a far-reaching impact on global morbidity and mortality. The effects of varying degrees of implementation of public health and social measures between countries is evident in terms of widely differing disease burdens and levels of disruption to public health systems. But with a continuing changing and unpredictable world, we need to think further to prepare and enhance the capacity of Public

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Health Professionals for different situations. To enhance the capacity of public health professionals to respond to the pandemic or crisis, the government needs to help mobilizing staff to meet the required surge capacity; develop and implement updated policies to protect occupational safety; initiated packages to support morale and well-being; and the universities and Council of Community Public Health need to help updating lifelong learning competency for public health professionals.

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Seiji Okada

Seiji Okada M.D., Ph.D. is a Professor of Joint Research Center for Human Retrovirus Infection & Graduate School of Medicine, and Director of Radioisotope Center, Kumamoto University, Japan. He received his M.D. in 1985 and his Ph.D. degree in 1992 from Jichi Medical University. He is a Board Certificated Member and Councilor of the Japanese Society of Hematology. He established several types of novel highly immuno-deficient mice, humanized mice, and Patient derived tumor xenograft (PDX) models for AIDS and cancer research. His current research interest is development of novel therapy for infection related cancers such as AIDS related lymphoma, adult T cell leukemia/lymphoma and liver-fluke related cholangiocarcinoma.

"HIV/AIDS: Past, present, and future:- Lessons from Japan"

AIDS was recognized as an emerging infectious disease in early 1980s and then rapidly spread all over the world. In 2021, approximately 38 million people worldwide are living with AIDS. Since the start of this epidemic, 85 million people have been infected and 40 million people have died. HIV/AIDS has had a large impact on society, both as an illness and a cause of discrimination. The spread of HIV/AIDS differs from country (region), affected by their culture, history, religion, etc. In the 1980s approximately two thousand hemophilia patients in Japan contracted HIV-1 via imported unheated blood products (HIV-tainted blood scandal). After this tragedy, the Japanese government constructed a free medical care system for AIDS patients, which support early diagnosis and intensive care of HIV-infected individuals. Currently, approx. thirty thousand patients are reported in total and are being treated with combination anti-retroviral therapy

(cART) in Japan. Ninety percent of the patients are male and more than 70% are MSM. Causes of death have changed from AIDS itself to malignancies after cART era in Japan. Ministry of Health, Labour and Welfare of Japan defines that HIV/AIDS is now a controllable chronic infectious disease. HOWEVER, we still have a long way to go to eliminate HIV/AIDS as it is still a non-curative disease, the aging HIV population is growing, and an effective prevention vaccine is not yet established. I would like to discuss future prospects of HIV/AIDS in the presentation.

Dr. Chris Ka Pun, Mok

Dr. Chris Ka Pun, Mok is currently the assistant professor in The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong. He is also the honorary assistant professor of The University of Hong Kong and the visiting scientist of Nanyang Technological University. His group focuses on the virology and immunology of emerging infectious diseases including influenza and coronavirus. He particularly interested to understand how the adaptive immunity is regulated and sharpen by the evolution of respiratory viruses which will help to further improve the design of new vaccines. Dr Mok has over 10 years of experience to perform *in vitro* and *in vivo* experiments under biosafety level 3 containment. He is now the associate editor of Virology Journal and Frontier of Immunology.

"Virus inactivated or mRNA COVID-19 vaccine? A head-to-head comparison in Hong Kong"

The new severe acute respiratory coronavirus 2 (SARS-CoV-2), which has caused the pandemic of a life-threatening disease (COVID-19), has overwhelmed the whole world with its high transmissibility and wide range of severity. Although several antivirus drugs have been used for treating the disease, vaccine is still playing an important role to minimize the risk of infection or the severe consequences after SARS-CoV-2 infection. So far, CoronaVac and BNT162b2 are the most widely used whole virus inactivated and lipid nanoparticle (LNP) encapsulated RNA vaccines worldwide, respectively. Both vaccines have been used in the Hong Kong Special Administrative Region of China since early 2021. Here, we provide a head-to-head comparison of antibody and T cell responses in adults with vaccination strategies using CoronaVac and BNT162b2. Our results may provide insights to the mechanisms of protection provided by CoronaVac vaccines and provide insights into optimal outbreak control strategies.

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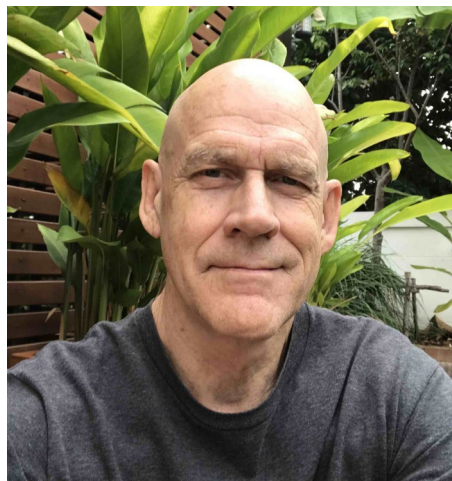
Dr.Umesh Kapil

Dr.Umesh Kapil Professor ,Public Health Nutrition All India Institute of Medical sciences, New Delhi , India   Email: umeshkapil@gmail.com

Dr.Umesh Kapil Professor, Public Health Nutrition All India Institute of Medical sciences, New Delhi , India. Having trained in Public Health Nutrition and epidemiology, he is presently regarded as a National and International   leader in the field of Public Health Nutrition. Prof. Kapil has been involved in several major national research studies. He has been a researcher, teacher, policy enabler, advocate and activist who has worked to promote Public Health Nutrition specially in the field of prevention of micronutrient deficiencies across the lifespan. Prof. Kapil has worked with, in many committees / advisory / consultancy positions, and several National governmental and UN agencies. : Indian Council of Medical Research, Ministry of Health and Family Welfare, Ministry of Industries, UNICEF, WHO, USAID, MOST, Agha Khan Foundation. His contributions to public Health Nutrition has been recognized through several awards and honours. They include i)Received B C Srivastava Indian Council of Medical research (ICMR) National Award for the year 1992,ii)Received M.K. Seshadri ICMR National Award for the year 1996,iii)Received P.N. Raju ICMR National Award for the year 2002,iv)Receive Hargovind National Award of IAP for the year 2009,v)Received Senior Scientist Award, Nutrition Society of India,1992,vi)Elected as Fellow of National Academy of Medical Sciences, 2003 vii)Elected as a Fellow of Indian Public Health Association, 1993,viii)Conferred Fellowship of Indian Association of Preventive and Social Medicine, 1998 ix) Elected as a President of Indian Association of Preventive and Social Medicine 2011.

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Is iron deficiency   the cause of   anemia in South East Asian Countries

Anemia is a major public health problem globally. Due to loss of 42.2 million disability-adjusted life years (DALYs) in 2011, Iron-deficiency anemia (IDA) was ranked among the top three major causes of disability in the world . IDA is presumed to be responsible for at least 50% of anemia and is highly prevalent in south east Asian countries especially among women, children below 5 years, and adolescent girls perhaps due to increased needs, insufficient dietary supplies, poor intervention coverage etc . Anemic girls will grow up to anemic mothers and in turn give birth to anemic children. Childhood anemia can have long term consequences. IDA has been associated with developmental deficits, impaired memory and neurodevelopment, diminished physical function, depression, fatigue, loss of vitality, preterm delivery, and lower infant birth weight. These, effects attributable to anemia remain invisible but are substantial, as it has serious health and economic costs and may hinder nation's development. Iron deficiency is commonly assumed to cause half of all cases of anaemias, with hereditary blood disorders and infections such as hookworm and malaria being the other major causes. In countries ranked as low, medium, and high by the Human Development Index, a systematic review was conducted nationally representative surveys which reported the prevalence of iron deficiency, iron deficiency anemia, and anemia among pre-school children and non-pregnant women of reproductive age. Using random effects meta-analyses techniques, data from 23 countries for pre-school children and non-pregnant women of reproductive age was pooled, and the proportion of anemia attributable to iron deficiency was estimated by region, inflammation exposure, anemia prevalence, and urban/rural setting. For pre-school children and non-pregnant women of reproductive age, the proportion of anemia associated with iron deficiency was 25.0% (95% CI: 18.0, 32.0) and 37.0% (95% CI: 28.0, 46.0), respectively. The proportion of anemia associated with iron deficiency was lower in countries where anemia prevalence was >40%, especially in rural populations (14% for pre-school children; 16% for non-pregnant women of reproductive age), and in countries with very high inflammation exposure (20% for pre-school children; 25% for non-pregnant women of reproductive age). Analyses suggested that the proportion of anemia associated with iron deficiency is lower than the previously assumed 50% in countries with low, medium, or high Human Development Index ranking. Causative factors of anaemia often coexist, and their individual contribution varies in different settings

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Prof. Bruce

Prof. Bruce is a biologist by training whose research and teaching for the past 20 years has focused on bridging ecological with public health sciences and practice. He received his education at University of California San Diego and Yale University, as National Institutes of Health PhD Trainee in Genetics. Subsequently, he held post-doctoral, research, and teaching positions, including Associate Professor in Human Biology, at Stanford University. He co-founded the journal *EcoHealth* in 2004, served as Founding Editor-in-Chief, and held the position of Professor and Chair of Ecology and Health at University of Hawaii's School of Medicine (2001-2011). While in this position he was awarded and served as PI and Director (2006-2011) of a prestigious National Science Foundation Integrative Graduate Education and Research Grant, focused on integrating ecology, sustainability and health in the Asia-Pacific. In 2011 he helped found Global Health Group International (GHGI) in Chiang Rai while collaborating with Ajarn Tawatchai during the establishment of MFU's School of Health Science in 2011. He holds Adjunct and Visiting Professor positions at several universities in the US and Asia, and currently is GHGI's Senior Scientist, now based in Berlin, and serves as a technical consultant to WHO and other international agencies on applying social-ecological approaches to global health challenges. He has over 100 peer review journal publications and is the lead author for the One Health chapter in recent WHO/Springer Handbook of Global Health (2021).

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Social-Ecological Approaches to understanding emerging global health challenges

Advances in medical science and practice contributed to the dramatic improvement population health worldwide during the 20ᵗʰ Century. This included introduction of Germ Theory in the late 19ᵗʰ Century, and the associated technologies such as anti-biotics and vaccines in the mid-20ᵗʰ Century. Despite these advances, incidence of infectious and chronic diseases has been increasing during the past 2-3 decades. It is evident that health science and practice, based mainly on the biomedical model of health, is insufficient to address today's global health challenges. The biomedical model allows only for the most reductionist approach to understanding health, focused on curative not truly preventive methods nor health promotion. Ecology, the study of the interactions between individual organisms and their environment, first applied to non-human organisms, increasing has been applied to humans and human societies to deepen understanding of health in recent decades. The so-called social-ecological model has revolutionized thinking and practice around disease prevention and health promotion. This presentation describes the continuing evolution of thinking and models around ecology applied to health, including the social-ecological model, and the social-ecological systems framework. These approaches and associated method are increasing proving effective in addressing both infectious and chronic disease challenges, and more broadly human well-being and sustainability.

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Dr.Suriyadeo Tripathi

Dr.Suriyadeo Tripathi was born in 1964 in Bangkok Thailand. He graduated Pediatricians at the Chulalongkorn University, and then further his study with a subspecialty in Adolescent Medicine at the University of California Sanfrancisco, USA in 2005. When he created the Adolescent Center at the Queen Sirikit National Institute for Child Health (Children's Hospital), he has worked as an adolescent medicine professional since then. *He is a member of the Society for Adolescent Health and Medicine (SAHM) since 2006, and* **in 2011 he had received the International Chapter Recognition Award from the SAHM (Northern Hemisphere)**. He received several awards by the Prime Minister, Ministry of human security and social development, Ministry of Public health, the Royal college of Pediatricians, and other institutions. He has created **Life Assets Positive model** (Positive Child and youth Development) in Thailand and it becomes a navigator for implementing plan for community to build up program for development of child and youth in many parts of Thailand and also **one of important key indicator in the National Economics and Social Development 13th strategy** announce by Office of the National Economics and Social Development Council

He was selected from the Director of John Hopkins Bloomberg Public Health to be a representative in ASEAN region on round table discussion in USA in the topic of Emerging issue in Adolescent Health. His experience in public health are demonstrated by his participation in the several National Program in

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Teenage pregnancy, Substance abuse, Positive Youth Development (Life Assets), family development and other else.

As an Organizing secretary to hold the 12nd International Epidemiological Association Conference of SEAR in Bangkok on the theme of Maternal and Child Health very successfully. Since 2010 until 2018 he was a Director and Dean of the National Institute for Child and Family Development, Mahidol University for two terms continuously and **from 2018 till now** be a **Director of the Moral Center of Thailand (Public Organization**) **under Minister of Culture (second terms)** running a lot of mega projects nationally such as Morality Index for Thai people , social credit system Life Assets as a National key indicator of the 13th National Strategy for Economics and Social Development by Office of the National Economic and Social Development Council (NESDC).

"Moral Fight COVID-19 An experience of the Power of Social Capital in Thailand"

According to COVID 19 crisis become pandemic effect all over the world , every country whole world be tested their own national system setup to cope with this contagious organism spreading rapidly in at least three mechanism consisted of Health care system, Governmental management system and also social capital setup system. This topic will focus on how important of the Social capital system in Thailand to cope with COVID-19 which we call **MORAL fight COVID -19 An experience of the Power of Social capital in Thailand**. Morality situation of Thai people in crisis situation, 100 extreme superb story telling social capital among situation of COVID crisis in Thailand. The topic also mention in Mental health and stress management in Thai communities with a **National Stress survey by people self help** in five languages including Thai Chinese Hindi Myanmar and English. Moreover as COVID-19 also increase mortality and morbidity to every communities nationwide , Thailand also **Setup Community baby sitting system** to help each other in each community area pilot by 4 provinces and implement as an important policy from the government announce in Moral Assembly of Thailand.

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Dr Janaki Vidanpathirana

Dr Janaki Vidanpathirana

MBBS, MSc (Community Medicine), MD (Community Medicine)

Dr Janaki Vidanpathirana, is a Public Health Consultant. Currently she is working as the Director, Policy Analysis & Development In the Ministry of Health, Sri Lanka. She was the Secretary for the 10th South East Asia Regional Scientific Meeting of the International Epidemiological Association and the chair for the 1st South East Asia Regional group meeting of the International Epidemiological Association. She was the 2018/2019 President of the - College of Community Physicians of Sri Lanka. Presently she is the president Elect of the College of Palliative Medicine of Sri Lanka. Her Interesting field is sexual and Reproductive Health.

"Public Health Resilience for COVID 19 pandemic in Sri Lanka"

Sri Lanka records successful heath indicators and good human development dimensions compared to many other countries in the region. The Sri Lankan *healthcare* system provides *free* of charge healthcare at the point of delivery and healthcare system has been identified as a low-cost high impact achievement. Until the first of November 2022, Sri Lanka reported 671110 COVID cases and 16781 fatalities, while vaccination coverage was 78%, 66%, and 36% for the first, second, and third doses, respectively Three COVID 19 clusters with large number of cases were reported during April (New year cluster), and August (Delta cluster), 2021 and Omicron cluster was experienced during February 2022. Soon after identifying of

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the first local case in 29th January 2020, risk communication strategies rumor mitigation were put in place. Regular press releases, media advertisements as well as social media communications were released. The preparedness & Response plan was developed January 2020 and capacity was developed among the public health staff. Presidential task force with multisectoral partnership and COVID center was established with 10 committees promptly. A contact tracing and surveillance system was connected to the provincial health authority, the epidemiology unit, and the port of entry. Public health teams at the grass-route level provided round-the-clock contract tracking and personalized services. A center- or home-based quarantine was implemented based on the risk assessment. Quarantine centers and the authorized hospitals with PCR facilities were expanded island-wide as the number of patients gradually increased. All hospitals conducted a triage of patients with fever, and all medical emergencies were handled. Emergency surgeries, maternal care, and cancer diagnosis and treatment were all offered. Patients experiencing symptoms on the entire island received complimentary free ambulance services. Medicines were sent to regular clinic patients via postal services. Clinics books and prescriptions were used as Curfew passes to access to essential services. Financial assistance and food subsidiaries were provided for vulnerable people.. The COVID 19 epidemic resilience in Sri Lanka provided insight into potential pandemic resilience.

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Professor Dr. M S A Mansur Ahmed

Professor Dr. M S A Mansur Ahmed is now working as Professor and Advisor in the Department of Noncommunicable Diseases of Bangladesh University of Health Sciences. He has been a teacher and researcher in Public Health for more than last four decades and retired from the National Institute of Preventive & Social Medicine (NIPSOM), Bangladesh as the Professor of Community Medicine in 2008. He obtained his MBBS degree from Bangladesh in 1973 and got his MPH degree in epidemiology from the University of Minnesota, USA in 1981 as a WHO fellow and PhD in 2016. He is life member and Vice President of Public Health Association of Bangladesh. He is also the Vice Chairperson of the Public Health Foundation of Bangladesh. He has been a member of International Epidemiological Association (IEA) since 2010. He is a life member and also member of the International Advisory Committee of the World NCD Federation. He is also the Vice Chairperson of the Public Health Foundation of Bangladesh. He has got remarkable number of publications in peer reviewed national and international journals. He worked as consultant of the World Health Organization for five years.

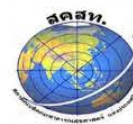**"Bangladesh COVID-19 situation, prevention and control"**

COVID-19 Statistics: Bangladesh is a South East Asia Regional country of WHO with a population of 167 million and Population density of 1265/Km^2. COVID-19 was first reported in Bangladesh on March 8, 2020. Since the beginning of the pandemic as of 21st October 2022 total confirmed cases of COVID-19

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was 20 million plus of whom 1.9 million recovered and 29,410 persons died. Vaccinated - 1st dose 13 20,86100(132 million plus), 2nd dose 123 787 086(123 million plus), Booster dose 53 864 081(53 million plus), Coverage – 1st dose, 77.6%, Full dose - 72.7%. Statistics of Testing and Lab/Centres: Number of Tests in 882 facilities as of 10th October. 2022: RT PCR Lab tests : 161 13 177 203(16 billion plus),GeneXpert Lab tests : 57 141 616(571 million plus),Rapid Antigen tests   : 664 1 594 696(6 billion plus). Last week (ending on 10th October,2022) daily Test average: 4 223.The overall Case Fatality Ratio (CFR) is stable at 1.45%. **Current situation:** Fully under control almost with no or one or two deaths per day.   **Prevention and control COVID in Bangladesh:** The Government of Bangladesh acted swiftly to address the immediate health requirements and implemented containment measures to combat COVID-19.

Measures at Point of Entry to Bangladesh: Health Declaration Form' to all passengers arriving Bangladesh. Cell phone based follow up of the patients. Advanced - Follow up of the patients through Interactive Voice Response (IVR). Organizational Strengthening: National Committee formed with Honorable Minister, Health and Family Welfare as Chair. Public Health Advisory Committee formed at DGHS level. National Technical Advisory committee formed. District and sub district committee formed.

Bangladesh and ADB Partnership: From the start, the Asian Development Bank (ADB) has stood beside the Government of Bangladesh to fight this dreaded disease and help put the country back on track for its long-term growth and development. It has strengthened the country's public health system. More than 20,800 doctors, nurses, and other frontline medical workers were given two months' basic pay as a special honorarium. Salary support and wage subsidies have been provided to over 3.8 million workers in export-oriented industries. Helping the Poor: Over 15 million poor and vulnerable people in Bangladesh have been aided through ADB's $500 million budget support under the COVID-19 Active Response and Expenditure Support (CARES) Program and other programs.

Border Health

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254 — A Lahu Community-Based Model Development for Malnutrition in Children Aged 1-12 Years Solving Problem

Manassawin Kampun[1], Thanatchaporn Mulikaburt[2]

[1]*Center of Excellence for The Hill tribe Health Research, School of Health Science, Mae Fah Luang University, Thailand*, [2]*School of Health Science, Mae Fah Luang University, Thailand*

ABSTRACT

A cross-sectional study design aimed to study nutritional status among the Lahu hill tribe children in northern Thailand. The study samples were the hill tribe children aged 1-12 years. Data were collected from their parents or caregivers. A validity questionnaire was used as a research tool. Data were analyzed by using descriptive statistics. A total of 858 participants were recruited into the study: 253 parents or caregivers, and 605 children. Majority of parents had a low level of knowledge about nutrition for children (64.3%), 69.6% had a good level of attitude toward nutrition in children, and 84.4% had a moderate level of a good cooking skill for children. Lard was used as a major cooking oil (22%), 59.5% used ingredients for cooking, and 26.5% used monosodium glutamate. Regarding nutritional status of children, 10.1% were underweight and, and 12.6% were overweight. One third (34.2%) of children had unhealthy dietary behavior. Most children drank untreated water (67.1%), and 11.3% found Entamoeba coli, and followed by Blastocystis hominis and Hookworm (3.1% and 1.6% respectively). Improving knowledge, attitudes and practice on cooking for children among the Lahu parents are essential to improve children's health. Moreover, sanitary is another factor to improve Lahu children nutritional status.

Keywords: Lahu, Parents, Children, Nutritional status, Knowledge, Attituded, Cooking practice

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255	**Akha Youth Community Model Development to Prevent Initiation of Methamphetamine Use, Chiang Rai Province**

Buathanya Srikua[1], Anusorn Udplong[2], Chalitar Chomchoei[1]

[1]Center of Excellence for The Hill tribe Health Research, School of Health Science, Mae Fah Luang University, Thailand, [2]School of Health Science, Mae Fah Luang University, Thailand

ABSTRACT

This action research aimed to develop Akha youth community model development to prevent initiation of methamphetamine use, Chiang Rai Province, four (4) Akha villages in Chiang Rai were purposely selected to participate in the study: two (2) villages for implementation and two (2) villages for control. Four steps of the developmental processes of the community model: 1) Data collection of general information of the village and participants; 2) Development of the community model by using activities to promote knowledge and skill on substance use prevention especially methamphetamine; 3) Implementation of the community model which developed in the implementation both 2 villages; and 4) Evaluation of the impacts and changing of the implementation villages after implementation. Data were collected using questionnaires. Data were analyzed properly before interpretations.

The findings show that the effective community model to prevent initiation of methamphetamine use is composed of 3 factors. One, at the community level, the community head and the committee needed to establish rules and penalties to control the use of methamphetamine/narcotics in the village and developed plans and guidelines to prevent methamphetamine/drug use. Establishing the peer group to prevent drug use among youth was also mandatory. Second, the family level, creating a preventive environment in the family was essential. Lastly, the individual level, promoting the knowledge and awareness to prevent initiation of methamphetamine use in youth were very significant to reduce the number of youths in use of amphetamine.

An integrative role model of stakeholders in the villages is important to reduce the problem of methamphetamine use among the hill tribe youths.

Keywords: Akha village, Community model, methamphetamine use

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264	**Diabetes Causation Beliefs among Hill tribesperson patients in Thailand**

Siwarak Kitchanapaibul[1]
[1]School of Health Science, Mae Fah Luang University, Thailand

ABSTRACT

Little is known about hill tribes diabetic patients in Thailand so, understanding their perceptions of the disease may enhance practitioners' understanding of the barriers to health care information facing this group. The aim of this qualitative study was to explore the causal beliefs among hill tribespersons with type 2 diabetes mellitus in Chiang Rai, Thailand, who are minority groups with their own language, cultures, beliefs and lifestyle. The study was conducted from a semi-structured interview of 16 participants with age range from 30 to 68 years, using the content analysis method. The findings revealed that there were 4 themes of causal beliefs among this group including heredity, over consumption of sugar, the use of agricultural chemicals and 'Lom Pid Duan' sickness which is a cultural belief of following unofficial protocol after childbirth. These findings suggest health professionals need to be culturally sensitive when dealing with this group and be aware of the barriers to information facing the hill tribespersons.

Keywords: Akha village, Community model, methamphetamine use

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265   Domestic Violence in Lahu Hill Tribe Community, Chiang Rai Province, Thailand

Atithaya Pornsakulpaisan[1]
[1]Mae Fah Luang University, Thailand

ABSTRACT

Domestic violence is one of the major health problems that could lead to several consequences both physical and mental health. The vulnerable populations are women, children and the elderly especially who are living in poor education and economic families such as the Lahu people living in northern Thailand. A cross-sectional study design aimed to assess the domestic violence among Lahu hill tribe Chiang Rai, Thailand. The study samples were from the Lahu hill tribe who lived in Chiang Rai Province, Thailand. The target samples were children, general population, and elderly. A validate questionnaire was used for gathering information from the participants. A total of 458 people participated in the study. The majority were females (55.5%). The prevalence of having experienced domestic violence was 32.2%. Those women aged between 20 and 59 had experienced physical violence (85.7%), verbal violence (61.3%), and sexual abused by husbands (4.4%). Those aged 60 years and over; 50.0% had experienced physical violence, and family members were most the major drivers of the physical violence (64.7%) in verbal violence as a majority (58.8%). Policy and implements should be concerned and developed for proper implementation to reduce the domestic violence in the Lahu family in Thailand.

Keywords: Domestic violence, Hill tribe, verbal violence, physical violence, sexual violence

| 270 | # The South and Southeast Asian Community Trials Network, Activities in Chiang Rai Province |

Carlo Perrone[1]

[1]*MORU Mahidol Oxford Tropical Medicine Research Unit University of Oxford*

ABSTRACT

Introduction: The rural communities of South and Southeast Asia have, for several reasons, been underrepresented in research and there is a need for a better understanding of the causes and outcomes of non-malaria febrile illnesses, and other health priorities in remote communities.

Objectives: To fill this gap, the South and Southeast Asia Clinical Trials Research Network (SEACTN) was established in five countries in Thailand, Laos, Cambodia and Bangladesh. We will introduce the network in general and the projects that are being conducted in Chiang Rai province in more detail.

Methods: Selected primary care units, hospitals and villages in Chiang Rai partnered with SEACTN and the Mahidol Oxford Tropical Medicine Research Unit (MORU) to conduct two studies to determine the infectious causes of fever, a household survey project examining the burden of disease and access to health in villages and a verbal autopsy project to estimate the causes of mortality in the community.

Results: The above mentioned SEACTN projects have been started throughout the network and in Chiang Rai and thousands of subjects have been recruited so far.

Conclusions: SEACTN proved to be a network capable of running large research projects and constitutes an ideal platform to run interventional trials in rural settings

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297	**A Model for Solving Haze Problem in Border Communities, Mae Sai District, Chiang Rai Province**

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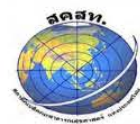
ABSTRACT

Background: Nowadays, the PM2.5 is still a major problem in Thailand. Especially the northern of Thailand has been most affected because the North is mountainous and borders with neighboring countries. Moreover, the PM2.5 is still higher including Mae Sai District, Chiang Rai Province that has highest level, also an air quality index that exceeds the dangerous level. In addition, this is a special economic area. There is a wide variety of transportation industries, difficult to prevent haze problems. As a result, people in the area must have to manage and protect the problems that arise in order for the people to be least affected.

Methods: This research as qualitative research. The aim was to study the haze problem situation and Solution to solving problem in Mae Sai District, Chiang Rai. In this research, purposive sampling was used to select sample consisted of people suffering from diseases affected haze problem, Health care providers, and Local government organizations with focus group discussion interview in each sample. Then the data obtained were analyzed according to thematic analysis.

Results: There were found that haze problems solving in border areas can be divided into 2 phases: the phase before the smog problem. That focuses on planning and coordinating, also develop potential making international agreements. In addition, period of smog problem which focuses on giving medical personnel access to people, and to be able to protect themselves. The limitations found some people living in the border areas that ignore the problems that arise.

Conclusion: The recommendations should focus on international coordination in controlling the cause of the problem. Issue a joint environmental policy, especially in border areas with severe PM2.5 pollution, to prevent people from long-term exposure.

Keywords: Haze problem, PM2.5, Border community, Model, Solving

COVID-19

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120 COVID-19 vaccine in pregnant women and pregnancy outcomes: a historical cohort in center of Iran.

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ABSTRACT

Background and objective: Starting vaccination in pregnant women; numerous theories have been proposed that the vaccine might affect the mother or the fetus. The goal of this research was to see whether there was a link between the sinopharm vaccination and certain pregnancy outcomes in COVID-19-vaccinated women.

Methods: This retrospective cohort study was conducted on pregnant women who delivered from 1 August 2021 to 1 January 2022 in Yazd city. In this period time, all pregnant women were 5787 people in which 5666 were in the second and third trimester. Among these women, 1222 women were randomly selected.

Results: Among 1222 pregnant women, 558 women (45.6%) had received one dose vaccine, 162(13.3%) people had received two doses, and 502 women (41.1%) had not been vaccinated. In crude analysis was no significant difference between vaccinated and non-vaccinated groups. After adjusting for maternal age, maternal BMI, parity, stillbirth history, abortion history, Gestational Diabetes in multivariate analysis, no differences were found between the groups in pregnancy as well.

Conclusion: Vaccinations during pregnancy seem to have no negative effects on the mother or the baby. This finding may aid pregnant women in deciding whether or not to take the vaccination.

Keywords: Antibiotic resistance, extended spectrum beta-lactamases, E. coli, K. pneumoniae

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122 — Economic Impacts of the COVID-19 Pandemic on People Living in the Western Province

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ABSTRACT

Background: *Public health strategies, many of which required restricting movement of people, such as lock-downs and social distancing measures had to be resorted to world-wide, to reduce the incidence and transmission of COVID-19, leading to significant financial impacts.*

Objective: *To assess the economic impact due to Covid-19 during the period June-July 2021 among people living in the Western Province*

Methods: *An online survey was conducted in June-July 2021 involving 449 adults living in the Western-Province of Sri Lanka. Data on participants' socio-demographic and economic status, comorbidities, access to health care, and health care-seeking behaviors were collected using a pre-tested questionnaire.*

Results: *449 respondents completed the survey. Mean age was 41.6(Â± 0.65) years, and 44%(n=196) were males. 36%(n=114) chose to respond that their main job activity changed due to COVID-19. More than 55%(n=173) responded that there was a negative impact on their main income, whereas 9%(n=29) reported a positive impact on income. Nearly 30%(n=130) of the participants had an additional source of income before the pandemic; the main mode being (31%; n=40) a part-time job. The majority(74%; n=97) reported a negative impact on additional income during the pandemic. Of these 29% (n=118) reported their ability to earn was affected negatively due to being in quarantine. 50%(n=226) and 44%(n=197) reported that they had difficulty obtaining food due to travel restrictions and shops being closed respectively. 15%(n=66) reported cutting down on meals or the amount consumed, and 30%(n=135) reported that they had to cut down on the amount of food bought. Lack of availability, reduction of household income and high price of food were reasons for cutting down on food.*

Conclusion: *Residents of the Western province were severely economically affected by the COVID-19 pandemic. Food consumption patterns were affected by travel restriction, closure of shops, availability, price of food, and household income.*

Keywords: COVID-19, Economic Impact, Healthcare seeking

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123	**Healthcare Access, Utilization, and Patient-Reported Experiences among People with Chronic Illnesses during the COVID-19 Pandemic**

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ABSTRACT

Background: *Public health strategies, many of which required restricting movement of people, such as lock-downs and social-distancing measures had to be resorted to world-wide, to reduce the incidence and transmission of COVID-19, leading to a decline in healthcare utilization by non-COVI-19 patients, which is detrimental to people suffering from chronic-illnesses.*

Objective: *To assess the healthcare access, utilization, and patient-reported experiences among people living with chronic illnesses during the COVID-19 pandemic.*

Methods: *An online survey was conducted in June-July 2021 among adults living in the Western-Province of Sri Lanka. Data on participants' socio-demographic and economic status, comorbidities, access to healthcare, and health care-seeking behaviors were collected using a pre-tested questionnaire. Further, a diverse sample of 10 participants completed qualitative interviews that focused on patients' experiences.*

Results: *449 respondents completed the survey. Mean age was 41.6(± 0.65)years and 44%(n=196) were males. Of the 27%(n=115) had a chronic-illness and 72%(n=83) were on regular medication. The pandemic led to changes in healthcare utilization patterns among patients. Majority had to obtain the drugs from the pharmacy 65%(n=70) and the laboratory tests from private labs 58%(n=62). Forty-eight percent agreed that the pandemic led to delays in healthcare seeking, mostly because they were unaware of the services rendered. 31%(n=36) responded that perceived health during the pandemic to be fair and 7%(n=8) as poor. Quantitative and qualitative data suggest most participants experienced high out-of-pocket expenditure on health. However, during this period, the healthcare services were mostly uninterrupted, although delays were observed.*

Conclusions: *Though the health care service continued to function, healthcare access and utilization patterns changed among patients with chronic illnesses during the pandemic. Participants had incurred high out-of-pocket expenditures. Modifiable factors that led to reduced utilization and high out-of-pocket expenditure should be further studied and remedial action implemented as the pandemic situation may continue in the foreseeable future.*

Keywords: Healthcare access, Utilization, Patient-reported experiences , Chronic diseases

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137	**Disease Profile of Patients Availing Ophthalmic Care During COVID-19 Lockdown**

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ABSTRACT

Objectives: *To evaluate the disease profile of patients visiting Ophthalmic outpatient and emergency department during the COVID-19 enforced phased lockdown.*

Methods: *(Design of study, number of cases including mode of selection, samples, controls):*

Place of study: Department of Ophthalmology, ANIIMS. Duration of study: March 24, 2020 to May 31,2020. Study subjects: All patients visiting the Ophthalmology Out Patient Department (OPD) and Emergency Department (ED) during the lockdown period from March 24, 2020 to May 31,2020. Methodology: Cross-sectional analysis of records of all patients visiting the Ophthalmology OPD and ED during the COVID-19 pandemic phased lockdown period will be done to evaluate the disease profile of Ophthalmic patients and ascertain the nature and magnitude of clinical presentations.

