

THE 9th ASIAN HEALTH LITERACY ASSOCIATION

INTERNATIONAL CONFERENCE 2023

PHUKET, THAILAND



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Welcome Address by AHLA President

Dear our distinguished invited guests, AHLA country office representatives, delegates and AHLA members,

A very WARM welcome to you all to the 9th AHLA International Conference in 2023!

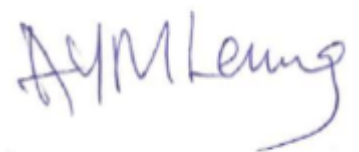
I feel extremely glad to welcome everyone to this Conference as it marks the 10th Anniversary of AHLA. We are very thankful to the local hosts of this conference - Khon Kaen University (KKU), Thai Health Literacy Promotion Association, and Thailand's Ministry of Public Health. I would like to express my gratitude towards all the staff, students and volunteers who sincerely contributed to this event in order to make it a success. This wouldn't have been possible without the support of each and everyone of you.

This year, the theme of the conference is 'ALL FOR HEALTH LITERACY'. This is pretty true as we can witness the growth and development of global and regional interests in health literacy. Many Asian countries, including Thailand, have been promoting health literacy to citizens, clinicians, caregivers and health service providers. It is timely for us to discuss strategies on how to support such development, and how we can work together to excel our work in health literacy.

This conference is the best platform for us to exchange views and share experiences in health literacy. I strongly believe that collective wisdom can solve many problems. We have been hearing lots of stories that our citizens are in disadvantage when their health literacy level is inadequate. Such issues happen in all clinics and communities, regardless of its geographical location or economical standard. We all understand that the best way to deal with health inequity is to promote health literacy and support people access necessary health services. For this, we advocate 'Health Literacy for ALL, and all for HEALTH LITERACY'.

I hope you will enjoy this 2-day conference, taking this opportunity to have immerse exchange of ideas in health literacy research, practices and policy. Our dialogues in the conference will be a good starting point for our collaborations. Phuket is famous for its beaches and breeze. Don't forget to spend some time under the sun by the beach!

Hope you have a wonderful time in the conference and have a great stay in Phuket!



Professor Angela Leung, PhD, MHA, BN, RN,

FHKAN (Gerontology), FHKAN (Education and Research), President, AHLA,

Professor and Associate Head (Research), School of Nursing, The Hong Kong Polytechnic University

Opening Remark by Khon Kaen University

Thailand Ministry of Public Health Permanent Secretary, Past and Present Presidents of Asian Health Literacy Association (AHLA), International Health Literacy Association (IHLA), Administrators, Academics, Practitioners, Students, Ladies and Gentlemen.

This 9th Asian Health Literacy Association International Conference is hosted by Khon Kaen University and the Thailand Health Literacy Promotion Association (THLA) with the respected support of the Ministry of Public Health.

As the President of Khon Kaen University, I would like to express my profound appreciation for the trust and support extended by AHLA and all the participating organizations in organizing this year's most significant health literacy event in Asia. It brings me with a great pleasure to extend a warm welcome to all of you in this event.

Health literacy is essential for healthy behaviors since it is the ability to access, understand, appraise and apply health information to perform appropriate health actions. In Asia, we face unique challenges when it comes to health literacy. With diverse populations and varying levels of access to healthcare, it is essential for us to form networks and coalitions to work together for effectual solutions.

Khon Kaen University has taken a prominent role in advancing health literacy promotion, not only within the country but also on the international platform. Through our commitment in teaching, research, and academic services to society, through this we have been actively engaged in this critical area.

We are thrilled to host this unique conference, which presents an excellent opportunity for all of us to gather, exchange knowledge, experiences, and skills, and collectively work towards enhancing health literacy, both within the country and globally. This conference brings together experts and practitioners from across the globe to share their insights and experiences.

On behalf of Khon Kaen University and from my personal side as well, I would like to express my gratitude to all the esteemed speakers and attendees who have joined us here today. With our collective efforts and shared vision, I am sure that, we can make a substantial impact on enhancing health literacy, not only in Asia but globally as well. Thank you very much for your participation and valuable contributions.



Assoc. Prof. Charnchai Panthongviriyakul, M.D.
President of Khon Kaen University

Welcome remarks on the 9th AHLA International Conference

Dear AHLA members, Directors of the AHLA country offices, the international affiliates, global partners of health literacy, friends, colleagues, and local participants

May Thailand welcome you to the 9th AHLA International Conference, which is held in Phuket, one of the most memorable islands in Thailand. This 9th AHLA International Conference has been made possible with support and collaborations from the Phuket Provincial Municipality, the Department of Health, Ministry of Public Health and local health workers and health care organizations in Phuket. This year's conference theme is "All for Health Literacy".

We realize that health literacy is a fundamental element for good health and quality of life throughout the life course. It is also a crucial factor for delivering good quality services to the citizens with various health literacy needs.

All sectors, public, private and civic organizations play important roles in promoting and improving health literacy of the people they serve. Furthermore, health literacy might help reduce inequity in the society through empowerment and access to health and social services available in the communities.

We have selected and included daily life health topics that will help you understand the importance and impact of health literacy on health and quality of life. You will learn how health literacy can be applied in daily life activities, organizational improvement, quality management of health care, and community-based health promoting activities. There will be good practices you can learn and apply for your relevant situations.

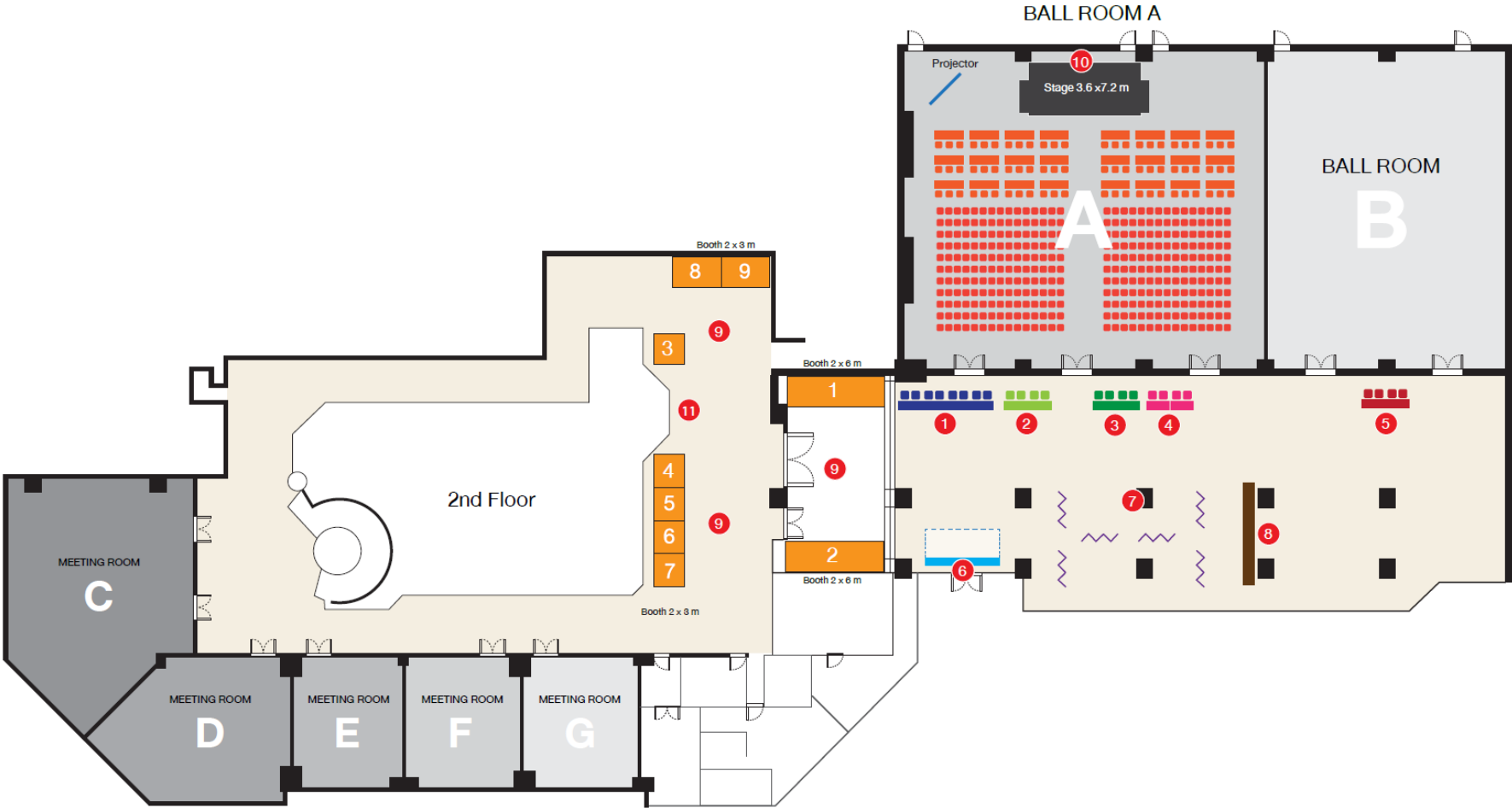
I hope that you will get valuable experiences during the 9th AHLA International Conference and sensations of "All for Health Literacy".



A handwritten signature in black ink, reading "Wachira Pengjuntr".

Dr. Wachira Pengjuntr |

President of Thai Health Literacy Promotion Association (THLA)



FLOOR PLAN

Royal Phuket City Hotel

KEY PLAN

1. Registration Desk

2. Information Desk

3. AHLA Membership Desk

4. Receipt Desk

5. First Aid Station

6. Photo Op

7. Poster Display

8. Break area

9. Sponsor Booth

10. Refreshment area

11. Main Stage

Booth

1. ThaiHealth Foundation

2. Phuket Expo 2028 Candidate

3. Princess Chulabhorn Science High School

4. PCL Holding Co., Ltd

5. NeuPharma (Thailand) Co., Ltd

6. Atlantic Pharmaceutical Co., Ltd

7. Prachachuen Imaging Center Co., Ltd

8-9. Shops Booth

General Information

9th AHILA Registration & Information Desk.

The Desk will be open during the following times:

- Sunday, May 14: 12:00 - 16:00 (1st Floor, in front of hotel lobby)
- Monday, May 15: 08:00 - 16:00 (2nd floor, in front of Ballroom A)
- Tuesday, May 16: 08:00 - 12:00 (2nd floor, in front of Ballroom A)
- Wednesday, May 17: 7:30 - 10:00 (1st Floor, in front of hotel lobby)

The Registration & Information Desk is the place to go for all of your conference needs. You can register for the conference, pick up your badge, get information about the conference program, and more. The staff at the Registration & Information Desk is also happy to answer any questions you may have about the conference.

Registration fee.

- General Registration: \$300

Includes admission to the complete 2-day conference program on May 15 - 16, special programs such as the Site Visit 2 at Phuket Old Town Street Food on May 14 night, one lunch and two coffee breaks per day, and the Welcome Reception dinner.

- General and Site Visit Registration: \$600

Includes all of the benefits of the General Registration, plus additional 2-day site visit access on May 14 and 17. Each day, there are 2 activities (workshop or site visit) to choose from.

Badges required for conference sessions. All attendees must wear their conference badge at all sessions and events. Attendees without badges will be asked to go to the Registration & Information Desk to register and pick up their badge.

Welcome Reception dinner. The Welcome Reception dinner will be held on Monday, May 15 at 6:00 PM in the Ballroom A. The dinner is open to all registered attendees and guests.

Getting around by public transport. There are several transportation options available for getting around Phuket, including buses, tuk-tuks, taxis, cars, and motorbikes.

- Buses: The Phuket Public Bus Service operates a network of buses that cover most of the island. Fares start at 30 baht for a short trip and can be paid in cash or with a Rabbit card.
- Tuk-tuks: Tuk-tuks are small, three-wheeled vehicles that are a popular mode of transportation in Phuket. Fares are negotiated with the driver and can be expensive, especially for longer trips.
- Taxis: Metered taxis are available in Phuket, but they can be hard to find, especially during peak times. Fares start at 50 baht for the first 2 kilometers and then increase by 6 baht per kilometer.
- Cars and motorbikes: Renting a car or motorbike is a great way to explore Phuket at your own pace.

However, it is important to note that traffic can be heavy, especially in the city.

Shopping. Phuket is a shopper's paradise, with something to offer everyone. From high-end boutiques to bustling markets, there are plenty of places to find the perfect souvenir or gift. Here are a few tips for getting the most out of your shopping experience in Phuket:

- Do your research before you go.
- Be prepared to bargain.
- Avoid buying goods from tourist traps.
- Look for hidden gems.
- Be patient.

With a little planning, you can find great deals on all sorts of goods in Phuket. So don't forget to pack your shopping bags!

Emergency numbers. In Phuket, the emergency numbers are as follows:

- Police: 191
- Tourist Police: 1155
- Ambulance & Rescue: 1554, 1669
- Fire: 199
- Phuket Tourist Rescue Center: +6676-383-907-9

Glance Program

PRE-CONFERENCE DAY: May 14, 2023 (SUNDAY)

12.00 – 13.00	13.00 – 14.00	14.00 – 15.00	15.00 – 16.00	16.00 – 17.00	17.30 – 18.30	18.30 – 19.30	19.30 – 21.00
Registration (1st Floor, in front of hotel lobby, Royal Phuket City Hotel)							
Site Visit 1 Health Literacy Promotion in primary and secondary care units in Chalong district (Outside)							
				Workshop 1 (Room C)			
				Reception Dinner (Invited Guests Only) (19th Floor, Royal Phuket City Hotel)			
							Site Visit 2 Health Literacy Community in Phuket Old Town Street Food (Outside)

CONFERENCE-DAY 1: May 15, 2023 (MONDAY)

8.45 – 9.30	9.30 – 9.50	9.50 – 10.15	10.15 – 10.40	10.40 – 12.00	12.00 – 13.00	13.00 – 13.40	13.40 – 14.20	14.20 – 14.40	14.40 – 15.20	15.20 – 16.00	18.00 – 20.00
Registration (9th AHILA Registration & Information Desk in front of Ballroom A) (Since 8.00)											
Open ceremony (Room A)	Coffee break (In front of Room A - B)	Keynote 1 (Room A)	Keynote 2 (Room A)	Panel Discussion 1 (Room A)	Lunch Buffet (1 st or 19 th Floor)	Keynote 3 (Room A)	Keynote 4 (Room A)	Coffee break (In front of Room A - B)	Panel Discussion 2 (Room A)	Panel Discussion 3 (Room A)	Welcome Reception Dinner (Room A)
					Lunch Symposium (Room C) [Lunch Box]	Oral Presentation 1 (Room C)			Oral Presentation 5 (Until 16.40) (Room C)		
						Oral Presentation 2 (Room D)			Oral Presentation 6 (Until 16.40) (Room D)		
						Oral Presentation 3 (Room E)			Oral Presentation 7 (Until 16.40) (Room E)		
						Oral Presentation 4 (Room G)			Oral Presentation 8 (Until 16.40) (Room G)		
						Oral Presentation (Online) 1 (Room F)			Oral Presentation (Online) 2 (Until 16.40) (Room F)		
					Poster Presentation (In front of Room A) (Until 13.00)			Poster Presentation (In front of Room A) (Until 15.00)			

CONFERENCE-DAY 2: May 16, 2023 (TUESDAY)

9.00 – 9.30	9.30 – 10.00	10.00 – 10.20	10.20 – 11.00	11.00 – 11.40	11.40 – 13.00	13.00 – 13.40	13.40 – 14.20	14.20 – 15.20	15.20 – 15.40	15.40 – 16.00		16.30 – 22.00
Registration (9th AHLA Registration & Information Desk in front of Ballroom A) (8.00 – 12.00)												
Keynote 5 (Room A)	Keynote 6 (Room A)	Coffee break (In front of Room A - B)	Keynote 7 (Room A)	Keynote 8 (Room A)	Lunch Buffet (1 st or 19 th Floor)	Keynote 9 (Room A)	Keynote 10 (Room A)	Panel Discussion 4 (Room A)	Coffee break (In front of Room A - B)	Closing Ceremony (Room A)		AHLA Dinner (Invited Guest Only) (Phuket Fantasia)
		Oral Presentation 9 (Room C) (Until 12.00)			AHLA EB Meeting (Room C) Start 12.00 [Lunch Box]							
		Oral Presentation 10 (Room D) (Until 12.00)										
		Oral Presentation 11 (Room E) (Until 12.00)										
		Oral Presentation 12 (Room G) (Until 12.00)										
		Oral Presentation (Online) 3 (Room F) (Until 12.00)										
		Poster Presentation (In front of Room A) (Until 11.30)										

POST-CONFERENCE-DAY: May 17, 2023 (WEDNESDAY)

07.30 – 08.00	08.00 – 09.00	09.00 – 10.00	10.00 – 11.00	11.00 – 12.00	12.00 – 13.00	13.00 – 14.00	14.00 – 15.00	15.00 – 16.00	16.00 – 17.00
Registration (1st Floor, in front of hotel lobby, Royal Phuket City Hotel)									
Site Visit 3.1 Environmental HL settings (Phi Phi – Ma Ya Bay – Pileh Lagoon - Khai Island) (Until 16.30)									
		Site Visit 3.2 Thai Cooking Class (Cultural Health Literacy) (Phuket old town) (Until 09.30 - 13.30)							

Full Program

PRE-CONFERENCE DAY: May 14, 2023 (SUNDAY)

12:00 – 16:00	Registration (1st Floor, in front of hotel lobby, Royal Phuket City Hotel)
13:00 – 16:00	Site Visit 1 Health Literacy Promotion in primary and secondary care units Chalong Health Promoting Hospital and Chalong Community Hospital
15:00 – 17:00	Workshop 1 Psychometric Properties of Health Literacy Survey Tools <i>A. Prof. Tuyen Van Duong, Taipei Medical University, Vice-president, AHLA</i> (2nd Floor, Room C, Royal Phuket City Hotel)
17:30 – 19:30	Reception Dinner (Invited Guests Only) (19th Floor, Royal Phuket City Hotel)
18:00 – 22:00	Site Visit 2 Health Literacy Community in Phuket Old Town Street Food

CONFERENCE-DAY 1: May 15, 2023 (MONDAY)

08:00 – 16:00	Registration (In front of Room A)
08:45 – 09:30	Open Ceremony (Room A) <i>Opening Performance (15 minutes)</i>
	Opening Remarks Welcome Remarks to Phuket <i>Mr. Narong Woonsiew, Governor of Phuket</i> Opening Remarks by KKU <i>Prof. Charnchai Panthongviriyakul, President, Khon Kaen University (KKU)</i> Opening Remarks by AHLA <i>Prof. Angela Leung, President, Asian Health Literacy Association (AHLA)</i> Address by IUHPE <i>Prof. Stephan Van de Brouke, Vice President, International Union for Health Promotion and Education (IUHPE)</i> Welcome Remarks by Permanent Secretary of the Ministry of Public Health (MoPH), Thailand <i>Dr. Opart Karnkawinpong</i>
	Appreciation Awards ceremony <i>Global Health Literacy Awards AHLA Network Achievement Awards</i>
	Group photoshoot
09:30 – 09:50	Coffee break (In front of Room A - B)
09:50 – 10:15	Keynote 1 Health Literacy on Smart Health Care and Global ESG (Room A) <i>Prof. Peter Chang, Honor President of AHLA; International Director, Show Chwan Medical Group, Taiwan</i>

10:15 – 10:40	Keynote 2 The Role of Health Literacy in Addressing Social Inequalities in Health (Room A)
	<i>Prof. Stephan Van den Broucke, University of Catholic Louvain, Belgium</i>
10:40 – 12:00	Panel Discussion 1 Health Literacy Driving: Global and Thailand experience (Room A)
	<i>Prof. Angela Leung, President, AHLA,</i> <i>Dr. Narong Sahamethapat, Thailand's Senator,</i> <i>Dr. Suwannachai Wattanayingcharoenchai, Director General, Department of Health (DOH),</i> Chairperson: <i>Prof. Wongsu Laohasiriwong,</i> <i>Dean of Faculty of Public Health, KKU; Vice President of AHLA</i>
12:00 – 13:00	Lunch Symposium 1 Real World Experience: Thailand's Health Literacy National Policy (Room C)
	<i>Dr. Wachira Pengjuntr, President of Thai Health Literacy Promotion Association (THLA),</i> <i>Assoc. Prof. Roy Batterham, Thammasat University,</i> <i>Kamolnutt Muangyim, PhD, Sirindhorn College of Public Health, Chonburi,</i> <i>Wimon Roma, DOH and THLA,</i> Moderator: <i>Assoc. Prof. Chanuantong Tanasugarn</i>
12:00 – 13:00	Poster Presentation 1 (P1-P36) (In front of Room A) <i>Evaluator 1: Prof. Vo Van Thang</i> <i>Evaluator 2: A. Prof. Tuyen Van Duong</i> <i>Evaluator 3: Dr. Krittiyane Thammasarn</i> <i>Evaluator 4: Dr. Mansuang Wongapai</i> <i>Evaluator 5: Dr. Surat Mongkolnchaiarunya</i> <i>Evaluator 6: Dr. Wanchai Yiangkulchao</i>
	Lunch Break (1st or 19th Floor)
13:00 – 13:40	Keynote 3 Mental Health Literacy (Room A)
	<i>Dr. Amporn Benjaponpitak, Director General, Department of Mental Health</i>
13:40 – 14:20	Keynote 4 Digital Health Literacy and Innovation for Promoting Health Throughout the Life Course (Room A)
	<i>Prof. Diane Levin-Zamir, University of Haifa, Israel</i>
13:00 – 14:20	Oral Presentation 1 Organizational Health Literacy and High-performance Organization (Room C)
	Chairperson: <i>Prof. Frank Peter Schelp</i> Co-chair: <i>A. Prof. Tuyen Van Duong</i> Co-chair: <i>Dr. Saipin Chotivichien</i>

13:00 – 14:20	Oral Presentation 2 Health Literacy and NCDs prevention (Room D)
	<i>Chairperson: Prof. Angela Leung</i> <i>Co-chair: Dr. Kittipong Sornlorm</i> <i>Co-chair: Dr. Chonlatit Urairoekkun</i>
13:00 – 14:20	Oral Presentation 3 Health Literacy and COVID prevention and Control (Room E)
	<i>Chairperson: Prof. Peter Chang</i> <i>Co-chair: Dr. Wachira Pengjuntr</i> <i>Co-chair: Dr. Sompong Chaioapanon</i>
13:00 – 14:20	Oral Presentation 4 Health Literacy in vulnerable populations (Room G)
	<i>Chairperson: Prof. Dr. Wongsu Laohasiriwong</i> <i>Co-chair: Prof. Stephan Van de Brouke</i> <i>Co-chair: Dr. Yada Sawangpaew</i>
13:00 – 14:20	Oral Presentation (Online) 1 (Room F)
	<i>Chairperson: Assoc. Prof. Roy Batterham</i> <i>Co-chair: Asst. Prof. Dr. Roshan Kumar Mahato</i> <i>Co-chair: Dr. Jittima Rodsawad</i>
14:20 – 15:20	Poster Presentation 2 (P37-P70) (In front of Room A) <i>Evaluator 1: Assoc. Prof. Roy Batterham</i> <i>Evaluator 2: Dr. Mansuang Wongapai</i> <i>Evaluator 3: Dr. Srush-shar Kanjanasingha</i> <i>Evaluator 4: Dr. Chutikan Sakphisutthikul</i> <i>Evaluator 5: Dr. Thiwakorn Prachaiboon</i> <i>Evaluator 6: Dr. Wanchai Yiangkulchao</i>
14:20 – 14:40	Coffee break (In front of Room A - B)
14:40 – 15:20	Panel Discussion 2 Phuket Sandbox: Best Practice for Public Private Partnership Perspective (Room A)
	<i>Mr. Bhummikitti Ruktaengam, Chairman, Sustainable Tourism Development Foundation,</i> <i>Dr. Withita Jangiam, Senior Professional Level of Medical officer, Samutsakorn Provincial Public Health Office,</i> <i>Moderator: Miss Nantawan Sriputtha,</i> <i>CRM officer, Bangkok Hospital Phuket</i>

15:20 – 16:00	<p>Panel Discussion 3 One School One Anamai Teacher for Student's Health Literacy (Room A)</p>
	<p><i>Dr. Sarawut Boonsuk, Deputy Director, DoH, Dr. Phuriwat Khamaikawin, Director of the Excellence in Science Education Bureau, Secretary-General of the Basic Education Commission, Ministry of Education, Representative, Secretary-General of the Office of the Vocational Education Commission, Ministry of Education, Princess Chulabhorn Science High School's students, Chairperson: Prof. Frank Peter Schelp, KKU</i></p>
14:40 – 16:40	<p>Oral Presentation 5 Health Literacy and Effective Health Communication (Room C)</p>
	<p><i>Chairperson: Prof. Dr. Wongsu Laohasiriwong Co-chair: Prof. Peter Chang Co-chair: Dr. Burin Suraaroonamrit</i></p>
14:40 – 16:40	<p>Oral Presentation 6 Mental Health Literacy (Room D)</p>
	<p><i>Chairperson: Prof. Angela Leung Co-chair: Dr. Boonsiri Junsirimongkol Co-chair: Dr. Dutsadee Juengsiragulwit</i></p>
14:40 – 16:40	<p>Oral Presentation 7 Digital technology for Health Literacy (Room E)</p>
	<p><i>Chairperson: A. Prof. Tuyen Van Duong Co-chair: Prof. Vo Van Thang Co-chair: Dr. Naiyana Chaitiemwong</i></p>
14:40 – 16:40	<p>Oral Presentation 8 Health literacy capacity to foster clinical practices (Room G)</p>
	<p><i>Chairperson: Prof. Don Nutbeam Co-chair: Assoc. Prof. Chanuantong Tanasugarn Co-chair: Dr. Siripan Boodsri</i></p>
14:40 – 16:40	<p>Oral Presentation (Online) 2 (Room F)</p>
	<p><i>Chairperson: Prof. Stephan Van de Brouke Co-chair: Asst. Prof. Dr. Roshan Kumar Mahato Co-chair: Dr. Surat Mongkolnchaiarunya</i></p>
18:00 – 20:00	<p>Welcome Reception Dinner (Register and Intent to join) (Room A)</p>

CONFERENCE-DAY 2: May 16, 2023 (TUESDAY)