Importance of the Research: *The study purports to be the first of its kind to be conducted in the only referral ophthalmic facility in the Andamans, and to the best of our knowledge in entire India. It will help describe the epidemiology of ophthalmic diseases for which the patients visited the OPD and ED in spite of lockdown restrictions, thus highlighting the urgent and emergent ophthalmic care which needs to be focused on during the current and future pandemics.*

Application: *Devise plan of ophthalmic care in terms of triage, drugs, man-power, technology and ophthalmic personnel protection during such events. Devise plan of channeling non-urgent ophthalmic manpower to the facilities of utmost importance during such pandemics viz. ICU, Quarantine wards.*

Keywords: COVID-19, Lockdown, Ophthalmic

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140 COVID-19 Vaccination Efforts During Multiple Waves of the Pandemic in Jakarta

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ABSTRACT

Background: Jakarta, a capital city with approximately 11 million inhabitants, has become the epicenter of the COVID pandemic in Indonesia. Jakarta is a metropolitan area with an international hub surrounded by several satellite cities. On top of that, Jakarta also has unique rural islands in the north (Kepulauan Seribu Islands). These factors made vaccination efforts in Jakarta during the pandemic challenging.

Objective: To present several efforts made by Jakarta to optimize vaccine administration during multiple waves of pandemic and social restrictions.

Methods: We did a quantitative and qualitative analysis during the 2-year COVID-19 pandemic in Jakarta. We analyzed the predisposing, enabling, and reinforcing factors of the vaccine administrations during the pandemic. We compared the pandemic curve with its fatality rate and bed occupancy rate within the context of different vaccination coverages achieved.

Results: Jakarta managed to deliver 100% of the two-dose COVID vaccine to adults by November 2021 and more than 70% of the child population by March 2022. Booster vaccinations have been given since August 20, 2021. Those coverages are likely one of the factors that suppressed the fatality rate (0.54 vs 1.46%) and bed occupancy rate (58 vs 93%) during the Omicron waves compared to the Delta waves. Enabling factors are the key to a successful vaccination program in Jakarta. We developed rapid vaccination programs in collaboration with the government, experts (university), the general public (community), the media, and the private sector. Vaccination centers were made in every sub-district without any domicile restriction. Vaccine delivery is also supported by the community (volunteers), Indonesia's army and police forces, and private corporations. We also do home visits to boost coverage, especially in hard-to-reach areas and for the disabled population. Vaccine cold chain facilities from prior vaccination programs also enabled our mass vaccination efforts. These efforts made vaccine coverage quite satisfying, including in the Kepulauan Seribu Islands. Jakarta also educates its citizens through extensive health promotion through print, broadcast, and social media-based efforts with a local cultural approach. These predisposing factors improve behavior, especially willingness and acceptance of vaccination. Last, vaccination is also mandatory for citizens to travel and visit public facilities, including offices, shopping centers, and recreation areas. Vaccination status is well integrated into a single mobile application managed by the government. It encourages people to get vaccinated.

Conclusion: Well-planned public health policies and collaborative efforts are key to successful vaccination programs, especially during a pandemic.

Keywords: Vaccination, COVID-19, Jakarta

Anxiety and its Associated Factors among Frontline Nurses during COVID 19 Pandemic in the COVID Hospitals of Kathmandu, Nepal

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ABSTRACT

Background: Health workers especially, nurses are the frontline warriors during COVID 19 pandemic. Nursing workforce who are involving in the management of COVID patients are in the potential risk of anxiety which could affect nurses' well-being and work performance. However, limited information on anxiety status among frontline nurses working in the COVID hospitals of Kathmandu, Nepal was observed.

Objective: To assess the level of anxiety and its associated factors among frontline nurses during second wave of COVID 19 pandemic in COVID hospitals of Kathmandu, Nepal.

Methods: A descriptive cross-sectional study was conducted among frontline nurses working in two COVID hospitals of Kathmandu, Nepal. Non probability purposive sampling was used to select the 101 frontline nurses and data were collected using self-administered method. GAD-7 Scale was used to assess the level of anxiety among participants in the study. Descriptive statistics such as frequency, percentage, mean and standard deviation were used to describe dependent and independent variables. Fisher exact test and chi-square test were used to find out the association between anxiety and selected variables.

Result: Out of 101 respondents, majority (62.4%) of the respondents were aged 25-34 years. More than half of the respondents were unmarried (52.5%) and had completed the proficiency certificate level of education (52.5%). Majority of the respondents (39.6%) had mild level of anxiety whereas least respondents (8.9%) had severe level of anxiety. Age, high risk group in family, fear of being infected with COVID 19, and working department were found to be statistically significant with anxiety among frontline nurses.

Conclusion: The study concluded high burden of anxiety among frontline nurses during COVID 19 Pandemic. It suggests the further assessment of the mental health status of nurses and plan appropriate coping strategies and interventions accordingly to safeguard nurses from the physiological distress and consequences of anxiety, ultimately enabling them to provide quality health services during this worldwide pandemic.

Keywords: COVID 19 , Nurses, Anxiety, Associated factors, Nepal

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Collective Factors for COVID-19 Vaccination Status among Bangladeshi Sanitation and Waste Workers: Mixed Method Approach Followed Workplace Setting

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ABSTRACT

Background: Sanitation and waste workers of Bangladesh were the leading fighters against COVID-19 along with other front-line frontiers and silently providing their cleaning services despite not receiving proper recognition and appreciation.

Objective: This study was aimed to identify the underlying factors for COVID-19 vaccination status among these front-line workers.

Methods: It was a cross-sectional study with mix-method approach conducted among 800 sanitation or waste workers and 20 administrative authorities of sanitation and waste management department of Dhaka city of Bangladesh. Quantitative data was collected from the signified active sanitation and waste workers from both North and South City Corporation of Dhaka city and qualitative information was gathered from the respective administrative authorities. Multinomial logistic regression was used for the quantitative analysis and thematic analysis was done for qualitative data.

Results: Most of the workers were found vaccinated (94.6%) notably because of the efficient COVID-19 vaccine policy of Government implemented by the respective authorities in through motivational programs, technical assistance in vaccine registration process etc. Majority (69%) received both the first and second doses and 21% have completed 3rd dose. COVID-19 non-vaccination status found significant among unmarried (OR:0.19) young group having poor knowledge on infection (6.5%) and vaccination (6.6%). Significant predictors for the complete vaccination status were found among the higher educated older age group (>50 years), from nuclear family (OR:1.75) who experienced adverse health effect (OR:12.07) of vaccination. Reasons for unwillingness to vaccination were found as some misbelieves and technological incompetence for registration.

Conclusions: A greater number of sanitation workers were found as vaccinated although they had unwillingness at the beginning stage. The necessary action plans need to be formulated and implemented at the policy-making level to ensure vaccination for all up to the third dose, as well as awareness programs among the Bangladeshi sanitation and waste workers.

Keywords: COVID-19; Vaccination, Sanitation and Waste Workers

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186	**Machine Learning Model in Predicting Post-COVID Symptoms. Roles, Implementation and Challenges**

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ABSTRACT

Background: Residual symptoms after COVID affect the quality of life among survivors. Several factors were associated with the persistent symptoms, including demography, clinical condition, and treatment. Therefore, screening and precisely treating the high-risk individual is essential to prevent residual symptoms, and there seems to be a role for the machine learning model for post-COVID symptoms screening.

Methods: We developed machine learning models (classifiers and neural network) to predict fatigue (measured by Fatigue Severity Scale) and chronic cough (by quantitative visual scale) occurred within 30 days after onset using the 738 data of the post-COVID participants collected between July 2021-July 2022. Data splitting, cross-validation and external validation using new data across COVID waves were performed. We deployed the machine learning as a webpage accessible at https://chulacovidproject. shinyapps.io/Chula-LC/

Results: Post-COVID symptoms were more common in Delta (38%) than Omicron Period (18%). The predictors were vaccination, Favipiravir, duration of symptoms, chronic disease and selected demography factors. However, the performance of machine learning models was lower than 80%. For example, the best model from the decision tree obtained only 40.9% sensitivity and 72% specificity for fatigue within 30 days when data from different COVID waves were tested. The discrepancy in the screening performance by the model could be the result of the model building that utilized data during the Delta period and tested by the data in the Omicron period, which was characterized by milder symptoms, shorter duration and inclusion of booster vaccination and the presence of different antiviral therapy.

Conclusion: The machine learning model could not accurately predict post-COVID symptoms, particularly in Omicron data. However, we may assume that post-COVID symptoms during omicron rapidly diminished and may not last for more than 30 days, reducing the need for further specific screening for post-COVID prevention.

Keywords: Post-COVID symptoms, Chronic Fatigue, Chronic Cough, Machine Learning

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| 187 | **Causal Relationship Model of Covid-19 Prevention Behavior among Older Adults in The Upper Central Region, Thailand** |

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ABSTRACT

Background: Older adults are at high risk for serious illness from COVID-19, so preventive behaviors among older adults should be studied.

Objective: The aim of the survey study was to analyze a causal relationship model of COVID-19 prevention behaviors among older adults.

Methods: The cross-sectional analytic study selected the elderly 60-79 years in Upper Central Region Thailand, inclining Nakhon Sawan, Kamphaeng, and Uthai Thani Provinces by multi-stage sampling. The data were collected between 1st June and 12th September 2022 by the interview questionnaires. The latent variables consisted of 1) economic and social status 2) healthy habits and 3) health communicable and the dependent variable was the COVID-19 prevention behavior. The causal relationship model was analyzed with AMOS.

Results: The research findings can be summarized as follows: The model is congruent with the evidence-based practice. The consideration was based on chi-square = 8.249, $x2/df.$ = 0.550, p-value=0.913. Thus, it is evident that the chi-square value varied from zero with no statistical significance (GFI=0.995, AGFI=0.986, RMSEA=0.000). The weighted values of the factors were in the form of standard scores for the observed variables for the model for COVID-19 prevention behavior. In total, the values ranged from 0.047 to 0.145 (p<0.001). The latent variables had direct and indirectly influenced the COVID-19 prevention behavior, SES(0.15) healthy habit (0.37) health communicable (0.32), and SES(0.06) healthy habit (0.14), respectively. All variables could be used to explain this model at 34.0 percent.

Conclusion: It reveals that performance-enhancing COVID-19 prevention among the elderly could support healthy daily habits and communication with their families and neighbors to improve their COVID-19 preventive behaviors.

Keywords: Post-COVID symptoms, Chronic fatigue, Chronic cough, Machine learning

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198	**The Predictive of Cluster COVID -19 outbreak situation in community by analysis criteria result of RT-PCR for active case finding in Aotong district, Wangwiset district, Trang province.**

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ABSTRACT

The collection of pandemic COVID19 hasn't criteria tool to assessment the severity of clusters in outbreaks. The result had delayed confirmation made the disease control on timely since the policy of every high-risk person confirm by RT-PCR only. The objective was to using RT-PCR results to analyze the situation severity criteria in predicting the outbreak of the 2019 coronavirus Cluster infection in community and to using RT-PCR results to search for additional patients according to the direction of COVID-19 outbreak in community. This study is a descriptive study using CT values from confirmed case COVID-19 patients since August 1, 2021. Analyzing the mean CT values of confirmed case patients, establishing Cluster's risk assessment criteria and the direction of COVID-19 epidemic using a tool collection form with support for ATK support the test by urban government organization The tool preliminary disease investigation by using statistical analysis of percentage and mean. The results of the study found that Bannaipong tambon health promoting hospital was the first place to use ATK to search for more patients. (Before the Ministry of Public Health had a policy to use ATK in PCU) by searching for additional patients using ATK screening first and then confirming with RT-PCR to know the CT value to analyze the severity of the situation. The new assessment criteria are Lo-RAC (Level of Risk Assessment COVID-19) was divided into Level 1 CT 1–24 values, Level 2 CT 24–32 values and Level 3 CT values 32-40. The operations of the COVID-19 outbreak in this study in August 2021, it was a beta strain. which is an emerging disease that relies on the study of the spread of the disease This was coupled with the identification of the patient's CT value on the activities they were exposed to or the activities that likely led to the 2019 coronavirus infection. and knowing the mean CT values that can predict the situation and stage of infection of that patient. ATK+ cases are found in Level 1 CT values. The tendency is to be in the infective phase, exposure and ATK-, but RT-PCR+ is found in the CT values. Grade 2 (symptomatic) or pre-exposure CT and 3 (asymptomatic) symptoms are not present or previous window, and the advantage of rapid screening or ATK is useful in isolation and knowing the infection status. That can save time with RT-PCR, but at-risk groups at ATK- must stay on quarantine until the health care facility reports the RT-PCR results.

Keywords: COVID19, Outbreak, CT, RT-PCR, ATK

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| 199 | **The Development of COVID-19 Vaccine Service Management in Community to Motivate Whose Refuse Vaccine Dose 1st and Dose 3rd to Receive Vaccine Aotong Sub-District, Wangwiset District, Trang Province Thailand.** |

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ABSTRACT

Thai Coronavirus disease 2019 (COVID19) vaccine service system of has prepared in connection with the supply of COVID19 vaccine so that people have the opportunity to have access to the safe and effective cost use of vaccine as much as the country's potential can be operated are still those who don't wish to receive the vaccine who must have a targeted management process to have an incentive to receive the COVID-19 vaccine. more than 90% of dose1 received vaccine and those who didn't wish to receive vaccine dose 2nd received vaccine more than 30%. This study was a research and development study (CQI) was be descriptive study methodology to develop a 4 quarter outcome system for community-based COVID19 vaccine service management by analyzing statistics, percentages and averages.Q1: The public relations for receiving vaccine for vulnerable groups 607 (60 year old up and 7 disease groups) There is a mobile app "Moh Prom" training for village public health volunteers in handling bookings and shared educate about vaccine and understand those who don't wish to receive the vaccine, vulnerable groups 607, Q2: Publicize the campaign to receive the vaccine by opening a promotion fragile group 607, 1 person : 1 target group more caretaker to inject and perform tasks for fragile bedridden persons with disabilities or poor who wish to receive Vaccine. Q3: The disseminate public relations for receiving to group 607 ,There is a public relations vehicle parade with injection Vaccine to receive vaccine dose 3rd Set up a mobile injection unit then set up vaccination service points in every village, group 608 and the general public 12 years and over who haven't received the vaccine dose1st in case of rare cases and contact type 2 outside the vaccination area, Q4 : Public relations notice receiving the dose3rd for village public health volunteer 1 person per aging person Public relations for receiving vaccine for group 608 receive a lucky draw coupon from Trang province governor and Wangwiset sheriff promotion for a gang of 6 people with 607 at least 1 person home injection service and serve promotion for part-timers. And information notice for 5-11 years outside of vaccination service at schools in service area by Pfizer orange cap dose 1st

The results of the service provision of COVID-19 vaccines, those who didn't receive the first dose of vaccines were 27.42%, 29.37,97.56 and 98.26 percent, respectively, and those who did not wish to receive the vaccine received the 3rd dose. quarterly, representing 5.25%, 11.51, 22.73 and 32.30, respectively. The comparing results of change from the average vaccination each quarter, there was still a good response during the 1-2 quarters. decreased in the 3rd and 4th quarters due to the declining demand, so more development activities must be added. The percentage of vaccination in vulnerable groups 607. In the third quarter, Bannaipong health center area was the most injected dose1st people to receive in Trang province from 140 health centers. The second quarter, 29.37 percent of the population received the vaccine until the fourth quarter was 98.26 percent received the vaccine. People can select to get vaccine and confidence to get vaccinated. There is a timely way to control the COVID-19 vaccine in the community. Officials can motivate people to get the right news. clarified the current TV news source in motivating people who don't get the COVID-19 vaccine to get the vaccine and the results after last quarter suggested a plan to fix people 12 years and aging to receive dose 3rd.

Keywords: COVID-19 vaccine, Vaccine dose 1st and dose 3rd

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228	**Situation of Child Rights and Protection in the Slum Settlement of Urban Dhaka in Covid-19 Pandemic**

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ABSTRACT

Background: Bangladesh ratified the Child Rights Convention in 1989 to safeguard children from all forms of child maltreatment (CM), however, no Act has yet been adopted by the legislature.

Objective: To comprehend the child protection situation in urban slum settlements of Dhaka during the COVID-19 pandemic

Methods: This mix-method study was conducted in Adabor slum area, Dhaka, from January to December 2021. For the quantitative portion, 384 parents who lived in the study area and had at least one child aged 7-17 years been randomly selected from a pre-formed household list of the area and interviewed face-to-face. For the qualitative section, in-depth interviews were conducted with 12 purposively selected children and caregivers. Qualitative data analysis was done based on the generic coding method, and multiple regression analysis was done to estimate the risks of CM.

Result: The lifetime prevalence of physical abuse, psychological abuse, and neglect were 86.1%, 94.7%, and 29.9%, respectively. During the Covid-19 pandemic, 49% of participants experienced decreases in household income and 54.5% reported mild food insecurity. Predictors for CM were female caregivers (β= 0.18; p-value= <0.01), male sex of the index child (β= 0.11; p-value= 0.04), low level of parental education (β= -0.10; p-value= 0.05), and lower per capita income of the caregiver (β= -0.13; p-value= 0.02). Poverty was the main theme of the child rights breach that emerged from the meaning unit of all interviews. Children from higher-income families are less likely to be abused than children from lower-income ones.

Conclusion: Child protection rights breaches are highly linked with poverty. The COVID-19 epidemic and the accompanying economic crisis have worsened poverty, increasing the risk of child maltreatment for disadvantaged children.

Keywords: Child rights, Protection, Provision, Covid-19, Slum

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240	**The Results of the Medical Staff at Buntharik Hospital in UbonRatchathani, Thailand, Being Monitored for Adverse Events Following Immunization for the Third Dosage of COVID-19**

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ABSTRACT

Background: A COVID-19 vaccine is currently being developed. There have been numerous products released, and information regarding the unfavorable adverse events of vaccines is still being researched. To help recipients of various vaccine groups feel confident and educated about the safety of receiving the third dose of the COVID-19 vaccine, researchers are examining the incidence and factors associated with the occurrence of adverse events among medical staff at Buntharik Hospital after the third dosage of the COVID-19 vaccination.

Methods: This is an analytical, unmatched case-control, retrospective data collection of 74 medical professionals who received the third dose of the AstraZeneca vaccine in July 2021.

Result: The results show that 21.6% of vaccine-related adverse events were recorded. An equal number of men and women, an average age of 37.2±10.5 years, a weight of 66.4±17.7 kg, and the presence of at least one chronic illness at the time of immunization in 3 cases, or 18.8%, were observed. The three most frequent adverse reactions were fever (81.3%), myalgia (75.0%), and pain and edema at the injection site (56.3%). A BMI of more than 23 and having more than 8 weeks since the second dosage (odds ratio (OR) = 5.3, 95% confidence interval (CI) = 1.34–20.95 and OR = 3.4, 95% CI = 1.02-1.49, respectively) were two statistically significant factors associated with the occurrence of events.

Conclusion: Therefore, these results can be used as a planning tool for the third dosage of COVID-19 immunization services as well as a database for post-hospital surveillance activities at Buntharik Hospital, UbonRatchathani, Thailand.

Keywords: Adverse events following immunization, COVID-19 vaccines

243 — Individual Factors of Coping Abilities to Manage Boredom and Worries Due to Lockdown Condition During Covid-19 Pandemic

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ABSTRACT

Background: The first case of COVID-19 in Indonesia was reported on March 2nd, 2020. Since that time, preventive measures were declared by the Indonesian Government to limit its spread by Large-scale Social Restrictions. Schools closed, public events cancelled, travel restrictions imposed, and people encouraged to stay in their homes and avoid unnecessary gatherings. The aim of this study was explored the coping strategies deal with worries, anxiety, and boredom by Indonesian people during the COVID-19 crisis.

Methods: This study uses an online survey design with snowball technique. The target population of this study is composed of all adults, aged 18 years and above. The total sample was 1194 respondents. A questionnaire composed of socio-demographic information, information regarding covid-19 and how participants cope with it, and different psychometrically validated instruments, such as a Short Boredom Proneness Scale, Development and Psychometric Properties, Short Scale for Measuring Loneliness in Large Surveys.

Result: The result found 42% of respondents feels nervous, anxious, or on edge, 38.5% not being able to stop worrying, 38,9% feels worried too much, 37.9% feels trouble relaxing, 56.2% being so restless that it's hard to sit still, 42.5% becoming easily annoyed or irritable, 38.4% feeling afraid as if something awful might happen. They felt all those feeling for over the half day until the nearly every day. However, 81.7% respondents stated can well controlling the worries well during COVID-19 situation. It proved by 95,1% not drink containing alcohol and 80.7% used the time well during Covid 19 situation.

Conclusion: Even though, the Indonesian people felt worried, anxiety, and boredom due to "lockdown" but they still can well manage the time and relationship with others.

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| 253 | **The Relative Effectiveness of Reverse Transcription Loop-Mediated Isothermal Amplification to Detect SARS-Cov-2 Compared with Real Time RT-PCR** |

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ABSTRACT

Background and Objectives: In the present study, we compare the effectiveness of reverse transcription loop-mediated isothermal amplification (RT-LAMP) method with real time RT-PCR method.

Methods: A total of 270 nasopharyngeal swab and throat swab samples (220 positives and 50 negatives) were randomly chosen from persons under investigation for coronavirus disease 2019 (COVID-19) at the Office of Disease Prevention and Control Office region 7 Khon Kaen Province from January to August 2022. Samples were tested by RT-LAMP for the detection of SARS-CoV-2 and evaluated its performance by comparison with real time RT-PCR result as a reference.

Results: Of the patients, 204 of 220 (92.7%) had an RT-LAMP positive test result yielding a sensitivity of 92.73% (95% CI: 88.46-95.79), 16 patients had negative RT-LAMP test results (7.6% false negative rate). The specificity of RT-LAMP for SARS-CoV-2 compared with real time RT-PCR was 100.0% (95% CI: 92.89-100). Positive Predictive Value (PPV) was 100.0% (95% CI) and Negative Predictive Value (NPV) was 75.8% (95% CI: 99.06-99.63). The prevalence of SARS-CoV-2 was 7.5%.

Conclusion: The RT-LAMP test used in this study showed sensitivity and NPV below the manufacturer's specification (Sensitivity 95.74% and NPV 99.90%) but high values for specificity and high PPV. This study suggests that RT-LAMP methods are less effective in persons under investigation population, when compared with real time RT-PCR. Therefore, the confirmation of negative results with real time RT-PCR or the use of repetitive sequential testing are needed to improve diagnosis based on RT-LAMP methods.

Keywords: SARS-CoV-2, COVID-19, Real-time RT-PCR, Reverse Transcriptase loop-mediated Isothermal amplification, RT-LAMP.

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256	**Implementation Research in Improvement of COVID-19 Prevention and Control Skills Among the Community Health Volunteers, Patient Caregivers and Public Health Professionals Living in Northern Thailand**

Fartima Yeemard[1], Kittiya Thongdee[1], Chalitar Chomchoei[1], Ratipark Tamornpark[1,2], Panupong Upala[1,2], Thanatchaporn Mulikaburt[2], Anusorn Udplong[2], Tawatchai Apidechkul[1,2]

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ABSTRACT

Background: COVID-19 is a severe pandemic disease resulting in large human lives and economic impacts. With the specific transmission through close contact, many people are in the stage of being vulnerable for the infection, particularly those who live in poor economic and education statuses such as the community health volunteers, patient caregivers and public health professionals in northern Thailand. This study aimed to assess the efficacy of the implementation research in improving knowledge, attitudes and skills in COVID-19 prevention and control among the community health volunteers, patient caregivers and public health professionals living in northern Thailand.

Methods: Three specific training programs were designed and implemented among community health volunteers, patient caregivers and public health professionals.

Results: A total of 1,196 participants participated in the programs: 48 healthcare professionals, 40 healthcare professional assistants, and 1,108 community health volunteers were trained. After attending the program, all participants had a higher rate of essential knowledge, a better attitude towards COVID-19 prevention and control, and more accuracy practices on COVID-19 prevention and control. A few incident cases were reported from the areas in following episodes.

Conclusion: Having a specific and proper design training program for healthcare professionals, community health volunteers, and community health volunteers living in remote and border areas could lead COVID-19 prevention and control effectively.

Keywords: COVID-19, Impact, Community health volunteers, Patient caregivers, Public health professionals, Prevention and control

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257 — Hill tribe community model development for preparedness and response COVID-19 epidemic, in the border area of Thailand-Myanmar

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ABSTRACT

Background: Many ethnic minorities live in border areas especially in the north of Thailand. Most of these populations are living in poor education and economic status and then being a vulnerable population for several kinds of infectious disease including COVID-19.

Methods: A community participatory action research aimed to assess knowledge, attitudes, and practices to prevent COVID-19 among the hill tribe population living in border areas including the impacts of the COVID-19. Five villages were purposely selected. All people living in the selected villages were invited to provide information to the study. A validated questionnaire was used to assess information from the participants. Descriptive statistics (percentage, frequency, mean) and paired t-test were used to analyze the data.

Results: A total of 2,518 people were recruited: a moderate level of knowledge and attitude were detected, while a good level of practice to COVID-19 prevention was found. Students had to stop going to school and having trouble with online learning. Those who were working age, were terminated from working their job and denied paying salary, and many people had debt during the pandemic. Farmers could not sell their products, while a large proportion did not get the compensation from the government due to lack of Thailand national identification card (ID card). After the training, it was found that knowledge and attitude towards COVID-19 prevention and control of the participants improved significantly. There were many approaches to transfer their knowledge and skills to the villagers: village broadcast, small group discussion, and small group training. All people in the villages had a better knowledge and skills in COVID-19 prevention and control.

Conclusions: Disease prevention and control implementation should be collaborated among community leaders, village health volunteers and villagers to maximize the effectiveness and efficacy especially under the situation of travelling restriction.

Keywords: COVID-19, Impact, Community health volunteers, Patient caregivers, Public health professionals, Prevention and control

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260 Impact and Adaptability Through Behaviors Change for Prevention COVID-19 among The Hill Tribe Populations Living in Borders Areas, Chiang Rai Province, Thailand

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ABSTRACT

Background: The COVID-19 pandemic has had a damaging impact on the global economic system and affected millions of people's work and personal lives across the world.

Methods: A cross-sectional study aimed to assess the impacts from the COVID-19 pandemic and adaptability to prevent and control the disease among the three groups (students, general population, and the elderly) of the hill tribe people lived in border areas in Chiang Rai province, Thailand. Validated questionnaires were used to gather information from participants. Data were collected between April 2021 and December 2021.

Results: A total of 2,091 participants were recruited into the study. Among students, there had got moderate level of the impact. Several barriers access education during the pandemic were detected such as inaccessible to internet and no educational technologies and materials available. The ability of their adaptations to follow COVID-19 prevention and control measures was found in moderate level. In general population, majority were impacted in moderate level. Several impacts were detected such as leaving job without compensation, salary reducing, not met the qualification from the national policy of compensation from the COVID-19 pandemic due to no Thai identification. Moreover, a large proportion had increased their family debt during the pandemic. The ability of their adaptations to follow COVID-19 prevention and control measures was found in moderate level. The elderly, a large proportion were working in agricultural section, and had got the impact in moderate level in particular their job and income. The main problem was unable to sell their agricultural products. The ability of their adaptations to follow COVID-19 prevention and control measures was found in good level.

Conclusions: National educational policy should be focused on educational materials and technologies supported to children and schools. Creating and seeking markets and supply chains for general population and the elderly should be urgently executing. Moreover, the policy related to support prolong living environmental under the COVID-19 pandemic is crucial particularly those who are living in poor education and economic status.

Keywords: Assessment, Impact, Adaptability, Behavior, COVID-19, Border areas

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261 — Evaluation of Capacities of Health Systems to Response The COVID-19 Epidemic in Border Area, Chiang Rai Province

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ABSTRACT

Introduction: Health system management of COVID-19 Pandemic is very important and challenging especially at the beginning of the epidemic. Therefore, the capacity of the health system is necessary to study.

Objective: To assess the capacities of COVID-19 prevention and control among healthcare workers and health system at border areas in Chiang Rai Province

Methods: A cross-sectional study was conducted among healthcare workers and health system under the Ministry of Public Health and Ministry of Interior located in the border areas in Chiang Rai Province between April and December 2021

Results: A total of 906 people were recruited into the study. In the aspect of management: healthcare workers working under health institutes belonging to the Ministry of Public Health, local government and health volunteers did not clearly understand the process of work. In the aspect of manpower: healthcare workers under the Ministry of Public Health reported having worked longer hours compared to the period of pre-COVID-19 epidemic, and healthcare workers shortage. In the aspect of communication: line application was favored among government officers. Mobile phones were commonly used among people in a community. In the aspect of materials for the implementation: N-95, PPE and face shield were not sufficient for working among healthcare workers, while the community members reported that masks and alcohol were not enough for them. In the aspect of budgetary: almost all government officers reported that they had a big challenge in the requesting process. Some of the officers did not get the compensation and used their personal money for buying equipment. In the governance aspect: the overload assigned from their director was the major concern. In the aspect of the health system: communities had established several commitments and agreements among them to prevent and control the disease. Moreover, most people followed the agreements. People in a community have good practices to prevent and control COVID-19.

Conclusion: Personal and health system capacity related to COVID-19 prevention and control developments are crucial especially to people who are living in border areas. The main focus on improving the capacities is deploying processes of work in crisis situations to make them confident and accurately follow the instructions

Keywords: Assessment, Health system, COVID-19, Border areas

262 Evaluation of The Effectiveness on COVID-19 Prevention Measures in Educational Institutions Located Border Areas, Chiang Rai Province, Thailand

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ABSTRACT

Background: Students who live together in school all the time thus increasing the chances of getting infected more. Especially if any school fails to comply with the measures for any reason. There will be COVID-19 outbreak. Evaluation of the effectiveness on COVID-19 prevention measures in educational institutions located border areas, it is very important to control the COVID-19 outbreak.

Methods: A cross-sectional study was applied to assess the effectiveness of COVID-19 prevention and control measures in different kinds of schools (public schools, private schools, day care center, foreign language teaching schools, and religion teaching schools) located in border areas of Mae Fah Luang, Mae Chan, Mae Suai, Mae Sai, Muang, Wiang Pa Pao, and Chiang Saen Districts, Chiang rai Province. The study population were school directors, teachers, caregivers, students, and their parents. Validated questionnaires were used to collect data. Descriptive and inferential statistics were used to test the associations at the $\alpha = 0.05$.

Result: A total of 2,240 participants were recruited into the study. Among 168 school directors, 50.50% were female, and working at the schools that belonged to the Office of the Basic Education Commission. Majority of teachers and caregivers were female (84.13%). While 66.18% of parents were female, and 21.75% were Akha. While 57.55% of students were female. 64.57% of primary schools and 64.29% of high schools were detected in the level of "pass but required improvement" according to the standard protocol of COVID-19 prevention and control measures which was able to operate their schools. While 78.29% of day care centers were detected in the level of "non-pass the safety level and could not operate their schools". A large proportion of parents (97.43%), 93.81% of all primary schools, 92.86% of high schools followed the national COVID-19 prevention and control procedures to an excellent level. The size of day care centers and school, and types of administration departments were associated with the effectiveness of COVID-19 prevention and control of organization level significantly. Parents' knowledge and practices related to disease control were associated with the effectiveness of COVID-19 prevention and control of organization level significantly.

Conclusion: In implementation for COVID-19 prevention and control, it needs to focus on the size and their administration departments of schools including knowledge and practice in COVID-19 prevention and control of parents.

Keywords: COVID-19 prevention measures, Day care centers, Schools, Border area

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| 284 | **Has the COVID-19 Pandemic Pushed Households of Pregnant Women into Poverty? Evidence from Rural Sri Lanka** |

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ABSTRACT

Introduction: The COVID-19 pandemic has negatively impacted household economies globally. Since pregnant women are considered as a vulnerable population during this global crisis, it is important to assess the changes in their household economies during the COVID-19 pandemic.

Objective: To describe how the household economies of pregnant women in rural Sri Lanka were affected during the COVID-19 pandemic

Methods: This cross-sectional study was conducted in the Anuradhapura district, Sri Lanka among pregnant women registered in the Rajarata Pregnancy Cohort(RaPCo) who delivered during the initial stage of the COVID-19 pandemic in Sri Lanka (from March to June 2020). Pregnant women's household economic details during the COVID-19 pandemic were gathered through telephone interviews. Data were analyzed by combining the baseline household economic and pregnancy cost data collected in the RaPCo study using descriptive and non-parametric analysis. Three poverty lines; national(USD3.65), lower-middle-income countries(USD3.20), and the extreme poverty line(USD2.15) were used for poverty analysis.

Results: The sample consisted of 648 pregnant women. The average monthly household income was reduced in 47.2%(n=306) of them during the pandemic and the reduction was statistically significant(Z=-6.317,p<0.001). The mean(SD) reduced income was USD124.50(85.19). The mean(SD) expenditure for a maternal health visit of the pregnant women in the affected households was USD3.89(3.76), equivalent to 3.1% of the reduced average monthly household income. In the total sample, 28(4.3%) and 29(4.5%) households were pushed into poverty according to the national and lower-middle-income poverty lines. Further, 21(3.2%) of households were pushed into extreme poverty. Only 12(15.4%) of households pushed into poverty had received financial aid from the government.

Conclusion: Even during the early stages of the pandemic, the household economies of pregnant women in rural Sri Lanka were severely affected pushing the households into poverty and extreme poverty. Hence, a proper mechanism to provide financial assistance to affected households of pregnant women is needed.

Keywords: COVID-19 pandemic; Household economy; Poverty; Pregnant women

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295 — Management Model for Surveillance, Prevention and Control of COVID-19 in Border Community, Thailand – Myanmar

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ABSTRACT

Background: COVID-19 has been a major human threat for a year. Many people have been infected and killed globally, including people living in border areas between Thailand and Myanmar. Mae Sai is the northernmost district of Chiang Rai province in northern Thailand. Mae Sai district is a major border crossing between Thailand and Myanmar. It is characterized by high population mobility. In addition, there are many migrant workers residing in that area, which leads to people in border areas at risk of contracting COVID-19.

Objective: To study the management model for surveillance, prevention, and control of COVID-19 in the border community, Mae Sai district, Chiang Rai province

Methods: Qualitative data were collected from key informants who lived in 12 villages along the Thailand-Myanmar borders in the Mae Sai district, Chiang Rai province, Thailand. The participants were over 20 years old, public health care professionals, public health volunteers, community leaders, immigration police, and soldiers who had roles in implementing disease surveillance, prevention, and control measures. A total of 47 participants (11 men and 36 women) used a semi-structured questionnaire with POCCC theory to guide interviews. In addition, information was extracted for thematic analysis.

Results: Surveillance systems, disease prevention, and control in the area are still the only defenses from the Thai side. The COVID-19 management model in the border area of Mae Sai district consists of 1) Planning: practicing the preparation plan for the situation in the case of the COVID-19 outbreak 2) Organizing: There is a committee to operate and clearly define roles and responsibilities 3) Command: designate a single commander. 4) Coordinating: there is communication, formal and informal, affecting the speed of coordination or transmission of information, making it possible to control the disease in area 5 quickly) Control: Control is measured through cooperation from various agencies, the government, and the people in the community.

Conclusion: Border Trade Checkpoint and natural Border Path in Mae Sai district are considered essential points for joint surveillance and screening to prevent disease outbreaks from neighboring countries entering the area. In local dimensions, cooperation operations have formal and informal working patterns. Comprehensive and flexible border health policies should be implemented by allowing freedom to set guidelines for work in the area that can be self-administered, including creating a coalition of partners, networks, agencies, and organizations supporting border health work. Hence, the integration at the national level, at the level of ministry, department, province, district, and sub-district until reaching a village or border community.

Keywords: COVID-19, Surveillance, Prevention and control, Border Community

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296	**Community Practices for Prevention and Control of COVID-19: A Case Study of Thai - Myanmar Border Community**

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ABSTRACT

Objective: The purpose of this research was: 1) to describe the level of community practice for prevention and control of COVID-19 in the Thai-Myanmar border community, and 2) to determine the factors related to a community practice for prevention and control of COVID-19 in the Thai-Myanmar border community.

Methods: The study was cross-sectional and used the concept of participation as a research framework. The research area was the Thai-Myanmar border community (Mae Sai district and Mae Sot district). A sample was selected from household representatives 400 cases were included as a sample, using a proportional stratified random sampling. The instrument used was a questionnaire. The data were analyzed using the descriptive statistics of frequency percentage mean and standard deviation, the level of the community practice was classified into 3 levels: low, moderate, and high, and the related factors were analyzed by Pearson correlation coefficient at the statistical significance level ($p<0.05$).

Results: The results indicated that the level of community practice for preventing and controlling COVID-19 in the Thai-Myanmar border community was moderate (mean±sd=32.65±4.313). The community practice for preventing and controlling COVID-19 was divided into four dimensions: 1) the community's practice for prevention and control covid-19 was moderate (19.64±3.429) 2) community participation in prevention and control covid-19 was high (3.23±1.979) 3) the community's measurement for prevention and control covid-19 was high (9.84±0.657) and 4) covid-19 notification in the case of outsiders entering the area was notified to the village headman. In addition, the significant factors related to the community practice for preventing and controlling COVID-19 were the period of living in a community (r=-0.140, p=0.005), income (r=0.129, p=0.010), the community's practice for disease prevention and control (r=0.876, p<0.001), community participation (r=0.591, p<0.001), and community measurement (r=0.212, p<0.001).

Conclusion: In conclusion, based on the factors related to community practice for preventing and controlling COVID-19 in the Thai-Myanmar border community. It was recommended that the government sector, the private sector, and relevant organizations should encourage community participation. Collaboration with the community to synthesize the preventing and controlling disease guidelines appropriate for community context; to enhance sustainable understanding and participation in the community.

Keywords: Community practices, Prevention and control of disease, COVID-19, The border community

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Rapid Detection Methods for SARS-CoV-2 RNA Using Colorimetric Loop-Mediated Isothermal Amplification Assays

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ABSTRACT

The emergence of a new severe acute respiratory syndrome coronavirus (SARS-CoV-2) in late 2019 has sparked an explosive global pandemic of COVID-19 disease. Due to its high specificity and sensitivity, a real-time reverse transcription-polymerase chain reaction (RT-PCR) has been used as a gold standard for the molecular diagnosis of SARS-CoV-2 but it is time-consuming, requires expensive specific equipment and specialized laboratory facilities, which may limit its implementation in remote areas and resource-limitedsettings. We thus developed the rapid colorimetric reverse transcription loop-mediated isothermal amplification (RT-LAMP) assay for SARS-CoV-2 detection in a single closed tube, in which the color change can be visualized within 30 minutes after RNA extraction step through the naked eye. A total of 176 nasopharyngeal/throat swabs obtained from 99 individuals confirmed SARS-CoV-2 infection and 77 uninfected individuals between May 2020 and December 2021 were tested using the colorimetric RT-LAMP assay. Amplified target RNA was visualized using either hydroxynaphthol blue (HNB) or cresol red as indicator dyes. After evaluation with clinical samples, the RT-LAMP assay based on HNB dye yielded sensitivity of 92.1% and specificity 93.2%, whereas RT-LAMP based on cresol red yielded 80.3% sensitivity and 97.0% specificity. Therefore, this assay is easy to implement, field-deployable, low-cost, and user-friendly, which can be used as alternative method for massive scale-up and rapid diagnosis of SARS-CoV-2 infection, especially in where a sophisticate and expensive equipment is not available.

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129	**Race to a Responsive Blood Donor Management: Demographic Profile, Knowledge, Attitude, and Practices (KAP) of Blood Donors in a Low-Middle Income Country**

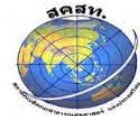**Angeli Abegail Quiton Naranja[1], Myra Oruga[2]**

[1] *University of Baguio, Philippines*
[2] *University of the Philippines- Open University, Philippines*

ABSTRACT

Rising demand for blood units may be addressed through focusing on donor management. The study determined the demographic profile of blood donors in terms of sex, age, ethnicity and level of education and measured the level of KAP in terms of blood donation including the relationship of the donor profiles and KAP. A cross-sectional study from February to October 2020 was performed with 316 blood donor respondents. Descriptive statistics and Chi-square were applied. Demographic profile of respondents reflects the unique demographic landscape of the city; female with age ranged from 18–30 years old and in collegiate level and Tagalog. Study revealed a high level of knowledge and favorable attitude. Most of the respondents donated in the past, 62.3% are lapsed donors, 18% were first timers. Majority intended to donate in the future. Only practices revealed a significant relationship to sex, age, ethnicity and level of education. Results revealed an opportunity to retain this donor pool. The results may be used by blood bank facilities in crafting targeted retention strategies and intentional donor management.

Keywords: Attitude, blood donors, knowledge, low-middle income country, practices

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131	Standard Treatment Workflows: An Approach Towards Universal Health Coverage

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ABSTRACT

Primary health care caters to nearly 70% of the population and provide treatment to about 80-90% of the common conditions. Towards attainment of Universal Health Coverage (UHC), the Indian healthcare system is gearing up by initiating several schemes like National Health Protection Scheme, Ayushman Bharat, Nutrition Supplementation Schemes, Inderdhanush Schemes etc. The healthcare delivery system is facing the challenges like irrational use of medicines, over and under diagnosis, high out of pocket expenditure, lack of targeted attention to preventive and promotive health services, poor referral mechanism etc. With the volume of growing new scientific evidence and rising healthcare costs, the healthcare providers are not able to keep pace with due to lack of common standard treatment guidelines, workflows and reference manuals from Govt. of India. Keeping these facts, Indian Council of Medical Research in collaboration with National Health Authority Govt. of India and WHO India country office has developed Standard Treatment Workflows (STW) with definite outline to be utilized at various levels of health care starting from primary to tertiary level care. These workflows in 21 specialities are available in four ways by Government of India to be adopted and followed by all providers. It would be ensured that STWs can be implemented effectively at all levels and ensure quality health care at an affordable cost as part of Universal Health Coverage.

Keywords: Standard Treatment Workflows (STWs), Universal Health Coverage (UHC), Quality health care (QHC)

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155	**Impact of Strengthening Mental Health on Prevention of Burnout, Bangkok Hospital Phuket**

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Abstract

Background/purpose: Healthcare worker burnout is now crisis and a stressful professional health occupation. The purpose of this cross-sectional study was to determine the level of burnout and related factors among 936 Thai healthcare worker in Bangkok hospitals Phuket, Thailand. 1. Finding the suitable assessment for Thai people in our organization emphasize Thai people, 2. Evaluate the burnout symptoms of issue 3. access and compare pre & post intervention of assessment.

Materials and methods: A self-administered questionnaire was collected through an online platform and using the burnout assessment, stress assessment and happiness assessment. Set up "By-Jai" clinic establish employee assistance program for employee emotional support with personalized care program for building resilience and handle stress and support system. The data were analyzed for descriptive statistics percentage, mean, standard deviation e and inferential statistics using T-test for compare pre & post intervention of assessment.

Results: The prevalence of low, medium to high level of burnout were 71.05%, 17.74%, 11.22% for emotional exhaustion, depersonalization, and low personal accomplishment, respectively. The trial results indicator that decreased turnover rate professional staff 70.20% and increases engagement score of all profession stall 13.21%.

Keywords: Strengthening mental health, prevention of burnout

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177 Service Seeking Knowledge and Behavior Towards Safe Dental Care Among Bangladeshi Patients

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ABSTRACT

Introduction: Safe dental service seeking knowledge and behavior is essential for the sustainable management and prevention of dental problems among the general population which might help to avail exact treatment management facilities regarding dental issues.

Objective: This study aimed to assess the knowledge and behavior towards safe dental service seeking practice.

Methods: This was a cross-sectional study conducted among 312 dental patients of Khulna city. Data was collected by semi-structured questionnaire through face-to-face interview and uni- and multi-variate procedures were used for analysis.

Results: The average age was found as 34 years with higher (61.2%) female respondents. Most of the study subjects had graduate and above education (69.6%) who belonged to a nuclear family (24.7%) and resided in urban areas (71%). Majority of the respondents had poor service seeking knowledge (69.6%) and behavior (64.1%) regarding safe dental care. Some factors under socio-demographic and clinical information were identified as significantly (p<0.05) associated with poor knowledge (less education, low blood pressure) and behavior (rural habitation, low blood pressure and having deleterious habits).

Conclusion: This study reveals a depressive scenario regarding knowledge and behavior on safe dental service seeking practice. A large-scale study is required to generalize the information and to improve the situation. Hence, this study will provide the future researchers of this field with a concrete base for further study and will come into great assistance for the policy makers of the pertinent arena.

Keywords: Safe dental care, service seeking knowledge, behavior

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216	**Spatial Distribution and Referral Pattern of Sick Neonates to a Tertiary Care Neonatal Centre in Bhubaneswar, Odisha**

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 ABSTRACT

Introduction: India accounts for the highest number of neonatal deaths in the world and Odisha is a leading contributor to the national neonatal mortality. Different levels of newborn care units have been established for newborn care and referral to higher level tertiary care newborn intensive care unit (NICU) becomes an essential part of service provision do address the issues such as limited infrastructure for diagnosis and treatment and lack of skilled human resources.

Objective: To study the spatial distribution and referral pattern of out-born neonates of a tertiary care NICU in Bhubaneswar city, Odisha.

Method: A medical college hospital-based study was conducted to study the spatial distribution using density and distance-based map neonates referred to NICU during Jan 2020 and Dec 2021. Descriptive summary statistics was used to describe the pattern of referral cases.

Results: Out of 355 out-born neonates, majority (99.9%) were from within Odisha and rest were from two neighbouring states. Around 56% referrals were within 50 km radius and 74% referrals were within 100km radius. The site of referrals belongs to medical colleges (11%), Special Newborn care unit (SNCU) of district hospital(15%), private health care(62%) and home(3%) were respectively. The majority (61.4%) of patients transported in self-arranged vehicles and rest were though ambulance services. About one-third of cases were treated at multiple facilities before arriving the study site. The neonates were referred for prematurity, jaundice, sepsis, and birth asphyxia were 30%, 23%, 20% and 21% respectively.

Conclusion: About one in four referrals from facilities beyond 100 km with limited ambulance transport and incomplete referral slips, is a concern that require proper transportation. One-fourth referrals from medical colleges or district hospitals, is also additional concern, that requires strengthening of facilities. Referal from private hospitals require standardization of new-born care in private hospitals.

Keywords: Preterm, neonatal intensive care unit, sick newborn care

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266 Training Need Assessment of Nurses in Intensive Care Units at All India Institute of Medical Sciences, Bhubaneswar, Odisha

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ABSTRACT

Background: The Training Need Assessment (TNA) survey is a commonly used survey to identify the actual needs of employees. It is an effective method to determine "how" and "what" should be given as training, which is based on the perspective of users when planning a training and development program for employees of an organization. The use of a TNA exercise can support the development of a "fit-for-all and purpose" program of information dissemination and skills upgradation and training. Thus, in this study , TNA was conducted to explore the overall training and educational needs of the ICU nursing staff of a tertiary care teaching hospital.

Aims & Objectives: The main aim of this study was to explore the self-perceived training needs including general, clinical, and non-clinical performance, of ICU nurses and to identify the training needs of nurses, in order to establish where the key skill deficits lay and to develop continuing professional development packages, customized to the local needs if necessary.

Methodology: This study was designed as a questionnaire survey to investigate the demographics, training needs to improve performance of the target population. A set of questionnaire-based descriptive cross sectional study among nurses in different intensive care units The questionnaire had self-reported, close-ended structured questions, with a set of forty-four questions each. The total sample collected for the study consisted of eighty-eight nurses, which included thirty-eight nurses from CICU, eighteen nurses from NICU, ten nurses from PICU, and twenty-two nurses from SICU.

Result: In total, forty-four questions were distributed among all eighty-eight nursing officers. These forty-four questions were from forty-four topics, which are documented to be of importance in patients care from a nursing perspective. The mean average of topics where nursing officers had taken training was found to be 25.875. The maximum number of trainings received by a staff member was 35, while the minimum number of trainings received by an officer was 15.Hand washing and correct use of PPE were two topics that received the highest numbers in TNA by the ICU nurses, and crisis management was the lowest rated training need mentioned by them.

Conclusion: The training need assessment must be carried out before training activities are organized as it gives indications to prioritizing the topics according to the needs of the subject. Providing training according to the needs of the nursing officers is of vital importance as it conserves resources and gives better results.

Keywords: Training need assessment, continuing education, critical care, nurses, health care

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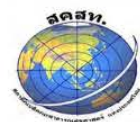| 124 | **Occurrence of Extended-Spectrum Beta-Lactamase Producing Escherichia coli and Klebsiella spp. Isolated from Different Clinical Samples in a Tertiary Care Center, Southern Thailand.** |

Phanvasri Saengsuwan[1], Chonticha Romyasamit[2], Phoomjai Sornsenee[1], Soontara Kawila[1]

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ABSTRACT

In non-outbreak settings, infections with extended-spectrum-lactamase–producing Enterobacteriaceae (ESBL-producing *E. coli* and *K. pneumoniae*) have not revealed the presence of dominant strains. The main goal of the study was to determine the prevalence, clinical characteristics, and genetic characteristics of extended-spectrum beta-lactamase (ESBL) isolated from clinical samples in a tertiary care hospital in southern Thailand. ESBL isolates (n = 102) were collected from diverse clinical specimens from January 2021 to August 2021. The double-disc synergistic test was used to assess ESBL production among these clinical isolates. ESBL encoding genes were examined by multiplex PCR for the most common beta-lactamases: TEM, SHV, and CTX-M. Amplicons were sequenced and identified using BLAST software. Of the 102 ESBL (23 *E. coli* and 79 *K. pneumoniae*), 46.8% and 53.9% were from male and female patients, respectively. The majority were isolated from urine (44.1%), followed by body fluid (26.5%), blood (18.6%), and tissue (10.8%). ESBL- producing *K. pneumoniae* was most frequently diagnosed in the medical ward (36.3%). The antibiotic susceptibility test showed that 100% of the isolates were resistant to ampicillin, cefotaxime, ceftazidime, ceftriaxone, cefuroxime, 81.4% to ciprofloxacin, and 74.5% to trimethoprim-sulfamethoxazole. Ertapenem and meropenem were active against 99% of ESBL-producers. It was also discovered that the rate of multidrug resistance for ESBL was 58.8% and 45.1% for extremely drug resistant ESBL producers. According to the multiplex PCR assay, the most common genes among ESBL producers were bla_{TEM} (62.7%), bla_{SHV} (49.0%), and bla_{CTX-M} (7.8%), while bla_{GES}, bla_{VEB}, and bla_{PER} were not found in any of them. Interestingly, co-harboring genes of bla_{TEM} and bla_{SHV} were found in all isolates of ESBL- producing *K. pneumoniae*. To our knowledge, this is the first study to demonstrate a high prevalence of multidrug resistance and the presence of more than one ESBL variant gene in a tertiary care hospital in southern Thailand, highlighting the challenge of treatment.

Keywords: Antibiotic resistance, extended spectrum beta-lactamases, E. coli, K. pneumoniae

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Evaluation of the Use of Different Solvents for Mitragyna speciosa Leaf Extracts on Larvicidal Activity Against Aedes aegypti (Diptera: Culicidae)

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ABSTRACT

Aedes mosquitoes are vectors of etiologic agents of viral diseases including yellow fever virus, dengue virus chikungunya virus and Zika virus. Mosquito control is facing a threat because of the emergence of resistance to synthetic insecticides. Extracts from plants may serve as proper alternative sources of mosquito control agents because they constitute active insecticide compounds that are biodegradable into nontoxic products and potentially suitable for use to control mosquitoes. Sine *Mitragyna speciosa* Korth. (Rubiaceae) has been traditionally used to combat fatigue, improve productivity, ans control insects, it is a promising sources of bioactive compounds. In this current study, larvicidal efficacy of different solvent (hexane, methanol and alchohol) crude leaf extracts of *M. speciosa* was investigated against 3rd-4th-instar larvae of *Aedes aegypti*. Larval bioassay tests were carried out as per WHO protocol and mortality was recorded after 24 h exposure. The highest larval mortality was observed in hexane and methanolic extracts of *M. speciosa* against *Ae. aegypti* with LC_{50} value of 96.24 and 138.76 mg/l. Meanwhile, the ethanolic extract of *M. speciosa* exhibited a low larval mortality (53.33%) with LC_{50} value of 148.68 mg/l respectively. However, from these results, it might be concluded that crude hexane and methanolic extracts of *M. speciosa* were excellent potential for controlling *Ae. aegypti* mosquitoes.

Keywords: Aedes mosquitoes; Botanical insecticide; Larvicidal effects; Mitragyna speciosa

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| 158 | **Internalized Stigma and HIV Status Disclosure Among Hill Tribes, Northern, Thailand.** |

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ABSTRACT

Introduction: Hill tribes are severely affected by the HIV epidemic, yet research on the relationship between HIV stigma and status disclosure is relatively limited among this population.

Objective: To examine the effect of internalized stigma on HIV status disclosure among hill tribes

Methods: Hospital based cross-sectional study was conducted. A random method was used to select the participants from 10 district hospitals in Chiang rai, Thailand. A validated questionnaire was used to collect socioeconomic information about the participants, and a 28-item scale internalized HIV stigma (Sayles et al, 2008) was used to assess the participants' internalized stigma. Logistic regression was applied to determine the association between the variables at a significance level of = 0.05.

Results: 182 participants were recruited for the study; 68.1% were female, 58.2% married, 36.8% were Akha ethnic, 64.3% Buddhism, 62.1% illiterate, 39.0% temporary employee, 85.2% infected HIV by heterosexual intercourse, and 64.8% disclosure HIV status to sexual partner/family members. After controlling for sex, one variable was found to be associated with HIV status disclosure. Those who had an internalized stigma were more likely to disclosure HIV status than those who did not (AOR = 5.35, 95% CI = 2.02–14.12),

Conclusion: Intervention efforts to reduce HIV stigmatization are urgently required for improving social relationships and HIV status disclosure among HIV-positive hill tribe.

Keywords: Internalized stigma, hill tribes, HIV status disclosure

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215 — Community Sero-Prevalence of Hepatitis B In India: A Review and Meta-Analysis

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ABSTRACT

Introduction: Hepatitis B infection is a major determinant of hepatocellular carcinoma.

Objective: This study reviews and estimate the pooled seroprevalence of Hepatitis B in India.

Method: Community studies (excluding high-risk groups and hospital settings) conducted during the last 15 years assessing seroprevalence of hepatitis B virus (HBV) were included in this meta-analysis after selection using PRISMA guidelines. Selected studies were analyzed using MetaXL (v.5.3) software. The random effect model was used for estimating pooled prevalence.

Result: Included 14 studies covered about forty thousand populations. The pooled seroprevalence of HBV was 2.55% (LCI:0%, HCI:11.1%). Because of limited gender stratified information in these studies, pooled sero-prevalence of HBV among males and females couldn't be estimated. Studies included were of moderate quality and there was high heterogeneity (I^2=98%) among studies.

Conclusions: Overall HBV seroprevalence in community settings in India is low but considering population size, it can be translated into more than 3 million HBV-infected individuals which is a grave concern. Controlling current infection and future planning for care of hepatocellular carcinoma individuals should be given priority.

Keywords: Hepatitis B, Meta-Analysis, Prevalence

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218	**Prevalence of Drug-Sensitive and Drug-Resistant Tuberculosis Among Household Contacts of Multidrug-Resistant Tuberculosis Patients in Dhaka, Bangladesh**

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ABSTRACT

Background: Patients with multidrug-resistant tuberculosis (MDR-TB) may remain a source of infection for a longer time than patients with drug-susceptible TB. But globally, only 44% of the estimated 65,000 incident cases were notified in 2019.

Objective: To estimate the prevalence of drug-sensitive TB (DS-TB) and drug-resistant TB (DR-TB) among symptomatic household contacts of MDR-TB patients in Dhaka, Bangladesh.

Methods: This cross-sectional study was conducted among the 355 household contacts of 93 MDR-TB index cases in Dhaka diagnosed from November 2020 to October 2021. Socio-demographic factors, behavioral factors, co-morbidities, and physical measurement data were taken. For the identification of active cases of TB, GeneXpert analysis was done among symptomatic contacts.

Results: Among the contacts, verbal screening resulted in TB-like symptoms prevalent among 9.9%, where common symptoms were loss of appetite (45.7%), unexplained weight loss (40.0%), and cough for more than 2 weeks (37.1%). After adjusting with possible confounders, age group 16-30 years (P=0.046, aOR=3.3, 95% CI: 1.1-10.5), age group 31-45 (P=0.044, aOR=3.4, 95% CI:1.1-11.5), and history of kidney disease (P=0.030, aOR=6.1, 95% CI: 1.2-30.6) were found to be associated with TB-like symptoms. Of the contacts with TB-like symptoms, 6.7% were diagnosed as a case of TB (3.35% were DR-TB, and 3.35% were DS-TB). The number needed to be screened (NNS) to find a case of TB was 178 among the household contacts of MDR-TB.

Conclusions: The NNS to find a case of TB indicates the need for regular effective screening programs among contacts of MDR-TB to cut the transmission chain. Household contacts aged between 16 to 45years and contacts with a history of kidney disease should be given special attention.

Keywords: Multidrug-resistant tuberculosis; MDR-TB; Tuberculosis; Household contacts Tuberculosis

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221 Prevalence and Factors Associated with Depression Among Adult Patients Living With HIV/AIDs Undergoing ART Unit in Banadir Hospital, Mogadishu Somalia

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ABSTRACT

Background: Africa is the highest HIV-affected continent, with 25.7 million out of 37.9 million people with HIV. Depression is the most psychiatric illness that affects HIV patients, with 121 million living with HIV. The study aimed to estimate the prevalence of and determine factors associated with depression among HIV/AIDs adult patients undergoing ART unit in Banadir Hospital Mogadishu Somalia.

Method: A hospital-based cross-sectional was conducted between 1 May and 1 July 2022. The study populations were HIV/AIDs adult patients attending in ART unit at Banadir Hospital, Mogadishu Somalia, and samples were recruited from the ART unit of the hospital who attended the period of the study. A questionnaire including socio-demographic characteristics, three items social support scale, patient health questions-9 (PHQ-9), and an 11-item of HIV stigma scale were used as research tools. Logistic regression was used to determine factors associated with depression at the significance level a=0.050.

Result: 331 patients were recruited for the study, 51.1% were female, 53.2% were married, 68.6% were 30-45 age group, 47.1% were Illiterate, 59.8% were Employed, and 46.2% were from the low-income population. The overall prevalence of depression among HIV/AIDs was 33.5%. Four factors were associated with depression in the multivariable logistic regression, those who had low (AOR=3.00; 95%CI=0.80-11.19), and middle-income (AOR=1.149; 95%CI=0.41-5.41) had a greater odd of having depression than those who did not. Those who lived with poor social support (AOR=4.99; 95%CI=1.47-16.95) had a greater odd of having depression than those who lived with strong social support. Those who had poor (AOR=23.6; 95%CI=4.78-117.3), and fir treatment adherence (AOR=10.76; 95%CI= 3.53-32.82) had a greater odd of having depression than those who had good adherence to treatment. Those who used substances (AOR=3.43; 95%CI=1.71-6.88) had a greater odd of having depression than those who did not.

Conclusion: People living with HIV in Somalia are suffering from depression. The implementation to reduce the problems of depression should be focused on improving family or induvial income, empowering social support, developing an appropriate approach to increase the adherence rate to treatment, and reducing substance use.

Keywords: Human Immunodeficient Virus, prevalence, depression, ART, Factors associated

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241 HIV Case Surveillance to Monitor the HIV Epidemic and Program Outcomes in Vietnam

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ABSTRACT

Background: In Vietnam, HIV case surveillance (CS) was started in CDC supported provinces, including two provinces in the North: Hai Phong, Thai Nguyen and three provinces in the South: Binh Duong, Long and Ba Ria-Vung Tau, in 2020. Backlog data entry was conducted as far back as availability of data which were subsequently submitted into the HIV CS database.

Method: Risk behaviors, transmission mode, recency data – including rapid testing for recent infection (RTRI) and recent infection testing algorithm (RITA), viral load, and treatment history of all newly diagnosed cases from January 2019 to August 2021 in the five provinces, were extracted from HIV CS database for descriptive analyses.

Results: Among 5,373 newly diagnosed cases, 40.6% (n=2,182) were males aged 20-29y and 34.8% (n=1,646) were men who had sex with men (MSM). 40.9% (n=2,199) were tested with RTRI and 11.6% (n=256) was classified as recent infection by RTRI (RTRI_recent). Among RTRI_ recent cases, 97.7% (n=250) received a viral load test and 66.0 % (n=169) were classified as RITA_recent (viral load > 1000 copies/ml). The proportion of RITA_recent among newly diagnosed cases was 3.14%. The main mode of HIV transmission among RITA_recent cases was sexual transmission (89.4%). MSM contributed 75.2% of all RITA_recent cases. Among the five provinces, Binh Duong had the highest numbers of newly diagnosed (n=2,137) and RITA_recent (n=90) cases during this period. In this province, the treatment linkage proportion among newly diagnosed and RITA_recent cases was 91.5% (n=1,957) and 93.3% (n=84), respectively. By August 2021, ART treatment continuity among RITA_recent cases were 74.4% (n=67) and 74.6% (n=50) of these were virally suppressed. Meantime since diagnosis at the August 2021 time point for these patients was 1.38 years (SD=0.65).

Discussion: The majority of recent infections in the five provinces were MSM, suggesting ongoing sexual HIV transmission in this community, especially in Binh Duong. Treatment continuity and viral load suppression among recent cases lower than other provinces indicated substantial gaps in HIV treatment program in Binh Duong. This analysis demonstrates that HIV CS is an important tool for monitoring the HIV spread, informing public health response and program improvement in Vietnam.

Keywords: HIV case surveillance; MSM; recent infection; HIV; Vietnam

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| 252 | **Prevalence and Factors Associated with Hepatitis B Infection Among the Hill Tribe Youths, Northern Thailand** |

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ABSTRACT

Background: Hepatitis B virus is a major cause of hepatitis and led to develop hepatocellular carcinoma (HCC). The main routes of transmission are close-contact, sexual contact, and blood transfusion. Approximately 8-10% were found a HBsAg carrier among Thai general population. Those people who got infection during their early life, it becomes a chronic carrier and develop HCC ultimately. HBV immunization has been implemented for all Thai population for more than two decades, however, several hepatitis B infections are still reported particularly those marginalized population including the hill tribe people.

Objective: The study aimed to investigate the prevalence of hepatitis B infection among the hill tribe youths by assessing their risk behaviors and detecting several hepatitis B markers.

Method: A cross-sectional study design was used to determine prevalence and factors associated with hepatitis B infection among the hill tribe youths, aged 15-24 years. A 5 mL blood specimen were drawn and detected for HBsAg, anti-HBsAg, and anti-HBc. Logistic regression was used to detect the associations at the alpha=0.05.

Results: In total, 836 participants were recruited into the study; 62.7% were females, 58.9% were aged 15-17 years, 78.4% graduated high school, 89.1% had no income, 13.3% had tattoos, 3.9% had experienced about drug injection from illegal practitioners and 35.7% had no history of HBV immunization. Prevalence of HBsAg was 3.0%, Anti-HBs was 10.2% and Total anti-HBc was 8.1%. Those aged 18-20 years and 21-24 years had a greater odds of HBV infection than those aged 15-17 years at 2.14 times (95%CI=1.35-3.29), and 2.39 times (95%CI=1.05-3.90) respectively. Akha, Lahu, and Hmong youths had a greater odds of HBV infection than Lisu youths at 3.21 times (95%CI=1.07-9.21), 3.71 times (95%CI=1.21-11.41), and 3.84 time (95%CI=1.26-11.69) respectively. Those who had experienced working outside the village had a greater odds of HBV infection than those who did not at 1.77 times (95%CI=1.18-2.98). Those who had ≥ 2 partners had a greater odds of HBV infection than those who had no partner at 2.66 time (95%CI=1.96-3.87).

Conclusion and discussion: Even Thailand has been promoted hepatitis B vaccine to their citizens for more than two decades, however, the high prevalence is found in some populations particularly those who are living in remote areas such as the hill tribe people. Accessibility and affordability to educational and health care systems are a proxy factors to contribute the hepatitis B infection for the hill tribe youths. Age and having working experience outside the village in some tribes are influencing factors for hepatitis B infection among the hill tribe youths.

Keywords: Prevalence, Factors associated, Hepatitis B, Hill tribe, youths

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Health Literacy Effecting to Preventing and Controlling Dengue Hemorrhagic Fever Among Village Health Volunteer, Pattani Province.

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ABSTRACT

Introduction: Dengue hemorrhagic fever is a major problem in Thailand, especially, it's the cause of death in Thai people every year.

Objective: Research aimed to study health literacy effecting to preventing and controlling dengue hemorrhagic fever among village health volunteers.

Methods: Cross-sectional research study consisted of 6,841 village health volunteers in Pattani Province and sample size calculating used Daniel formula for 215 cases, and systematic random sampling was determining. Data collected by questionnaires composed of characteristic health literacy and preventing and controlling dengue hemorrhagic fever. In addition to, validity was checked by 3 experts and try out testing reliability by Cronbach's coefficient alpha about 0.87. Data analyzed using Pearson product moment correlation coefficient.

Results: Health literacy variables including, cognitive skill, access skill, communication skill, self-management skill, media literacy skill, decision skill, had mean score with high level (80%) (=2.79, S.D.=0.415). Moreover, preventing and controlling dengue hemorrhagic fever including, physical, biological, and chemical had mean score with high level (81.40%) (=2.81, S.D.=0.405). An association analyzed reported five factors positively associated with preventing and controlling dengue hemorrhagic fever with statistic significant level 0.05, including access skill (P-value<0.001) communication skill (P-value=0.003) media literacy skill (P-value<0.001) decision skill (P-value<0.001) self-management skill (P-value<0.001), respectively. Moreover, cognitive skill was not association (P-value=0.086).

Conclusion: Chief of Public Health Provincial should be to support all activities to increase dengue hemorrhagic fever' knowledge for village health volunteer.

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299 Factors Influencing Dengue Hemorrhagic Fever Prevention and Control Behaviors Among Village Health Volunteers in Wang Thong District, Phitsanulok Province

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ABSTRACT

The purpose of this survey research was to study the factors influencing dengue fever prevention and control behaviors among village health volunteers, Wang Thong District, Phitsanulok Province. The participants were 249 village health volunteers, Data were collected by using a questionnaire. Data were analyzed by using descriptive statistics, and stepwise multiple regression analysis. The results showed that the dengue fever prevention and control behaviors were at high level (70.60%), moderate level (27.00%), and low level (2.40%). Furthermore, from the predictive factors study, factors influencing dengue fever prevention and control behaviors of village health volunteers were these 4 factors: information support (b = 2.250, p-value <0.001), emotional and social support (b = 1.321, p-value < 0.001), perceived susceptibility of dengue fever (b = 0.213, p-value = 0.016) and duration of work for the VHV. (b = 0.099, p-value = 0.033). These four factors can together predict 52.60% of village health volunteers' dengue fever prevention and control behaviors (R^2 adj = .5260). This study suggested that related organizations should focus on information support, emotional and social support, and perceived susceptibility among village health volunteers for more effective dengue fever prevention and control development planning.