08:00 – 12:00	Registration (In front of Room A)
09:00 – 09:30	Keynote 5 Health Literacy Global Perspective (Room A)
	<i>Dr. Kristine Sørensen, President, IHLA</i>
09:30 – 10:00	Keynote 6 International Health Literacy Policies and Practices (Room A)
	<i>Asst. Prof. Sabrina Kurtz-Rossi, Tufts University School of Medicine, USA</i>
10:00 – 11:30	Poster Presentation 3 (P71-P111) (In front of Room A) <i>Evaluator 1: Prof. Roy Batterham</i> <i>Evaluator 2: Dr. Surat Mongkolnchaiarunya</i> <i>Evaluator 3: Dr. Chutikan Sakphisutthikul</i> <i>Evaluator 4: Dr. Kittipong Sornlorm</i> <i>Evaluator 5 : Dr. Srush-shar Kanjanasingha</i> <i>Evaluator 6: Dr. Wanchai Yiangkulchao</i>
10:00 – 10:20	Coffee break (In front of Room A - B)
10:20 – 11:00	Keynote 7 Addressing Health Literacy in Infection Control Training (Room A)
	<i>Prof. Angela Leung, President, AHLA</i>
11:00 – 11:40	Keynote 8 Global Perspective on Marriage and Childbearing Intention and Realization: Roles of Health Literacy and Lifestyles
	<i>A. Prof. Tuyen Van Duong, Taipei Medical University, Vice-president, AHLA</i>
10:00 – 12:00	Oral Presentation 9 Health literacy in schools and educational contexts (Room C)
	<i>Chairperson: Prof. Peter Chang</i> <i>Co-chair: Dr. Wachira Pengjuntr</i> <i>Co-chair: Dr. Saipin Chotivichien</i>
10:00 – 12:00	Oral Presentation 10 Health literacy as an enabling factor in promoting health (Room D)
	<i>Chairperson: Prof. Kristine Sorensen</i> <i>Co-chair: Prof. Vo Van Thang</i> <i>Co-chair: Dr. Yada Sawangpaew</i>
10:00 – 12:00	Oral Presentation 11 Digital Health Literacy / e-health literacy (Room E)
	<i>Chairperson: Prof. Don Nutbeam</i> <i>Co-chair: Prof. Frank Peter Schelp</i> <i>Co-chair: Dr. Chonlatit Urairoekkun</i>

10:00 – 12:00	Oral Presentation 12 Health Literacy and Self-Care / Self-Management (Room G)
	<i>Chairperson: Prof. Dr. Wongsu Laohasiriwong</i> <i>Co-chair: Prof. Dr. Stephan Van de Brouke</i> <i>Co-chair: Dr. Naiyana Chaitiemwong</i>
10:00 – 12:00	Poster Presentation (Online) (Room F)
	<i>Chairperson: Asst. Prof. Dr. Roshan Kumar Mahato</i> <i>Co-chair Person: Dr. Mansuang Wongapai</i>
12:00 – 13:40	AHLA EB Meeting (Room C)
11:40 – 13:00	Lunch Break (1st or 19th Floor)
13:00 – 13:40	Keynote 9 Public Private Partnership for Driving Health Literacy in Thailand (Room A)
	<i>Dr. Nuttapun Supaka, Director of Partnership and International Affairs Section and</i> <i>Director of Academic and Innovation Section,</i> <i>Thai Health Promotion Foundation</i>
13:40 – 14:20	Keynote 10 Improving Health Literacy: Moving from Theory to Practice (Room A)
	<i>Prof. Don Nutbeam, The University of Sydney, Australia</i>
14:20 – 15:20	Panel Discussion 4 Global Perspective in Health Literacy (Room A)
	<i>- Prof. Angela Leung, President, AHLA</i> <i>- Prof. Wongsu Laohasiriwong, Dean of Faculty of Public Health, KKU; Vice President of AHLA</i> <i>- A. Prof. Tuyen Van Duong, Taipei Medical University; Vice-president, AHLA</i> <i>- Dr. Kristine Sørensen, President, IHLA</i> <i>- Prof. Stephan Van de Brouke, Vice President, IUHPE</i> <i>- Prof. Don Nutbeam, The University of Sydney, Australia</i> <i>- Dr. Wachira Pengjuntr, President, THLA,</i> <i>Chairperson: Prof. Peter Chang,</i> <i>Honor President of AHLA; International Director, Show Chwan Medical Group, Taiwan</i>
15:20 – 15:40	Coffee break (In front of Room A - B)
15:40 – 16:00	Closing Ceremony <i>Best Oral and Poster presentation award</i> <i>The 10th AHLA 2024 Invitation</i>
16:30 – 22:00	AHLA Dinner (Invited Guest Only) (Phuket Fantasia)

POST-CONFERENCE-DAY: May 17, 2023 (WEDNESDAY)

07:30 – 10:00	Registration (1st Floor, in front of hotel lobby, Royal Phuket City Hotel)
07:30 – 16:30	Site Visit 3.1 Environmental Health Literacy settings (Phi Phi – Ma Ya Bay – Pileh Lagoon - Khai Island)
09:30 – 13:30	Site Visit 3.2 Thai Cooking Class (Cultural Health Literacy) (Phuket Old Town)

Oral Presentation Session

Date: May 15, 2023 Time: 13:00 - 14:20

Room C	Room D	Room E	Room G	Room F
Oral Presentation 1 Organizational Health Literacy and High-performance Organization	Oral Presentation 2 Health Literacy and NCDs prevention	Oral Presentation 3 Health Literacy and COVID prevention and Control	Oral Presentation 4 Health Literacy in vulnerable populations	Oral Presentation (Online) 1
<p>1. CODE003 by <i>Janthiya Nativipattum</i>: Situation and evaluation of Health Literacy Organization in health care organizations participating in project “Sasuk Oonchai 2022” of Health Region 7, 2022.</p> <p>2. CODE030 by <i>Malinee Aimekong</i>: Upgrading the Public Health Service Unit in the 4th Health Region to become a Health Literacy Organization: Using a model of motivation and participation from the registration of a Sasukoonchai website</p> <p>4. CODE070 by <i>Haiyan FU</i>: The assessment tools of organizational health literacy in medical institutions</p> <p>5. CODE092 by <i>Kamolnat Muangyim</i>:</p>	<p>1. CODE040 by <i>Fesanmie Amarillo</i>: Fitspiration Culture on social media and its impact on eating habits and weight control behaviors among nursing students</p> <p>2. CODE135 by <i>Le Duc Huy</i>: Insight into global research on health literacy and heart diseases: A bibliometric analysis</p> <p>3. CODE167 by <i>Karl Peltzer</i>: National cross-sectional data on health literacy of undiagnosed type 2 diabetes among adults in Sudan</p>	<p>1. CODE055 by <i>Pham Thi Minh Thu</i>: Negative impact of fear of COVID-19 on long COVID as modified by health literacy: a multiple-health centers survey in Vietnam</p> <p>2. CODE061 by <i>Daniswara Agusta Wijaya</i>: Impact of health literacy and resilience on COVID-19 fear: Study among Indonesian COVID-19 survivors</p> <p>3. CODE075 by <i>Pakorn Tungkasereerak</i>: Effectiveness of electronic media to promote health literacy in COVID-19 prevention among children with intellectual disabilities</p>	<p>1. CODE019 by <i>Thisophon Thongthai</i>: Health Literacy in Early Childhood Rearing of Parents in the Middle Zone of Northeastern Thailand</p> <p>2. CODE039 by <i>Maria Cristiane Barbosa Galvao</i>: Involving undergraduate students from the health field to answer questions from underserved population on social networks</p> <p>3. CODE081 by <i>Maria Cristiane Barbosa Galvao</i>: Ana Maria: Instrument to capture librarians’ perception about information products and services with focus on individuals with Down Syndrome</p>	<p>1. CODE031 by <i>Pragya Sharma</i>: Prescribing Pattern of Antidepressants among Patients with Depression in a Mental Hospital of Nepal</p> <p>2. CODE099 by <i>Benedicta Audrey Putri Trisnadewi</i>: Relationship among fear of COVID-19, health literacy, and COVID-19 survivors’ quality of life</p> <p>3. CODE199 by <i>Aunchalee Jittrapirom</i>: Digital Health Literacy of Healthy among Pregnancy Women in Suratthani Province: A Case Study for Promoting Health Literacy</p> <p>4. CODE223 by <i>Houng Sar Mon</i>: Health literacy on Tobacco Use among working aged people</p>

Room C	Room D	Room E	Room G	Room F
<p>How to develop a primary health care organization in Thailand into a health literate primary health care organization?</p> <p>6. CODE138 by <i>Usha Rani</i> : Organizational Health Literacy and Patient Health Literacy at the beginning of the COVID-19 pandemic in South India</p>	<p>4. CODE205 by <i>Alexander Thomas Mboma</i> : Health Literacy and Digital Healthy Diet Literacy as Associated with Health-related Quality of Life among Diabetic Patients with Long COVID</p> <p>5. CODE098 by <i>Jumnion Suwannachai</i> : Improving eating literacy for people with uncontrolled blood glucose type-2 diabetes mellitus</p>	<p>4. CODE079 by <i>Neil Madulara Martin</i> : Visual Voice of the Youth Under Lockdown Protocol Amidst Covid-19 Pandemic: A Photovoice</p> <p>5. CODE090 by <i>Han T. Vo</i> : Association of Health literacy and digital healthy diet literacy with post-traumatic stress symptoms in people with long COVID-19</p>	<p>4. CODE101 by <i>Endang Widyorini</i> : The Relation Between Resilience and Subjective Happiness among Covid-19 survivor with comorbidities: The Mediating Role of Fear of COVID-19</p>	<p>5. CODE225 by <i>Than Myint</i>: Factors influencing cervical cancer screening uptake among reproductive aged women (30-60 years) in Maesot, Tak province, Thailand</p> <p>6. CODE156 by <i>Tatjana Murau</i> : Sociodemographic differences in Digital Health Literacy among informal caregivers in Germany</p>

Room C	Room D	Room E	Room G	Room F
Oral Presentation 5 Health Literacy and Effective Health Communication	Oral Presentation 6 Mental Health Literacy	Oral Presentation 7 Digital technology for Health Literacy	Oral Presentation 8 Health literacy capacity to foster clinical practices	Oral Presentation (Online) 2
<p>1. CODE013 by <i>Sarath Lekamwasam</i> : Health literacy and economic downturn: A conceptual abstract based on the current Sri Lankan economic situation</p> <p>2. CODE077 by <i>Zhan</i> : Public health policy in Republic of Kazakhstan: understanding of health literacy among population</p> <p>3. CODE121 by <i>Mariusz Duplaga</i> : What determines the attitudes toward the pandemic: conspiracy beliefs or health literacy?</p> <p>4. CODE172 by <i>Hai Duong</i> : Telemedicine in outpatient care for chronic diseases: A systematic meta-analysis</p> <p>5. CODE228 by <i>Wassana wangpimoon</i> : Pharmaceutical literacy and drug calendar service in tuberculosis patients, Nhongkrugori Hospital</p>	<p>1. CODE036 by <i>Burin Suraaroonsamrit</i> : Suicide literacy in Thai people</p> <p>2. CODE105 by <i>Margaretha Sih Setija</i> <i>Utami</i>: Psychometric properties of health literacy scale for covid survivors</p> <p>3. CODE149 by <i>Thu Huong Nguyen</i> : Status of Stress, Anxiety, Depression of Surgical Patients at Vinmec Timescity International Hospital in 2022 and Some Related Factors</p> <p>4. CODE158 by <i>Nopporn Tantirangsee</i> : Development of the depression and suicidal ideation screening test</p> <p>5. CODE054 by <i>Rawipreya Punarong</i>: Effects of mental health literacy and community-level capability</p>	<p>1. CODE021 by <i>Piyanan Photichai</i> : Electronic Media Usage in Early Childhood in Khon Kaen Province Under the Supervision of Primary Caregivers of Various Ages</p> <p>2. CODE066 by <i>Ngamnetr Eiamnakha</i> : Rehabilitation for Bedridden Patient by Using Telehealth</p> <p>3. CODE152 by <i>Chanisa Hengruamyat</i> : The effectiveness of AI-assisted health literacy promotion innovation for diabetes risk group in Raksukkapap Clinic, Regional Health Promotion Center 5 Ratchaburi</p> <p>4. CODE164 by <i>Navinee Kruahong</i> : Promotion of mental health literacy in social media society: thematic</p>	<p>1. CODE053 by <i>Usha Ghimire</i> : Impact of Local Community Health Workers' Response on Maternal and Child's Health in Rural Nepal: A COVID-19 pandemic Overview</p> <p>2. CODE082 by <i>Chen-Su Lin</i> : The Development of Health Literacy Toolkit in Taiwan</p> <p>3. CODE226 by <i>Than Zaw</i>: Health literacy on type 2 diabetes mellitus among Tuberculosis patients</p> <p>4. CODE119 by <i>Altyn Aringazina</i> : Health Literacy of The Population of The Republic of Kazakhstan</p>	<p>1. CODE125 by <i>Hsien-Wen Kuo</i> : Association of environmental health literacy (EHL) with risk perception, avoidance behaviors, and trust for stakeholders among residents in Taiwan</p> <p>2. CODE132 by <i>Cecilia Wong T.T.</i> : The impact of a training program for domestic workers in preventing fall of older people in the community</p> <p>3. CODE169 by <i>Shane Andrelei D. Perez</i> : Self-care practices of hypertensive adult female patients in the City of Marikina amidst the COVID-19 lockdown: a phenomenological inquiry</p> <p>4. CODE173 by <i>Josephine Ferren Heryanto</i> : Relationship among fear of COVID-19, resilience and quality of life in Indonesian</p>

Room C	Room D	Room E	Room G	Room F
	development on sustainable health promotion of model community	analysis of a twitter conversation 5 CODE166 by <i>Anchana Sopon</i> : The effectiveness of SMART NCDs program for establishing health literacy in diabetic patients, Bantakhun hospital, Surat Thani province, Thailand		adolescents COVID-19 survivors 5. CODE196 by <i>Umaporn Kamlungdee</i> : The experience in applying health literacy of uncontrolled diabetic patients in Bang Sai Hospital Network 6. CODE200 by <i>Loan Thi Dang</i> : Anxiety, depression among hemodialysis patients during the COVID-19 pandemic: the roles of health literacy, hemodialysis dietary knowledge, and physical activity 7. CODE220 by <i>Padmore Adusei Amoah</i> : Social capital and quality of care and health information: Rethinking health literacy among community-dwelling older persons in Hong Kong 8.CODE157 by <i>Tatjana Murau</i> : Technology commitment among informal caregivers in Germany: results of an online survey 9. CODE201 by <i>Enny Rachmani</i> Developing an Online Assessment Tool (Si Cerdik)