Keywords: Prevention and control behaviors, Dengue hemorrhagic fever, Village health volunteers

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301 — Assessment of Neutralizing Activity of Anti-Hepatitis B Surface Antibodies from Vaccinees Against Various Hepatitis B Virus Strains

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[1]Chiang Mai University

ABSTRACT

Although the hepatitis B (HB) vaccine is considered as one of the most effective human vaccines, mother-to-child transmission of hepatitis B virus (HBV) still occur despite passive and/or active immunizations were adequately administered at early life. This may be a consequence of inefficient neutralizing activities of vaccine-induced anti-hepatitis B surface (anti-HBs) antibodies or of hepatitis B Immunoglobulin (HBIg). In general, a total anti-HBs antibodies is measured with serological ELISA test to express the protective status (10mIU/ml) of individual instead of using neutralizing antibody level. However, anti-HBs antibody ELISA titer might not directly indicate the existence and quality of neutralizing antibody in individual sera. Therefore, this study aimed 1) to assess the relationship between a titer of vaccine induced anti-HBs, as well as HBIg, and their neutralizing activity using an *in vitro* infection model, 2) to investigate anti-HBs antibodies for the breadth of their neutralizing activity with regard to HBV diversity and emerging variants. Samples were recruited from 4 sources: *i)* individuals who received a plasma-derived HB vaccine, *ii)* who received recombinant vaccines, *iii)* who recovered from natural acute HBV infection, and *iv)* HBIg preparation. Anti-HBs antibodies titers were measured using a commercial ELISAs kit (Monolisa™ Anti-HBs PLUS, Bio-Rad, France). Their neutralizing activity was determined using the hepatitis delta virus (HDV) *in vitro* infection assay as a practical surrogate to an HBV infection assay. Then, anti-HBs level of each group and neutralizing activity were analyzed to assess their correlation using Spearman's rank correlation coefficient. Median of neutralizing activity of each antibody sources against a verity of surface antigen of HBV (HBsAg) was compared using Mann-Whitney U test. On average, anti-HBs antibodies titers showed a positive correlation with their *in vitro* neutralizing activity (r = 0.854). Anti-HBs titer of antibodies elicited by plasma-derived vaccine have strongly correlation with their neutralizing activity at r = 0.849 while antibody elicited by recombinant vaccines and after recover from infection showed correlation at r = 0.785 and r = 0.447, respectively. Furthermore, neutralizing antibody activity of recovered group against serotype *ayw* was significantly higher than against serotype *adw* (*p* = < 0.01). A significant reduction of neutralizing activity was also observed in all 4 groups when tested against HBV immune escape variants (D144A and G145R). The study would imply that, beside antibody titer measurement, functionality of these anti-HBs antibodies should be assessed especially regard to HBV diversity. This information will be crucial to the development of therapeutic and to the optimization of immunoprophylaxis strategies for prevention of HBV infection.

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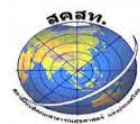IEA ● IOM UN MIGRATION ● ● ● ● ● ● iHPP Thailand

132	**Self-Perceived Performance of Medical Technologists Working in Public and Private Hospitals in Manila, Philippines Prior To and During the time of the COVID-19 Pandemic**

Kenneth Laderas Esmeralda[1]
[1] *University of Santo Tomas, Philippines*

ABSTRACT

During these times of public health concerns, yielding a good laboratory result is of paramount importance, almost synonymous to optimal patient experience. In recognition of this public health dilemma and in recognizing the existing informational gap regarding work dynamics for the medical technology profession, this study came into realization. In general, this study aims to identify the determining-factors that influence self-perceived performance and workload of Medical technologists employed in public and private health institutions. The study is a correlational research that will make use of data on participants' demographic details, workload, and work performance gathered through online survey platforms. The study will make use of purposive sampling and will require 90 participants based on the sampling calculation provided by G*Power sample size computation software following all standard parameters (one-tailed analysis, normal distribution, effect size=0.5, level of significance=0.05). The data collected will then be subjected to statistical tests under the t-test family to be able to create inferences. Based on the comparative analysis of the collected data, there is no significant difference in the self-perceived performance and workload of medical technologists working in public and private health institutions prior and during the COVID-19 pandemic. This is further reinforced by the reason that even before the pandemic, medical technologists already deal with disproportionately high volumes of clinical workups, hence the minimal change in self-perceived performance and workload regardless of the institution from where the medical technologists are affiliated with.

Keywords: Medical technology, self-perceived performance, public and private health institutions, workload, work performance

Medical Technology and Innovation

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165 Perceptions Regarding Smart Phone Application for the Self-Management of Diabetes: A Qualitative Study in Comprehensive Approach

Bilkis Banu[1]
[1] *Northern University Bangladesh, Bangladesh*

ABSTRACT

Introduction: Bangladesh has rapid evolving practices in smart phone penetrated to develop an application (App) which might help patient for self-management of diabetes through reminder system.

Objective: This qualitative study was aimed to explore the perceptions regarding the future use of App for the self-management of diabetes.

Methods: Participants were aged ≥18 years of diabetic patients, relatives, health care providers and policy makers. 25 Focus Group Discussions (FGDs) [05: male-senior, 05: male-young, 05: female-senior, 05 female-young, 05: relatives) and 20 Key Informant Interviews (KIIs) [15: health-care providers, 05: policy makers] were conducted among subjects available under Diabetic Association of Bangladesh.

Results: All participants of 25 FGDs (n=150) were reported that such an App would be beneficial to them because it will remind in all seven components. Respondents hope that this application could be helpful for the patients from nuclear family (FGD=4), elder patients (FGD=6) and businessman patients (FGD=1). Health care providers opined that the App would be helpful for indoor and hospital patients (KII=2) and for hypoglycemic management (FGD=7). However patients and their relatives indentified some challenges for using this App such as finishing phone charge (FGD=2), children use for games (FGD=1), lack of operating skills (FGD=6), low economic status and lower occupation to purchase (FGD=2). Health care providers restricted to use it for inpatients (KII=2). Patients had some recommendations for the finalization of the App such as use local language (FGD=14), audible option of delivered reminder (FGD=3) and lowest phone storage (FGD=2). Health care providers (KII=5) recommended to add diabetes complications (eye and teeth) related reminder, food exchange list, sick day management and hypoglycemia management in the App.

Conclusion: Majority participants were interested to use this application in very near future because they hope that this reminder system would be very much helpful for the management of diabetes.

Keywords: Diabetes, self-management, perceptions, smart-phone application

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251 — The Cost-effective Advantage of Remote Monitoring System for Patients with Arrhythmia Treatment on Rural Area in Japan

Takashi Yamano[1]

[1] *Faculty of Public Health, Mahidol University, Thailand*

ABSTRACT

Introduction: Remote monitoring (RM) system in patients with cardiac implantable electrical devices (CIEDs) was known to detect arrhythmia earlier, and the cost of RM system were started to be covered by Japanese National Health Insurance from 2016 ahead of other disease. For regular check-ups of generators, CIED patients without RM visit Wakayama Medical University every three months, while CIED patients with RM visit every six months. RM system can reduce not only emergency department visits, but also regular visits in patients with CIEDs by daily monitoring.

Objective: We verified whether RM would produce cost-effective advantage for patients.

Methods: We enrolled seventy-eight CIEDs patients on RM who regularly attend Wakayama Medical University in Japan. The questionnaire for enrolled patients was conducted on living area, whether attendants to hospital are present or not, the traffic way and the total cost of the time and the money, for a regular visit.

Results: 44 of 78 (56%) patients visited to the hospital with attendants (one attendant; 44 patients, two attendants; 3 patients) and most patients visited to the hospital by private car (86%). The average of the time cost and money cost for one visit, including in attendants, are 6.2 +/- 3.8 hours and 1087 +/- 1173 Japanese yen.

Conclusion: The RM system is useful in terms of time and money for patients with CIEDs living in Japanese rural areas like Wakayama Prefecture, which faces many problems such as an ageing population, reduced transport options and more. This study would be also a basic resource for online medical care system which will be spreading in Japan.

Keywords: Emote monitoring system, telemedicine, cost-effective advantage, care support in rural area

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An Investigation of Spatial Potential in Healthcare Facilities to Promote Medical Tourism in Lower Northern Region, Thailand

Phataraphon Markmee[1], Narongsak Noosorn[1], Rung Wongwat[1], Sanae Sangern[1], Somkiat Sornprasit[1]

[1] *Faculty of Public Health, Naresuan University, Thailand*

ABSTRACT

At present, Thailand has given high priority to health tourism, which can bring the country a large amount of revenue for the global health tourism market. This mixed method aimed to analyze the spatial potential of health facilities corresponding to medical tourism in the lower North region. The quantitative, samples were 500 health personnel from center hospital administrators, college hospitals, general hospital community hospitals, Tambon health promoting hospital, Thai traditional medicine hospitals, applied Thai traditional medicine clinics representatives of local government organizations in 9 provinces in the lower northern region in tourist areas. Qualitative data were collected through in-depth interviews and focus group discussions, including 270 administrative offices of central hospitals, college hospitals, general hospitals, community hospitals, Tambon Health Promoting Hospitals, Thai Traditional Medicine Hospital Applied Thai Traditional Medicine Clinic representatives of local government organizations. The results show the spatial potential of medical care facilities in the Lower North Region. Hospitals have a network at each level, including Naresuan University Hospital, 3 advanced hospitals, 9 general hospitals, 81 community hospitals, and 1,132 sub-county health promotion hospitals. There are government hospitals that have achieved the Joint Commission International (JCI) standard, Sawan Pracharak Center Hospital in Nakhon Sawan Province, and a private hospital in Phitsanulok Province. There were also specialized dentists at the college and a variety of specialists. Phitsanulok, Sukhothai, and Phetchabun provinces have the potential to be models. Recommendations from those involved in developing medical tourism for hospitals included human resources for services, security, and safety systems. Some factors such as transportation, pricing, infrastructure and communication, and tourism promotion and support should be improved in addition to the tourism center areas.

Keywords: Medical tourism, medical hub, spatial potential, hospitals

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| 251 | The Cost-effective Advantage of Remote Monitoring System for Patients with Arrhythmia Treatment on Rural Area in Japan |

Takashi Yamano[1]

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At present, Thailand has given high priority to health tourism, which can bring the country a large amount of revenue for the global health tourism market. This mixed method aimed to analyze the spatial potential of health facilities corresponding to medical tourism in the lower North region. The quantitative, samples were 500 health personnel from center hospital administrators, college hospitals, general hospital community hospitals, Tambon health promoting hospital, Thai traditional medicine hospitals, applied Thai traditional medicine clinics representatives of local government organizations in 9 provinces in the lower northern region in tourist areas. Qualitative data were collected through in-depth interviews and focus group discussions, including 270 administrative offices of central hospitals, college hospitals, general hospitals, community hospitals, Tambon Health Promoting Hospitals, Thai Traditional Medicine Hospital Applied Thai Traditional Medicine Clinic representatives of local government organizations. The results show the spatial potential of medical care facilities in the Lower North Region. Hospitals have a network at each level, including Naresuan University Hospital, 3 advanced hospitals, 9 general hospitals, 81 community hospitals, and 1,132 sub-county health promotion hospitals. There are government hospitals that have achieved the Joint Commission International (JCI) standard, Sawan Pracharak Center Hospital in Nakhon Sawan Province, and a private hospital in Phitsanulok Province. There were also specialized dentists at the college and a variety of specialists. Phitsanulok, Sukhothai, and Phetchabun provinces have the potential to be models. Recommendations from those involved in developing medical tourism for hospitals included human resources for services, security, and safety systems. Some factors such as transportation, pricing, infrastructure and communication, and tourism promotion and support should be improved in addition to the tourism center areas.

Keywords: Medical tourism, medical hub, spatial potential, hospitals

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142 Erectile Dysfunction among Type 2 Diabetes Patients and Its Correlates

Vignesh Viswanath Shanmugasundaram[1], Anil C Mathew[1], Senthil Kumar[1]
[1] *PSG Institute of Medical Sciences and Research, India*

ABSTRACT

Introduction: Erectile Dysfunction (ED), the persistent inability to achieve or maintain an erection sufficient enough for a satisfactory sexual performance, is a common complication of diabetes. Many studies found that metabolic parameters including duration of diabetes is associated with type 2 diabetes; and eventually is a predisposing factor for ED.
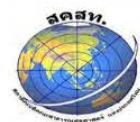
Objective: Present study was undertaken to investigate the association between demographic factors, metabolic parameters and medication use with ED among type 2 diabetics.

Methods: This was a cross-sectional study. Married men aged 20-60 years with a diagnosis of type 2 diabetes were enrolled. The severity of erectile function was assessed using the validated International Index of Erectile Function (IIEF-5) questionnaire. All subjects were evaluated based on demographic factors, metabolic parameters and medications used.

Results: Out of the 204 patients enrolled, 65 (31.86%) were found to have ED. ED was significantly associated with patients who were having less physical activity, hypertension, obesity and diabetic retinopathy. A significant increase in the prevalence of ED with duration of diabetes was observed. In patients with diabetes, for 1-5, 6-10 and 11-30 years, the prevalence was 24.1%, 27.7% and 53.1% respectively. The use of antihypertensive drugs and cardiovascular drugs increased the odds of not getting erection most times by a factor of 2.32 and 3.06 times respectively.

Conclusion: For type 2 diabetics, increasing duration of diabetes poses a greater risk for Erectile Dysfunction. Increased risk of ED was positively correlated with hypertension and less physical activity. The use of cardiovascular and antihypertensive medications also had a detrimental effect on erectile function. Our results suggest that healthcare providers who address sexual dysfunction issues with their diabetic patients early may be able to reduce the severity or delay the onset of ED by implementing intensive lifestyle changes as the first step in management for type 2 diabetes.

Keywords: Type 2 diabetes, erectile dysfunction, risk factor

Non-infectious Disease and Injury

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145 Evaluation of Community Based Non-Communicable Disease Surveillance for Monitoring Coronary Heart Disease Risk Factors Based on Surveillance Attributes

Arief Hargono[1], Chatarina Umbul Wahyuni[1], Hari Basuki Notobroto[1]
[1] *Faculty of Public Health, Universitas Airlangga, Indonesia*

ABSTRACT

Cardiovascular disease (CVD) is a disease that causes the most deaths in the world. The government held an Integrated Guidance Post (Posbindu) as a community-based surveillance program to monitor risk factors for non-communicable diseases, including coronary heart disease (CHD). Center for Disease Control and Prevention recommends surveillance attributes that can be used to measure the quality of surveillance, namely Simplicity, Acceptability, Timeliness, Data Quality, and Stability. This study aims to analyze the description of the quality of CHD risk factor surveillance based on surveillance attributes. The type of this research is observational analytic with the research design is cross-sectional. The study was conducted in 89 Posbindu selected purposively in Surabaya City the second biggest city in Indonesia with a high number of NCD. The results showed that the surveillance of CHD risk factors in the selected Posbindu had high values on simplicity and acceptability attribute. The attributes of timeliness, quality data, and stability in conducting surveillance of CHD risk factors in selected Posbindu were low. Continuing Posbindu assistance by the Public Health Center and District Health Office is expected to improve surveillance attributes. Timeliness attributes, Quality, and Stability Data can be improved by the application of information technology in the form of an optimal NCD Web Portal. Optimizing the use of the NCD Web Portal can be achieved if the officer feels the ease and benefits of its use. NCD Web Portal needs to pay attention to the application function to speed up recording and reporting to improve data quality and readiness of applications to provide data and information.

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151 Factors Effecting to Blood Sugar Level Control among Diabetes Mellitus Type 2 at Community Hospital, Phuket Province.

Amornsak Poum[1]

ABSTRACT

Introduction: Diabetes Mellitus is the problems, in Thailand had incidence rate increasingly every year.

Objective: Research aimed to study either selected factors association or jointly predict factor effected to blood sugar level control among diabetes mellitus type 2.

Methods: Descriptive research study consisted of 1,769 diagnosed diabetes mellitus type 2 who had fasting plasma glucose higher than 140 mg/dl drawn from name list which be registered in community hospital in fiscal year 2016, and sample size calculating used daniel formula for 330 cases, and systematic random sampling was determine. Data collected by questionnaires including, characteristics, health behavior, heath service system, health perception, and blood sugar level. In addition, validity was checked by 3 experts and try out testing reliability by Cronbach's coefficient alpha about 0.86. Data analyzed using Pearson product moment correlation coefficient and Stepwise multiple regression analysis.

Results: Dependent variables including; health behavior had high level (65.2%) (=2.65, S.D.=0.477), heath service system had high level (95.4%) (=2.93, S.D.=0.210), health perception had moderate level (58.6%) (=2.41, S.D.=0.493). An association analyzed reported six factors positively associated with blood sugar level control among diabetes mellitus type 2 with statistic significant level 0.05, including; marital status (P=.047) take medicine after meals (P=.003), take both insulin injection with medicine (P=.002), doctor appointment (P=.045), health center structure (P=.033), monitoring and evaluation (P=.004). Moreover, negative association including; perceived barrier treatment (P<.001), dyslipidemia (P=.029), and food control (P<.001) were significantly. Model predicting reported six selected factors including; take the medication after meals, take both insulin injection with medicine, perceived barrier treatment, dyslipidemia, monitoring and evaluation, and food control still significantly predicted blood sugar level control among diabetic mellitus type 2 for 17.6%.

Conclusion: Chief of community hospital should be developed health care service program for patient. Health provider should be to support them set health behavior activities.

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| 152 | **Baseline Prevalence of Hyperglycaemia and Its Predictors in a Rural Adult Population of Bangladesh: Outcome from the Application of WHO PEN Interventions** |

Mithila Faruque[1], Lingkan Barua[1], Palash Chandra Banik[1], Saidur Rahman Mashreky[1]
[1] Bangladesh University of Health Sciences, Bangladesh

ABSTRACT

Background: Hyperglycaemia is a major public health concern which has multisystemic effect resulting in morbidity and mortality.

Objective: To find out the baseline prevalence of hyperglycaemia (prediabetes and T2D) and its predictors in a rural adult population of Bangladesh.

Methods: A cross-sectional study was conducted among the rural adults (>18 years) in Dhangara Union of Raiganj Upazila, Sirajganj district. It is a part of the implementation research conducted in 2019 for prevention and control of hypertension and diabetes at primary health care settings using the WHO PEN intervention. The questionnaire was prepared as per 'Action 1 (ask about)' and 'Action 2 (Assess)' sections of the WHO PEN protocol 1. For Action 1, socio-demographic, behavioral and disease related information were asked and for Action 2, physical (height, weight, blood pressure) and biochemical measurements (blood glucose) were done following STEPS questionnaire. Hyperglycaemia was defined as a fasting plasma glucose of ≥6.1 mmol/L. We analyzed the data of 11,145 rural adults who visited the community clinic.

Results: The prevalence of hyperglycaemia was 12.5% (prediabetes 3.4% and T2D 9.2%) among the rural adults of Bangladesh. Again, the proportion of new and old cases were 3% and 6.2% respectively. Above fifty years of age, majority of the population (82.5%) was hyperglycaemic. About 94.6% participants had unhealthy dietary habits and tobacco consumption was highly prevalent (35.6%). Prediabetes and T2D had higher odds for having same risk factors as follows: age ≥40 years (OR, 1.72; 95% CI, 1.336-2.006; OR, 3.23; 95% CI, 2.685-3.905), family history of diabetes (OR, 1.15; 95% CI, 0.884-1.488; OR, 2.78; 95% CI, 2.405-3.221), generalized obesity, and hypertension.

Conclusions: Irrespective of sex, an age-wise increasing pattern was observed for hyperglycaemia and the condition was prevalent among men. Age ≥40 years, family history of diabetes, generalized obesity, and hypertension were found as significant predictors for both prediabetes and T2D.

Keywords: Prediabetes, diabetes, hyperglycaemia, WHO PEN, risk factors

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| 167 | **Change in Digit Bias for Cigarette per Day (CPD) Assessment between First and Second Wave of Global Adult Tobacco Survey in 12 Countries** |

Debashis Mohapatra[1], Nancy Satpathy[2], Ajit Kumar Singh[3], Pratap Kumar Jena[1]
[1] *School of Public Health, KIIT DU, India*
[2] *IMS & SUM Hospital, SOA DU, Bhubaneswar, India*
[3] *GBH American Hospital, Udaipur, India*

ABSTRACT

Introduction: Self-reported cigarette per day (CPD) may be subjected to digit bias during global adult tobacco survey (GATS). Bias in CPD reporting may result in misclassification of tobacco dependence level and inappropriate NRT dosage prescription.

Objective: This study explores the digit bias in self-reported CPD data in first and second waves of GATS.

Methods: The self-reported CPD among daily users of manufactured cigarette in the both rounds of GATS held in 12 countries under the Global Tobacco Surveillance System were analysed. Digit preference for '0' and '5' were defined as digit bias which was further quantified using modified Whipple Index. Additionally, mode as an indicator of digit bias was also explored.

Results: Proportion of reported CPD frequency ending in '0' or '5' was ranged from 32.3% to 86.4% in first wave and ranged from 36.1% and 89.3% in the second wave, with 58.33% of countries reporting higher digit preference in second wave than the first wave. All countries were found having very bad quality of CPD data (Whipple Index > 175) both in 1st wave and second wave of GATS. When three modes were calculated for each country CPD frequency, 33/36 instances identified 5,10,15 & 20 as the modes.

Conclusion: Very rough quality of CPD data is a concern and may be due to various contextual factors including pack size which need to be explored. The country specific pack size reflecting the modes may serve as a rough guide for CPD data quality in surveys.

168 Impairment, Disability, Mortality and Financial Impact due to Injuries. A Community Based, Cross-Sectional Study from Rural Area of Wardha, India

Shriram Gosavi[1]

[1] *Maharashtra University of Health Science, Nashik, Maharashtra, India*

ABSTRACT

Injuries are a significant cause of morbidity and mortality worldwide. An injury has direct and indirect impact on human life. The direct impact hampered the physical quality of living/life and indirect impact on economic condition of individuals and family. Very few studies have assessed impact of injuries. The present study was conducted with objectives to assess the prevalence injury, physical impairment, disability, mortality as well as the economic impacts. Methods: community based, cross sectional study was conducted on total 4790 subjects from April 2010 to May 2011. Results: we found that prevalence of injury 19% (901), the prevalence of impairment, disability and mortality was 4.7%, 3.1%, and 0.31%, respectively. The average amount spent on treatment was Rs.3800 and Rs.29,100 for non-hospitalized and hospitalized, respectively. Conclusion: Injuries directly effects on the physical quality of living/life i.e. life with impairment, disability and economic condition of the individuals and families.

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Views and Experiences on Fasting during Ramadan among Muslim Patients With Type 2 Diabetes in Kabacan, North Cotabato Through the Lens of Health Belief Theory: A Phenomenological Inquiry

Ray-Hannah Ganoy Makakena[1]
[1] *University of Southern Mindanao, Philippines*

ABSTRACT

This study explored the views and experiences of Muslim patients with type 2 diabetes during Ramadan in Kabacan, North Cotabato. This study was done to address the conflict between the health practices and religious practices of Muslims by the health professions to improve healthcare for the Muslim diabetic patients who were fasting during Ramadan. The study used a phenomenological design employing qualitative data gathering techniques by Creswell (Creswell, 2009). There were ten (10) participants who underwent an in-depth interview and five (5) participants who participated in the focus-group discussion as recommended by Creswell (2009) using a structured questionnaire. The researcher interpreted the data gathered using thematic analysis by Colaizzi (1978). The Davao Medical School Foundation, Inc.'s Research Ethics Committee had reviewed the final draft. Data collection was done as soon as clearance from the Research Ethics Committee was given. Most of the participants practiced self-reliance in taking medicines and observing diet. All participants mentioned that they were eating the same food for Suhoor and Iftar. They experienced hypoglycemia and were aware of it during the month of Ramadan; however, they have this strong belief that Allah (SWT) will let them survive through fasting. The creation of national educational materials and guidelines for the diabetes management of diabetic Muslims fasting during Ramadan is highly recommended. Overall, proper communication and openness between health care practitioners, diabetic Muslim patients, and religious authorities can bridge the gap in treating diabetes among diabetic Muslims while fasting during Ramadan.

Keywords: Phenomenology, lived experiences, Muslims with type 2 diabetes, Philippines, thematic analysis

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175	**Comparative Scenario of Unmet Supportive Care Needs of Breast Cancer Patients in Bangladesh: Public vs Private Cancer Treatment Centre**

Sujana Haque Chowdhury[1]

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ABSTRACT

Introduction: Advancement in cancer treatment institute and breast cancer treatment had improved survival rate of breast cancer in Bangladesh. But unfortunately, this survivorship comes with series of unmet needs.

Objective: This study intended to identify unmet needs of breast cancer survivors and compare the needs between public and private cancer treatment institute.

Method: A cross sectional study among 138 breast cancer patients; 77 form public and 61 from private cancer institute were enrolled. Face-to-face interview was conducted to collect data, and medical records review was performed for checklist. Unmet needs were determined by supportive care needs survey short form 34 (SCNS SF-34) scale. Independent t-test and multivariate logistic regression model was used for the analytical exploration. Adjusted and Unadjusted Odds Ratio with 95% confidence intervals were calculated for the specified setting indicators.

Result: Study indicated mean (±SD) age was 40.50 (±10.55) years and majority were married, housewife, had at least two children, got no educational qualification (Illiterate) and lived in a nuclear family. Breast cancer patient's disease profile shows that more than half of the respondents were diagnosed with invasive cancer (79, 57.2%) and 100% study respondents received chemotherapy (CTx) as their treatment. Highest need was observed regarding information and counselling. "Give adequate information about patient's care" and "Explain the benefits and side effects of therapy before choosing them" were most reported unmet need. Surprisingly independent t-test revealed that, total score of health system & information need, patient care support need and sexuality need was significantly (p <0.01) higher in private cancer treatment institute compare to public. Finally, sexuality need was identified as significant predictor for unmet need among patient who received treatment from private cancer treatment institute.

Conclusion: Unmet Information and Sexuality needs are higher among breast cancer patients from private cancer treatment institute in Bangladesh.

Keywords: Unmet supportive care need, breast cancer, public and private cancer treatment institute, health system and information need.

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| 176 | Ideal vs prolonged standing duration influencing Musculo-Skeletal Disorders in Bangladeshi Dental professionals |

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ABSTRACT

Background: Work-related musculoskeletal diseases (MSDs) are recognized as a serious occupational concern among dental professionals worldwide. Dentists are at high-risk group to develop MSDs because dental surgeons often cannot avoid prolonged static postures during their work time.

Objective: This study aimed to explore insights of dental professionals who used to work in standing position for prolong period.

Method: This cross-sectional study was conducted among 110 dental professionals working in capital city of Bangladesh. Data was obtained through a pre-tested and semi-structured questionnaire using interviewer-administered method. Multivariate logistic regression model and Chi-square test was used for the analytical exploration. Adjusted and Unadjusted Odds Ratio with 95% confidence intervals were calculated for the specified setting indicators.

Result: According to the study, dentists who worked for 5–10 hours a day (AOR/p= 5.60/<0.01), had 1-2 children (AOR/p= 4.90/<0.01), lived in nuclear family (AOR/p= 2.8/0.07) and who had MSDs (AOR/p= 10.90/<0.01) used to stand for prolonged periods of time while doing their dental procedures. Result also reveal that higher proportion of dentists (63%; n= 69/76) who spent a significant amount of time standing throughout the day mostly experienced MSD. In an addition, it was observed that significant (19%; n=21/34) percentage of dentist who kept practice ideal standing hour also developed MSD at some point of their practice.

Conclusion: Dental professionals are at high risk and more likely to develop MSD due to their perilous professional work pattern and reluctance to maintain a comfortable posture during practice period.

Keywords: Musculoskeletal diseases (MSDs), dental professionals, prolonged standing, ideal standing

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185	**Prevalence and Risk Indicators of Diabetes and Prediabetes among Santal Indigenous (minority) Group in Bangladesh**

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ABSTRACT

Santals are one of the oldest indigenous groups of South Asia who, according to anthropological evidences, are thought to be the origins of the Bengali race. The aim of the present study was to explore, for the first time, the prevalence and risk indicators of diabetes and prediabetes in this relatively isolated and marginalized indigenous group who still live mostly in a traditional style. Under a cross-sectional analytical design the study was conducted on the adult (age≥18 years) Santals (n=389, M/F 184/205, age in yrs, 38±15.3) of a village located in a remote rural area of northern Bangladesh. Subjects were selected by purposive sampling and data were collected by interviewer administered pretested questionnaire. Anthropometric measurements were done following standard methods. Diabetes and prediabetes were diagnosed and classified following WHO Study Group criteria after 2-sample OGTT. For BMI and waist circumference (WC) WHO classification for Asian population was used. Blood glucose was measured by GOD-PAP method using an auto analyzer. The prevalence of diabetes was only 0.7% among the respondents but, in contrast, that of impaired glucose tolerance (IGT) was fairly high (9.0%). The prevalence of impaired fasting glucose (IFG) was very low (0.4%). Females had much higher prevalence (13.8%) of IGT compared to males (3.3%, p=0.01). Among the risk indicators of diabetes and prediabetes overweight was present among 11.8% of all the subjects. High WC was found among 27.5% of the respondents and it was very high among 19% of the subjects. Females had significantly higher WC (p=0.001) compared to males. Proportion of low physical activity was 7.2% among the study population. Further analysis of risk indicators was done only on the IGT group and it showed that they had higher BMI and WC compared to the normoglycemic group. On logistic regression analysis association of IGT with female gender persisted (p=0.02 OR=0.17, CI=0.04-0.7) after adjustment of age, BMI, WC and occupation. Diabetes is still almost absent among the Santal indigenous group in Bangladesh, but IGT is present in a small proportion of males and fairly large proportion of females. Favorable anthropometric features and physically active traditional lifestyle may underlie the extremely low prevalence of diabetes in this population. However the remarkable difference in the prevalence of IGT among females and males are not explained only by these factors and further studies are warranted in this area.

Keywords: Diabetes, minority group, Bangladesh

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Model Development of the Create Values and Health Literacy in Prevention Non- communicable Diseases for School- Age Children

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ABSTRACT

Introduction: The main chronic non-communicable diseases are diabetes and high blood pressure. They are more likely to be found in the younger age group. Nowadays, students have increased the opportunity risk because more children have become obese, have little exercise, and eat inappropriately. The good way to prevent should be creating the right values and knowledge of health to prevent disease.

Objective: The three objectives of this research were 1) to find out factors related to creative values and knowledge of prevention. 2) to develop a model of creative values and knowledge; and, 3) to evaluate the effectiveness of the creative value model and literacy model in the prevention of diabetes and hypertension.

Methods: The research design was survey research. The data were collected with a mixed-method design only one time in a timely manner. The 408 samples were children at the levels between 3 to 6 in the Nakhon Sawan Primary Educational Service Area Office 1 by two-stage random sampling. The data were analyzed by content analysis and statistical structural equations.

Results: The results revealed that the factors related to preventing diabetes and hypertension were knowledge (0.150), creative values (0.147), and health literacy (0.191), respectively, at the statistical significance level (p- value< 0.01). The model was found to be consistent with the empirical data at c2 = 57.272, P-value = 0.195; DF = 49 CMIN./DF = 1.169 RMR= 0.180 GFI = 0.979 AGFI = 0.961 RMSEA = 0.020. The results of the effectiveness of the connoisseurship found that the values and knowledge development curriculum can improve the prevention of diabetes and hypertension behaviors.

Conclusion: The relevant agencies should apply the results of this research to modify the behavior of school-aged children and prioritize implementation according to the models discovered from this research.

Keywords: Creative values, health literacy, non-communicable diseases prevention, school-age children

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201 Trend in Pooled prevalence of Cigarette Smoking and Access to Cigarettes among Youths in Four South-East Asian Countries

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ABSTRACT

Background: Multiple strategies including the prohibition of the sale of tobacco to and by minors, the restriction of tobacco sales around educational institutes, etc., are being implemented to reduce access to tobacco products among youths.

Objective: This study examines the trend in the pooled burden of cigarette smoking and access to cigarettes among youths in four South-East Asia (SEA) countries having two rounds of Global Youth Tobacco Survey (GYTS) data.

Methods: The nationally representative school-based GYTS data from Bhutan (2013 & 2019), Timor-Leste (2013 & 2019), Indonesia(2014 & 2019) and Maldives(2011 & 2019) involving 13-15 years old students was analysed. The meta-analysis of the weighted current cigarette use was done using the random effect model in MetaXL software. Physical (methods of obtaining cigarettes), financial (pocket money exceeding a pack of 20 cigarettes), and illegal (sale to minors) access to cigarettes was estimated and the trend was analyzed from the two rounds of GYTS (2011-2014 and 2019) data.

Results: The pooled cigarette smoking in first and second round were 14% (95%CI:5-25%; Boys:23%; Girls:5%) and 16% (95%CI: 12-21%; boys:28%, girls:4%) respectively. In cigarette smoking, boys outnumbered girls in both rounds except in Maldives (Girls-3%, Boys-1%) in the first round. Among boys, except in Timor-Leste, there was an increase in cigarette use from the first to the second round. Among girls, except in Bhutan, there was either a decrease or no change in cigarette use. The most common method of obtaining cigarettes for boys and girls were "buying it from a store/kiosk/street hawker" and "other sources" respectively. Access to cigarettes from a shop/vendor was increased in Bhutan and Maldives, and obtaining cigarettes from others/someone else was increased in Timor-Leste and Indonesia. The use of cigarette vending machines was observed in Timor-Leste and Indonesia in the first round only. An increasing trend of illegal access was seen in Bhutan, Indonesia, and the Maldives. Except in Indonesia, financial access was limited for the majority of youths to buy a cigarette pack with 20 cigarettes.

Conclusion: The increased use of cigarettes among youths despite the legal ban warrants the effective implementation of tobacco control measures in the SEA region. Country-specific socio-cultural-economic and legal dimensions need to be examined to limit cigarette use among youths.

Keywords: Tobacco, access, youth, global youth tobacco survey

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203 | # Assessing compliance with health warnings on tobacco packs marketed in a city of an Eastern Indian State

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ABSTRACT

Introduction: Graphic health warning labels (HWLs) on product packaging have been identified by the World Health Organization as a cost-effective policy intervention to warn consumers about the health dangers of tobacco. The Indian tobacco control law (COTPA) mandates the display of health warnings covering 85 percent (60 percent pictorial, 25 percent text) of the tobacco pack's principal display area in legible text in white font on a black background and in English and/or the same Indian language as the language used on the pack.

Objective: To assess compliance with this legislation (COTPA Amendment Rules, 2020) in the Bhubaneswar city of Odisha, India.

Methods: Smoking and smokeless tobacco packs marketed in 22 out of 67 wards in three municipal zones of Bhubaneswar city were collected. In each of the randomly selected wards, 10 vendors were selected using the compact segment technique and approached for collecting tobacco packs retailed from April 2022 to May 2022. A content analysis (content, size, & colour) for graphics and textual health warnings was carried out using applicable legal provisions as standard. The surface area occupied by these warnings was calculated with the help of a calibrated ruler.

Results: About 54 distinct brands of tobacco products were identified from the 2135 packets collected. Among the 295 collected cigarette packets, 17 unique brands were identified, and 6 (35.29%) brands didn't comply with HWL provisions. Among the 453 bidi packets, 302 packets were unbranded, and the rest belonged to 5 brands. None of the packets had compliance with HWL provisions. Out of 1387 smokeless tobacco (khaini, gutkha, betel quid/pan masala with tobacco) packets, 1106 packets represented 32 brands and the rest were unbranded. All unbranded smokeless tobacco packets and 87% of branded SLT packets didn't comply with HWL provisions. The majority of non-compliance was with size followed by content and colour.

Conclusion: The majority of tobacco products marketed were not in compliance with the HWL provisions, emphasizing effective enforcement and monitoring of HWL provisions by concerned local authorities.

Keywords: Compliance, impact, health warnings, COTPA, tobacco

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204	**Period Effect of NRT (Nicotine Replacement Therapy) Inclusion in National Essential Medicine List: Evidence from Two Waves of Global Adult Tobacco Survey in Four Countries**

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ABSTRACT

Introduction: The inclusion of NRT (Nicotine Replacement Therapy) in NEML (National Essential Medicine List) is considered as an important enabling policy environment for tobacco cessation.

Objective: This study explores the period effect of NRT inclusion in NEML by analyzing GATS (Global Adult Tobacco Survey) data from four countries.

Methods: The GATS data from Russian Federation (wave1 2009, wave2 2016 & NRT in NEML 2014), Turkey(wave1 2012 , wave2 2016 & NRT in NEML 2014), Mexico(wave1 2009, wave2 2015 & NRT in NEML 2010), and Uruguay (wave1 2011, wave2 2017 & NRT in NEML 2010), were considered for analysis. NRT use among current smokers while making quit attempts in the past year and among former smokers who had quit in the past year was estimated. Additionally, the policy environment in these countries prevalent before the second wave was analyzed.

Results: The NRT use among current and former smokers increased by 4.7% and 17.1%, respectively from the first to the second wave of GATS. Decreased use (by 0.7% to 3.6%) of NRT among current smokers, was observed in Turkey, Mexico, and Uruguay. Marginally increased (0.2 to 0.7%) use among former smokers was seen in Turkey and Mexico, but decreased use (by 9%) was observed in Uruguay. NRT was legally sold in all four countries and was available in pharmacies without a prescription (Over The Counter-OTC). NRT cost was fully covered in Turkey and Uruguay in 2010 and 2007, respectively, while NRT cost in Mexico was partially covered since 2014 and not covered in Russian Federation.

Conclusion: Increased NRT use among former smokers for quitting following inclusion in NLEM is a positive sign for tobacco control, however decreased use among current smokers while making quit attempts despite its availability as an OTC product is a concern. Awareness about and access to NRT may be explored to increase its use in smoking cessation.

Keywords: Nicotine replacement therapy, national essential medicines list, global adult tobacco survey

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212 Decision Tree Approach to Identify Predictors of Quit Intention: Results from Second Wave of GATS-India Survey

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ABSTRACT

Introduction: Quit intention is a precursor of tobacco cessation and hence predictors of quit intention play a vital role in tobacco control.

Objective: To explore predictors of quit intention among Indian current smokers aged 15 and above years using the 2nd wave Global Adult Tobacco Survey (GATS-2016) data of India.

Methods: The nationally representative GATS (2016) data used a multistage geographically clustered sample survey and interviewed 74,037 individuals aged 15 years and above across all the states and two of the Union Territories of India. Current exclusive smokers' positive quit intention (thinking to quit within one year) was anlysed. Significant predictors among gender, residence, age group, education, asset index, tobacco dependence (time to first smoke), healthcare providers'(HCP) advice to quit smoking, awareness about the harm caused by tobacco, past quit attempt, smoking exposure at home, and exposure to anti-tobacco message in media were considered in decision tree (CRT - Classification and Regression Trees) analysis. Considering individual behaviour analysis, an unweighted analysis was carried out.

Results: Of the 6406 current exclusive smokers, 19.4% had positive quit intention. In the bivariate model using the Chi-square test, education (p=0.047), awareness about tobacco harm(p=0.042), past quit attempt (p<0.001), smoking inside home(p<0.001), exposure to anti-tobacco message in media(p<0.001), asset index (p<0.001) found to be significant predictors. In the CRT decision tree model, exposure to anti-tobacco message ($X2=48.25, p<0.001$) followed by smoking inside home($X2=22.42, p<0.001$) and asset index($X2=16.44, p<0.001$) were found to be important and significant predictors of positive quit intention.

Conclusion: Continued and enhanced anti-tobacco messages and making home smoke-free may help smokers to quit. A differential approach for low, middle and high-income groups is essential to increase the number of people with positive quit intention.

Keywords: Predictors, GATS 2- India, smoking tobacco, willingness to quit, decision tree analysis

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| 202 | **Epidemio-Clinical Characteristics of People with Spinal Cord Injury in Bangladesh** |

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ABSTRACT

Introduction: Spinal cord injuries (SCI) and disorders, which are worsened by neurological damage, are major public health concerns in Bangladesh, with high rates of morbidity and mortality.

Objectives: The goal of this study is to determine both clinical and demographic characteristics of patients with SCI in Bangladesh

Methods: This was a secondary data analysis of the medical records of tertiary-level hospitals and Rehabilitation centers known to treat patients with SCI All traumatic or non-traumatic SCI who attended the selected hospitals were included in the study during the period of 2018–2022. SCI data was gathered by a group of trained physicians in a semi-structured questionnaire containing basic demographic and medical records of SCI after the ethical approval of the institutes.

Results: A total of 1627 SCI Patients from 16 institutes in Bangladesh were included in the study. Among them, 508 (31.2%) were female, and 1119 (68.8%) were male patients, respectively. The majority of the patients (37.7%) belonged to the 18 to 30-year age group. In addition, 481 (29.6%) people with SCI were classified as paraplegic and 1146 (70.4%) as tetraplegic. Among them, 644 (39.6%) had non-traumatic SCI, 967 (59.4%) had traumatic SCI, and 16 (1%) had cauda equina syndrome. Road traffic accidents and falls from heights were the main contributors to traumatic SCI, and non-traumatic SCI was caused mainly due to Compressive myelopathy is brought on by degenerative diseases.

Conclusion: This is a multi-centre source of nationally representative data on people who have suffered a spinal cord injury. This data set will assist in creating effective guidelines for preventive and strategic planning of the wellbeing of people with SCI in Bangladesh since there isn't a proper national SCI registry yet.

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214 Awareness about Breast Self-Examination among University Students: Review and Meta-Analysis

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ABSTRACT

Introduction: With an annual incidence of 2.3 million cases and 6,85,000 deaths in 2020, breast cancer has become a global concern for women. Awareness and practice of breast self-examination (BSE) is a proven strategy for early diagnosis and has the potential to reduce mortality and morbidity.

Objective: To explore the awareness of breast self-examination among university female students in Asian regions by using systematic review and meta-analysis.

Methods: PubMed-indexed literature on awareness about breast self-examination published in the last two decades from Asian regions was analyzed. The keywords or MeSH terms used included (breast neoplasm OR breast health OR breast disease OR Ca Breast) AND (awareness OR knowledge OR education OR practice) AND (Breast Self-Examination OR BSE) AND (University Students OR College Students) to retrieve relevant literature. Pooled awareness about BSE was estimated using a random effect model using MetaXL software.

Results: The search identified 19 (West Asia:10; South & South-East Asia:09) qualified literature published during 2010-2022 that meet the criteria for review and meta-analysis. Heterogeneity among included studies was high (I2=99%). The pooled prevalence of awareness about breast self-examination among female university students was 49.51% (LCI:38.97%, HCI:60.08%). Sub-group analysis suggested higher awareness among University students from West Asia [56.36%(LCI:38.79 HCI:73.13%)] than their South & South-East Asian [42.07%(LCI:29.40, HCI:55.28%)] counterparts. The quality of included studies was moderate.

Conclusion: Overall half of the female students are aware of breast self-examination with higher awareness among West Asian students. Further improvement in awareness could help us in fighting the Breast Cancer menace in Asian Region.

Keywords: Breast cancer, awareness, knowledge, university students

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275 | Quality of Life among COPD Patients in a Tertiary Care Hospital of Lucknow

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ABSTRACT

Introduction: Chronic Obstructive Pulmonary Disease (COPD) is a preventable & treatable chronic lung disease which remains underdiagnosed and is life threatening. The Global burden of Disease reported 251 million cases in 2016 and 3.17 million deaths in 2015. In India, out of total NCD burden, Chronic Respiratory diseases accounts for 7% deaths and 3% DALY's lost. Quality of life (QOL) of COPD patients deteriorates with increasing severity of disease owing to accelerated decline in lung function which causes progressive impairment of physical performance. COPD patients fight for air while doing simple tasks which results in decrease in their socialization. With this background this study was planned to assess the QOL of patients with COPD.

Methodology: A Cross-sectional study was conducted among 229 COPD patients at Respiratory Medicine OPD of a tertiary care hospital, Lucknow. Systematic random sampling was used to select the sample size. Semi-structured schedule was used to determine socio-demographic characteristics, disease history and biophysical profile of patients. St. George's Respiratory Questionnaire was used to measure the impact of chest related disease on health-related quality of life and well-being. Data were analysed using SPSS version 24.

Results: The mean total of HRQOL (Health Related Quality of Life) score of COPD patients residing in urban and rural areas was 45.66 (SD+13.9) and 37.39(SD+13.3) respectively. Predictors of higher mean HRQOL score were marriage, working, illiterate, smokers who smoked more than 20 pack years, exposed to biomass smoke, pulmonary tuberculosis history, disease history of more than 10 years, hospitalization due to COPD exacerbation, underweight and patients with multiple systemic morbidities.

Discussion: QOL is severely impaired in COPD patients with strongest association with BMI. Weight management, smoking cessation program and screening of patients with comorbidities will improve QOL in COPD patients.

Keywords: Chronic obstructive pulmonary disease, quality of life, tertiary care hospital

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| 291 | **Factors Associated with Glycemic Control Level among Type 2 Diabetes Mellitus Patients at Public Health Centers in Bangkok, Thailand** |

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ABSTRACT

Background: Type 2 Diabetes Mellitus becomes a major health problem in many countries. Consequently, Type 2 DM is one of important public health problems in Thailand. In 2019, there are 14,025 registered cases of Type 2 DM that received health care services at 68 Public Health Centers, Bangkok Metropolitans Administration while 7,283(52%) of them were uncontrolled blood sugar; HbA1C ≥ 7% , and 8,256 (48%) were control blood sugar level; HbA1C <7% (BMA, 2019).

Objective: This study aims to determine the proportion of uncontrolled and controlled level of glycemic control, to explore levels of self-efficacy, self-care behaviors, and social support, and to identify the influencing factors on Glycemic Control among Type 2 DM patients at Public Health Centers in Bangkok, Thailand.

Method: A Retrospective Cross-sectional Study used in this study. 411 participants from 5 Public Health Centers, Bangkok Metropolitan Administration (BMA) was conducted in this study by face-to-face interview base on questionnaire. Descriptive statistics were used to describe the characteristics of participants. Simple Logistic Regression were used to identify the association glycemic control and others variables. Multiple logistic regression included any independent association with p in simple logistic regression (odds ratios (ORs) and 95% CI).

Result: Most of Participants (224,54.1%) had medium self-efficacy 224(54.5), medium self-care behavior 186(45.3), and medium social support 294(70.8). Odds Ratio of poor glycemic control increased with duration of Type 2 DM (6-10 years: OR1.654 95% CI 1.053-2.500; > 10 years: 1.972 95% CI 1.197-3.248). On the other hand, odds ratio of glycemic control decreased with higher level of self-efficacy, self-care behavior, and social support.

Conclusion: The findings of this study could be used to develop an intervention program for Type 2 DM patients, caregivers, and public health volunteers at Public Health Centers in Bangkok in order to improve the glycemic control level.

Keywords: Type 2 diabetes miletus, glycemic control, HbA1C, self-efficacy, self-care-behavior, social support

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| 294 | **Current Level of Human-Papilloma Virus Awareness among the General Population at Risk in India** |

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ABSTRACT

Background: Human-Papilloma-Virus (HPV) is a significant contributor to the cancer burden in India. Awareness and vaccination could reduce the menace of HPV.

Objective: This study reviews and estimates the current level of HPV awareness among the general female population in India by estimating the pooled prevalence of HPV awareness using a meta-analysis of studies published from Jan 2010 to Oct 2022.

Materials and methods: Studies assessing HPV awareness among the general female population were included in this meta-analysis. Studies among students of health sciences, health staff, and males were excluded in the analysis. Nine studies were selected for this meta-analysis using MetaXL (Version 5.3) software. 237+684+2391

Results: Included studies covered only 6,104 female populations at risk in India, including 3312 students or adolescent girls. The HPV awareness in the included studies ranged between 2.4 percent to 100 percent of the studied population. Using the Inverse Variance Heterogeneity model, pooled prevalence of knowledge regarding HPV infection was found to be 30.81 percent. Among younger females, up to 26 years of age, the pooled prevalence of knowledge regarding HPV infection was 42.71 percent. The majority of the studies included were of moderate quality and there was heterogeneity among studies.

Conclusions: Overall low HPV awareness among the Indian general female population at risk is a concern. There is an unmet need to reach and educate this at-risk population group regarding HPV infection in order to protect them from the devastating consequences.

Keywords: Awareness, HPV VI/ Human Papilloma Virus

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298 | # Factors Related to Obesity Prevention Behaviors among Undergraduate Students, Naresuan University Phitsanulok Province

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ABSTRACT

The objectives of this cross-sectional survey research study were to study the personal factors, health perception, Influencing factors and obesity prevention behaviors and to examine the factors related to obesity prevention behaviors among undergraduate students, Naresuan university. The samples consisted of 379 people by multi-stages random sampling. Data were collected by using a questionnaires: 1.) personal factors 2.) knowledge 3.) health perception 4.) Influencing factors 5.) obesity prevention behaviors. Data were analyzed by frequency, percentage, mean, standard deviation and Pearson's product – moment correlation coefficient. The results showed that the most of the samples had the obesity prevention behaviors at high level (59.4%). The factor related to obesityy prevention behaviors with statistically significant at 0.01 level were gender (p = 0.008), income (p < 0.001), knowledge (p < 0.001), perceived susceptibility (p < 0.001), perceived severity (p < 0.001), perceived benefits (p < 0.001), perceived barriers (p < 0.001), social support (p < 0.001), food access (p = 0.001), self-efficacy (p < 0.001) and media exposure (p < 0.001). Regarding recommendation: University, Tambon Health Promoting Hospital and Phitsanulok provincial public health office should encourage undergraduate students to change obesity prevention behaviors and modifying obesity prevention behaviors by knowledge and health perception.

136 Water, Sanitation and Hygiene in Healthcare Facilities in a District of Chhattisgarh State in Central India

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ABSTRACT

Introduction: Water, Sanitation and Hygiene (WASH) in healthcare facilities is fundamental for the provision of quality, people-centred care and is a critical component to achieving quality and accessible health services.

Objective: The objective of this study was to assess the WASH infrastructure status in the Raipur district healthcare facilities, Chhattisgarh, India.

Methods: This was a hospital-based cross-sectional study carried out in all public healthcare facilities of Abhanpur block, Raipur district, Chhattisgarh, India between 2019 and 2020 using an adapted version of the Joint Monitoring Program's (JMP) core questions, indicators, and service ladder framework.

Results: A total of two CHCs, seven PHCs and 34 SHCs were included in the present study. All CHCs (100%) had basic water, sanitation, hygiene, and waste management services. Among PHCs, 85.7% had basic water and hygiene, only 57.1% had basic sanitation and 100% had basic waste management services. Among these, 55.9% had basic water, 2.9% had basic sanitation, 20.6% had basic hygiene and 35.3% had basic waste management services. Overall, it was found that 62.8% of healthcare facilities had basic water services, 16.3% had basic sanitation services, 34.9% had basic hygiene services and 48.8% had basic waste management services

Conclusion: The status of WASH infrastructure in healthcare facilities of Raipur district is either limited or not available primarily in regard to sanitation services, hygiene, and waste management services. It is the need of the hour to ensure a coordinated response in all health care facilities WASH services be available and accessible.

Keywords: WASH; India; Healthcare facility
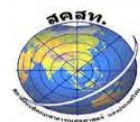
Occupational
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Environmental Health

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179 Job Burnout: The Effect of Mental Working Load and Social Support During Work from Home in Pandemic COVID-19

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ABSTRACT

Introduction: During the COVID-19 pandemic, Indonesia's government-imposed movement restrictions, driving the majority of workers in all industries who were previously engaged in offices to shift their pattern to a variety of systems, including working from home and blending. Burnout is one of the risks associated with working from home, along with psychosocial risks. This study investigated the relationship between mental workload, social support, and burnout among workers working remotely due to the COVID-19 epidemic.

Methods: This research was a cross-sectional study. The sample for this study consisted of full-time workers in the Jakarta headquarters of a pharmaceutical company. Forty-seven workers studied the sample selected using a proportional stratified random selection technique. Mental workload and social support were the independent variables. Burnout was the dependent variable. The NASA-TLX, Maslach Burnout Inventory (MBI), and Multidimensional Scale of Perceived Social Support (MSPSS) instruments collected the data. Statistical Package for the Social Sciences (SPSS) 23 uses a multiple linear regression test to analyze the data.

Results: The findings indicated that the majority (57.4%) of workers had a demanding mental workload. Many workers (74.5%) had an excellent level of social support. Most workers (87.2%) reported

moderate levels of burnout. The results of multiple linear regression indicate that there was a relationship between mental workload on burnout (sig. 0.000).

Discussion and conclusion: The study results indicate that mental workload and social support impact burnout in workers who work from home during the COVID-19 epidemic. In order to prevent employees' heavy mental workloads that lead to burnout, the organization is expected to be able to assess work performance regularly. In contrast, workers work from home, including work hours, work demands, and the suitability of duties.

Keywords: Burnout, mental workload, social support

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206 — The Factors That Influence Return to Work: Study in Patients with Chronic Disease

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ABSTRACT

Introduction: Return to work for all workers who experience occupational diseases and work accidents is currently regulated by Indonesian government regulations. This does not apply to workers who suffer from chronic diseases but are not due to work. A worker with a chronic illness often encounters many obstacles when they want to return to work, one of which is medical action that must still be carried out while carrying out work and many other factors that will greatly affect their readiness to return to work. Therefore, this study wanted to determine the factors that can affect work readiness in workers with chronic diseases.

Methods: The design of this study was cross-sectional. The population of this study is all chronic disease patients in Indonesia. The research sample using simple random sampling technique is 332 people. The dependent variable studied is the readiness to return to work. The independent variables studied included individual factors (gender, age), number of chronic diseases suffered and work status. Data were analyzed using ordinal regression test for categorical data scale and linear regression test for ratio data scale.

Results: There is an influence between work status and the number of chronic diseases suffered by readiness to return to work. However, the age and gender variables did not show any influence on the readiness to return to work.

Discussion and Conclusion: Based on the results of the study, it is necessary to provide special assistance from various sectors such as the government, non-governmental organizations and awareness from companies for chronic disease patients with different work status and number of chronic diseases so that they are better prepared to return to work.

Keywords: Return to work, Chronic Disease, Employment Status

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278 High Job Strain Among Bank Employees During the COVID-19 Pandemic: A Sri Lankan Experience

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ABSTRACT

Introduction: The global financial crisis during the COVID-19 pandemic has adversely impacted on the mental health of bank employees due to associated high job demand and low job control. However, there is a dearth of research on occupational mental health among Sri Lankan bank employees, who play a vital role in providing essential public services during the pandemic.

Objective: To determine the prevalence and associated factors of high job strain among bank employees in a selected urban setting in Sri Lanka during the COVID-19 pandemic

Methods: A cross-sectional study that included all bank employees employed in all 31 branches of banks in a selected urban divisional secretariat area, Colombo district, Sri Lanka was conducted. A self-administered questionnaire, including the validated 22-item Job Content Questionnaire (JCQ-22), was used for data collection. The prevalence of job strain among bank employees was computed with 95% CI. Odds ratios (OR) with 95% CI were computed to quantify the associations of high job strain in bank employees.

Results: The sample consisted of 323 bank employees (response rate=83.9%). The mean (SD) age was 32.7 (7.6) years, and the majority were females (n=183,56.7%). The prevalence of high job strain among bank employees during the COVID-19 pandemic was 25.1% (95%CI=20.3%-29.8%). Service experience of less than 10 years (OR=1.6,95%CI=1.0-2.8;p=0.043), less overtime work (OR=0.5,95%CI=0.3-0.9;p=0.037), high job satisfaction (OR=0.2,95%CI=0.1-0.3;p<0.001), perceived adequacy of different workplace facilities to prevent and control COVID-19 (p<0.05), and working with the constant worry of contracting COVID-19 (OR=1.8,95%CI=1.1-3.0;p=0.023) emerged as statistically significant associations with high job strain among the bank employees.

Conclusion: The prevalence of high job strain among the bank employees in the selected urban study setting, Colombo, Sri Lanka during the COVID-19 pandemic was high. Adequate measures to prevent and control COVID-19 within the workplace showed significant negative associations with high job strain among bank employees.

Keywords: Job strain; Bank employees; COVID-19 pandemic

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| 288 | **Factors Predict in Self-Protective Behaviors on Pesticide Use among Rice Farmers in Prompiram District, Phitsanulok Province** |

Phataraphon Markmee[1], Sunisa Haedee[1], Suphitcha Singha[1], Sunicha Chankeaw[1], Aphisit Phubua[1], Sunisa Yaemmod[1], Sunita Potakham[1], Supaporn Thewa[1]
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ABSTRACT

This cross-sectional study aimed to investigate self-protection behavior in pesticide use and factors influencing self-protection behavior in pesticide use among rice farmers in Nong Khaem Subdistrict, Phrom Phiram District Phitsanulok Province. The sample consisted of 263 farmers randomly selected. Data were collected from July to September 2022 using a standard questionnaire that was reviewed by 3 experts. Content validity was 0.67-1.00 and Cronbach alpha reliability for perception, attitude, and behavior was 0.75, 0.78, and 0.79, respectively. Analysis included descriptive statistics such as percentage, mean, standard deviation, and frequency distribution and inferential statistics such as multiple regression analysis. The results showed that rice farmers were male (62.0%), most of the age group were 51-60 years old (36.9%), married (71.9%), and had sufficient family income per year (46.8%). Most of them had 1-10 years of experience as rice farmers (36.5%), the number of rice cultivation attempts was 2 times per year (79.1%), and the pesticides used were insecticides and herbicides. Most of them had a high level of perceived use of pesticides (90.1%), a high level of attitude toward pesticide use (77.9%), and a high level of self-protective behavior (99.4%). The factors that statistically significantly predicted rice farmers' self-protective behavior before using pesticides at 95% confidence level consisted of perception ($\beta = 0.328$) and personal attitude ($\beta = 0.396$), which predicted 43.3%. (Adjusted $R^2 = 0.433$) It is recommended that all agencies should pay attention to improve their perception and attitude to improve the practice of safe use of pesticides, especially in application.

Keywords: rice farmer, self-protective behavior, pesticides, risk perception

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144 The Relationship of Stress Levels During the Covid-19 Pandemic with Changes in Coffee Consumption Patterns in Students of Sman 2 at Madiun City

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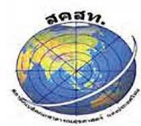
ABSTRACT

Background: The COVID-19 pandemic has greatly impacted mental health globally, one of which is stress. The education level most at risk of experiencing stress during the Covid-19 pandemic is the High School (SMA) level. There are several ways that can be done to deal with stress in high school students, one of which is by consuming coffee. The Covid-19 pandemic that caused high school students to feel bored and bored made them choose to consume coffee to improve their mood, calm their minds, as a means of gathering with friends, and reduce the stress experienced due to adjustments to changes in learning methods during the Covid-19 pandemic. The Aim of this study was identify the relationship between stress levels during the Covid-19 pandemic and changes in coffee consumption patterns in students of SMAN 2 Madiun City.

Methods: This study used an observational design with a cross sectional design. The research sample was 97 people, taken randomly using Stratified Random Sampling with two strata based on class level, namely class X and XI. Data was collected by distributing questionnaires on stress levels and coffee consumption patterns. Analysis of the data used in this study is the Prevalence Ratio statistical test.

Result: The results showed that 68% of the total saWmple experienced moderate stress. There is a significant relationship between stress levels and changes in coffee consumption patterns (p=0.000). Students with moderate stress conditions had a 6.4 times bigger risk of experience increased coffee consumption patterns than students with mild stress conditions.

The conclusion: of this study is that there is a significant relationship between stress levels and gender with changes in coffee consumption patterns. It is better to provide education regarding the dangers of consuming excessive coffee and provide maximum counseling services so that students' stress levels do not increase.

Keywords: stress levels, Covid-19 pandemic, coffee consumption, senior high school, mental health

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| 153 | **Prevalence and Effect of Cyberbullying on Mental Health among Adolescents in Gurugram District- A Price to Pay in Digital World.** |

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ABSTRACT

Introduction: Urbanization, digitalization, and Industrializations are some of the parameters that are commonly taken as indicators of development for any country. Digitalization in form of increased use of the internet through screen media like mobiles/ laptops has made our life easy but at the same time has its side effects too like a breach of privacy, data selling, fraud through digital media, etc. Similarly, it has also given birth to "Cyberbullying". It is bullying with the use of digital technologies. It can take place on social media, messaging platforms, gaming platforms, and mobile phones. It is repeated behaviour, aimed at scaring, angering, or shaming those who are targeted1. Cyberbullying is majorly seen in adults and adolescents since they are heavy users of such digital media but the risk (physical or psychological) is maximum for adolescents. Some studies have shown its burden as high as 17% among children.2 Cyberbullying can have a basket of effects on individual health like mentally- feeling upset, embarrassed, stupid, angry, or afraid; emotionally- feeling ashamed or losing interest in the things you love (anhedonia) and physically like loss of sleep, stomach aches, headache, etc. Skipping school is another common effect of cyberbullying and in some cases, the individual can turn to substances like alcohol and drugs to deal with it.

Justification of the present research: Quantification of cyberbullying in terms of frequency and severity, and its effect on mental health and quality of life is less explored in the country, especially in community settings. Hence the present research will target to document such an event in adolescent life and its effect on mental wellbeing.

Objective: 1. Estimating the prevalence of cyberbullying among the adolescent age group (15-19 years) in the field practice area of SGT Medical College

2. To study the association of cyberbullying with mental illness (depression, anxiety, behavioural issues, phobia) among adolescent age group (15-19 years) in the field practice area of SGT Medical College

Methodology: The proposed research will be a community-based cross-sectional study among adolescents in the age group of 15-19 years residing at the field practice area of SGT Medical College. Considering the prevalence of cyberbullying as p=17% as reported in a study2, absolute precision as d=4%, the sample size using the formula (n=z2pd/d2) came to be 380 (considering 10% as a non-response rate). A semi-structured interviewer-administered questionnaire will be formulated to collect data on socio-demography, school absenteeism, substance use history, history of emotional and physical abuse, and sleep disturbance. To assess mental health Patient Health Questionnaire-9 for depression, General Anxiety Disorder-7 for general anxiety, and Social Phobia and Anxiety Inventory scale will be used to cover somatic, cognitive, and behavioural symptoms.

Proposed Outcome: 1) Prevalence, frequency, and severity of cyberbullying among adolescents (15-19 years)

2) Effect of cyberbullying on mental well-being and social/ physical quality of life.

Impact: 1) Model to identify cyberbullying early through the involvement of parents/ school teachers.

2) Development of coping mechanisms among adolescents to minimize its effect on mental and physical health and school/ college performance.

3) Policy formulation like reporting platform, toll-free number, banning the individual from digital media who indulges in cyberbullying

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171	**Astute Exploration of Collective Mental Health Events Among the Residents of Elderly Care Homes in Bangladesh**

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ABSTRACT

Introduction: Developing countries are presently witnessing a great burden of rapid aging followed by losing the social values of older adults due to age-related cognitive impairment as well as rising depression levels.

Objective: This study was designed to assess the cognitive impairment and depression status combinedly among older adults in elderly care homes.

Methods: It was a cross-sectional survey among randomly selected 200 older adults aged between 60-80 years residing in some old homes in Dhaka district, Bangladesh. Data were collected through face-to-face interviews while Cognitive function and level of depression were assessed by applying the Standardized Mini-Mental State Examination (MMSE) and Geriatric Depression Scale (GDS).

Results: Among all the respondents, the majority (81.5%) were staying in old homes for 1-5 years. Mostly (91.0%) had difficulties with vision, 40.7% had difficulties with hearing and 19.6% had difficulties in moving around. The MMSE test revealed that 43% had moderate cognitive impairment, 36% had mild and 19.5% were found normal while more than half (56%) had severe depression. Significant cognitive impairment was found among the illiterate respondents (AOR/p=7.23/0.03; 95% CI: 1.27-41.16) who did not have any family care support and was admitted to old homes upon children's choices (AOR/p=9.17/0.01; 95% CI: 2.18-38.58) which made them depressed. However, higher educated respondents were found to have more severe depression (AOR/p=12.18/0.01; 95% CI: 5.69-26.03). Furthermore, severely depressed respondents had more severe cognitive impairment (COR/p= 3.83/0.01). Functional disabilities were also a greater concern for cognitive impairment and depression.

Conclusion: An increasing number of old home residents are suffering from significant mental disorders while there is no mental health support in the elderly care homes in Bangladesh. Finally, there is a great need to develop packages and programs of mental health care in old homes, which can be scaled up across the country's mixed healthcare delivery system.

Keywords: Collective mental health events, exploration, elderly care homes

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195	Developing Depression Caring Model for the Hill Tribes: A Family and Community-based Participatory Research

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ABSTRACT

There was a high prevalence of depression among the hill tribes in Thailand, but no specific model based on family and community participation to take care of these patients. In order to develop and examine the effectiveness of the depression caring model for the hill tribes, this community based participatory research (CBPR) employed 60 hill tribe members: 15 stakeholders in the model development and 12 patients, 5 families, and 28 VHVs in the model testing, in Pa-Tung community, Chiangrai Province, Thailand. Based on family and community participation, the model development and testing consisted of three phases: Phase I: understanding the current depression patient care for the hill tribes with depression; Phase II: developing the depression caring model; Phase III: testing the model's effectiveness on psychological and relevant outcomes. Data collection included questionnaires, observations, focus groups, and in-depth interviews. Based on the results of phase I, we developed the depression caring model: the "SMILE" model consisting of stakeholder's readiness (S), external and internal motivation (M), interpersonal relationship (I), life and community asset (L), and empowerment (E). Overall, after SMILE model-based activities and program implementation, we found that a) depressive symptoms and self-esteem of the hill tribes with depression were improved, as well as interpersonal relationship scores were increased at the post-self-help group program; b) the family camp program was found not successful for their current circumstance; c) after participating in a training workshop, the basic counseling skills and basic depression screening skills of VHVs were improved. The model is effective for the depression care among the hill tribes. The model can be applied to other hill tribe communities in northern Thailand to promote their mental-related self-actualization.

Keywords: Depression, hill tribes, caring model development, family and community participation

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| 210 | **Dose Effect Association Between BMI and Decline in Overall and Domain-Specific Cognitive Functioning Among the Indian Adults** |

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ABSTRACT

Background: Cognitive functions may have a major role in the management of obesity by ensuring compliance towards lifestyle-related behaviours. The aim of this study was to identify the cognitive deficits among adults and study their association across different BMI categories in an Indian setting.

Methods: The indexed study is a cross-sectional survey of a sample attending tertiary care hospital in northern India. The MoCA scale was administered in an interview schedule to assess the cognitive performance of participants across eight cognitive domains. The responses were analysed to determine the association between BMI and total MoCA scores and domain-specific MoCA scores.

Results: A total of 349 participants with a mean age of 36.9 ± 10.9 years and a BMI of 26.7 ± 4.6 kg/m2 were recruited. BMI was found to be significantly associated with total MoCA score, indicating a negative relationship ($p<0.001$). A significant negative association between six domain-specific scores, namely, visuospatial, attention, language, abstraction, delayed recall ($p<0.001$), orientation ($p<0.05$) and BMI was also found.

Conclusion: A dose-effect association between BMI and cognitive deficits has been established in the study. Any national health policy framed to manage the growing health burden of obesity has to target the underlying cognitive deficits identified in this study, without which the behavioural modifications that are necessary to mitigate overweight conditions are difficult to sustain in the long run.

Keywords: Obesity, cognitive functioning, metabolic syndrome, MoCA

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211 An Epidemiological Study to Assess the Prevalence, Knowledge and Attitude on Substance Abuse Among College Going Youths of a Hilly District, North India

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Abstract

Background: Recent times have witnessed a gradual increase in substance use and abuse among younger population, with more people initiating substance use from an early age. The use of various licit and illicit substances among the school and college students is also on the rise with newer substances and multiple substance use also being documented.

Objectives: To find out the prevalence of substance abuse among the college students. To assess the level of knowledge and attitude. To find out the association between level of prevalence and knowledge.

Methodology: Cross-sectional descriptive study design was adopted to fulfil the objectives and it was a Quantitative method of data collection.