Room C	Room D	Room E	Room G	Room F
				for Measuring Digital Health Literacy 8. Online Symposium by <i>Ruyi Huang,</i> <i>Yu-Chang Chen,</i> <i>Clydie J. Aldana :</i> Recent Advances on Health Literacy and Family Medicine in Taiwan

Date: May 16, 2023 Time: 10:00 – 12:00

Room C	Room D	Room E	Room G	Room F
Oral Presentation 9 Health literacy in schools and educational contexts	Oral Presentation 10 Health literacy as an enabling factor in promoting health	Oral Presentation 11 Digital Health Literacy / e-health literacy	Oral Presentation 12 Health Literacy and Self-Care / Self-Management	Poster Presentation (Online)
<p>1. CODE025 by <i>Suwusith Changthong :</i> Health Literacy in Food Handler of School in Khon Kaen municipality</p> <p>2. CODE028 by <i>Suthra Auapisithwong :</i> Effectiveness of a Life Skills Enhancement Program (LSEP-V) for Vocational Students in Thailand: A quasi-experimental study from a middle-income country</p> <p>3. CODE056 by <i>Maria Cristiane Barbosa Galvão :</i> Pediatric patient literacy and storytelling</p>	<p>1. CODE010 by <i>Sarath Lekamwasam :</i> Association of health literacy with metabolic control and vascular surrogates among patients with diabetes attending outpatient clinics; a cross-sectional study</p> <p>2. CODE073 by <i>Pakorn Tungkasereerak :</i> Effects of health literacy program (NESTPlus) on unpregnancy and abortion teenage life skill protection in higher education institution</p>	<p>1. CODE113 by <i>Mila Nu Nu Htay :</i> Digital health literacy on COVID-19 and its association with sense of coherence and well-being among youths of East and South-East Asia</p> <p>2. CODE184 by <i>Phoenix K.H. Mo :</i> Longitudinal Effect of Electronic Health Literacy on Health-promoting Lifestyles among Chinese Older Adults: A Three-wave Longitudinal Study</p>	<p>1. CODE134 by <i>Nonthaphat Theerawasttanasiri :</i> Health Literacy and Self-care Behaviors to prevent PM2.5 Impact of Village Health Volunteers at Special Economic Area in Chiang Rai Province</p> <p>2. CODE148 by <i>Sujitra Chaiwatthanakorn :</i> Effectiveness of a self-perineal wound care promotion program for postpartum mothers: Self-Assessment of perineal wound healing</p>	<p>1. CODE005 by <i>Prapassara Pissawongprakan :</i> Digital literacy used in electronic online journal system among personnels of the Regional Health Promotion Centre 7 Khon Kaen</p> <p>2. CODE064 by <i>Anyamanee Suksing :</i> Road traffic injury in Thailand: A 10-year trend analysis from national injury surveillance</p> <p>3. CODE065 by <i>Yada Sawangpaew:</i> Health Literacy in Vulnerable Population for Human Research Ethics</p>

Room C	Room D	Room E	Room G	Room F
<p>4. CODE136 by <i>Pakasinee Gawee</i> : The analysis results of adolescent leadership development model in health region 1</p> <p>5. CODE139 by <i>Ploynate Chananantpojchaniti</i> : The effectiveness of lanna smart child program for self-care behaviors of obesity secondary school students</p> <p>6. CODE178 by <i>Premyuda Narkarat</i> : Effect of social media model to improve sexual health literacy among secondary school female students in southern provinces, Thailand</p>	<p>3. CODE114 by <i>Soe Moe</i> : Role of health literacy in the prevention of emerging and re-emerging diseases: medical students' perception</p> <p>4. CODE170 by <i>Margaretha Sih Setija Utami</i> : The correlation between eco-literacy and pro-environmental behavior of university students</p> <p>5. CODE198 by <i>Wiphawadee Potisopha</i> : Translation and Cross-cultural Adaptation of the Thai-Brief Health Literacy Screening Tool</p>	<p>3. CODE224 by <i>Nyunt Win</i>: Health Literacy among Myanmar Migrant Workers in Khon Kaen Province, Thailand A cross-sectional study"</p> <p>4. CODE227 by <i>Wor Mi Thi</i>: Prevalence of limited hypertensive health literacy among Myanmar migrant workers in Northeastern Thailand</p>	<p>3. CODE187 by <i>Yue Tian</i>: The impact of Health Literacy on Quality of Life and Healthcare Utilization: A Cross-sectional Study in Hong Kong</p> <p>4. CODE190 by <i>Emyr Reisha Isaura</i> : The Important Role of Health Literacy in Health Eating Behavior among Adults During the Covid-19 Pandemic</p> <p>5. CODE171 by <i>Suchitra Sumonnok</i> : Antenatal care services model promoting iodine deficiency prevention literacy among pregnant women in health region-9 during the new normal</p>	<p>4. CODE111 by <i>Kangsadal Suwannarong</i> : Health Literacy and eHealth literacy in the Prevention and Control of COVID-19 among Village Health Volunteers in Thailand</p> <p>5. CODE129 by <i>Prakit Sarathap</i>: Development of a Maritime Emergency Management Training Course</p> <p>6. CODE163 by <i>Tran Tuan Anh</i> : Improving the quality of wound care in community in Vietnam</p> <p>7. CODE183 by <i>Ha Truong</i> : Factors related to the knowledge and skill of health education of health staff at Hanoi obstetrics and gynecology hospital in 2022</p> <p>8. CODE185 by <i>Benjamas Thussanasupap</i> : Development of Health Literate Nursing Organization for Breastfeeding Promotion at Queen Sirikit National Institute of Child Health</p> <p>9. CODE192 By <i>Ratu Dien Prima Fermeza</i>:</p>

Room C	Room D	Room E	Room G	Room F
				<p>Association between Health Literacy and Diet in Women of Reproductive Age 10. CODE206 by <i>Arianna Mae L. Amit</i> : Measuring health literacy of health professionals in the Philippines: A step towards better clinical practice 11. CODE207 by <i>Rachakrit Monyanon</i>: Development of Deep Learning Model and Application for the Diagnosis of Periodontal Disease using Radiographic Images 12. CODE208 by <i>Jonathan Patam Guevarra</i> : Communicational Determinants of Road Safety in the National Capital Region, Philippines: Basis for the Proposed Road Safety Promotion and Communication Model 13. CODE209 by <i>Jonathan Patam Guevarra</i> : Why Do Road Traffic Injuries Happen? A Semiotic Response 14. CODE210 by <i>Arem Gem Austria</i>: Health-Related Media Exposure and Health Literacy</p>

Room C	Room D	Room E	Room G	Room F
				<p>Among Filipinos: A Cross-Sectional Study 15. CODE213 <i>by Arianna Mae L. Amit :</i> Self-care practices for common acute conditions in the Philippines: a scoping review</p> <p>16. CODE214 <i>by Louella Patricia Carpio:</i> Determination of the association of health literacy with use of health services among Filipinos</p> <p>17. CODE217 <i>by Jintapa benchamas:</i> Health literacy and factors associated with dengue prevention and control behaviors among village health volunteers</p> <p>18. CODE222 <i>by Tran Tan Tai :</i> Dental caries prevention interventions among preschool children in Vietnam: a community-based trial</p>

Poster Session**Date: May 15, 2023 Time: 12:00 - 13:00**

ID	Code	Presenter	Title
P1	CODE002	Udomsak Kaewbangkurt	Effects of Health Promotion Program on Health Literacy and Prevention Behavior of COVID-19 among Caretaker and Teachers of Children in Early Childhood Development Centers
P2	CODE004	Prapintip Pukkunnun	Situation of Sexuality Education Literacy and Life Skills Among Teenagers aged 10-19 years, Health Region 7
P3	CODE006	Muthita Anthaket	Implementation Health Literacy in Public Health Professionals in the Northeastern Thailand
P4	CODE008	Cheewanan Kaothan	The use of entertainment-education for improving mental health literacy in adolescents: A literature reviews
P5	CODE009	Kanyapat Kumsom	Health Literacy in Utilization of Sasuk Sure Program among Public Health Professionals in the Northeastern Thailand
P6	CODE011	Hsiu-Li Huang	Building a framework of dyadic self-management program for person with mild dementia and their family caregiver
P7	CODE012	Supamat Amphol	An Intermediate Care in Stroke Patients by Home Health Care Chiang Mai Neurological Hospital
P8	CODE014	Nutcha Hiriotuppa	Health Literacy related to COVID-19 Antigen Self -Test Behavior of service recipients at Metropolitan Health and Wellness Institution, Bangkok
P9	CODE015	Hsueh-Fen Chou	Factors related to breastfeeding health literacy in Taiwan

ID	Code	Presenter	Title
P10	CODE016	Dr.Namon Phetnin	Oral Health Literacy and Oral Health Status Among Elderly in Geriatric Dental Clinic, The 9th Regional Health Promotion Centre, Nakhon Ratchasima Province, Thailand
P11	CODE017	Natthaphon Phoonwichian	THE EFFECT OF RESILIENCE QUOTIENT ON JOB BURNOUT AMONG VILLAGE HEALTH VOLUNTEERS IN WANGTHONG DISTRICT, PHITSANULOK PROVINCE
P12	CODE018	Parichat Phamontee	Nutritional Literacy among secondary school Students in Kalasin Province, Thailand
P13	CODE020	Siriwan Songchan	Effects of the Construction Health Literacy Antenatal Care Program with the Quality New Way of Life among Pregnant Women
P14	CODE022	Makararat wongjaroen	The results of in-depth interviews and group interviews among antenatal clinic staff to find gaps in care and advice in the antenatal clinic Health Center 7 Khon Kaen
P15	CODE023	Suwitchcha Sangthong	Health Literacy and Desirable Health Behaviors of School-Aged Children and Adolescents in Health Regional 7, Thailand
P16	CODE024	Kornvipa pakphoom	The Comparison of Health Literacy of Students Before and After Health Literate Schools Project in Regional Health Promotion Center 7 KhonKaen
P17	CODE026	Anchalee Aeamsee	Effects of caregiver's behavioral modification program on development and positive discipline promotion for preschool children by the application of health literacy
P18	CODE027	Siam Prasanphim, M.D.	Reducing blood pressure levels with meditation training program.

ID	Code	Presenter	Title
P19	CODE032	wireeon joomprabutra	Effectiveness of an online training program based on adolescent depression guideline for physician in the 10th public health region
P20	CODE033	Wimonrat Wanpen	The Improvement of School Health HERO Platform
P21	CODE034	Yen-Ming Huang	Impact of a blended multimedia teaching approach versus a lecture-based approach on pharmacy students' self-efficacy and skills in over-the-counter medication counseling
P22	CODE035	Natasha Aquinas	Curdlan production: Effect of Carbon and Nitrogen sources, characterization, and applications in health
P23	CODE037	Mahasak Bhooriwatphakorn	Promote the certification and evaluation of youth-friendly health services 2020 edition, Health Zone 7.
P24	CODE038	Chunyanuch Pannil	Health literacy for hypertension prevention in population aged over 30 years in area health 7
P25	CODE041	Monruedee Sangwong	Effects of health savings 'Warin healthy city' program on self-efficacy and health behaviors of working age of Warin chamrab municipality offices
P26	CODE042	PIKUL SRIBUTDEE	Development of health literate organization in lifestyle modification clinic: Health outcomes in diabetic and hypertension patients
P27	CODE043	Siripun Bootsri	Development of Training Course to Construct Mastery of 4D of Childhood Teacher to Promote Child Health for Proper Growth and Development
P28	CODE044	Parichart Charakamud	The Model Development of Mental health literacy School (bullying) of Upper Elementary School Students with Participatory in Thairathwittaya 75 Chaloam Phra Kiat

ID	Code	Presenter	Title
			School
P29	CODE046	Rattabal Khunphonoi	Development of adsorbent derived from industrial waste for CO2 capture
P30	CODE047	Chatree Seedacam	Factors affecting health literacy among village health volunteers, Chum Saeng District, Nakhon Sawan Province
P31	CODE048	Pornthip Sittichanasut	The Development Health Literacy Activities of Early Childhood Developmental Surveillance and Promotion System among Caregiver's Childhood in Health Promotion Center 3
P32	CODE049	Wanpen Suttikomin	Influencing Health Literacy Factors Related to the working-age people with obesity, regional health zone 3
P33	CODE050	Apichaya Kitiwan	The development of a quality antenatal service model to promote health literacy of pregnant women in Health region 3
P34	CODE051	Kesineee Lonimitdee	Health literacy for preventing maternal death in Health region 3
P35	CODE052	Suthasinee Phichaikan	Health literacy and Safety behaviors of Farmers in ChomBueng District Ratchaburi Province
P36	CODE057	Wasana Mongkolsil	Health Literacy in Prevention of COVID-2019 among Population Aged Over 30 Years in Area Health 7

ID	Code	Presenter	Title
P37	CODE058	Bangoun Thongmon	Learner's satisfaction towards mooc.anamai online, food and nutrition course of Department of Health, Ministry of Public Health, Thailand
P38	CODE059	Rattananoot Matanasarawoot1	"Effectiveness of Health Literacy and Follow-Up Processes on Cardiovascular Risk Factors and Weight Reduction among Factory Workers in Lamphun Province"
P39	CODE060	Rattananoot Matanasarawoot2	"Effectiveness of Health Literacy and Follow-Up Processes on Health Behavior 3E2S among Factory Workers in Lamphun Province"
P40	CODE062	Rujipat Phetsindechakul	Health Literacy of risk pregnancies in pregnant women Health Promotion Center 3
P41	CODE063	Woraluk Indej	The development of Health Literacy model for parents of children with malnutrition in Health Promoting Hospital, Health Promotion Center 3
P42	CODE067	Kanya Janpol	The Effectiveness of Individual Wellness Plan to Enhance Health Literacy for Elderly in Clubs: Health Area 7 Thailand
P43	CODE069	Anothai Faikoaw	Health Literacy and Associated Factors in Thai Elders: Health Area 7, Thailand
P44	CODE071	sadudee phuhongsai	Developing Desired Health Literacy of Elder in Elderly Clubs: Health Area 7 Thailand
P45	CODE072	Piyanoot Phansiri	Health literacy and factors affecting of sexual risk behaviors among adolescents and youth in Ubon