Results: The overall prevalence of substance abuse among college students was found to be 30%. Regarding the prevalence of different substances abused: alcohol was maximum 23.8%, followed by tobacco 10.3%, cannabis 5.3%, opium 5.3%, heroin 3.3%, pharmaceutical opioids 2.8%, inhalants 2.5%, pharmaceutical sedatives 2.3%, injectables 1.8% respectively. Out of the total 30% students who were substance abuser, 63.4% were single substance users while 36.6% were multiple substance abusers. 55.5% of respondent had moderate level of knowledge. The attitude towards addiction was not affected by social stigma as majority 72% of respondents considered it as a social evil. The regular substance abuse was more among males as compared to females (89.1% vs 10.9%). Here 88.3% of regular substance users belonged to rural area and 11.7% to urban area.

Conclusion: Consumption of licit and illicit substances has been increasing and the age of initiation of abuse is progressively falling. Lack of knowledge regarding substance abuse lead to increased prevalence of substance abuse. The common drugs of abuse amongst adolescents are tobacco and alcohol followed by illicit drugs like cannabis heroin, opium & injectables.

Key words: Attitude, substance, illicit, abuse

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217	**Sense of Coherence and Coping Strategies and Their Influences on Quality of Life of Breast Cancer Patients in Bangladesh: A Hospital Based Cross-sectional Study**

Syeda Naheed Sultana[1], Sabrina Mousum[1], Md. Maruf Haque Khan[1], Md. Atiqul Haque[1]
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ABSTRACT

Background: According to the 2020 World Health Organization statistics, cancer costs approximately 10 million lives globally. Among all types of cancer, breast cancer ranked first with 0.7 million fatalities. It affects the health-related quality of life (HRQoL) of patients, while the sense of coherence (SOC) and coping strategies have been found to extenuate this impact.

Aim: The study aimed to explore the mediating/moderation role of SOC and coping strategies, their influences and dimensions on HRQoL in Bangladeshi patients with breast cancer.

Methods; In this hospital-based cross-sectional study, a total of 125 female cancer patients were included. The 13-item Orientation to Life Questionnaire (SOC 13), Brief COPE and EORTC QLQ C-30 were used to attain the goal of the study. Pearson's correlation coefficient, multiple linear regression and mediation/moderation analysis were done.

Result: Significant association was observed between SOC and HRQoL (B=0.46, p<0.001). In the case of coping behaviours (CBs), Use of Instrumental support (UIS), Positive reframing (PR), Planning (Pl) and Self-blame (SB) are significantly correlated with both HRQoL and SOC. SOC partially mediated the effects of CBs' (UIS, PR, SB) on HRQoL. Which is in case of UIS (CI=95% [0.002,2.95]), PR (CI=95% [0.31, 3.62]), SB (CI=95% [-4.75, -1.62]). SOC had no moderator role in the relationship between coping behaviours and HRQoL.

Conclusion: Health care providers can incorporate SOC and adapt CBs, including positive reframing (PR) and use of instrumental support (UIS) into the health care system to implement in clinical practice for intervention in rehabilitation centres to improve HRQoL in cancer patients.

Keywords: Breast cancer, coping, sense of coherence, quality of life, health-related quality of Life, mediator, moderator

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235 | **Visual and Descriptive Analysis of the Scoping Review in Mental Health Efforts in Indonesia**

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ABSTRACT

Mental health effort in Indonesia is legally stated in the Mental Health Act of 2014. Mental health efforts define as the activities to optimize the mental health of every individual, family, and community with promotive, preventive, curative, and rehabilitative approaches and interventions that are carried out in a comprehensive, integrated, and sustainable manner by the national and regional government and/or the communities. This scoping review aims to capture the implementation of the mental health effort in a visual and descriptive way. Twenty-six research articles on the mental health effort in Indonesia are reviewed and analyzed using narrative descriptive analysis. The exclusion criteria are the study conducted to target the pandemic's effect on mental health. The result showed that the mental health effort is mostly conducted in the community setting with the involvement of the community member by using training and counseling. The result also showed that mental health efforts are conducted for special subjects such as disaster victims, disabled communities, drug addicts, and orphanages but with limited reports. Notable findings also show that spiritual-based intervention is also conducted in cross-setting. This study can provide a baseline of critical perspective for future mental health efforts in Indonesia across settings and interventions.

Keywords: Mental health efforts, mental health interventions, cross-setting interventions

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Level of Stress and Its Predictors among Undergraduate Students of Lucknow City

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ABSTRACT

Introduction: Stress is described as a feeling of being overwhelmed, worried or run down. It can affect people of ±all ages, genders in any circumstances and can have major impact on physical and psychological health issues. Stress and college go hand in hand. Many students experience college as chronically stressful owing to various reasons like tests, presentations and papers to name a few. Limited studies have been conducted in India on stress related issues. Hence, in the view of above, the present study was undertaken to study the level of stress among undergraduate students and its predictors.

Methodology: A descriptive cross-sectional study was conducted among 182 students enrolled in professional undergraduate courses namely MBBS, BDS, Nursing and engineering in universities/colleges of Lucknow cities. 1 college from each stream was selected randomly from the list of total government and private colleges of Lucknow. A pretested semi-structured questionnaire was used to collect the data regarding socio-demographic characteristics, academic and leisure activities. DASS 42 questionnaire was used to assess the emotional states of depression, anxiety and stress. Data was analyzed using SPSS version 23.

Results: Mean stress score among, MBBs, BDS, nursing and B. Tech students was 13.22 (±8.13), 14.54 (±7.79), 15.94 (±7.74) and 11.75 (±6.93) respectively. Mean score of stress was higher in students who consumed alcohol, tobacco or sleeping pills. Statistically significant predictors in multivariate analysis were education loan, inferiority complex, family history of substance abuse and not satisfied with lectures.

Discussion: Level of stress was high among all the college students of different streams, with maximum proportion among nursing students. Regular screening and counselling sessions should be scheduled the alleviate the stress levels and to the overall welfare of student lives.

Keywords: Stress, undergraduate students, predictors, India

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237 The Effect of Anapanasati Meditation Training on Anxiety and Rowing Performance in Para-Rowers

Thawichai Khaothin[1], Pornthep Rachnavy[1]
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ABSTRACT

Introduction: Anapanasati meditation is an effective technique for reducing anxiety and improving performance in sports situations. Therefore, the effects of Anapanasati meditation training on anxiety and rowing performance in para-rowers were to be examined.

Purpose: This study examined the effects of Anapanasati meditation training on anxiety and rowing performance in para-rowers.

Methods: Twenty healthy para-rowers from the Para-Rowing Training Champs in Nakhon Ratchasima, Thailand, volunteer. Participants were randomly assigned into two groups: the training group and the control group. The training group (n = 10) participated in eight-week Anapanasati meditation training, and the control group (n = 10) did not participate in Anapanasati meditation training. All participants were not to change or increase their other mental and rowing training during the study. Participants in both groups were tested before and after the study period on anxiety using the Revised Competition Sport Anxiety Inventory-2 (CSAI-2R) and rowing performance using a 2000-meter time trial on the rowing ergometers.

Results: According to the findings of this study, participants in the training group had significantly lower levels of somatic anxiety, cognitive anxiety, and self-confidence than participants in the control group. But no significant differences in the 2000-meter time trial were found between the training group and the control group.

Conclusion: The findings suggest that Anapanasati meditation training can reduce anxiety. However, it cannot improve rowing performance in para-rowers.

Keywords: Anapanasati meditation, anxiety, rowing performance, para-rowers

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| 238 | # The Athletics Coping Skills of Thai National Athletes with Physical Disabilities |

Thawichai Khaothin[1], Pornthep Rachnavy[1]

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ABSTRACT

Introduction: The Athletics Coping Skills Inventory (ACSI - 28) is a highly valid psychological assessment of an athlete's psychological coping skills. It helps guide athletes with more understanding and clarity about these mental skills that can impact performance.

Purpose: This survey study was to study the psychological coping skills of Thai national athletes with physical disabilities.

Methods: One hundred forty - four Thai national athletes with physical disabilities from the National Training Center for Disabilities, Nakhon Ratchasima, Thailand include para-table tennis (n = 36), para-rowing (n = 10), athletic (n = 36), wheelchair tennis (n = 16), para-swimming (n = 28), and para-shooting (n = 18). Participants will answer twenty - eight questions about different performance psychology components, and based on the athlete's results, they will receive an athlete's psychological coping skills report. Seven different psychological aspects of performance include coping with adversity, coachability, concentration, confidence and achievement motivation, goal setting and mental preparation, peaking under pressure, and freedom from worry and translated into the Thai language.

Results: The results of this study show that sport type and duration of practice were influential on coachability ($p < 0.05$). No significant difference was found between males and females on the total score and 7 subscales. A score of 25 - 52 hours/week on confidence and achievement motivation, goal-setting, and mental preparation, peaking under pressure, was significantly higher than 2 - 12 hours/week ($p < 0.05$). Male athletes with physical disabilities scored significantly higher on concentration, confidence, and achievement motivation, goal-setting and mental preparation, peaking under pressure, and total score than female athletes with physical disabilities ($p < 0.05$).

Conclusion: The findings indicate that there is no significant difference in athletic coping skills between the sexes. And male athletes with physical disabilities scored higher on concentration, confidence, and achievement motivation, goal-setting and mental preparation, peaking under pressure, and total scores than females.

Keywords: Athletics coping skills, sports psychology, athletes with physical disabilities

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| 280 | **Assessment of Health Quotient and Other Quotients for Living among Student in Semi-Urban Area of Thailand** |

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ABSTRACT

For students to become complete humans and well-being, they need to have the ability to happily conduct daily living. The research objective was to assessment the health and other simple quotients for living of student in semi-urban area near Bangkok in Thailand. Other than Health Quotient (HQ), the other quotients composed of Intelligence Quotient (IQ), Emotional Quotient (EQ), Adversity Quotient (AQ), Moral Quotient (MQ), and Creativity Quotient (CQ) was including in this study. The study design was conducted by cross-sectional study. The sample subjects were 2,512 high school students with age 15-18 years old and bachelor's degree student with age 18-22 years old. The results found the low-level of health quotient around 54.4% in students. Around 42% were low level of intelligence quotient, 61.3% were normal level of emotional quotient and 19.3% were low level of emotional quotient. There were 66.0% in normal level of adversity quotient and 33.2% in high level of adversity quotient. Around half of subject were in high level of moral quotient (50.2%). The policy and program development could use be the strategies to increase the health quotient and other quotients in Thai youth.

Keywords: Health quotient, six quotients, Thai youth, semi-urban area

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289 — Exposure to Phthalates from House Dust in Phayao Province, Thailand

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ABSTRACT

Phthalates are used as plasticizers in polyvinyl chlorides (PVCs) and consumer products, such as building materials, children's toys, and home furniture. Phthalates have been recognized as being house pollutants which increasing risk of health problems. This study aimed to estimated human exposure to house dust-ingested phthalates for Thai adults from 107 dwelling in Phayao province, Thailand. House dust was collected by using a handheld vacuum cleaner. Phthalate concentration in house dust was analyzed by gas chromatography/mass spectrometry. Results revealed that di-2 ethylhexylphthalate (DEHP) having the highest level (median = 12 µg g^{-1}, maximum = 2,253 µg g^{-1}) followed by di-iso-nonyl phthalate (DiNP) (median = 55 µg g^{-1}, maximum = 744 µg g^{-1}). The estimated exposure of DEHP for Thai adults is higher than the US Environmental Protection Agency reference dose (20 µg g-1), which may pose a potential health risk to residents, particularly in elderly people who stay at home longer than other ages, in Phayao province.

Keywords: Phthalates; house pollutants; elderly; Phayao

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Evaluating Clinical and Laboratory Characteristics of Celiac Patients in Iran

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ABSTRACT

Introduction: Prior to the 20th century, celiac disease (CD) was considered relatively rare in most European countries. With the availability of sensitive and non-invasive screening tests for CD, it is now possible to detect CD in the general public.
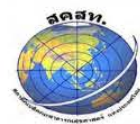
Objective: As an autoimmune disease, celiac is triggered by exposure to dietary gluten in genetically susceptible individuals and leads to different gastrointestinal and non-gastrointestinal symptoms. This study aimed to more accurately evaluate the epidemiology of the celiac disease in west of Iran.

Methods: This study was performed at Hamadan University of Medical Sciences on 2019. Subjects were selected by the census method. In addition, data analysis was performed in SPSS using descriptive and analytical statistics.

Results: From 72 patients, 68.1% were female and 31.9% were male. The mean age of the subjects was 32.47 ± 17.21 years. Evaluation of the serological results of the patients revealed that 47% of the participants had a tTG antibody. According to the disease severity classification, the highest frequency (57%) was related to March III. Furthermore, 10% of celiac patients were simultaneously diagnosed with diabetes.

Conclusion: In this study, celiac was mostly diagnosed in young to middle-aged people (30-40 years), the majority of whom were female. In addition, it seems that the incidence of diabetes and CD is one of the most significant issues related to the disease in the province. Among gastrointestinal symptoms diarrhea and abdominal pain were more common. In terms of non-gastrointestinal symptoms, anemia was the most prevalent issue.

Keywords: Clinical and Laboratory Characteristics, Celiac Disease (CD), Gluten free Diet, Transglutaminase, Anemia.

Physical Activities, Exercise and Nutrition

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Predictors for Weight Retention and Barriers for Weight Management in Postpartum Women: A Cross-Sectional Study.

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ABSTRACT

Introduction: Postpartum weight retention is affected by factors related to socio-demographic profile, obstetrics correlates and lifestyle. Various barriers and myths restrict postpartum women from adopting healthier lifestyle-related practices.

Objectives: To study the association of postpartum weight retention with socio-demographic, obstetrics, and lifestyle-related factors. To investigate barriers/myths associated with postpartum weight management.

Methods: A hospital-based telephonic cross-sectional survey was carried out using a validated questionnaire to assess the predictors of weight retention and barriers associated with weight management. Convenience sampling technique was employed to recruit women from different phases of the postpartum period i.e., women in the first three months post-delivery, four to six months post-delivery and beyond six months post-delivery. Chi-square test and regression analysis were applied to assess the association of various factors with weight retention in different postpartum phases.

Results: The final sample comprised 505 postpartum women with a mean age of 29±4 years. Socio-economic status was associated with weight retention during the first three months post-delivery (p<0.05) whereas type of family and education qualification were associated with weight retention during four to six months post-delivery (p<0.05). Gestational weight gain was associated with weight retention in all three phases of the postpartum period (p<0.05). Among lifestyle-related factors, around 70% women had lower consumption of fruits and vegetables with a higher intake of HFSS foods. 95% of women had more than 4-hour exposure to screen time and sedentariness. Barriers such as lack of knowledge about diet and physical activity, lack of time, boundation to abide by family's advice and myths such as eating for two, and consumption of energy-dense galactagogues restricted participants from adopting healthy lifestyle practices.

Conclusion: The study findings will assist in formulating and implementing weight management strategies. Future longitudinal studies must be carried out for further understanding of predictors of postpartum weight retention.

Keywords: Postpartum weight retention; predictors; barriers; weight management; India

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149 The Investigating the Amount of Aflatoxin in Sesame-Based Products in West of Iran

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ABSTRACT

The contamination of aflatoxins (AFs) in 120 samples of sesame seeds, tahini, and tahini halva collected from Iran's market were evaluated. The exposed risk due to ingestion of aflatoxin B1 (AFB1) via their consumption was estimated with the aid of the Monte Carlo simulation (MCS). The highest prevalence of AF (55%) was associated with sesame seed samples, followed by tahini (45%) and tahini halva (32.5%). The AFB1 concentration in sesame seeds, tahini, and tahini halva was in the ranges of 0.21–12.35, 0.23–5.81, and 0.27–3.56 μg/kg, respectively. The concentration of the total aflatoxin (TAF) in 7 (17.5%), 8 (20%), and 2 (5%) samples of sesame seeds, tahini, and tahini halva, respectively, was below the limit of European regulations (4 μg/kg), while the levels of AFB1 in 10 (25%), 7 (17.5%), and 6 (15%) samples of sesame seeds, tahini, and tahini halva, respectively, were higher than the European regulations (2 μg/kg). As the percentile 50 and 95 of margin of exposure (MOE) with AFB1 for sesame seed, tahini, and tahini halva was more than 10,000, it could conclude the intake of aflatoxin through the consumption of mentioned products did pose a not remarkable cancer risk for adults.

Keywords: Mycotoxin; contamination; aflatoxin; traditional products; sesame based

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150 | **Nutritional Care Services in Long-Term Care Institutions; Evidence from a National Survey in Sri Lanka**

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ABSTRACT

Introduction: Sri Lanka has the fastest aging population in South Asia leading to an increase in the number of older people living in long-term care institutions (LTCIs). Older persons living in LTCIs are more vulnerable to nutritional problems than those who live in their households; thus, nutrition care for older persons in LTCIs has become an issue that needs to be promptly addressed.

Objective: This study aimed at assessing the status of the existing nutritional care services in LTCIs in Sri Lanka.

Methods: This cross-sectional study included telephone-based interviews in 200 LTCIs (out of 381 LTCIs) representing all 26 districts in the country. Trained data collectors interviewed LTCIs' management staff using a pre-tested interviewer-administered questionnaire with questions to assess the existing nutritional care services in the interviewee's preferred language (Sinhala, Tamil, or English).

Results: Only 16 (8.0%) and 12 (6.0%) of LTCIs assessed the nutritional status of older persons on admission and periodically. A referral mechanism for identified nutritional problems was available in 29 (14.5%) LTCIs. Sixty-nine (34.5%) LTCIs had different meal plans for the older persons needing special care. Only 10% (n=20) of LTCIs had a mechanism for a medical professional to advise on special meal preparation. Almost 90% (n=180) of LTCIs changed their meal plan daily. Fifty-two LTCIs (26.0%) had an institutional food purchasing policy. The majority (n=174,87.0%) of LTCIs accepted donor food. Only 94 (47.0%) LTCIs had designated staff in the kitchen. Only 27 (13.5%) LTCIs had staff with special training in providing nutritional services.

Conclusion: This national survey conducted in a representative sample of LTCIs in all districts in Sri Lanka reveals that the provision of basic nutritional care services is sub-optimal in most LTCIs. Thus, it is highly recommended to establish a regular mechanism at the national level to monitor the nutritional care services in LTCIs.

Keywords: Long-Term Care Institutions; Older Adults; Nutritional Care Services

231 Effectiveness of Sports Massage Techniques on Flexibility

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ABSTRACT

Flexibility is the ability of a joint to move through an unrestricted, pain free range of motion. Although flexibility varies widely from person to person, minimum ranges are necessary for maintaining joint and total body health. Many variables affect the loss of normal joint flexibility including injury, inactivity, or a lack of stretching. Massage is a beneficial treatment for maintaining and improving motion. By working on muscles, connective tissues, tendons, ligaments, and joints, regular massage can improve range of motion. This study was an experimental study to investigate the effect of massage with the sports massage technique on flexibility. The sample was a faculty member of Suranaree University of Technology 30 persons attended the massage for eight weeks, each time 30 to 45 minutes. Data were analyzed using percentage, mean, standard deviation, Paired T-Test, Independent T-Test, and content analysis.The results showed that post-massage flexibility values were significantly higher than pre-massage flexibility values ($p < 0.05$). It was concluded that after the massage with the sports massage technique, the sample had an increase in flexibility. An 8-week Sports Massage was effective in improving flexibility in the participants.

Keywords: Effectiveness, Sports Massage, Flexibility

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232 Comparison of Rowing Ergometer and Bicycle Ergometer Exercise in Patients with Knee Osteoarthritis (OA)

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ABSTRACT

Physical activity is crucial for people with arthritis. It improves physical fitness and reduces joint pain. The purpose of the study was to compare the rowing ergometer exercise and bicycle ergometer exercise on maximum heart rate and calories burned after finishing activities in twenty older adults with knee osteoarthritis (OA) aged between sixty to seventy years old. The number of calories burned after finishing activities and heart rate before exercise, during exercise, and after exercise were recorded and analyzed. The results showed that the number of calories burned, and the maximal heart rate (P<0.001) were significantly higher on the rowing ergometer exercise than on the bicycle ergometer exercise. Our study concluded that rowing exercises were more effective than bicycle exercises for knee patients. Because rowing exercises use back and arm muscles during exercise. They can exert more energy than exercise with a bicycle that uses only legs, which can cause knee pain. However, both types of exercise are beneficial for health promotion, diagnosis, and appropriate rehabilitation.

Keywords: Comparison, Rowing Ergometer, Bicycle Ergometer, Knee Osteoarthritis

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259 Situation of Poor Glycemic Control Among Type 2 Diabetes Mellitus and Its Risk Factors: Systematic Review

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ABSTRACT

Background: Poor glycemic control is a major public health issue all over the world. This systematically reviewed the available evidence and summarized the prevalence and risk factors for poor glycemic control among type 2 diabetes mellitus (T2DM) worldwide.

Method: A comprehensive electronic-based published literature search was carried out in the databases of Google Scholar, Science Direct, and PubMed to retrieve the prevalence and risk factors for poor glycemic control among patients with type 2 diabetes mellitus (T2DM) around the world. Two independent reviewers screened the retrieved citations and extracted data. The random-effects model was employed to estimate T2DM prevalence and risk factors for poor glycemic control.

Result: Of the 4,034 screened citations, 22 research reports were eligible. The global prevalence of poor glycemic problems varies from region to region. The prevalence of poor glycemic control in the United States ranges from 29.0% to 73.0%, while in African countries it varies from 50.1% to 91.8 %. Whereas in Southeast Asian countries, it ranges from 54.7% to 65.4%. Being female gender (OR = 2.40; 95%CI= 0.31-0.81), age of ≥50 years (OR = 2.77; 95% CI= 0.15-0.85), being single (OR = 2.55; 95% CI=0.18-86), not attending formal education (OR = 3.12; 95% CI=1.53–6.35), unemployed (OR = 4.99; 95% CI = 2.58–9.69), low income, (OR = 1.73; 95% CI=1.01–3.40), family history of DM (OR =2.30; 95% CI= 1.40-3.90), monthly income of <134 USD (OR = 2.14; 95% CI= 1.17-3.91), patients with no family/social support (OR = 2.55; 95% CI = 1.13–5.73), poor knowledge about diabetes (OR = 4.22; 95% CI = 1.38–12.93), hypertension (OR =1.53; 95% CI= 1.27–1.84), having high low-density lipoprotein cholesterol (LDL-C)(OR = 3.44; 95% CI= 1.65, 7.12), duration of diabetes >10 years (OR = 6.36; 95% CI = 1.74–23.24), obesity (OR = 3.44; 95% CI= 1.44–8.21),smoking (OR = 1.08; 95% CI=1.00–1.17), alcohol intake (OR = 1.88; 95% CI= 1.14-3.10), poor dietary adherence (OR = 2.4 95% CI= 1.40-4.10), no physical activity (OR =2.53; 95% CI = 1.29-4.93), and poor medication adherence 39.0% were found to be associated with poor glycemic control.

Conclusion: Among T2DM patients, a large proportion are still not able to control their blood glucose levels properly. Personal traits and behaviors should be focused on public health implementation developed and implemented to address the problem.

Keywords: Poor glycemic control, type 2 diabetes mellitus, risk factors, systematic review

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164 Sociodemographic Correlates of Dietary Pattern and Level of Physical Activity in Indian Adults: A Cross Sectional Survey

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ABSTRACT

Introduction: The promotion of healthy dietary and activity behaviour is a key strategy to prevent non-communicable diseases. However, evidence on dietary pattern and level of physical activity and its socio-demographic correlates is limited in resource constrained settings.

Materials and methods: Indexed study is a cross sectional survey on a purposive sample of adults attending a tertiary care centre of a developing country. In an interview schedule, a trained dietitian assessed the socio-demographic, dietary and activity parameters using a valid and reliable questionnaire for the Indian population. Physical activity was assessed using Madras Diabetes Research Foundation of India- Physical Activity Questionnaire (MPAQ). Standardised techniques were used to measure anthropometric parameters (Body Mass Index and Waist Circumference). Descriptive analysis was performed for all the variables. The correlation between sociodemographic, anthropometric indices, dietary and physical activity parameters were also analysed.

Results: A total of 250 participants (61.5% female, mean age: 38.50 ± 9.57 years, mean BMI: 30.9 ± 1.6 kg/m2) were enrolled. More than half of the participants had a weekly consumption of high fat sugar and salt (HFSS) foods (60%) and sugar sweetened beverages (SSBs) (63%). Daily time spent on sedentary activities like screen (172 ± 103 min) and sitting time (151 ± 90 min) was greater than dedicated exercise (24 ± 19 min). Younger participants with higher BMI were positively associated with consumption of HFSS and SSBs. Being women and higher education status was associated with greater screen time ($P<0.05$).

Conclusion: High consumption of energy dense foods coupled with limited participation in physical activity varies across demographic groups. It is important to understand these associations to develop population centric public health strategies to manage non-communicable disease.

Keywords: Physical activity; diet; socio-demographic; India

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193 — Wash and COVID-19 Protocol Amongst Mothers - A Cross Sectional Study of Knowledge and Practices in Punjab (India)

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ABSTRACT

Background: With the global advent of Coronavirus, addressing the issue of WASH became more significant. In regard to this, necessary guidelines were released by UNICEF for mothers with suspected or confirmed COVID-19 and isolated at home to intensify promotion of safe hygiene behaviours especially hand washing with soap at all critical times and practicing safe food preparation/ handling to reduce risk of transmission of COVID-19.

Aims: To assess the knowledge and practices regarding WASH and COVID-19 protocol amongst mothers of infants and young children aged 0-24 months in district Mohali (Punjab, India)

Methods: In this study, data was collected from 500 mothers of infants and young children of age 0-24 months who visited the OPD of Paediatrics department of Government and Private hospitals of district Mohali. The proposed sample (respondents) were studied with the help of the questionnaire that included their demographic details, knowledge and practices of WASH and COVID-19 protocol. Statistical software, SPSS was used for statistical analysis.

Results: According to majority of mothers from government (41.3%) as well as private hospital (42.1%), they believed that they cannot breastfeed if detected COVID-19 positive. Only 8.6% mothers breastfed their children during COVID-19 period. Out of 500 mothers, only 12.4% (n=62) mothers are vaccinated for COVID-19. Maximum (86.8%) mothers did not get COVID-19 vaccination due to pregnancy. Data was also collected to pin out if mothers followed WASH practices after using toilet, during food preparation, cooking, serving, feeding the baby, changing baby's clothes/diaper, before eating food and after eating food. 64.2% (n=321) mothers sterilized the bottle/ nipple before bottle-feeding the child.

Conclusions and Recommendations: In this study, mothers satisfactorily practiced COVID-19 specific protocol and WASH practices. However, it was found that the handwashing practice is still low at crucial times. For mothers with children aged 0 to 24 months, the presence of water and soap close to the handwashing location was substantially linked with the practise of handwashing. In order to improve handwashing with soap and water at crucial moments, it is required to enhance the availability of both water and soap close to the handwashing location.

Keywords: WASH practices; hygiene; sanitation; COVID-19 protocol

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230 Effect of Elastic Band Exercise Program on Flexibility in Elderly

Pornthep Rachnavy[1], Thawichai Khaothin[1], Hathairat Rachnavy[1], Pho Boonrod[1]
[1]Suranaree University of Technology

ABSTRACT

Flexibility is the ability of the muscles and tendons to lengthen and stretch in response to movement and allow a joint to move through its range of motion. As the body ages, it becomes less flexible. This is usually due to inactivity. However, like any form of exercise, flexibility can be increased with regular practice. This quasi-experimental aimed to examine the effect of an exercise program with elastic bands on flexibility in the elderly. The samples were 40 members aged between sixty to seventy-nine years old, randomly selected into the study. The participants were randomly divided into elastic band group (n = 20) and control group (n = 20). The control group would continue with their normal daily activities without elastic exercise. Elastic-band resistance exercise is composed of 10 movements of the Biceps, Triceps, Deltoids, Obliques, Hamstrings, Gluteals, and Quadriceps muscles. It is performed for 45 minutes during 12 weeks by 3 times a week. It is measured and recorded at the pre and post-test that sit and reach test. The results of the study revealed that there was a significant difference between the averages of flexibility before and after the experiment in the control group. For the experimental group, the results showed a higher score of flexibility after the experiment. It can be concluded that a 45-minute session of group exercises using an elastic resistance band 3 times a week for 12 weeks can have positive effects on the flexibility of the elderly. Based on this result, elastic-band resistance exercise can be a better instrument and easier for elderly people for the improvement in flexibility.

Keywords: Elastic Band Exercise Program, Flexibility, Elderly

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| 282 | The Characteristics of Musculoskeletal Pain, Online Study Posture and Physical Activities During COVID-19 Pandemic in Mae Fah Luang University Students |

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[1]Mae Fah Luang University

ABSTRACT

During the coronavirus disease 2019 (COVID-19) pandemic, Mae Fah Luang university announced the online in all courses. The normal activities in classroom and the physical activities of the student were decreased. Furthermore, the time of using computer were increased which may cause the musculoskeletal pain in the student. Therefore, the purpose of this study was to investigate the characteristics of musculoskeletal pain, online study posture and level of physical activities during COVID-19 pandemic in Mae Fah Luang University. This study was approved by the Mae Fah Luang ethics committee. Data were collected from a cross-sectional online survey containing the general information, the global physical activity questionnaire, musculoskeletal pain and online study posture questionnaire. There were 79 subjects in this study. They were female (n=56) 71%, male (n=23) 29% aged between 19-24 years old. The body mass index was 21.58±4.23 kg/m^2. The characteristic of musculoskeletal pain was most presented in neck (94%), shoulder (94%) and lower back (92%) in left side and neck (97%), shoulder (94%) and lower back (90%) in right side. The online study posture revealed that they have inappropriate height of the chair (54%), inappropriate the resting arm (77%), inappropriate height of the screen (68%), inappropriate the height of the keyboard (73%). They were mostly in inactive physical activity (43%), moderate physical activity (33%) and high physical activity (24%). In conclusion, the musculoskeletal pain was mostly presented at neck, shoulder and lower back respectively along with the inappropriate of the online study posture in the height of the chair, resting arm and height of the screen and keyboard. They were mostly inactive during the pandemic. Lack of real classroom activities, the social interaction and the relying on the computer screen during the pandemic may paly important role in the characteristic of the musculoskeletal pain, the online study posture and the physical activities.

Keywords: COVID-19, musculoskeletal pain, physical activity

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274 A Comparative of Skill-Related Physical Fitness in Mae Fah Luang University Team Sports Athletes

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ABSTRACT

Skill-related physical fitness or motor fitness is the ability to perform specific movements for each sport. The tests consist of agility, speed, reaction time, power, coordination, and balance skills. The objective of this study was to examine the skill-related physical fitness of Mae Fah Luang University team sports athletes and to use data to analyze and formulate better performance for athletes. Eighty-six participants (61 male and 25 female) from 5 team sports (group1: football, futsal, basketball, and group 2: volleyball and sepak-takraw) completed the skill-related fitness characteristics test. The results showed that football players were the fastest in speed skills (running 50 m. test) when compared within a group. Power skills (standing broad jump test) showed the highest performance for both basketball male and female players. Agility skills (semo test) and reaction time skills (wall toss test) showed the peak performance in male football and female basketball players. Balance skills (balance board test) were found to be greatest in male sepak-tekraw and female basketball players. This study concluded that male football and female basketball teams had the highest skill-related physical fitness when compared with other team sports. The results can be used as implications in individual training to success in sports competitions and useful selected criteria for team sports athletes.

Keywords: Skill-related physical fitness, motor fitness, team sports, university athletes

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IEA

283	**Does the Reduction of Physical Activity Related to the Stress in Mae Fah Luang University Students During the Pandemic COVID-19**

Haruthai Petviset[1], Narong Jaruvet[1], Natthaphoom Phrutthiphongpisut[1], Kittinan Kitwatee[1], Sasima Pakulanon[1]

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ABSTRACT

Knowing the relationship between physical activity level and stress level is crucial for continuing active physical activity. However, the reduction of group gatherings, for example, doing group sports, and social gatherings may relate to the stress of the student due to the banning of group activities in students at Mae Fah Lung University during the pandemic. Therefore, this study aimed to investigate the relationship between the level of physical activity and the stress in Mae Fah Luang university students during the pandemic COVID-19. This study was approved by the Mae Fah Luang ethics committee. This study was a cross-sectional study using an online survey. The questionnaire contained the general personal data, stress was evaluated by the SPST-20 and physical activity was evaluated by the questionnaire. The analytic sample was 62 Mae Fah Luang university students aged between 19-23 years old. There was 70% of female and 30% of male. They were mostly in low physical activity (61%), moderate physical activity (28%), and high physical activity (11%). The stress level showed that they mostly have moderate stress (43%), high stress (32%), low stress (20%), and severely high stress (5%). The Spearman correlation test showed that there was a strong inverse relationship between severely high stress and low physical activity which was not statistically significant ($r_s = -0.86$, $p = 0.33$). In conclusion, this study showed that during pandemic the student tend to be more physically inactive during the pandemic. The result showed the reducing of physical activity was not significantly related with the stress in Mae Fah Luang university student during pandemic COVID-19.

Keywords: COVID-19, stress, physical activity

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285 Sports Events to Enhance Youth Hill Tribes' Health-Related Physical Fitness in Chiang Rai Province, Thailand.

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ABSTRACT

Physical activity is essential for improving the health of the global population. The massive problem presented by the World Health Organization was lack of physical exercise. There were 81% of adolescents who did not meet the WHO's physical activity recommendation. Thailand. Noncommunicable disease risk was increased by a lack of physical activity. This study aimed to organize sports events to increase youth hill tribes' health-related physical fitness. Leaders of the community, sports leaders, and young people from the hill tribes all helped plan and organize sports activities. This study conducted six events in five months that included physical fitness training, and sports competition. The intervention conducted in Therd Thai sub-district, Mae Salong Nok sub-district and Mae Salong Nai sub-district, Mae Fah Luang District, Chiang Rai province, Thailand. This study consisted of 80 participants, consisting of 49 male and 31 females, average aged 14.61 ($\pm$ 2.00). The participated in health-related physical fitness tests before and after sports activities. The comparison of health-related physical fitness testing was significantly increased in applied push-up 30 seconds ($p<0.01$), sit up 60 seconds ($p<0.01$), and 3 minutes steps ($p<0.01$) while a male hill tribe had a greater score than female hill tribes for applied push-up 30 seconds ($p<.05$). The youth hill tribes were educated in physical training and participated in sports competitions for five months. The increased frequency and type of physical activity developed health-related physical fitness in youth hill tribes.