ID	Code	Presenter	Title
			Ratchathani province, Thailand
P46	CODE074	Jenwit Sornpom	Health literacy on noncommunicable diseases among working age population
P47	CODE076	Sadudee Phuhongsai	Effects of Fall Prevention Program for Elderly in the community: Health Area 7 Thailand
P48	CODE078	Napichaya Ngaengtaweek	Model 4C home isolation treatment of the Health Promotion Center 3, Nakhon Sawan
P49	CODE080	Jatupong Panwilai	Health Promoting Behaviors in Stroke Prevention for Risk People in the Community: Action Research
P50	CODE083	Supattra Puanfai	Health Literacy and Health Behavior, 3E 2S for Stroke Prevention among Village Health Volunteers in Hangdong Municipality, Hang Dong District Chiang Mai Province
P51	CODE084	Manida Singhussatith	Mindfulness creates happiness and creates value in the waiting period for patients and relatives
P52	CODE085	Anuthida Boonyuem	Health Literacy of Sexual Education and Life Skills for Teenagers in the College under the Office of Vocational Education Commission in Ubon Ratchathani
P53	CODE087	Piyaphon Da inwong	Health literacy school curriculum for elementary school students.
P54	CODE089	Ngo Viet Loc	Patient safety culture and its related factors in some district health centers of Thua Thien Hue province

ID	Code	Presenter	Title
P55	CODE091	Mr.Grit Lamputtha	Network development of mental health communicators in public sector in health region 10
P56	CODE093	Pimpaporn Somproh	Motivational interviewing for addressing COVID-19 vaccine hesitancy
P57	CODE094	Supannika Chaiwan	Promotion of nutritional health literacy for overweight children who treated to pediatric and adolescent's psychiatric clinics
P58	CODE095	Thanakrit Tippimol	Health literacy of the correct and safe use of traditional Thai medical cannabis
P59	CODE096	Pharanwit Anundilokrit	The Effects of Sleep Hygiene Literacy Program on Insomnia Elderly Patients in Health Promoting Hospital, Regional Health Promotion Center 9th, akhonratchasima
P60	CODE100	Sasigan Malakitsakul	The Relationship Between Health Literacy and Condom Use Behavior among students at an educational institution in Nakhon Sawan province
P61	CODE102	Wattana Kaeoyaem	Comparative study of diagnostic of acute myocardial infarction in patients by high-sensitivity cardiac troponin-I , between high-sensitivity cardiac troponin-T
P62	CODE103	Lin Ping-Yi	Environmental health literacy assessment scale development for residents living near the petrochemical industries
P63	CODE104	Kanittha Nimsakul	Effects of Health Literacy Program on Serious Adverse Drug Reaction among Methadone Maintenance Patients

ID	Code	Presenter	Title
P64	CODE107	Piya Puriso	The factors related to nutritional iodine status in pregnant women from 24 weeks of gestation who received iodine supplement tablets, Health Area 7
P65	CODE108	Chainarong Chaichana	Developing a Model to Promote Substance Health Literacy Using Community Participation, Mae Hong Son Province
P66	CODE109	Tiantada Hiranyachattada	The development of motion infographic media to disseminate knowledge of cannabis in Thailand for high school students
P67	CODE112	Kampanat Kotpan	Health Literacy on COVID-19 and Associated Factors among People in Mukdahan Province, Thailand
P68	CODE115	Wan Ling Chiu	Cancer Health Literacy: How to Use Medical Tests to Find Cancer Early
P69	CODE116	Amonrada Rongthong	Health literacy on Coronavirus disease 2019 prevention behavior among students in Muban Chombueng Rajabhat University, Ratchaburi Province, Thailand
P70	CODE117	Sunee Chueasuwanchai	Evaluation of weekly iron supplement program in prevention of anemia among infant in regional health 6 Thailand

Date: May 16, 2023 Time: 10:00 - 11:30

ID	Code	Presenter	Title
P71	CODE118	Sompong Chaiopanont	Effectiveness of COVID-19 Self-risk Assessment to Prevent Transmission among Working Age Group
P72	CODE120	Natthapong Athikijrungrueang	Clean Tooth Good Gum Project in Grade 4 students at Wat Suwan Khiri Khet School , Karon , Phuket
P73	CODE123	Apisak Wittayanookulluk	Enhancing Substance Abuse Literacy among High School Students in Mae Hong Son, Thailand
P74	CODE130	Chaweewan Sangsawang	Health Literacy, Health Behaviors, and Body Mass Index Among Older People in Chiang Mai Neurological Hospital
P75	CODE131	Wasanan Phonphairin	The impact of pharmacist-led pharmaceutical care service on Patient-Reported Outcomes Measure of Pharmaceutical therapy (PROMPT) in patients with schizophrenia
P76	CODE133	Tsetsegdary Gombodorj	Mental health literacy of codependent wives of alcoholics
P77	CODE137	Wasimon Suwannarat	Sexual health literacy and preventive pregnancy behaviors among adolescents in Chanthaburi Province, Thailand
P78	CODE140	Ampai Pimkrai	A comparative study of Honeymoon period in young-onset and late-onset Parkinson's disease patients who received Levodopa as first treatment in Chiang Mai Neurological hospital
P79	CODE141	Makararat Wongjaroen	Results of health literacy program to control individual weight through the flit for you project of Health

ID	Code	Presenter	Title
			Promotion Center 7
P80	CODE142	Wongsathorn Onsribut	Health literacy and performance roles in controlling and preventing COVID-19 among village health volunteers in Ubon Ratchathani Province, Thailand
P81	CODE143	Sakonwat Nanuan	Participation model of community leaders in controlling and preventing risk factors for diabetes and hypertension in the elderly in Ban Khao Kaew community. Nuea Klong Subdistrict Nuea Khlong District Krabi Province
P82	CODE144	Kopkan Choopan	The effects of health literacy enhancement program on hypertension prevention behavior of pre-hypertension risk group who receive the COVID-19 vaccination
P83	CODE145	Pakasinee Gawee	The survey of health literacy and health risk behavior among high school adolescents, Muang Chiang mai, Chiang mai province
P84	CODE146	Shynar Abdrakhmanova	Parental underestimation of child's weight and nutritional habits of primary school children in Almaty, Kazakhstan
P85	CODE147	Pattaraporn pandee	The Effectiveness of Parent Training and Social Skills Group Training for Children with Autism Spectrum Disorder
P86	CODE150	Prapasri Punyavachirachai	A study of resilience quotient among Thai people during the COVID-19 outbreak
P87	CODE154	Kamolrat Sangkharat	The Effects Of Health Literacy Enhancement Program On Self-protection From Fine Particulate Matter (PM2.5): Case Study In Tha-KhunRam, Khampangphet Province

ID	Code	Presenter	Title
P88	CODE155	Somyos Srijarnai	A study on the development of health literacy skills model to prevent preterm birth for pregnant women in parents's scholl, health district 4
P89	CODE165	Apinphon Sakdakriang	The driven model of health literacy in the 4th Health Region
P90	CODE168	Puncharika Nakkongkham	Building health literacy with 8 saving behaviors for good health
P91	CODE174	Sujitra Khunnoi	Health literacy of the breastfeeding logistic among breastfeeding women in the regional health promotion center 7, Khon Kaen
P92	CODE177	Yaowalux Panitangkool	Program Development of Caregiver Training: Rehabilitation for Instrumental Activities of Daily Living in the Elderly with BPSD of Dementia
P93	CODE179	Somsook Sommaluan	Effect of mutual support with mindfulness program on burden of caregivers of patients with behavioral and psychological symptoms of dementia
P94	CODE180	Tanomsri Srikirin	Effect of self-esteem enhancing program on solving problem in elderly with major depressive disorder at Saunsaranromhospital, Suratthaniprovince
P95	CODE181	Suwinya Dhanasilangkura	Health literacy approach employing "Tiktok platform" to improve self-care behaviors and health impacts in breast cancer patients enduring radiation treatment
P96	CODE182	Somreudee Rutchatanawin	Health Literacy Organization on The Organic waste Management in the Community by Black Soldier fly larvae (BSFL)

ID	Code	Presenter	Title
P97	CODE188	Anuch Sinarod	Automatic web application for ageing individual wellness plan report, health promotion center 3 nNakhonsawan
P98	CODE188	Anuch Sinarod	Automatic web application for ageing individual wellness plan report, health promotion center 3 nNakhonsawan
P99	CODE189	Ekaluck Chinkham	Web application to promote Health Literacy Nutrition status in early childhood Health Promotion Center 3 Nakhon Sawan
P100	CODE191	Kanchana Hattasin	Enhancing Mental Health Literacy: From Psychiatric Hospitals to Pharmacy Network
P101	CODE193	Tsamara Alifia Ramadhani	Relationship between Health Literacy and Dietary Adherence among People who are Diagnosed with Type 2 Diabetes Mellitus
P102	CODE194	Sarinna Sangarun	Improving Parents' Knowledge and Skills in Using the SNAP-IV to Reduce the Children's Learning and Behavior Problems
P103	CODE197	Chantira Nanthamongkolchai	The improvement of child care center to Health Literate Organization: A case study in Bangkean and Bangsue district, Bangkok, Thailand
P104	CODE202	Anuchit Chumkong	Knowledge, attitudes, and behaviors in prevention of dengue fever of the population in catchment area of Panichsangskuk primary care unit
P105	CODE203	Prasert Hanprasankit	Comparative study of diagnostic of acute myocardial infarction in patients by high-sensitivity cardiac troponin-I, between high-sensitivity cardiac troponin-T

ID	Code	Presenter	Title
P106	CODE211	Hoang Dinh Tuyen	Adherence to COVID-19 preventive measures among Vietnamese dental care workers: an online survey
P107	CODE215	Tran Dinh Trung	Intimate partner violence among pregnant women in a largest city of the central Vietnam
P108	CODE216	Sri Handayani	Healthy Lifestyle Practices: Does Health Literacy Matter?
P109	CODE218	Santana Munpolsri	Association between oral health literacy and oral health status in pregnant woman in Nong Khai province
P110	CODE219	Pongsa kon Krasae	Effects of Health Literacy and Social Support Program on Health Behaviors for Hypertension Control Among Essential Hypertension Patients Muaeng District, Khon Kaen Province
P111	CODE088	Nithiruj Phetsindechakul	The relationship between health literacy and COVID-19 preventive behavior of personnel in the Office of disease prevention and control, 3 Nakhon sawan when entering the Post-Pandemic

KEYNOTE SPEAKER



PETER WS CHANG, MD, MOH, SCD, FRCP

Received his medical doctorate from National Yang Ming University Medical College in Taiwan in 1984, and Master of Public Health and Doctor of Sciences both from Harvard University School of Public Health in Boston. He served as the Director-General of the Bureau of International Cooperation in the Ministry of Health in 2004 to 2007, and the advisor to the Ministry of Health in international affairs since 2002, further served in Geneva and Brussels as health representative for the Health Ministry. His major interests include occupational and environmental medicine, radiobiology, radiation protection, global health, and international relationships. He started interest and research on health care services and specifically health literacy from 2012 and helped establish the Asian Health Literacy Association as well as the International Health Literacy Association in 2013 and 2016 respectively. Prof. CHANG has published more than 160 international scientific articles on related subjects.



PROF. ANGELA Y.M. LEUNG, PHD, MHA, BN, RN, FHKCGN, FHKCERN

Professor Angela Leung is a Professor and Associate Head (Research) of the School of Nursing of The Hong Kong Polytechnic University in Hong Kong, China. She is an active researcher in health literacy and dementia caregiving, with a wide range of publications in international journals. She has a strong belief that technology can help people to understand their current health status and make the informed health decision. Serving as the Director of WHO Collaborating Centre for Community Health Services (WHO CC) and being dedicated to community-based health promotion initiatives, Prof. Leung provides consultancy services and advices to Singapore, Cambodia and China for the implementation of WHO ICOPE model.



A.PROF. TUYEN VAN DUONG, PHD

Dr. Tuyen Van Duong is currently an Assistant Professor of School of Nutrition and Health Sciences, Taipei Medical University, Taiwan. He has been serving as a Vice-president of Asian Health Literacy Association, London, UK (2019-2024); Elected Chair of Scientific Standards Committee, and EB member of International Health Literacy Association, Boston, USA (2022-2025). He has been invited as a yearly Guest Lecturer of Tufts University School of Medicine since 2018. He is an active member of several international organizations, e.g. Nutrition Society of Taiwan, American Society for Nutrition, and some others.

Dr. Duong has developed a strong academic background, and wide international networks. He has been closely working with other scholars on several research projects (e.g. Health and dietary literacy, dietary intake and health-related behaviors, mental health and quality of life in hemodialysis, chronic kidney disease, stroke, hypertension, diabetes mellitus and COVID-19, marriage and childbearing intention and realization) in Asian countries, and also collaborated with the research consortium in Europe and with growing number of institutions in Australia, United States and Africa.

By March 2023, Dr. Duong has published about 60 original research articles on 30 ISI journals. He has been serving as an Associate Editor of Specialty Section – Eating Behavior on Frontiers in Nutrition and Frontiers in Psychology, a Guest Editor of IJERPH, Nutrients, a reviewer of 36 international journals. He has received 14 honorable academic awards from national and international organizations from Australia, Indonesia, Malaysia, Switzerland, Taiwan, United States, and Vietnam.



PROF. STEPHAN VAN DEN BROUCKE, PHD

Professor of Health Psychology at the Department of Psychology, Faculty of Psychology and Educational Sciences, Université Catholique de Louvain, Belgium. Stephan van den Broucke is Professor of Health Psychology at the Department of Psychology, Faculty of Psychology and Educational Sciences of the Université Catholique de Louvain, Belgium. Formerly a senior expert at the Flemish Institute for Health Promotion in Brussels (1993-2005), a project officer at the Executive Agency for Health and Consumers of the European Commission in Luxembourg (2006-2009), and an Associate Professor at the Department of International Health, Faculty of Health, Medicine and Life Sciences of Maastricht University, The Netherlands (2009-2010), he has coordinated and supervised a large number of national and international research projects in the areas of health promotion planning and evaluation, mental health promotion, health inequalities, capacity building and health literacy. He serves as an expert adviser to the European Commission as Health and Research Directorate Generals and as a technical adviser for the World Health Organisation, and is a member of the executive team of the Regional Committee for Europe of the International Union for Health Promotion and Education (IUHPE). In addition to his teaching assignment at the UCL, he also teaches in the Master program in Psychology at the KU Leuven, Belgium, and has been a guest lecturer at various universities and institutes across Europe. Stephan van den Broucke holds a Ph.D. in Psychology (KU Leuven) and a degree in Complementary Studies in Health Policy (University of Antwerp). He is author or co-author of more than 50 peer-reviewed international publications and author and editor of several books.



PROF. KRISTINE SØRENSEN, PHD

As a thought leader Kristine Sørensen is committed to advance the global scope of health literacy. Her educational background is in medicine, public health and global health diplomacy. Kristine Sørensen is the founding director of the Global Health Literacy Academy, Denmark. She is the first President of the International Health Literacy Association and Executive Chair of Health Literacy Europe. She is also a member of the World Health Organization Technical Advisory Group on Health Promotion in the SDGs. Kristine Sørensen has been a health literacy advisor to the European Commission, the European Centre of Disease Control, the European Parliament, the European Council and McKinsey. Currently, she is a member of the global advisory boards of the Asian Health Literacy Association, Bridge4Health (CAN), MILSA – migrant health literacy (SWE) and Health Literacy for Children and Adolescence (GER). She is in the editorial board of the Journal of Health Literacy Research and Practice and an active member of the International Union of Health Promotion and Education as well as Rotary International. With colleagues, Kristine Sørensen was honored with the European Health Award 2012, the International Health Literacy Award 2017 and the AHILA Global Health Award 2018.



A/PROF. SABRINA KURTZ-ROSSI

Sabrina Kurtz-Rossi, M.Ed., is Assistant Professor of Public Health and Community Medicine at Tufts University School of Medicine and Director of the Tufts Health Literacy Leadership Institute. She is Principal of Kurtz-Rossi & Associates, a consulting group offering health, literacy, education, and evaluation services. Prof. Kurtz-Rossi is especially recognized for her health literacy work to improve patient-provider communication, build health literate health care organizations, and develop easy to read health information for diverse audiences.

In 2016, Ms. Kurtz-Rossi received the Association for Prevention Teaching and Research (APTR) Health Literacy Teaching Award for her work with health professions students. In 2017, she received an Innovations in Diversity Education Award (IDEAS) from the Dean's Office at Tufts University School of Medicine to exam online discussion as an instructional method for teaching health literacy and cultural humility. She was honored in 2018 by the Asian Health Literacy Association (AHLA) with the International Health Literacy Award for her efforts with students and professionals all over the world to improve health literacy.



PROF. DIANE LEVIN-ZAMIR, PHD, MPH, MCHES

Professor Diane Levin-Zamir is the National Director of the Department of Health Promotion of Clalit, Israel's largest healthcare organization. She is an Associate Professor at the School of Public Health at the University of Haifa in Israel. She is one of the founders and leaders of the Global Working Group on Health Literacy of the International Union Health Promotion and Education. She chairs the National Council of Health Promotion of the Israel Ministry of Health and was one of the founders of the Israel Health Promoter and Health Educators Association. She specializes in action research and policy development in health promotion in community primary care, children and adolescents, people with chronic conditions, hospital and media settings, media/digital health literacy, and measuring population health literacy. Diane also specializes in cultural appropriateness for health on the policy, research and practice levels. Diane was the principal investigator for the National Survey on Health Literacy in Israel. She is a scientific advisor for the Asian Health Literacy Association, as well as for the Health Literacy for Children and Adolescents project in Germany. Diane has published extensively on numerous aspects of health literacy and health promotion.

ORAL PRESENTATIONS

Session 1: Organizational Health Literacy and High-performance Organization CODE003

Situation and evaluation of health literacy organization in health care organizations participating in project “Sasuk Oonchai 2022” of Health Region 7, 2022

Janthiya nativipattum¹, Wanida Uttaranakhon²

Objectives: This research is descriptive research. The objective of this study was to study the situation and evaluation of the HLO assessment in the public health service units participating in the “Sasuk Oonchai 2022” activity in Health Region 7.

Methods: Selecting a specific sample group by the researcher gave public health personnel and the person who use the service in the service units in 4 provinces during the period. Registered to participate in the assessment in 914 places, participated in the survey in 424 places, research tools public health personnel form 14 items and people form 10 items. It is divided into 4 areas: leadership support and policies, human resources, access to information and services, and follow-up evaluation. Content validity was checked by experts at 80% in agreement and Cronbach's alpha coefficient in the whole evaluation form with a value of 0.96 in public health personnel form and 0.93 in the person form.

Results: The results of the study revealed that 4,323 public health personnel: the percentage of human resources and follow-up evaluation were the highest at 93.6%, followed by access to information and services and support and policies from leaders were 92.8% and 92.4%. The results of the study revealed that 7,338 persons: the highest percentage of human resources was 98.3%, followed by support and policies from leaders, access to information and services and the follow-up evaluation were 98.2%, 97.7% and 97.3%.

Conclusion: The development of HLO was successful. There is support and policies from leaders, working groups, organizational assessments, development plans, and planned evaluations.

Keywords: Health care organizations, health literacy organization, project “Sasuk Oonchai 2022”.

Upgrading the Public Health Service Unit in the 4th Health Region to become a Health Literacy Organization: Using a model of motivation and participation from the registration of a Sasukoonchai website

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Background: Currently, there are many communication channels, and some people need clarification about deciding which health information to follow. Creating a health literacy organization is a vital structure that will systematically develop the potential of people and organizations until becoming a health-literate society.

Objectives: 1. To upgrade the public health service units in the 4th Health Region to become health literacy organizations. 2. To study the model of motivation and participation in elevating the public health service unit in the 4th health region to become a health literate organization.

Methods: This research used Action-Mixed method research by applying the concepts and theories of motivation and participation. The study is divided into three phases: Phase 1 is preparation and creates motivation, and Phase 2 creates participation. Phase 3 takes lessons from the operation, incentive, and participation model to become a health literacy organization.

Results: Five hundred and fifty-two public health service units in the 4th health region applied to be health literate organizations by registering through the Sasukoonchai website, representing 63.08 percent of all the service units. One hundred and twenty-seven units are to become health literacy organizations, representing 23.00 percent. A result of lessons learned is that a clear policy is vital and a success factor. Leadership is essential in driving a health-literate organization; continuous supervision and mentoring exist.

Conclusion: Public health service units should be developed into health-literate organizations. To be a friendly and conducive source for people receiving better health services.

Keywords: Health literacy organization, public health service unit, the 4th health region

The assessment tools of organizational health literacy in medical institutions

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Background: Organizational health literacy is the capability of an organization to let individuals acquire, understand and use healthcare information and services, in order that an individual can make health policy for self or others. In 2021, the health literacy of Chinese citizens was only 25.4%, which was generally in a low health literacy state that had a negative impact on the overall health system. OHL evaluation tools for medical institutions played a positive role in assessing the complexity of the medical environment and improving the health literacy of residents. Thus, whether medical institutions have OHL has become an important factor for people to correctly access, judge and use a variety of health information and services.

Objectives: To research and development localized OHL assessment tools for medical institutions in China.

Method: In this study, we reviewed assessment tools of organizational health literacy in medical institutions.

Results: This study review the application purpose, application scenarios, evaluation methods, evaluation content, evaluation indicators and application status of eight OHL assessment tools in medical institutions, in order to provide reference for the development, evaluation research and practice of OHL evaluation tools in medical institutions in China.

Keywords: assessment tools; medical institutions; **Organizational Health Literacy**.

How to develop primary health care organization in Thailand into health literate primary health care organization?

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Background: Health Literacy (HL) has been announced as one of Thailand Public Health Reform Agenda since 2016, and the Health Literate Organization (HLO) was included as a significant strategic change in the reform.

Objectives: This study aimed to explore how the primary health care organization (PHCO) transformed themselves to be the Health Literate Primary Health Care Organization (HLPHCO).

Method: This action research applied Kemmis & McTaggart (1988) concept. The targeted PHCOs were Queen Sirikit Health Centers (QSHCs). There were two phases: protocol development among 16 QSHCs, and model adjustment among 92 QSHCs.

Results: The final process models included the preparation step for PHCOs' managers; and the 13– step HLPHCO development process for practitioners (13-Step to HLO toolkit). These process models included all constructs in the 10- attribute of HLO as defined by Brach et al, 2012. The structural model was needed in order to implement and scale up the HLPHCO. It consisted of two networking systems: a coaching system network and implementing system network to facilitate the changes based on the socio-ecological model of health behavior.

Conclusion: The collective performance of HLPHCO would lead to a higher performance organization in the health system. The policy recommendations were 1) to incorporate HLPHCO as key performance indicators and criteria for health care organization accreditation; 2) to set up HLPHCO coaching system and expand HLPHCO development to other organizations. 3) to enhance the health literacy of staff and patients or community members, the implementation network information system should be digitalized as a single platform to allow each individual person to access their health information, and to make collaborative decision with their professional, family, and community members as a relevant support for their health.

Keywords: Health literacy, health literate organization, HLO tool kit, primary health care.

Organizational Health Literacy and Patient Health Literacy at the beginning of the COVID-19 pandemic in South India

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Background: Health literacy in India is not explored much. During the COVID-19 pandemic, health resources are limited, access to healthcare facilities and information is unapproachable.

Objectives: We carried out a study to evaluate organizational health literacy and patient health literacy among two hospitals.

Methods: A cross-sectional comparative study was conducted in a tertiary care teaching private hospital and a secondary care private non-teaching hospital. The HLSF-12 questionnaire and HLHO-10 item questionnaire was used to assess patient health literacy and organizational health literacy. A sample of 244 patients and three managers participated from the tertiary hospital and 20 patients and three managers from the private hospital.

Results: Health literacy (H.L.) among patients showed no significant difference ($p>0.05$) in the total score among the two hospitals. There was no correlation between gender and the total score. The health literacy status of the two hospitals was similar, where nearly 50% of patients were literate to call an ambulance in case of emergency, and nearly 60% were aware of their physical and mental well-being.

Conclusion: The patient needs to get H.L. to reach out to ambulance services and information on physical and mental well-being activities, especially during lockdown due to COVID-19.

Keywords: COVID-19, health literacy, South India

CODE040

Fitspiration culture on social media and its impact on eating habits and weight control behaviors among nursing students

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Background: The media has portrayed health as a major concern for people of all ages, particularly young people. "Fitspiration" (also known as "fitspo") aims to motivate people to exercise and live a healthy lifestyle. There is very little existing literature on how people's lifestyles and physical health are influenced by engaging with this type of content. Initial research has focused on potential negative effects on psychological well-being, such as body image, self-esteem, and eating disorders.

Objectives: The goal of this study was to gain knowledge and understanding of fitspiration and its impact on dietary habits and weight control behavior in a sample of nursing students at Mindanao State University - Iligan Institute of Technology (MSU-IIT) who exercise and follow fitspiration.

Method: This study utilized a descriptive correlational study. Purposive sampling was used to select 101 respondents to complete an online survey with closed-ended multiple-choice questions.

Result: According to the findings, most participants watch and follow fitspiration content on social media, which increases their physical activity and adherence to a diet plan. When compared to fitness influencers, some report body consciousness and are dissatisfied with their failure to achieve their goals. There is a significant relationship between fitspiration culture and eating habits and between fitspiration culture and weight control behaviors.

Conclusion: The fitspiration community on social media can be useful and persuasive for young people, but it appears to have both positive and negative effects. The result of this study can also help in health literacy, especially for the young to make informed decisions as they use fitspiration content. Moreover, future research should seek to determine the magnitude of positive and negative effects, as well as investigate methods of achieving desirable outcomes while minimizing undesirable outcomes.

Keywords: dietary habits, fitspiration, social media, weight control behavior

Insight into global research on health literacy and heart diseases: A bibliometric analysis

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Background: Health literacy (HL) has shown its important role in reducing the burden of heart diseases. However, no study has provided a comprehensive worldwide view of the data regarding HL and heart diseases.

Objectives: The study aimed to provide insight into the intellectual structure, research trends, and research gaps on HL and heart diseases; and to explore HL scales commonly utilized in heart studies.

Methods: Studies related to HL and heart diseases were retrieved from Web of Science, Scopus, and PubMed. All publications published between 2000 and 2021 were included after conducting keyword searches on “heart diseases” in general or on specific types of heart diseases (e.g., “heart failure”) and “health literacy”. Bibliometric analyses were carried out using the Bibliometrix R package and VOSviewer 1.6.14.

Results: A total of 388 original research articles and reviews on HL and heart diseases were included in our study. The studies were primarily conducted in the United States and developed countries. A total of 337 studies focused on heart failure (51.5%) and ischemic heart diseases (35.3%). Sixty-two studies (16.0%) focused on other heart diseases (e.g., valvular diseases and rheumatic heart diseases). The percentage of interventional studies was limited (13.4%) and fluctuated from 2000 to 2021. The most common questionnaires measuring health literacy among patients with heart diseases were the Test of Functional Health Literacy in Adults (TOFHLA) and Brief Health Literacy Screen (BHLS). Use of the eHealth Literacy Scale (eHEALS) has become the latest trend among patients with heart diseases.