Keywords: Sports events, Physical activity, Health-related physical fitness

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207 SWOT analysis of Family Planning program in 2 tribal districts with high Total Fertility Rate, Odisha, India: excerpts from a Qualitative Baseline Research

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ABSTRACT

Background: India is one of the few countries in the world that has a National Population Policy, advocated in the year 2000, wherein the objective of integration of contraceptive service delivery and basic reproductive and health care is inbuilt. Reversal of Total Fertility Rate(TFR) to a national average of 2.4 births per woman as compared to 1.63 of China(2011 census) with region-wise wide disparity in states of India.
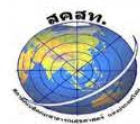
Objective: To determine Family planning approval and beliefs on contraception in selected districts. To analyze factors responsible for both among partners.

Methods: A quasi-experimental ICMR-funded study wherein as per district-wise TFR Odisha (state of 30 districts), 2 districts of Boudh and Koraput were selected for their high TFRs of 3.5 and 2.9. A detailed baseline was done in 2:4 sampled blocks of the respective districts to ensure representativeness. Qualitative indicators like the Family planning approval index and Family Planning belief index were used as proxy measures of the desire and intentions of being a family planning acceptor both for the male and female counterparts

Results: Age of male partner 32.1+5.6 and female was 27.2+5.1; female partner illiteracy was 8 points more than male. Mostly population was from the underserved castes. Mean, SD and Cronbach alpha for FPA male 3.29, 0.803, .638 (5 items); FPA female 3.37,0.813,0.631; FPB male 13.06,2.23,0.544 (6 items); FBB female 13.14, 2.304,0.591suggesting that both the indices are fairly reliable in both males and females, the family planning approval being better than that of Family planning belief indices. In males, interaction between age and education being 6.02 times suggestive of high contraceptive acceptance. Among females age shows evident interaction with spousal education and income.

Conclusions: FP program should be promoted and well-integrated with maternal and child health for best results/The acceptance is strongly dependent on social milieu and counselling.

Keywords: Family planning, Family planning approval index, Family planning belief index, Underserved districts, Odisha

Women
and
Reproductive Health

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IEA | World Health Organization | IOM UN MIGRATION | NRCT | iHPP Thailand

214 Awareness about Breast Self-Examination and Practice of Breast Self-Examination among University Students: Review and Meta-analysis

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ABSTRACT

Background: With an annual incidence of 2.3 million cases and 6,85,000 deaths in 2020, breast cancer has become a global concern for women. Awareness and practice of breast self-examination (BSE) is a proven strategy for early diagnosis and has the potential to reduce mortality and morbidity.

Objective: To review and do a meta-analysis of the awareness level regarding breast self-examination and practice of breast self-examination among university female students in the world during last decade.

Methods: PubMed-indexed literature that assessed both awareness and practice of breast self-examination during the last 10 years was analyzed. The keywords or MeSH terms used included (breast neoplasm OR breast health OR breast disease OR Ca Breast) AND (awareness OR knowledge OR education OR practice) AND (Breast Self-Examination OR BSE) AND (University Students OR College Students) to retrieve relevant literature. The awareness about BSE and the practice of BSE were the outcome indicators. Pooled awareness was estimated using a random effect model using MetaXL software.

Results: The search identified 10 qualified literatures published that meet the criteria for review and meta-analysis. Heterogeneity among included studies was high (I2=99%). The pooled prevalence of awareness about breast self-examination among female university students was 64% (LCI:45%, HCI:81%). The pooled prevalence of practice of breast self-examination among female university students was 32% (LCI:19%, HCI:45%). The quality of included studies was moderate.

Conclusion: Overall half of the female students are who are aware of breast self-examination do not practice the same. Further studies about enabling the environment need to explore to improve the practice of breast self-examination.

Keywords: Breast cancer, Awareness, Knowledge, University students

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242 Knowledge, Attitudes, and Practices on Reproductive Health among Lahu Women Northern Thailand

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ABSTRACT

Background: Universal access to sexual and reproductive health is one of the approaches to improve quality of life for people, which is one of the sustainable development goals (SDGs) in the aspect of health security and reducing inequality. Lahu is one of the hill tribes people who are facing access to reproductive health services.

Objective: This study aimed to explore the knowledge, attitudes, and practices (KAP) level and the relationship between these factors and the practice of sexual reproductive health among Lahu women.

Methods: A cross-sectional study was conducted to gather information on Lahu people living in their villages located Mae Suai district, Chiang Rai Province. Data were collected between March and April 2022. In each village, 36 women aged 12-35 years were selected into the study. A validated questionnaire and KAP questions were used for assessing information. Data were analyzed by Chi-square and ANOVA tests.

Results: A total of 146 Lahu women were recruited: 53.4% were married, 58.2% were secondary-educated, and 39.7% were agriculturists. One-third (38.4%) were students, 100.0% were Christian, 63.7% had 4-6 family members, and 58.9% had no health insurance.52.7% had never been prevented for HIV or sexually transmitted diseases six months prior, 52.7% had never used a birth control method, and 48.6% had never received care or advice about contraception and pregnancy. Almost a half were found a low level of knowledge on reproductive health (45.9%), moderate level of attitude (64.4%), and practices that could be improved (37.0%). The reproductive health practice was significantly related to knowledge and attitudes. The participant's age, marital status, and health insurance were significantly related to practice on reproductive health.

Conclusion: To improve sexual and reproductive health practices in Lahu women, especially adolescents, single status, and those without health insurance, they need to acquire more knowledge which is able to improve their access towards accessing reproductive health services.

Keywords: Reproductive health, Knowledge, Attitude, Practice, Lahu women

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IEA

258 Prevalence and Factors Associated with The Neonatal Sepsis in Yardimeli Hospital Mogadishu, Somalia

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ABSTRACT

Background: Neonatal sepsis is a global issue that poses a management challenge for organizations that provide care for newborns and babies. Sub-Saharan Africa has one of the highest cases of neonatal sepsis, particularly in Somalia. The study aimed to assess the prevalence and determine factors that are associated with neonatal sepsis in Yardimeli Hospital Mogadishu, Somalia.

Methods: A hospital-based cross-sectional study between 1 January and May 30, 2022. The study was carried out at Yardimeli Hospital. The study population All neonates admitted to the Neonatal intensive care unit department from January 1, 2022, to May 30, 2022, were included. Data were collected using questionnaires. Logistic regressions were used to determine the factors associated with neonatal sepsis, at the significant level $\alpha=0.05$.

Results: A total of 257 patients newborn were recruited; the prevalence of neonatal sepsis was 31.5%: 61.1% were males, 89.1% were aged group between 0-7 days, and 43.6% were mothers aged between 15-25 years. In the multivariate model neonate those aged 0-7 days were at 4 times (95% CI=1.24-12.97) greater risk to develop sepsis than those aged 8-28days, Neonates who did not cry after delivery was 19 times (95% CI=6.06-60.45) greater risk to develop sepsis than those cried, Neonates those of premature (AOR=10.05, 95% CI=2.27-44.51) and full-term (AOR=10.61, 95% CI=3.57-31.52) were a greater risk to develop sepsis than those postmature, Neonates those need resuscitation were 3 times (95% CI=1.26-7.50) greater risk to develop sepsis than those do not need resuscitation, Neonates those with their mothers who did not have history meconium fluid during delivery were 16 times (95% CI=5.68-48.49) greater risk to develop sepsis than those who had history meconium fluid during delivery.

Conclusion: Several profiles of newborns and mothers are related to sepsis. The implementation should focus on both knowledge and practice for pregnant women to reduce sepsis in newborns.

Keywords: Prevalence, Factors associated with, neonatal sepsis Somalia

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178 | The Development/Use of Smart Systems/Devices Applications for Improving Quality of Life in Daily Life: An Overview
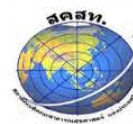
Suppakarn Chansareewittaya[1]
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ABSTRACT

Nowadays, quality of life is essential to everyday life. A lot of people do their activities without good daily life quality. Almost all of these people worry about the status of their houses such as the electricity consumption, temperature, or anything else and anywhere. If there are elders, babies, or children, the concerns about these issues are increased. Not only the status of houses and workspaces, the issues of health, or the surrounding environment such as pm. 2.5 dust is the main issue of today, too. There are a lot of systems/devices which can improve these problems. Smart house systems are proposed. These systems can show the status in real-time camera, electricity consumption, the status of a door locking, the status of the electrical switch, temperature, etc. as wish if the system is a DIY system via the dashboard. Moreover, smart systems for farming/agriculture are proposed, too. The farmer can view the temperature and humidity of the air and soil of the plots. In addition, the farmer can control the electric devices such as springers, fans, lamps and etc. to keep a suitable environment for plants. Smart devices such as fall detection or smartwatch have been proposed and popular, too. These systems/devices can help the improvement of quality of life by monitoring the surrounding environment, behavior, or activity via the systems/devices. The main purpose of this presentation presents an overview of the present technology of smart systems/devices. Some of the systems/devices are DIY that the user/developer can be modified up to the demand. Moreover, these systems/devices are IoT (Internet of Things) that the user can monitor via the internet anytime from anywhere.

Keywords: Internet of Things, IoT, smart system, smart device, quality of life

Other

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| 161 | **Impact Assessment of Trainings of Village Health Sanitation Committees Members on Malariometric Indices in Districts of Uttar Pradesh.** |

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ABSTRACT

Background: In 2019, the global number of malaria cases was estimated at 229 million. An estimated 409,000 deaths were attributed to malaria in 2019. Under-five children are the most susceptible to malaria, accounting for 67% (274,000) of all malaria deaths worldwide in 2019. This study aimed to assess impact of trainings to Village Health Sanitation committee's members on malariometric indices in selected districts of Uttar Pradesh.

Methodology: This cross-sectional study was conducted in the villages of four districts of Uttar Pradesh with high malaria burden. In the present study, 484 participants were interviewed from four districts of Uttar Pradesh.

Results: Nearly all the participants (97.1%) have heard about malaria. Majority of the participants (97.1) were aware that mosquito bites spread malaria. However, many participants were also having a false awareness that malaria is spread by other modes like drinking contaminated water, touching each other, Eating contaminated food, etc. More than half of the participants told that mosquitoes responsible for malaria breeds in stagnant clean water (25.6%) and Stagnant dirty water (28.5%). Nearly half of them were aware that mosquitoes biting time was sunset (42.1%) and sunrise (7.8%).

Conclusion: In the present study, many participants were having a false awareness that malaria is spread by other modes like drinking contaminated water, touching each other, eating contaminated food, etc. Even the knowledge regarding any government programme for the prevention and control of malaria of the mosquitoes was very weak. There is an urgent requirement of increasing knowledge among the Village Health Sanitation Committee members to reduce the malaria burden in the country.

Keywords: Knowledge, Practices, Malaria, Rural, Transmission

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172 Insights of Oral Health Behavior in Underprivileged Community People in Dhaka, Bangladesh

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ABSTRACT

Background: Healthy oral cavity is a reflection of overall good health. Many studies showed that oral health care of an individual depends on their oral health attitude and behavior.

Objective: To evaluate the oral health behaviors among underprivileged community people in Dhaka, Bangladesh.

Methods: This descriptive type of cross-sectional study was conducted among underprivileged community people in some selected slums in Dhaka with a sample size of 205. Samples were selected by the purposive sampling technique. Data was collected by face-to-face interview through semi-structured questionnaires and oral examinations by expert dental surgeons. Data were analyzed by Statistical Package for Social Sciences.

Results: The study found that 47.5% of the respondent's age was between 21-30 years, 58.5% were female, and 42.9% had a secondary level of education. Among them 41.5% of the respondents used 'toothbrush and toothpaste' for cleaning their teeth, 43% of the respondents brush their teeth once daily, 34.6% of respondents' duration of brushing was >5 minutes and 27.3% has used soft brush. Among them 43.9% used the horizontal technique of brushing, 33.7% changed their toothbrush when it became completely useless and 78% of the respondents had the habit of tongue cleaning. Study findings also showed that 63.7% had tooth decay and 62.0% had gingival bleeding. Of them, 66.3% of the respondents had never visited the dentist. In Females duration of tooth brushing time was longer than males ($p<0.05$), the duration was also longer in those who use 'toothbrush and paste' for cleaning their teeth than who use 'neem stick' or 'finger & ash' ($p<0.021$). There was also association found between 'type of materials used for cleaning teeth' and 'visit to dentist' ($p<0.00$).

Conclusion: For a good quality of life and stay free of oral diseases, good oral health behavior is mandatory.

Keywords: Oral health behavior, Insights, Under-privileged, Community people

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PREZODE in Action: Mapping and Analysis of Organizations and Projects in Southeast Asia Relevant to One Health issues.

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ABSTACT

PREZODE (https://prezode.org/) is a global One Health (OH) program introduced at the 2021 One Planet Summit on Biodiversity to promote zoonotic disease prevention, early detection, and epidemic resilience. PREZODE will coordinate regional, national, and worldwide initiatives and programs on emerging zoonotic infectious diseases, develop and implement novel prevention and risk-mitigation measures, and help transition science-based policy toward resilient socio-ecological systems. South-east Asia (SEA), particularly Vietnam and Thailand, underwent mapping and stakeholder consultation between March and August 2022. The purpose of this work was to inform regional actors involved in OH activities about the initiative, map organizations and projects related to animal, human, and/or environmental health in SEA, and gather opinions and ideas from stakeholders on additional PREZODE activities. The initial database was generated via PREZODE co-construction workshops and WOAH sub-regional representation in SEA. Using a snowball sampling technique, global to national institutions and projects were surveyed for new initiatives. The study involved online and in-person activities and interviews with 30 Vietnamese and Thai project stakeholders. We found 690 organizations involved in 240 ongoing programs addressing human, animal, and/or environmental health in at least one SEA country. 200 involve Vietnam. Organizations were analyzed by nature, status, intervention scale, mandates, and discipline. Higher education (141), government (134), and NGOs make up most SEA organizations (127). Nature, orientation, scale, country, goals, action field, and interdisciplinarity were evaluated. The most integrative SEA activities focus on health services and the public health sector (130) and ecosystem, natural resource, and climate management (120). This work is also ongoing in other regions of the world, and it should make it possible for PREZODE members to have global access to OH initiatives and key actors, as well as to avoid duplicating projects that deal with the same subjects.

Keywords: Zoonosis, emerging diseases, global health, quadripartite, ecohealth

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| 156 | **Effect of Fibers from the Nature Waste Materials to Made the Neck Pillow** |

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ABSTRACT

The objectives of this article are the development of a neck pillow from natural waste materials, finding out the ratio of the natural waste materials, size, shape, weight, pressure ability, and sample group satisfaction survey for the neck pillow. The results found that the suitability of an outer and an inner rim shape to minimize are less than 54 centimeters and 23 centimeters, respectively. The ratio of the natural waste materials for making the neck pillow is 40:35:10:10:5 compounded with 5 matters; pineapple fibers, coconut fibers, cotton fibers, silk fibers, duck feathers, and an interface material, respectively. The linear mass density is the physical property of all fiber that matters for consideration in making the test pieces. The linear mass density of pineapple fiber, coconut fiber, cotton fiber, and silk fiber is 52.84×10^{-5} kg/m. 9.5×10^{-5} kg/m. 18.2×10^{-5} kg/m. and 11.4×10^{-5} kg/m., respectively. The sample group was tried out to size satisfaction. The results found that the rim inner, the rim outer, thickness, width, and mass of the neck pillow are 39.00 cm. 89.00 cm. 7.90 cm.,10.00 cm. and 300.0 g. Designed the layers of the natural waste materials inside the neck pillow were pineapple fibers, coconut fibers, cotton fibers, silk fibers, and an interface material. The interface material use bandage. Then, it was covered by white cotton and cotton-dyed natural indigo. The pressure ability of the neck pillow was found in the equation relative to force and angle.

Keywords: Fiber, natural waste, neck pillow

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147 Glass for the Class- Estimation of Hospital-Based Presbyopia Prevalence in Deoghar District of Jharkhand.

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ABSTRACT

Introduction: Presbyopia has a huge global burden, with studies reporting more than a billion people affected globally with an estimated prevalence of 35·6% in people aged 35 years and older. Uncorrected presbyopia is associated with difficulty in daily living activities, adversely affecting quality of life and productivity. Though multitude of studies have been done on refractive errors, studies on presbyopia and uncorrected presbyopia in particular has been lacking in the region.

Objective: To retrospectively determine the hospital-based prevalence of presbyopia in the only tertiary care teaching institute of Deoghar district of Jharkhand-one year study.

Methods: The Ophthalmic department's refraction records were used to retrieve the case folders of all patients prescribed spectacles for near vision correction from August 2021 to July 2022. Information was extracted regarding patient's age, sex, power of presbyopic correction and previous usage of presbyopic correction, if any. The data was utilized to calculate the prevalence magnitude of presbyopia and uncorrected presbyopia among men and women and interpreted for any statistical relevance.

Results: Prevalence of Presbyopia was found to be 18.7%. Uncorrected presbyopia was found to be more prevalent in females with only 20% using any prior presbyopic correction as compared to 47.7% usage by males. Prior correction was used mostly in the age group 41-45 years and least in the age group 35-40 years.

Conclusions: Presbyopia has a high prevalence in this region with uncorrected presbyopia being more prevalent in females. A large population-based study needs to be done to judge the magnitude of this problem and steps for encouraging awareness and acceptance of presbyopic correction needs to be taken.

Key words: Presbyopia, uncorrected, hospital-based

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182 — Patterns of Use in Alcohol Drinking Among Factory Workers in Mandalay: Cross-sectional Study

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ABSTARCT

Background: In Myanmar, alcohol drinking becomes one of the major health risk problems because of changing lifestyle, social and economic development. This study aims to explore the pattern of use in alcohol drinking among workers of Myitnge Factory.

Method:320 workers who lived in Myitnge factory of Myitnge Town and have habits of alcohol drinking, fulfilled questionaries. The structured questionnaire contains basic information and The Alcohol, Smoking and Substance Involvement Screening Test (ASSIST), conducted with face-to-face interview. Data was collected from April-May 2019, analyzed via descriptive statistics, inferential statistics, and Chi-square test at a statistical significance of 0.05 level.

Results: 1-3 days per week drinking Beer and whisky is the most common drinking frequency in the past 12 months. The average age of started drinking alcohol was 24 years old ranging from 16 years old to 50 years old from the factor of experimental drinking. Most of the workers enjoy standard 5 % alcohol contained beer. 25% of the participants were drinking 5 or more 5 drinks per single occasion.

Conclusion: Research has revealed that 2-4 days per month drinking habits are the most common habits for a lifetime among participants and 1-3 days per month drinking is most common in the past 12 months. The reason for drinking in the past 12 months that are given by most workers was own satisfaction. In terms of overall associations between characteristics of the workers and alcohol drinking, there is a significant difference in age, education, and income for alcohol drinking per single occasion. Religion and ethnic groups were associated with the frequency of betel nuts per month. Most of the participants were at medium and high risk of alcohol drinking according to ASSIST. The preventive measures for both alcohol drinking should be considered and conducted because of medium and high risks of developing health problems due to alcohol drinking among workers of Myitnge factory.

Keywords: Alcohol drinking, Factory workers

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192	**Knowledge and Practices of Complementary Feeding Amongst Mothers of 0-24 Months Old Children in Mohali, Punjab**

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[1]*Government Home Science College (Affiliated to Panjab University), Chandigarh (India)*

ABSTRACT

Background: Child health is one of the alarming social issues that must be addressed in order to ensure effective national development and progress. WHO and UNICEF (2021) have recommended a set of indicators that serve as a standard for analysing Infant and Young Child Feeding (IYCF) practices to support programmatic action and contribute to tracking progress on IYCF at the national and global levels.

Aims: To assess the knowledge, practices, and associated factors complementary feeding factors amongst mothers of infants and young children aged 0-24 months in Mohali.

Methods: Hospital-based cross-sectional study was prospectively conducted on mothers (n=500) of infants and young children of age 0-24 months. The respondents were studied with the help of the, standardised questionnaire (WHO/UNICEF, 2021), operationally modified according to regional practices and consumption of locally and seasonally available foods. The questionnaire comprised of both open- ended and closed ended questions.

Results: Out of the total children (n=500), 242 children were in the age-group 0-6 months while 258 children were in the age- group 7-24 months. 47.8 % (n=239) subjects were female while 52.2% (n=261) subjects were male. Majority of mothers fed the child as usual during child sickness whereas 7.8% (n=39) mothers fed the child forcibly. Statistically significant relation was found between eating habits practiced by mothers during child sickness and educational qualification of mother. Out of 174 children who started with solid foods 70.7% female and 74.4% male children started when they were 4-6 months old. Type and frequency of food and liquid fed to the child was also assessed. Most of (15.2%) mothers gave cow's milk to their child.

Conclusions and Recommendations: In this study, mothers had satisfactory knowledge regarding complementary feeding practices however efforts are required to aware the mothers regarding various regional, seasonal and easy-to-cook recipes so that all food groups can be incorporated in the child's diet to improve nutritional deficiencies. Therefore, context specific guidance may improve the misconceptions and improve practices related to infant complementary feeding amongst mothers in this community.

Keywords: Complementary feeding; IYCF; solid foods; regional recipes; nutritional deficiencies

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| 205 | **Intimate Partner Violence among Female Garment Workers in Selected Garment Factories in Gazipur District during COVID-19 Pandemic Situation** |

Mirza Nazia Shabnam[1]
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Background: Intimate partner violence is a violation of human rights and major public health issue worldwide. Although it is doubted that economic regressions have boost up the intimate partner violence, there's not have enough explorative literatures that make agreement. Opposite to this backdrop, the present study is conducted to explore the intimate partner violence among female garment workers in selected garment factories in Gazipur district during COVID-19 pandemic situation.

Methods: A cross-sectional study conducted among 384 in the selected garment factories, Gazipur, Dhaka, Bangladesh. HITS questionnaire was used as tool. Collection of data from all married female garment workers equal or more than 18 years and working in the garment at least for one year. Married women, garment workers were selected purposively. Ethical permission was taken from the Institutional Review Board of Bangabandhu Sheikh Mujib Medical University before conducting the study.

Results: This cross-sectional study has found the prevalence of IPV about 45%, where 43% were physically abused, 40% were sexually abused, 52% were emotionally abused, 18% were economically abused when their income was totally off during COVID-19 pandemic situation. The mean (SD) age of respondents was 28.28 (5.98). The study has found that socioeconomic status, educational status, types of marriage, monthly income, pandemic induced economic disruptions were the associated factors of intimate partner violence amid pandemics.

Conclusions: In conclusion, the COVID-19 pandemic situation increased economic downturns and fired up the intimate partner violence. Special preventive measures should be taken as partner violence is a critical situation and has adverse effects on women health. Increase public health awareness, improvement of educational system, promote healthy relationship skill training and counselling system, implementation of law on violence can decrease the intimate partner violence.

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The Comparative Effect of Antioxidant, Total Phenolic and Flavonoid Content Between Cinnamomum.spp Oil and Its Powder Form

Panit Yamchuen[1], Kanittaporn Trisat[2], Nanteetip Limpeanchob[2]
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ABSTRACT

Cinnamon is traditionally used for food, flavoring product, and pharmaceutical preparations against various ailments. However, the extraction methods have reported that influenced on the polyphenol composition and the antioxidant activities. There are reported that cinnamon extract (powder form) and cinnamon oil show significant for the anti-diabetic activities, lowering cholesterol, antioxidant, and antifungal. This study aimed to investigate and comparison effect of antioxidant, total phenolic and flavonoid content between *Cinnamomum.spp* oil and its power form. The antioxidant activities were evaluated by Ferric iron reducing antioxidant power (FRAP) assay and DPPH radical scavenging capacity assay. Total phenolic content was determined using Folin-Ciocalteu method and total flavonoid contents were determined using the aluminum chloride colorimetric method. The result showed that the free radical scavenging of pure cinnamon oil was traces but cinnamon powder found to reduce free radical and IC_{50} was 198.5 mg/ml. The FRAB assays showed substantial metal ion reducing activity by Trolox and dose- dependent reduction by cinnamon powder. However, the metal ion reducing of cinnamon oil was undetectable. The comparative of total phenolic content showed that powder form containing the phenolic compounds about 1275.25 ±24.07 mg GAE / g of sample but cinnamic oil was less. Both powder form of cinnamon and cinnamic oil containing the flavonoid compounds was less. This study suggests that powder form of cinnamon may become potential anti-oxidative stress related to the total phenolic content and may be useful for supplementation.

Keywords: Cinnamon; oil; antioxidant; flavonoid; phenolic

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224 Assessment of Nicotine Dependence and Readiness to Change Amongst Patients Attending Tobacco Cessation Clinic

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ABSTRACT

Background: Tobacco epidemic is one of the biggest threats to mankind. Nicotine is the addictive substance present in tobacco. Aim: To access nicotine Dependence and stage of behavioural change amongst tobacco users visiting Tobacco cessation Clinic.

Methods: A retrospective study was performed by analysing the data recorded in the Tobacco Cessation Clinic at the department of Public Health Dentistry. The essential data was extracted from the tobacco cessation registration forms of tobacco users and then analysed through a statistical software using appropriate tests.

Results: Number of tobacco users was more in males than in females with a preference of smokeless type of tobacco usage. Most of the tobacco users were graduates or postgraduates (n=177,62.3%). More than 50% of the tobacco users had tried quitting before because of health issues and craving was the main reason for relapse. Most of the patients who attended the TCC had medium level of dependence on nicotine and in the "Preparation phase" to quit the habit.

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| 229 | **Child Rights to Participation: A Mixed-Method Study in A Slum Settlement of Urban Dhaka** |

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ABSTRACT

Background: Child participation is a process of including children in decision-making that affects their lives to promote good change. Children in Bangladesh, particularly those from hard-to-reach areas and minority communities, were denied the opportunity to express their views and opinions.

Objective: To explore children's rights to participation, their ability to participate in family, school, and community activities, and their voice in decision-making.

Methods: This mixed-method study was carried out in the Adabor slum area, Dhaka, Bangladesh, from January to December 2021. Six parents and six children aged 11-17 were interviewed in-depth for qualitative data, where data saturation was the principle of data collection. Before quantitative data collection, a list of households with at least one child aged 11-17 from the study area was prepared. A total of 384 parents were recruited by simple random sampling using the household list as the sample frame. The rights to protection, provision and participation screening tool (3PST) were used to collect quantitative data from the parents. For interview data, qualitative content analysis was used. Multiple regression analysis was performed to predict the factors associated with child participation rights

Results: Male children participate in community activities twice as frequently as female children (6.7% vs. 3.6%). Male children (1.1%) were more likely than females (0.5%) to express their views on community concerns. The age of the indexing children (OR= 1.3, 95% CI=1.2; 1.4, p-value <0.01) has a positive link with child rights to participation, whereas lifetime physical abuse (OR=0.4, 95% CI=0.2; 0.8, p-value 0.02) has a negative relationship. Poverty is the main barrier to child participation in the slum area.

Conclusion: As Bangladesh adopted the CRC in 1998, the government should emphasize enhancing children's engagement in their communities more.

Keywords: Right to participation, ICAST-P, 3PST, community participation.

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234 — Health Information and Media Literacy on Elderly in Bangkok Urban Communities

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ABSTRACT

Health information passed on through various kinds of media including personal media, mass media, new media, and social media has a hidden agenda to bring advantage to its creators. Elderly is interested in searching for and exposed to plenty of health news and information. The lack of good judgment may lead to misuse of information and cause health problems. The elderly's media literacy is thus a significant factor. This mixed-method research aimed to explore the elderly's exposure to health media and examine media literacy. Questionnaires completed by a sample of 379 elderly people and 8 focus group discussions were employed. The results show that communication channel used most is personal media, namely doctors, which amounts to 38.7%. The second channel is televisions, and the third one is descendants amounting to 36.5% and 23.4% respectively. For media literacy, 61.8% of them think that they can gain a small amount of information through the media, 61.2% of them can partly identify or indicate purposes of the received messages, 47.8% of them are able to somewhat identify senders, 59.1% of them can somewhat identify communication methods employed to draw their attention and rivet them to the messages, 60.9% of them can slightly explain their emotions and feeling while receiving the messages, and 62.8% of them can partly indicate what the media suggest or instruct. Focus group discussions show that the elderly acquires media literacy mainly due to their experience. They compare new information received via the media with their own experience and inquire about it with medical personnel. In conclusion, lack of criticism is a weakness when having media exposure. Elderly should study strategies of analysis and criticism of media content. Media literacy must be improved due to media and applications are likely to promote the elderly's health.

Keywords: Media Literacy, Health Information, Elderly, Urban Communities

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239 | Effects of High – Intensity Interval Training on 2000-Meters Rowing Performance in Para - Rowers

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ABSTRACT

Introduction: High-intensity interval training (HIIT) could be a method of performance-enhancing commonly used in individual and team sports training programs. Great improvements were reported after the high-intensity interval training intervention compared to traditional continuous training on the effectiveness of the rowing time trial in able-bodied rowers. PURPOSE: This study was to examine the effects of high-intensity interval training on 2000-meter rowing performance in para rowers.

Methods: Eight para-rowers (4 males, 4 females) from the Thai national team volunteered to participate in this study (mean ± SD: age 36.8 ± 1.32 yrs; height 160.8 ± 15.43 cm; weight 55.40 ± 8.14 kg; BMI 22.76±7.11 kg/cm2). Classification status: PR1 = 1 male, 1 female; PR2 = 1 male, 1 female; PR3 = 2 males, 2 females. The participants were healthy, well-trained, and free from injuries. The high intensity interval training of this study developed based on the Tabata protocol included that 4-minutes of cardiovascular training improved physical performance. It lasted six weeks and was performed twice a week in the evening (Tuesday and Friday). Overall, 16 training sessions were carried out. Each session lasted 60 minutes and consisted of a 10-minute warm-up, a 40-minute HIIT training primary portion, and a 10-minute cool-down. During the main portion of the session, the participants completed eight exercise series in each training session. Each series lasted four minutes and consisted of eight repetitions of exercises with 20 seconds of work alternated with 10 seconds of rest.

Results: The results of this study indicate significant rowing performance differences between before and after short-term plyometric training. The 2000-meter rowing time, average rowing power, and peak rowing power significantly increased ($p < 0.05$), but no significant increase in rowing stroke rate was found ($p > 0.05$).

Conclusion: High-intensity interval training was found to significantly increase 2000-meter rowing times, average rowing power, and peak rowing power, but the training did not significantly increase stroke rate. This study suggests that high-intensity interval training can improve rowing performance in para-rowers.

Keywords: High – Intensity Interval, Rowing Performance, Para - Rowers

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281	**Effectiveness of an Intervention to Promote Home-Based Early Childhood Care and Development Practices Among Mothers in the Estate Sector: Evidence Using a Health Promotion Approach in Sri Lanka**

Naradi Shanuka Baduge[1], Nuwan Darshana Wickramasinghe[1], Najith Duminda Guruge[1]
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ABSTRACT

Introduction: Home-based early childhood care and development (HBECCD) includes a variety of care arrangements from caregivers and forms of noncustodial childcare, especially for children living in disadvantaged communities. However, limited studies have assessed the effectiveness of HBECCD interventions in disadvantaged communities.

Objective: To assess the effectiveness of an intervention to promote HBECCD practices among mothers of children between 1 to 5 years in a selected tea estate sector, Kegalle district, Sri Lanka

Methods: A community-based interventional study was conducted among 60 mothers of children between 1 to 5 years in a selected tea estate sector, Kegalle district, Sri Lanka. The intervention was conducted for 6 months that included initial interactive discussions on the importance of HBECCD practices using success stories to empower mothers followed by the prioritization of the determinants and facilitation of the mothers to develop tools to measure changes. Data were collected using interviewer-administered questionnaires. The effectiveness of the intervention was assessed by comparing pre- and post-data using the McNemar Chi-Square test and paired t-test.

Results: The mean (SD) age of the mothers was 30.3(6.1) years and 55.0%(n=33) had not completed secondary education. There was a statistically significant improvement in the negative attitudes toward HBECCD practices(p<0.001). The average (SD) active interaction time of mothers with children per day increased from 8.6(3.5) hours to 9.4(3.1) hours(p<0.001). After the intervention, there was a statistically significant improvement in engaging the HBECCD practices among mothers(p<0.001). Similarly, there were statistically significant improvements(p<0.001) in the support from the fathers, community, family members and siblings for HBECCD practices(p<0.001). There was a statistically significant difference in changing activities according to age appropriateness such as modifying the baby rooms(p<0.001).

Conclusion: The community-based intervention with the active engagement of the mothers was effective in promoting HBECCD practices among mothers in the tea estate sector, Sri Lanka.

Keywords: Home-based Early Childhood Care and Development; Tea estate sector; Community- based intervention; Health Promotion

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250 — Quality of Life, Coping Strategies and Psychosocial Support Status of Caregivers Having Children with Neurodevelopmental Disabilities: A Cross-Sectional Study in Bangladesh

Anika Tasnim[1], Sharmin Islam[2], Marium Salwa[1], M Atiqul Haque[1]

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ABSTRACT

Introduction: Although caregiving has been considered as a normal phenomenon for parents, delivering care to a child with developmental disabilities could be distressful for parents. Families who have a child with unique healthcare requirements have a different experience than other families. Having children with neurodevelopmental disorders (NDD) may increase parental stress and significantly lower their quality of life (QoL). Because most families cannot cope with the condition of having a child with NDD, parents' quality of life worsens.