Conclusion: The study findings suggest the need to conduct more empirical studies on HL and heart diseases in different settings (e.g., developing or poor countries) and with different types of heart diseases (e.g., valvular and rheumatic disorders). Additionally, it is necessary to develop heart disease-specified HL scales for research and practice.

Keywords: bibliometric analysis, heart diseases, health literacy, heart failure, instruments, ischemic heart diseases

National cross-sectional data on health literacy of undiagnosed type 2 diabetes among adults in SudanKarl Peltzer¹¹Department of Health Education and Behavioral Sciences, Faculty of Public Health, Mahidol University, Bangkok, ThailandCorresponding Author: Karl Peltzer, Email: kfpeltzer@gmail.com

Background: The study aimed to estimate the prevalence and associated factors of health literacy of undiagnosed type 2 diabetes (T2D) among adults in Sudan.

Methods: Cross-sectional data were analyzed from 6,967 persons (18-69 years, with a mean age of 38.0 years) who participated in the Sudan STEPS survey in 2016, who had complete fasting blood glucose measurement.

Results: The prevalence of health literacy of undiagnosed T2D was 3.4% (47.9% of total T2D), diagnosed T2D 3.7%, and total T2D 7.1%. In the adjusted multinomial logistic regression analysis, older age (50-69 years) (ARRR: 2.05, 95% CI: 1.16-3.63), obesity (ARRR: 2.03, 95% CI: 1.27-3.27), hypertension (ARRR: 1.94, 95% CI: 1.38-2.72), and elevated total cholesterol (ARRR: 1.59, 95% CI: 1.10-2.30) were positively associated and high physical activity (ARRR: 0.50, 95% CI: 0.33-0.77) was negatively associated with undiagnosed T2D versus no T2D. Older age (50-69 years) (ARRR: 12.98, 95% CI: 7.31-23.02), urban residence (ARRR: 1.63, 95% CI: 1.12-2.37), received health care advice (ARRR: 2.03, 95% CI: 1.44-2.87), ever cholesterol screening (ARRR: 2.20, 95% CI: 1.41-3.42), higher education (ARRR: 1.87, 95% CI: 1.21-2.87), obesity (ARRR: 2.19, 95% CI: 1.49-3.22), and elevated total cholesterol (ARRR: 1.71, 95% CI: 1.16-2.53) were positively associated with diagnosed T2D versus no T2D. In adjusted logistic regression analysis, older age (50-69 years) (AOR: 0.18, 95% CI: 0.09-0.33), and health care advice (AOR: 0.32, 95% CI: 0.19-0.56) were negatively associated with undiagnosed T2D versus diagnosed T2D.

Conclusion: A significant proportion of adults in Sudan had low health literacy of undiagnosed T2D, and several associated factors were identified which can help in guiding interventions.

Keywords: health literacy, Sudan, type 2 diabetes

Health literacy and digital healthy diet literacy as associated with health-related quality of life among diabetic patients with long COVID

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Background: Study reports suggest that diabetic patients with long COVID experience significant changes of health-related quality of life (HRQoL). Health literacy (HL) and digital healthy diet literacy (DDL) are essential factors that can influence diabetes management and HRQoL among this population. However, there is scanty literature to demonstrate this association.

Objectives: To investigate the associations of health literacy and digital healthy diet literacy with HRQoL among diabetic patients with long COVID.

Methods: A cross-sectional study was conducted among 120 diabetic patients diagnosed with Long COVID, across hospitals in Vietnam. HL and DDL were assessed using a 12-item short form health literacy questionnaire (HLS-SF12) and a four-item digital healthy diet literacy (DDL-4), respectively. HRQoL was assessed using the RAND-36 measure of HRQoL instrument. Two Multiple linear regression models were employed to explore the associations between HL and HRQoL (model 1), and DDL and HRQoL (model 2), adjusted for other factors (social status, ability to pay for medication, education, age). All tests were conducted at 95% significance level.

Results: Means of HL, DDL, and HRQoL were 22.48 ± 10.66 , 23.36 ± 11.65 , and 57.34 ± 11.57 , respectively. Using the regression model, HL and DDL were significantly associated with HRQoL ($B=0.324$, C.I. = $[0.119-0.528]$, $p=0.002$), ($B=0.247$, C.I. = $[0.074-0.420]$, $p=0.006$). These results suggest a synergic effect of HL and DDL on the HRQoL among diabetic patients with Long COVID.

Conclusion: Among diabetic patients with Long COVID, both health literacy and digital healthy diet literacy were significantly associated with HRQoL outcomes. The present study provides further opportunities for extending the investigation on disease outcomes.

Key Words: diabetes, digital healthy diet literacy, health literacy, health-related quality of life, long COVID

Improving healthy eating literacy for people with uncontrolled blood glucose type-2 diabetes mellitus

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Background: Diabetes is a chronic non-communicable disease and is one of the top public health problems in all countries around the world. A healthy eating habit is important to have better glycemic control and prevent complications.

Objectives: The purposes of this experimental research were to develop and to examine an eating literacy training (ELT) program by using Barkey's behavioral inhibition model and health literacy model for people with uncontrolled blood glucose Type 2 diabetes mellitus (T2DM).

Methods: The participants consisted of 60 uncontrolled T2DM patients in Wangsomboon district, Sakaeo province, who were randomly assigned to one of two groups (ELT program for experimental group and self-regulation program for control group). The research design was a 2X2 factorial pre-test and post-test design. The research process consisted of four steps including 1) development of ELT program 2) testing instruments 3) screening participants and 4) investigation. Instruments included 1) an interview form 2) ELISA test kit 3) medical equipment and 4) the ELT program, a program consisting of 11 activities lasting over 12 weeks. Data were analyzed by descriptive statistics and analytic statistics including paired t test and ANCOVA.

Results: The results showed that all of the groups presented significant increases in total mean scores of eating literacy (EL), eating behaviors (EB), HbA1c and insulin at 12 weeks of training. Moreover, the mean scores of EL, EB, HbA1c and insulin of experimental group were significantly higher than the control group.

Conclusion: In conclusion, the findings suggest that the ELT program was more effective than self-regulation program for improving healthy eating habit for people with uncontrolled T2DM, and could be used as a guideline for diabetes mellitus.

Keywords: Eating literacy, Inhibition control, Eating behavior, Type 2 diabetes mellitus

Negative impact of fear of COVID-19 on long COVID as modified by health literacy: a multiple-health centers survey in Vietnam

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Background: Long COVID (or post-COVID-19 condition) is an increasingly recognized and concerning issue worldwide.

Objectives: We aimed to examine the association between fear of COVID-19 (FCOV-19) and long COVID, and further explore the modifying impact of health literacy (HL) on that association.

Methods: A cross-sectional online survey was conducted from December 2021 to October 2022 at 18 community health centers. Data on 4508 COVID-19 survivors aged at least 18 years were collected, including socio-demographics, health-related behaviors, health information related to COVID-19 infection, comorbidity (using the Charlson Comorbidity Index items), FCOV-19 (using a 7-item fear of COVID-19 scale with higher scores representing higher levels of fear), HL index (using a 12-item short-form HL questionnaire, HLS-SF12, with higher scores indicating better HL). Long COVID was defined as having one of the COVID-19-related symptoms lasting for at least 4 weeks after the initial covid-19 infection. Logistic regression models were used to explore the associations and interactions.

Results: The proportion of people having long COVID was 56.5%. The FCOV-19 and HL scores were 20.4 ± 4.9 and 31.2 ± 8.6 , respectively. The FCOV-19 was associated with an increased likelihood of long COVID (odds ratio, OR, 1.03; 95% confidence interval, 95%CI, 1.02, 1.05; $p < 0.001$), whereas HL was associated with a lower likelihood of long COVID (OR, 0.97; 95%CI, 0.96, 0.98; $p < 0.001$). In interaction analysis, compared to participants with the lowest scores of FCOV-19 and HL, those with higher scores of FCOV-19 and HL had a lower long COVID likelihood (OR, 0.98; 95%CI, 0.97, 0.99; $p = 0.029$).

Conclusion: The adverse impact of FCOV-19 on long COVID could be modified by better HL. Health literacy should be considered as a strategic intervention to mitigate long COVID, especially among people facing FCOV-19.

Keywords: COVID survivor, fear of COVID-19, health literacy, long COVID.

Impact of health literacy and resilience on COVID-19 fear: Study among Indonesian COVID-19 survivors

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Background: COVID-19 pandemic was once become a threat not only to physical aspects of human life but also to other aspects such as the economy and psychology. This huge impact in turn increases the level of fear of COVID-19 which is still observed even among the survivors, those who have recovered from this disease. This condition evokes the importance of investigating factors influencing the level of COVID-19 fear to develop a suitable healthcare policy, which is highly needed in the future specifically in Indonesia.

Objectives: The main objective of this study is to investigate the impact of both health literacy and resilience on COVID-19 among Indonesian survivors.

Methods: Total of 245 COVID-19 survivors completed several instruments including three which used in current article. Statistical analysis was conducted to ensure the instruments' reliability, investigate the association of measured variables with demographical data, and test this study's hypothesis.

Results: Data for this article was collected from COVID-19 survivors whose age varies from 14 to 67 years old (Mean=30.22; SD=12.707). Based on statistical analysis, two demographic factors influence COVID-19 fear which is sex ($t=2.690$; $p=.008$) with female presented higher score; and perceived social status ($F=3.873$; $p=.022$). Furthermore, multiple regression was conducted to test the hypothesis. Results show that health literacy and resilience significantly predict the level of COVID-19 fear among Indonesian survivors simultaneously ($F=14.398$; $p=.000$). However, health literacy alone does not present any statistically significant impact on fear of COVID-19 ($B=-.038$; $p=.349$).

Conclusion: Current study presents that health literacy and resilience simultaneously significantly impact the level of COVID-19 fear. Insight from this article would be beneficial for the stakeholders in establishing policy regarding public health management.

Keywords: Fear of COVID-19, health literacy, Indonesia, resilience

Effectiveness of electronic media to promote health literacy in COVID-19 prevention among children with intellectual disabilities

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Background: Children with intellectual disabilities had lower levels of significant health literacy (HL) compared to general children. Therefore, they were easily taking a risk in the situation of the COVID-19 outbreak. However, the effectiveness of electronic media to promote health literacy in COVID-19 was lacking for evaluation.

Objective: To evaluate the effectiveness of electronic media to promote health literacy in COVID-19 prevention among children with intellectual disabilities.

Methods: This research model utilizes quasi-experiment with two groups for repeated measure design, 40 participants were randomly assigned to two groups. The experimental group (n=20) received electronic media to promote health literacy in COVID-19 prevention based on intensive HL building (6 steps). The control group received health education (n=200). Those were following the intervention 3 times during 3 months. Data were analyzed by using generalized estimating equations to compare overall HL level at 0.05 significant levels.

Results: The experimental group had a greater significance. Overall, there were changes of health literacy in COVID-19 between baseline and 2 times following measures. After that, during 3 months, the health literacy level of the experimental group had increased, compared to the control group as 7.39 (95% CI: 4.92, 9.86, p-value <0.001).

Conclusion: According to our study population, assigned the electronic media to promote health literacy in COVID-19 prevention demonstrated effectiveness in children with intellectual disabilities. In future research, the focus should be on how to develop interventions for children with intellectual disabilities, considering family context dimensions and offer repeated measures on process.

Keywords: children, COVID-19, electronic media, health literacy.

Visual voice of the youth under lockdown protocol amidst Covid-19 pandemic: a photovoice

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Background: In the Philippines, the government issued a lockdown in the form of an enhanced community quarantine on 12 March, (Ocampo and Yamagishi, 2020). Interestingly, 188 countries have been on a pause, stopping religious meetings, sports events, and other social gatherings, while closing their borders and businesses including schools which affect 1.5 billion students.

Objectives: To explore the experience of the youth under lockdown protocol amidst Covid-19 pandemic.

Methods: Participatory action research through a photovoice approach was used and explored the experience of the eleven (11) mixed-gender youth participants under lockdown protocol amidst the COVID-19 pandemic. The (11) mixed-gender youth participants were bonafide college students of a state university in Southern Philippines who willingly participated with strict university ethics protocol. Photographs using smartphones were taken within (2) weeks, selected, and submitted to a designated online submission bin with a reflection sheet. Photographs were collected, clustered, and analyzed in an iterative process.

Results: (8) themes emerged: 1) Weekend breather 2) Education, job, selling online 3) Love of self, family, relatives, friends, and pets 4) Learning new experiences 5) Nature and nurture 6) Effect 7) Spiritual sphere 8) Sanitation at its peak.

Conclusion: The youth amidst Covid-19 proved to have thrived and survived during the lockdown protocol as conveyed through their visual voice. Self-care pillars were subsumed among the emerging themes of the photovoice. Thus, path-forward measures and call to action are imperative for health literacy mechanisms for the youth.

Keywords: photovoice, youth, Covid-19 protocol

Associations of health literacy and digital healthy diet literacy with post-traumatic stress symptoms in COVID-19 survivors

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Background: Post-traumatic stress disorder is a serious mental disorder that has a high prevalence in people with coronavirus disease 19 (COVID-19) survivors. The role of health literacy in improving health outcomes has been emphasized in recent years. However, a lack of studies has determined the impacts of health literacy and digital healthy diet literacy on post-traumatic stress symptoms in COVID-19 survivors.

Objectives: This study investigated the association of health literacy and digital healthy diet literacy with post-traumatic stress symptoms.