Objectives: This study explored the relationship between quality of life, coping strategies, and psychosocial support status of the caregivers of children with NDDs.

Methods: This cross-sectional study interviewed 906 caregivers of children having NDDs. We used the perceived stress scale (PSS-10) to measure stress level and World Health Organization Quality of Life Measure Abbreviated version (WHO-QOL BREF) to measure health-related QoL. We also developed a questionnaire to measure the caregivers' socio-demographic characteristics, coping strategies, and psychosocial support status. A multiple regression analysis was employed to identify the significant contributors to QoL.

Results: Increased age of participants and children, lower socioeconomic and educational status, increased birth order of the child, and PSS score are all negatively associated with QoL. Mothers had the lowest QoL among all caregivers. Escaping from the situation was the most commonly used coping strategy to avoid the circumstances. The social relationship domain of QoL had the highest score (M=14.6, SD=2.0), whereas the psychological domain had the lowest score (M=12.0, SD=2.4)

Conclusion: The findings from the study should be considered in legislation to provide better and more targeted assistance and interventions. Psychosocial intervention programs for caregivers of children with NDDs should include techniques for improving their QoL. There is a need for more research into the impact of different developmental impairments on caregivers QoL and psychosocial support status.

Keywords: WHO-QOL BREF, neurodevelopmental disorder, PSS-10, caregivers, parenting stress, coping strategies

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267	**Reasons for Waiting to be a Dental Surgeon as a Career**

Nabhira Aftabi Binte Islam[1]
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ABSTRACT

Introduction: The growth of the socioeconomic, political, and societal spheres has an effect on the healthcare workforce, which is seen as "vital" for health systems. In Bangladesh, more than 80% of the population has one or more oral and dental diseases.

Objectives: To find out the cause to become a dental surgeon choose as a career choice.

Materials and methods: It were a descriptive type of cross-sectional survey that was conducted to find out the main reason for wanting to be a dental doctor as a profession, at a selected dental unit in Dhaka city. The respondents were selected purposively. Semi-structured questionnaires were developed and delivered to the respondent. A total of 78 respondents were selected purposively. The survey was conducted on the period on 3rd of March 2022.

Results: In this study distribution of the respondents according to their sex, females were 80.77%. 51% of respondents were from Dhaka, Bangladesh and 27% came from the periphery. Educational background of the parents, fathers 25.6% and mothers 11.5% have post-graduation degrees. of Most of the respondents' fathers were (76.9%) service holders, 16.7% were businessmen and 15.4% mothers of the respondents had done a job, and 83.3% were homemakers. 75.6% did not get a chance at Gov. University. Among the respondents who got a chance at Government University, 36.8% did not get admission because the University was far from Dhaka. 31.6% mentioned that their family did not support them to study there. 18% of respondents responded that becoming a doctor was their life's aim, whether it be MBBS or BDS. 53.8% of respondents have admitted to the BDS course to fulfill their parent's dream and 20.5% of participants said that the BDS course is Less costly and has a shorter study duration than MBBS.

Conclusion: Every person has an aim in life. But sometimes they have been forced to do another thing that they are not wanting to be. So, those who will become e dental surgeons in the future have to take all responsibilities for the patient's well-being. It's necessary to be passionate about their profession.

Keywords: Dental surgeon, career, choice

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269 — Trend and Influencing Factors in Specialty Choice Among Post-Graduate Medical Students of Bangabandhu Sheikh Mujib Medical University, Bangladesh

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[1]Bangabandhu Sheikh Mujib Medical University

ABSTARCT

Background: There has been a rise in female students in undergraduate medical education over the last 2 decades in Bangladesh, with gender preference in specialty choice.

Objective: We aimed to determine the trend and influencing factors in specialty choice among postgraduate medical students in Bangladesh.

Method: This cross-sectional study was carried out at Bangabandhu Sheikh Mujib Medical University (BSMMU) from November 2021 to January 2022. Face-to-face interviews were conducted with 118 postgraduate medical students and asked them about the motivation behind their program selections. Secondary data regarding students' admission from 2016 to 2020 were acquired from the registry of the Information Technology cell of BSMMU.

Result: From 2016 to 2020, 9,112 post-graduate medical students were enrolled in 73 postgraduate medical programs across its five faculties (Surgery, Medicine, Basic Science and Para Clinical Science, Pediatrics, and Preventive and Social Medicine). There was a gradual increase in female students from 41.6% in 2016 to 49.3% in 2020. Different programs within the faculties of Medicine and Surgery were dominated by male students whereas the faculties of Basic/Paraclinical Science, Pediatrics, and Preventive/Social Medicine were dominated by female students. The most significant influencing factors for medical students' choice of specialization were "personal interest" (86.3%), "future career potential" (74.6%), and "demand for the specialty" (73.7%). Significant gender variation in specialty preference exists.

Conclusion: Over time female postgraduate medical students has increased with gender preference in specialty choices. 'Personal interest' in the specialty was the primary motivating factor in enrollment in postgraduate programs. The proportion and the fact that men and women choose different specialties may help policymakers decide how to distribute the health workforce equitably.

Keywords: Postgraduate medical student, faculty, specialty choice, Bangabandhu Sheikh Mujib Medical University
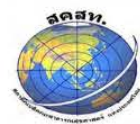
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Track: Health System and Determinant

No.	Name	Affiliation	E-mail	Paper ID	Title of an abstract
1	Angeli Abegail Quiton Naranja	University of Baguio, Philippines	angeli.naranja@e.ubaguio.edu	129	Race to a Responsive Blood Donor Management: Demographic Profile, Knowledge, Attitude, and Practices (KAP) of Blood Donors in a Low-Middle Income Country
2	Ashoo Grover	Indian Council of Medical Research, New Delhi	ashoogrover@gmail.com	131	Standard Treatment Workflows: an Approach Towards Universal Health Coverage
3	Kesornsukon Poonthananiwatkul	Bangkok Hospital Phuket	Supannika.Po@bgh.co.th	155	Impact of Strengthening Mental Health on Prevention of Burnout, Bangkok Hospital Phuket.
4	Sarder Mahmud Hossain	Professor & Head, Department of Public Health, Northern University Bangladesh (NUB)	hossainsarder059@gmail.com	177	Service Seeking Knowledge and Behavior Towards Safe Dental Care among Bangladeshi Patients
5	Pratap Kumar Jena	School of Public Health, KIIT Deemed to be University	drpratapjena@gmail.com	216	Spatial Distribution and Referral Pattern of Sick Neonates to a Tertiary Care Neonatal Centre in Bhubaneswar, Odisha
6	Parimala Mohanty	Institute of Medical Sciences & SUM Hospital, Siksha 'O' Anusandhan Deemed to be University	drparimalamohanty@gmail.com	244	Utilization of AYUSH Practitioner's Services among Older Adults in India: a Subgroup Analysis of Wave-1 (2017-18) Longitudinal Aging Study in India
7	Parimala Mohanty	Institute of Medical Sciences & SUM Hospital, Siksha 'O' Anusandhan Deemed to be University	drparimalamohanty@gmail.com	245	Unmet Needs for Hearing Assistive Devices among Older Adults in India
8	Sarojini Sahoo	Kalinga Institute of Medical Sciences - KIMS Hospital, Bhubaneswar	sarojinisahoo0986@gmail.com	266	Training Need Assessment of Nurses in Intensive Care Units at All India Institute of Medical Sciences, Bhubaneswar

Track: HIV, AIDS, and Infectious Disease

No.	Name	Affiliation	E-mail	Paper ID	Title of an abstract
1	Phanvasri Saengsuwan	Prince of Songkla University, Thailand	sphanvas@medicine.psu.ac.th	124	Occurrence of Extended-Spectrum Beta-Lactamase Producing Escherichia coli and Klebsiella spp. Isolated from Different Clinical Samples in a Tertiary Care Center, Southern Thailand
2	Pisit Poolprasert	Biology Program, Faculty of Science and Technology, Pibulsongkram Rajabhat University, Phitsanulok, Thailand 65000	poolprasert_p@psru.ac.th	127	Evaluation of the Use of Different Solvents for Mitragyna speciosa Leaf Extracts on Larvicidal Activity Against Aedes aegypti (Diptera: Culicidae)
3	Pilasinee Wongnuch	Mae Fah Luang University	pilasinee.won@mfu.ac.th	158	Internalized Stigma and HIV Status Disclosure among Hill Tribes, Northern, Thailand.
4	Ajit Kumar Singh	American Institute of Medical Science, Udaipur, India	ajitkusingh279@gmail.com	215	Community Sero-Prevalence of Hepatitis B In India: A Review and Meta-Analysis
5	Azizur Rahman Sharaque	Bangabandhu Sheikh Mujib Medical University	azizurrahmanmars@gmail.com	218	Tuberculosis among Household Contacts of Multidrug-Resistant Tuberculosis Patients in Dhaka, Bangladesh
6	Abdirahman Khalif Mohamud	Faculty of Medicine, and Health Science, SIMAD University, Mogadishu Somalia	6451804014@lamduan.mfu.ac.th	221	Prevalence of and Factors Associated with Depression among Adult Patients Living with HIV/AIDs Undergoing ART Unit in Banadir Hospital, Mogadishu Somalia
7	Thu Quang Le	Pasteur Institute in Ho Chi Minh City	quangthua2@gmail.com	241	HIV Case Surveillance to Monitor the HIV Epidemic and Program Outcomes in Vietnam
8	Panupong Upala	Mae Fah Luang University	panupong.upa@mfu.ac.th	252	Prevalence and Factors Associated with Hepatitis B Infection among the Hill Tribe Youths, Northern Thailand

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9	Phutthipong Makmai	Faculty of Public Health, Nareasuan University	Amornsakpoum1@gmail.com	286	Health Literacy Effecting to Preventing and Controlling Denque Hemorrhagic Fever Among Village Health Volunteer, Pattani Province.
10	anutida pramyothin	Naresuan University	khungkhing333@gmail.com	299	Factors Influencing Dengue Hemorrhagic Fever Prevention and Control Behaviors among Village Health Volunteers in Wang Thong District, Phitsanulok Province
11	Yada Aronthippaitoon	Chiang Mai University	yada_aroon@cmu.ac.th	301	Assessment of Neutralizing Activity of Anti-Hepatitis B Surface Antibodies from Vaccinees Against Various Hepatitis B Virus Strains

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Track: Medical Technology and Innovation

No.	Name	Affiliation	E-mail	Paper ID	Title of an abstract
1	Kenneth Laderas Esmeralda	University of Santo Tomas	kenneth.esmeralda.pharma@ust.edu.ph	132	Self-Perceived Performance of Medical Technologists Working in Public and Private Hospitals in Manila, Philippines Prior To and During the Time of the COVID-19 Pandemic
2	Bilkis Banu	Northern University Bangladesh	bilkisbanu80@gmail.com	165	Perceptions Regarding Smart Phone Application for the Self-Management of Diabetes: A Qualitative Study in Comprehensive Approach
3	Takashi Yamano	Faculty of Public Health, Mahidol University	ymntkspa23@gmail.com	251	The Cost-effective Advantage of Remote Monitoring System for Patients with Arrhythmia Treatment on Rural Area in Japan
4	Phataraphon Markmee	Faculty of Public Health, Naresuan University	phataraphonm@nu.ac.th	287	An Investigation of Spatial Potential in Healthcare Facilities to Promote Medical Tourism in Lower Northern Region, Thailand

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Track: Mental Health

No.	Name	Affiliation	E-mail	Paper ID	Title of an abstract
1	Kurnia Dwi Artanti	Universitas Airlangga	kurnia-d-a@fkm.unair.ac.id	144	The Relationship of Stress Levels During the Covid-19 Pandemic with Changes in Coffee Consumption Patterns in Students of Sman 2 at Madiun city
2	Abhishek Onkar	All India Institute of Medical Sciences (AIIMS) Deoghar	doc.abhishekonkar@gmail.com	147	Glass for the Class- Estimation of Hospital-Based Presbyopia Prevalence in Deoghar District of Jharkhand.
3	Flavie Luce Goutard	UMR ASTRE, CIRAD	flavie.goutard@cirad.fr	148	PREZODE in Action: Mapping and Analysis of Organizations and Projects in Southeast Asia Relevant to One Health Issues
4	Vineet Kumar Pathak	SGT Medical College, Gurugram, Haryana, India	pathakvineet2089@gmail.com	153	Prevalence and Effect of Cyberbullying on Mental Health among Adolescents in Gurugram District-A Price to Pay in Digital World
5	Pacharee Krongkitsiri	Department of Science and Mathematics, Rajamangala University of Technology Isan Sakonnakon campus, Sakonnakon, Thailand	pacharee.kr@rmuti.ac.th	156	Effect of Fibers from the Nature Waste Materials to Made the Neck Pillow
6	Nasrin Akter	Lecturer, Department of Public Health, Northern University Bangladesh, Dhaka, Bangladesh	nasrin.ddc@gmail.com	171	Astute Exploration of Collective Mental Health Events among the Residents of Elderly Care Homes in Bangladesh
7	Onnalin - Singkhorn	School of nursing, Mae Fah Luang University	onnalin.sin@mfu.ac.th	195	Developing Depression Caring Model for the Hill Tribes: A Family and Community-Based Participatory Research

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No.	Author	Affiliation	Email	ID	Title
8	Tanveer Kaur	University of Delhi, India	tanveerkaur2195@gmail.com	210	Dose Effect Association Between BMI and Decline in Overall and Domain-Specific Cognitive Functioning Among the Indian Adults
9	Hoshiar Singh Chohan	Adesh Medical College, Pt. BD Sharma University of Health Sciences, Rohtak, Haryana, India	drhsc26@gmail.com	211	An Epidemiological Study to Assess the Prevalence, Knowledge and Attitude on Substance Abuse Among College Going Youths of a Hilly District, North India
10	Syeda Naheed Sultana	Bangabandhu Sheikh Mujib Medical University (BSMMU)	mirpur2500@gmail.com	217	Sense of Coherence and Coping Strategies and Their Influences on Quality of Life of Breast Cancer Patients in Bangladesh: A Hospital Based Cross-sectional Study
11	Alifa Syamantha Putri	National Research and Innovation Agency, Indonesia	alif007@brin.go.id	235	Visual and Descriptive Analysis of the Scoping Review in Mental Health Efforts in Indonesia
12	Shivendra Kumar Singh	Professor, Department of Community Medicine and Public Health, King George's Medical University, UP, Lucknow, India	shivmymail0522@gmail.com	236	Level of Stress and Its Predictors among Undergraduate Students of Lucknow City
13	Khaothin Thawichai	Suranaree University of Technology, Scholl of Sports Science, Nakhon Ratchasima, Thailand	thawichai.khaothin@gmail.com	237	The Effect of Anapanasati Meditation Training on Anxiety and Rowing Performance in Para-Rowers
14	Khaothin Thawichai	Suranaree University of Technology, Scholl of Sports Science, Nakhon Ratchasima, Thailand	thawichai.khaothin@gmail.com	238	The Athletics Coping Skills of Thai National Athletes with Physical Disabilities
15	Sirima Mongkolsomlit	Thammasat University	tu.sirima@gmail.com	279	Assessment of Health and Other Quotients for Living among Student in Semi-Urban Area of Thailand
16	Sirima Mongkolsomlit	Thammasat University	tu.sirima@gmail.com	280	Assessment of Health Quotient and Other Quotients for Living among Student in Semi-Urban Area of Thailand

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Track: Non-infectious Disease and Injury

No.	Name	Affiliation	E-mail	Paper ID	Title of an abstract
1	Vignesh Viswanath Shanmugasundaram	PSG Institute of Medical Sciences and Research	svignesh99@gmail.com	142	Erectile Dysfunction among Type 2 Diabetes Patients and Its Correlates
2	Arief Hargono	Faculty of Public Health, Universitas Airlangga	arief.hargono@fkm.unair.ac.id	145	Evaluation of Community Based Non-Communicable Disease Surveillance for Monitoring Coronary Heart Disease Risk Factors Based on Surveillance Attributes
3	Amornsak Poum	Faculty of Public Health, Nareasuan University	Amornsakpoum1@gmail.com	151	Factors Effecting to Blood Sugar Level Control among Diabetes Mellitus Type 2 at Community Hospital, Phuket Province
4	Mithila Faruque	Bangladesh University of Health Sciences	mithilafaruque@buhs.ac.bd	152	Baseline Prevalence of Hyperglycaemia and Its Predictors in a Rural Adult Population of Bangladesh: Outcome from the Application of WHO PEN Interventions
5	Sethapong Lertsakulbunlue	Department of Pharmacology, Phramongkutklao College of Medicine, Bangkok 10400, Thailand	earthyboy12@gmail.com	157	Trends in Predicted 10-Year Risk for Cardiovascular Disease among Patients with Type 2 Diabetes in Thailand, from 2014 to 2018
6	Debashis Mohapatra	School of Public Health, KIIT DU, India	shaktideb99@gmail.com	167	Change in Digit Bias for Cigarette per Day (CPD) Assessment between First and Second Wave of Global Adult Tobacco Survey in 12 Countries
7	Shriram Gosavi	Maharashtra University of Health Science, Nashik, Maharashtra, India	shriramgosavig@gmail.com	168	Impairment, Disability, Mortality and Financial Impact due to Injuries. A Community Based, Cross-Sectional Study from Rural Area of Wardha, India
8	Ray-Hannah Ganoy Makakena	University of Southern Mindanao	rghmakakena@usm.edu.ph	170	Views and Experiences on Fasting during Ramadan among Muslim Patients with Type 2 Diabetes in Kabacan, North Cotabato through the Lens of Health Belief Theory: A Phenomenological Inquiry

#	Name	Affiliation	Email	Code	Title
9	Dr. Sujana Haque Chowdhury	Northren University Bangladesh.	suzanahaque020@gmail.com	175	Comparative Scenario of Unmet Supportive Care Needs of Breast Cancer Patients in Bangladesh: Public vs Private Cancer Treatment Centre
10	Dr. Sujana Haque Chowdhury	Northren University Bangladesh.	suzanahaque020@gmail.com	176	Ideal vs Prolonged Standing Duration Influencing Musculo-Skeletal Disorders in Bangladeshi Dental Professionals
11	Sharmin Sultana, Palash Chandra Banik	Mahidol University	sharminsultanabristy@gmail.com	185	Prevalence and Risk Indicators of Diabetes and Prediabetes among Santal Indigenous (Minority) Group in Bangladesh
12	Samran Siriphakhamongkhon	Office of Disease Prevention and Control 3 Nakhon Sawan Province, Department of Disease Control, Ministry of Public Health, Thailand	Siriphakha@gmail.com	191	Model Development of the Create Values and Health Literacy in Prevention Non-communicable Diseases for School- Age Children
13	Nancy Satpathy	Siksha 'O' Anusandhan University, Odisha, India	nancytani.satpathy@gmail.com	201	Trend in Pooled Prevalence of Cigarette Smoking and Access to Cigarettes among Youths in Four South-East Asian Countries
14	Nancy Satpathy	Siksha 'O' Anusandhan University, Odisha, India	nancytani.satpathy@gmail.com	203	Assessing Compliance with Health Warnings on Tobacco Packs Marketed in a City of an Eastern Indian State
15	Nancy Satpathy	Siksha 'O' Anusandhan University, Odisha, India	nancytani.satpathy@gmail.com	204	Period Effect of NRT (Nicotine Replacement Therapy) Inclusion in National Essential Medicine List: Evidence from Two Waves of Global Adult Tobacco Survey in Four Countries
16	Pratap Kumar Jena	School of Public Health, KIIT Deemed to be University	drpratapjena@gmail.com	212	Decision Tree Approach to Identify Predictors of Quit Intention: Results from Second Wave of GATS-India Survey

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No.	Name	Affiliation	Email	ID	Title
17	Anika Tasnim	Bangabandhu Sheikh Medical University	tasnim.nishi.tn@gmail.com	220	Epidemio-Clinical Characteristics of People with Spinal Cord Injury in Bangladesh
18	Satyabhama Sahoo	KIIT School of Public Health, Odisha, India	sahoosatyabhama97@gmail.com	226	Awareness about Breast Self-Examination among University Students: Review and Meta-analysis
19	Parimala Mohanty	Institute of Medical Sciences & SUM Hospital, Siksha 'O' Anusandhan Deemed to be University	drparimalamohanty@gmail.com	247	Body Mass Index, Waist Circumference, and Waist-Hip Ratio and Their Association with Cardiovascular Disease and Diabetes among Indian Adults of 45 Years and Above: Findings from LASI Wave-1
20	Vinay Prakash Srivastava	Department of Community Medicine & Public Health, KING GEORGE'S MEDICAL UNIVERSITY, UP, LUCKNOW	vinayp.1956@gmail.com	275	Quality of Life Among COPD Patients in a Tertiary Care Hospital of Lucknow
21	Uraiwan Thamkhuru	MPH Student at College of Public Health Science, Chulalongkorn University	anne.thamkhuru@gmail.com	291	Factors Associated with Glycemic Control Level among Type 2 Diabetes Mellitus Patients at Public Health Centers in Bangkok, Thailand
22	Sudhir Kumar Satpathy	KIIT School of Public Health, KIIT University, Bhubaneswar, India	sudhirksatpathy@gmail.com	294	Current Level of Human-Papilloma Virus Awareness among the General Population at Risk in India
23	Watcharaporn Saengrueang	Naresuan University	watcharaporns62@nu.ac.th	298	Factors Related to Obesity Prevention Behaviors among Undergraduate Students, Naresuan University Phitsanulok Province

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Track: Occupational and Environmental Health

No.	Name	Affiliation	E-mail	Paper ID	Title of an abstract
1	Madhu Balan V G	All India Institute of Medical Sciences, Raipur, Chhattisgarh, India	alanvgm@gmail.com	136	Water, Sanitation and Hygiene in Healthcare Facilities in a District of Chhattisgarh State in Central India
2	Kazi Rakibul Islam, Md. Golam Kibria	Department of Public Health, Northern University Bangladesh	rakibselective@gmail.com	173	Assessment of Mental Health Status among Intern Doctors During Covid-19 Pandemic in Bangladesh: A Cross-Sectional Study
3	Nasrin Akter	Department of Public Health, Northern University Bangladesh, Dhaka, Bangladesh	nasrin.ddc@gmail.com	174	Compliance Status of Tobacco Control Law (TCL) in Bangladesh: Approach in a Private University Setting
4	Indriati Paskarini	Airlangga University, Indonesia	indriati.paskarini@fkm.unair.ac.id	179	Job Burnout: The Effect of Mental Working Load and Social Support During Work from Home in Pandemic COVID-19
5	Shintia Yunita Arini	Airlangga University	shintia.arini@fkm.unair.ac.id	206	The Factors That Influence Return to Work: Study in Patients with Chronic Disease
6	Jin Ha Yoon	Yonsei University, College of Medicine	flyinyou@gmail.com	273	Noise Exposure at Workplace and New Onset Hypertension
7	Udani Kokila Shilpeswarage	Rajarata University of Sri Lanka	spukokila@gmail.com	278	High Job Strain among Bank Employees During the COVID-19 Pandemic: A Sri Lankan Experience
8	Phataraphon Markmee	Faculty of Public Health, Naresuan University	phataraphonm@nu.ac.th	288	Factors Predict in Self-Protective Behaviors on Pesticide Use among Rice Farmers in Prompiram District, Phitsanulok Province

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9	Orawan Kaewboonchoo	Mahidol University	orawan.kae@mahidol.ac.th	289	Exposure to Phthalates from House Dust in Phayao Province, Thailand

Track: Physical Activities, Exercise and Nutrition

No.	Name	Affiliation	E-mail	Paper ID	Title of an abstract
1	Leyla Halimi	Social Determinants of Health Research Center, Hamadan University of medical sciences, Hamadan, Iran	lhhalimi20@yahoo.com	121	Evaluating Clinical and Laboratory Characteristics of Celiac Patients in Iran
2	Divjyot Kaur	University of Delhi	divjyotkaur1995.dk@gmail.com	141	Predictors for Weight Retention and Barriers for Weight Management in Postpartum Women: A Cross-Sectional Study
3	Leyla Halimi	Researcher at Social Determinants of Health Research Center, Hamadan University of Medical Sciences, Hamadan, Iran	lhhalimi20@yahoo.com	149	The Investigating the Amount of Aflatoxin in Sesame-Based Products in West of Iran
4	Nuwan Darshana Wickramasinghe	Rajarata University of Sri Lanka	nuwick74@yahoo.com	150	Nutritional Care Services in Long-Term Care Institutions; Evidence from a National Survey in Sri Lanka
5	Sakshi Chopra	University of Delhi	sakshichopra893@gmail.com	164	Sociodemographic Correlates of Dietary Pattern and Level of Physical Activity in Indian Adults: A Cross Sectional Survey
6	Anupreet Kaur Sobti	Government Home Science College (Affiliated to Panjab University), Chandigarh (India)	anupreetsobti@gmail.com	193	Wash And Covid-19 Protocol Amongst Mothers- A Cross Sectional Study of Knowledge and Practices in Punjab (India)
7	Pornthep Rachnavy	Suranaree University of Technology	rachnavy@sut.ac.th	230	Effect of Elastic Band Exercise Program on Flexibility in Elderly

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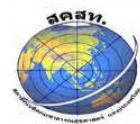| 8	Pornthep Rachnavy	Suranaree University of Technology	rachnavy@sut.ac.th	231	Effectiveness of Sports Massage Techniques on Flexibility
9	Pornthep Rachnavy	Suranaree University of Technology	rachnavy@sut.ac.th	232	Comparison of Rowing Ergometer and Bicycle Ergometer Exercise in Patients with Knee Osteoarthritis (OA)
10	Jeehana Shareef	Mae Fah Luang University	6451804016@lamduan.mfu.ac.th	259	Situation of Poor Glycemic Control among Type 2 Diabetes Mellitus and Its Risk Factors: Systematic Review
11	Chutinan Suksaard	School of Health Science, Mae Fah Luang University	chutinan.suk@mfu.ac.th	274	A Comparative of Skill-Related Physical Fitness in Mae Fah Luang University Team Sports Athletes
12	Haruthai Petviset	Mae Fah Luang University	sasima.pak@mfu.ac.th	282	The Characteristics of Musculoskeletal Pain, Online Study Posture and Physical Activities During COVID-19 Pandemic in Mae Fah Luang University Students
13	Haruthai Petviset	Mae Fah Luang University	sasima.pak@mfu.ac.th	283	Does the Reduction of Physical Activity Related to the Stress in Mae Fah Luang University Students During the Pandemic COVID-19?
14	Panupong Patarachao	Mae Fah Luang University	panupong.pat@mfu.ac.th	285	Sports Events to Enhance Youth Hill Tribes' Health-Related Physical Fitness in Chiang Rai Province, Thailand.

Track: Woman and Reproductive Health

No.	Name	Affiliation	E-mail	Paper ID	Title of an abstract
1	Pramod Chandra Samantaray	Kalinga Institute of Medical Science, KIIT University, Bhubaneswar, Odisha, India	drpcsr@yahoo.co.uk	207	SWOT Analysis of Family Planning Programme in 2 Tribal Districts with High Total Fertility Rate, Odisha, India: Excerpts from a Qualitative Baseline Research
2	Pratap Kumar Jena	School of Public Health, KIIT Deemed to be University	drpratapjena@gmail.com	214	Awareness About Breast Self-Examination and Practice of Breast Self-Examination among University Students: Review and Meta-analysis
3	Soontaree Suratana	School of health science Mae Fah Luang university	soontaree.sur@mfu.ac.th	242	Knowledge, Attitudes, and Practices on Reproductive Health among Lahu Women Northern Thailand
4	Ikran Abdulkadir Ali	Department of Neonatal intensive care unit in Yardimeli hospital Mogadishu, Somalia	6451804015@lamduan.mfu.ac.th	258	Prevalence and Factors Associated with the Neonatal Sepsis in Yardimeli Hospital Mogadishu, Somalia

Track: Other

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1	Sandip Kumar	Uttar Pradesh University of Medical Sciences, Saifai, Etawah-206130, (Uttar Pradesh) India	drsandip71@gmail.com	161	Impact Assessment of Trainings of Village Health Sanitation Committees Members on Malariometric Indices in Districts of Uttar Pradesh.
2	Sarder Hossain Mahmud Hossain	Department of Public Health, Northern University Bangladesh	dr_naju@yahoo.com	172	Insights of Oral Health Behavior in Underprivileged Community People in Dhaka, Bangladesh
3	Suppakarn Chansareewittaya	Mae Fah Lung University	suppakarn.cha@mfu.ac.th	178	The Development/Use of Smart Systems/Devices Applications for Improving Quality of Life in Daily life: An Overview
4	Htet Myat Aung	College of Public Health Sciences, Chulalongkorn University	dr.htetmyataung.92@gmail.com	182	Patterns of Use in Alcohol Drinking among Factory Workers in Mandalay: Cross-sectional Study
5	Anupreet Kaur Sobti	Government Home Science College (Affiliated to Panjab University), Chandigarh (India)	anupreetsobti@gmail.com	192	Knowledge and Practices of Complementary Feeding Amongst Mothers of 0-24 Months Old Children In Mohali, Punjab
6	Mirza Nazia Shabnam	Bangabandhu Sheikh Mujib Medical University	tithimirza12@gmail.com	205	Intimate Partner Violence among Female Garment Workers in Selected Garment Factories in Gazipur District during COVID-19 Pandemic Situation
7	Panit Yamchuen	Srinakharinwirot University	panity@g.swu.ac.th	219	The Comparative Effect of Antioxidant, Total Phenolic and Flavonoid Content between Cinnamomum.spp Oil and Its Powder Form
8	Vinay Kumar Gupta	King Georges Medical University, Lucknow	vinaykumargupta@kgmcindia.edu	224	Assessment of Nicotine Dependence and Readiness to Change Amongst Patients Attending Tobacco Cessation Clinic

9	Fatema Khandakar	BSMMU	khandakarfatema9@gmail.com	229	Child Rights to Participation: A Mixed-Method Study in A Slum Settlement of Urban Dhaka
10	Wannarat Rattanawarang	Faculty of Public Health Thammasat University	wannarat.ra@gmail.com	234	Health Information and Media Literacy on Elderly in Bangkok Urban Communities
11	Khaothin Thawichai	Suranaree University of Technology, Scholl of Sports Science, Nakhon Ratchasima, Thailand	thawichai.khaothin@gmail.com	239	Effects of High – Intensity Interval Training on 2000-Meters Rowing Performance in Para - Rowers
12	Anika Tasnim	Bangabandhu Sheikh Medical University	tasnim.nishi.tn@gmail.com	250	Quality of Life, Coping Strategies and Psychosocial Support Status of Caregivers Having Children with Neurodevelopmental Disabilities: A Cross-Sectional Study in Bangladesh
13	Nabhira Aftabi Binte Islam	PhD student of Preventive and Social Medicine Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka, Bangladesh.	nabhira22@bsmmu.edu.bd	267	Reasons for Wanting to be a Dental Surgeon as a Career
14	Evana Binthe Alam	Bangabandhu Sheikh Mujib Medical University	evanaalam9550@gmail.com	269	Trend and Influencing Factors in Specialty Choice among Post-Graduate Medical Students of Bangabandhu Sheikh Mujib Medical University, Bangladesh
15	Naradi Shanuka Baduge	Rajarata University of Sri Lanka	naradhibaduge94@gmail.com	281	Effectiveness of an Intervention to Promote Home-Based Early Childhood Care and Development Practices among Mothers in the Estate Sector: Evidence Using a Health Promotion Approach in Sri Lanka

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List of Scholarship Recipients

Bilkis Banu
Vineet Kumar Pathak
Ulfat Ara
Kazi Rakibul Islam
Sujana Haque Chowdhury
Sarder Mahmud Hossain
Shriram V Gosavi
Nasrin Akter
Verry Adrian, M. Epid
Sharmin Sultana
Samran Siriphakhamongkhon
Sawanya Siriphakhamongkhon
Ashoo Grover
Prakash Ghimire
Debashis Mohapatra
PC Samantaray
Sakshi Chopra
Tanveer Kaur
Nang Kham Kjing
Yada Aronthippaitoon
Ajit Kumar Singh
Pratap Kumar Jena
Divjyot Kaur
Nancy Satpathy
Htet Myat Aung
Nuwan Darshana Wickramasinghe
Mirza Nazia Shabnam
Satyabhama Sahoo
Taslima Chowdhury
Syeda Naheed Sultana
Khandakar Fatema
Sarojini Sahoo
Tasnim Nishi
Sudhir Kumar Satpathy
Dr. Nabhira Aftabi Binte Islam
Evana Binthe Alam
Leyla Halimi
Carlo Perrone
Dilara Begum Luin

Reza Mostary Akhter
Subah Hasneen Haseen
Rafat Farah Rashid
A.K. Mohammad Shahed Hossain
Dr. Muhammad Zahangir
Md. Tanzeerul Islam
Dr. Nusrat Nabi
Mosleh Uddin Faruk Reyal
Farzana Momen

List of scholarship recipients

- **COVID-19**
- **MEDICAL TECHNOLOGY & INNOVATION**
- **NON-INFECTIOUS DISEASE & INJURY**
- **HIV AIDS & INFECTIOUS DISEASE**
- **HEALTH SYSTEM & DETERMINANT**
- **WOMAN & REPRODUCTIVE HEALTH**
- **BORDER & MINORITY HEALTH**
- **MENTAL HEALTH**
- **OCCUPATIONAL & ENVIRONMENTAL HEALTH**
- **PHYSICAL ACTIVITIES,EXERCISE & NUTRITON**
- **OTHER**

Acknowledgements

We, the conference organizers and conference scientific committee, thanks to all contributors for making the excellent conference of the 14th Southeast Asia Regional Scientific Meeting of the International Epidemiological Association and International Conference on Public Health and Sustainable Development (The 14thIEA-SEA Meeting and ICPH 2022). The conference has successfully achieved its goals with more than 400 participants. There were more than 150 oral presentations in the conference.

Thank you very much and see you in the next edition of the IEA-SEA!

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