Methods: A cross-sectional study was conducted between 1st December 2021 to 31st October 2022 in Vietnam. We recruited 4178 people between 18 and 85 years who recovered COVID-19 infections. Participants were asked about personal characteristics, clinical characteristics during COVID-19 infection, health-related behaviors, health literacy (HL), digital healthy diet literacy (DDL), and post-traumatic stress symptoms (PTSS) (using IES-R). We used Chi-square test, Mann-Whitney U test, Spearman correlation test and logistic regression to analyze the data.

Results: Out of sample, 57.3% of participants had PTSS (IES-R score ≥ 24). The means of HL and DDL were 31.36 ± 8.50 , and 31.72 ± 9.22 , respectively. HL and DDL had a significant negative correlation with PTSS (Spearman's rho = -0.2 and -0.15, respectively; $p < 0.01$). According to multivariate logistic regression analysis, HL was significantly associated with a lower likelihood of PTSS (Odd ratio, OR = 0.96; 95% confidence interval, 95%CI, 0.95-0.98; $p < 0.001$). DDL was not significantly associated with PTSS (OR = 1.01, 95%CI, 0.99-1.02, $p = 0.348$).

Conclusion: This study suggests that health literacy is a protective factor for PTSS in COVID-19 survivors. The attainment of health literacy is crucial to reducing psychological distress related to the pandemic.

Keywords: COVID-19, digital healthy diet literacy, health literacy, post-traumatic stress symptoms

Health Literacy in Early Childhood Rearing of Parents in the Middle Zone of Northeastern Thailand

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Background: Health literacy in early childhood rearing is essential in child development. However, there are no studies in early childhood rearing of parents in the middle zone of Northeastern Thailand.

Objectives: This study aimed to explore the health literacy in early childhood rearing of parents.

Method: This study was a descriptive cross-sectional study. The participants were 339 early childhood parents in the middle zone of the North-eastern Thailand during July – September, 2021. They were chosen using consecutive sampling method according to the determined properties. Data were collected using the self-completed questionnaires with content validity index of 0.97 and reliability of 0.86. The data were analyzed for frequency, percentage, mean and standard deviation.

Results: The results showed that 49.6% of parents had a fair and improved level of health literacy in the early childhood rearing. The samples with low level of the health literacy had 94.4% of cognitive knowledge and 49.6% of correct discrimination decisions in the early childhood rearing.

Conclusion: The research suggested that parents had inadequate health literacy in early childhood rearing. Therefore, emphasis should be placed on establishing knowledge and understanding among the parents in order to correct discriminating decisions in the early childhood upbringing, covering issues of eating, hugging, playing, storytelling, sleeping, dental care, provision for a safety environment, including proper emotional and behavior control.

Keywords: Health literacy, Early Childhood Rearing, Thailand

Involving undergraduate students from the health field to answer questions from underserved population on social networks

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Background: Health information, employing proper language, format, and form of dissemination, helps patients and their families to improve their health condition.

Objectives: To answer health questions for the underserved population, with low health literacy, and with restricted access to the health system. Members in this project are mainly undergraduate students from the Ribeirao Preto Medical School of the University of São Paulo, with a faculty member supervision.

Method: The project adopts the following methodological route: 1) Undergraduate students perform active search for health questions asked by the population on social networks, especially in patients and family discussion groups on health conditions; 2) They consult the best existing scientific evidence to answer these questions; 3) They create answers in a simple language understandable by the lay Portuguese speaking population; 4) The project coordinator reviews the answers before dissemination on social networks; 5) All team analyzes the feedback given by the population about the answers; 6) Students receive continuous training to answer the population questions; 7) Students receive a monthly \$100 grant.

Results: It is observed that many questions presented by the population are repeated. Therefore, 766 answers assisted about 660,000 people from Brazil and other countries. In addition to helping the population, students who participate in the project have a more effective knowledge about the informational needs of the population, a fact that can decrease preconceived ideas about underserved populations; they learn which are the best sources of scientific evidence and the Brazilian Health System limitations; and they assimilate how to communicate in simple language as well as the difficulties in translating scientific knowledge into society.

Conclusion: Involving undergraduate students from the health field to answer population questions builds a virtuous circle where everyone involved strengthens their health literacy.

Keywords: Health evidence, health information, patient, simple language, social network, underserved population

Ana Maria: Instrument to capture librarians' perception about information products and services with focus on individuals with Down Syndrome

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Background: Down Syndrome has a high incidence in the world. However, analyzing the literature, there are isolated initiatives on informational products and services focused on population with this condition. Thus, we observed the need to develop an instrument to be applied more broadly to professional librarians from different places about their perception on informational products and services focused on people with Down Syndrome.

Objective: Develop an instrument for mixed methods research, including quantitative and qualitative questions, to understand the perception of librarians about services and informational products focused on people with Down Syndrome.

Methods: Based on gaps found in a literature review, a researcher who works in the field of information science applied to health created an instrument with 19 questions. Then, this questionnaire was analysed, revised and improved, consensually, by another researcher in the field of information science, with knowledge in Down Syndrome. Private nature questions were removed from the questionnaire, to facilitate instrument application without harming the librarians' data protection and privacy. After corrections were made, five librarians answered the instrument for initial validation.

Result: The instrument current version, named "*Ana Maria – v.1*", contains 18 questions, two of which are qualitative, dealing with: education and knowledge obtained by the librarian in the undergraduate course on Down Syndrome; desire to have additional knowledge and develop products and services for people with Down Syndrome; informational services and products developed by the librarian and the institution where he/she works; librarians' perceptions of informational products and services focusing on people with Down Syndrome in the national context.

Conclusion: Having a standardized instrument on informational products and services focused on people with Down Syndrome can generate scientific evidence that will help to establish public and institutional policies, as well as a more adequate librarians' education.

Keywords: down syndrome, informational products, information services, librarians, libraries, perception, research.

The Relation Between Resilience and Subjective Happiness among Covid-19 survivor with comorbidities: The Mediating Role of Fear of COVID-19

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Background: The COVID-19 pandemic has had an impact on all aspects of life including psychological problems. Previous research found that people have high fear because of situations such as contracting COVID-19, especially survivors with comorbidities. However, due to the development of positive psychology, researchers have focused not only on treating negative psychological impacts, but also on promoting positive states, which promote mental health.

Objective: This study aims to determine the role of fear of Covid-19 in the relationship between subjective happiness and resilience among survivors who have comorbidities.

Method: The study was conducted on 96 people, ages 17 to 60 years and over. The instruments used include the Subjective Happiness Scale, Fear of COVID-19 Scale, and Brief Resilience Scale. Pearson's correlations were used to examine the relationships between the variables of this study (resilience, fear of COVID-19, subjective happiness). For the mediation model, fear of COVID-19 was the mediator between resilience as the independent variable and subjective happiness as the dependent variable. The PROCESS Macro for SPSS was used for the mediation analysis.

Results: Results presented that resilience is a negative predictor of the fear of COVID-19 and a positive predictor of subjective happiness and the COVID-19 fear is a negative predictor of subjective happiness ($r=.281$; $p=.022$). There is no significant direct effect between subjective happiness and resilience.

Conclusion: In conclusion, the fear of COVID-19 mediates the relationship between resilience and happiness among survivors with comorbidities. Resilience has an important role in hindering fear of COVID-19, which will contribute to better happiness.

Keywords: fear of covid-19, resilience, survivor with comorbidities

CODE013

Health literacy and economic downturn: A conceptual abstract based on the current Sri Lankan economic situation

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Background: Health literacy (HL) is suboptimal in some countries while poor HL is more pronounced among marginalized populations such as immigrants and those in low socio-economic strata. HL is more relevant in challenging situations such as pandemics and economic downturns where health related decisions need to be made swiftly and logically.

Objectives: HL is a crucial factor in making correct health related decisions during economic downturn.

Method: This a conceptual paper based, partly, on previous literature searched using keywords “health literacy” AND “economic downturn” OR “economic crisis” in PubMed, Google Scholar and Ovid. Results were extrapolated to suit the Sri Lankan current economic situation.

Results: Studies on HL during economic downturns are sparse. Adverse health outcomes during economic crisis include reduction in public health expenditure, changes in health services and pharmaceutical market and higher prevalence of mental disorders and suicide. In critical situations, those with higher HL perform better than those without. Studies on HL performed during the recent Covid-19 pandemic help understand the relevance of HL in crisis situations. Extrapolation of these studies provides an opportunity to determine how HL would affect the overall health at individual and society levels. Mental stress during Covid-19 has shown a positive association with financial insecurity and a negative association with HL level. Furthermore, poor HL has led to difficulties in interpreting health related information during the pandemic and also panic buying.

The current economic downturn in Sri Lanka has disrupted economy at all possible levels. In the redistribution of government funds, health has not been considered a top priority. Furthermore the earning capacity of people has declined and this is more pronounced among marginalized populations which are more likely to have poor HL. The scarcity of drugs and the high cost have further aggravated this situation. At present, health is not a priority for most people and authorities.

Conclusions: Although it is essential for people to be health conscious, adopt healthy practices and manage their comorbidities in order to avoid adverse clinical outcomes, whether people in general have sufficient insight to perform these is questionable. Health personals are duty bound to educate people, enhance their HL and reinforce the relevance of maintaining health during this critical period.

Keywords: economic downturn, health literacy, Sri Lanka

Public health policy in Republic of Kazakhstan: understanding of health issues among population

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Background: Health literacy is a significant driving force behind achieving Sustainable Development Goals and a central tool of health promotion around the world, and Republic of Kazakhstan is no different. But studies show that health literacy levels remain limited across country – with social status, average monthly income, age, religion, education and family status being shown to have direct correlation with it.

Objectives: These social determinants, serving as channels of influence on the levels of understanding, as well as health literacy itself are subject to state Public Health Policy, which we aim to explore in this paper.

Methods: To do so we used literature review and legislation analysis. With the adaptation of Health Literacy Survey Questionnaire (HLS19-Q) for Russian-speaking populations the interest of researchers in the area is on the rise.

Results: In 2022 the health literacy index of the population was tested, using HLS-Q22, to have increased to 75.32, which corresponds to a “sufficient” level. Nonetheless, 31,1% of the population were found to have problematic or inadequate literacy rate. Rural areas contribute mostly to the low end of the spectrum. Part of the problem is that Republic of Kazakhstan has no clear indicators or systems in place to track the changes in health literacy, despite its inclusion in two past national health projects for 2011-2015 and 2016-2019. In the latest national project "Healthy Nation" for 2021-2025 it plays a bigger role with approximately 1. 640 million USD funded by the government.

Conclusion: It remains to be seen as to what direction public policy will take, but, overall, positive trends can be observed. Future research would need to determine the way of monitoring the positive and negative impacts of public health policy on health literacy in greater detail, to not lose sight of the processes going under the surface of general population health changes.

Key words: health literacy, public policy, Republic of Kazakhstan

What determines the attitudes toward the pandemic: conspiracy beliefs or health literacy?

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Background: The infodemic accompanying the COVID-19 pandemic raised an essential question about the role of misinformation and conspiracy beliefs in shaping attitudes and opinions about epidemic threats and government measures. It was also frequently emphasized that health and e-health literacies may be a remedy against misinformation.

Objectives: The main aim of this study was the analysis the effect of general conspiracist beliefs (GCB) and COVID-19-related conspiracy beliefs (CCB) vs. health (HL) and e-health literacy (eHL) after adjusting for sociodemographic variables and political sympathies on the perception of pandemic-related risk (PPRR), the acceptance of vaccination against COVID-19 (AV), the acceptance of governmental actions (AGA) and introduced restriction (AR).

Method: The data used for the analysis were derived from the computer-assisted web-based interviewing survey of 2410 Polish adults conducted in May 2021, 14 months after the beginning of the COVID-19 pandemic in Poland. Multivariate linear regression models were developed for PPRR, AV, AGA, and AR.

Results: Lower PPRR was observed in persons with lower GCB (B, 95%CI: 0.14, 0.06-0.22), higher CCB (-0.06, -0.07 - -0.05), and higher HL (-0.11, -0.21- -0.002). Lower AV was seen in respondents with higher GCB (-0.14, -0.22 - -0.06), and higher CCB (-0.07, -0.08 - -0.06). HL and eHL had no significant effect. Lower AGA was associated with higher GCB (-0.12, -0.21 - -0.04) and lower eHL (0.02, 0.01 – 0.04). Finally, lower AR was significantly associated only with lower CCB (0.08, 0.07 – 0.09).

Conclusion: The attitudes toward the pandemic and actions undertaken by the government are significantly associated with GCB and less often with CCB. Unexpectedly, HL and eHL exerted only limited effects on analyzed attitudes.

Keywords: COVID-19 related conspiracy beliefs, COVID-19 vaccination, e-health literacy, epidemic threat, pandemic, generic conspiracist beliefs, health literacy.

Telemedicine in outpatient care for chronic diseases: a systematic meta-analysis

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Background: Telemedicine uses telecommunication technologies and electronic information to provide health care services from a distance. Telemedicine has become increasingly popular recently, allowing real-time medical consultations with medical professionals. A meta-analysis on telemedicine was conducted to review its role in outpatient care for chronic diseases.

Objectives: This study aimed to evaluate telemedicine on reducing chronic disease-related hospitalization and clinical outcomes, including mortality, HbA1c, and hypoglycemia in diabetes patients.

Methods: Based on designated keywords and subject headings, “Telemedicine” and “Outpatient”, studies were searched in Cochrane Library, Embase, PubMed, and Web of Science without language or date limitations. The titles and abstracts were comprehensively screened in EndNote version 20.1 software. Full texts of relevant studies were accessed for meta-analysis. Two authors worked independently with discussion and agreement.

Results: Twenty-one studies met inclusion criteria among 3,670 published studies. Diabetes was the most common disease, followed by heart failure. Pooled analysis of 13 of 21 studies showed that the risks of hospitalization were decreased by 22% under telemedicine intervention, compared to non-telemedical care (OR = 0.78, 95% CI 0.53-1.16, p-value 0.23), but without significant difference. The mean HbA1c in diabetes patients was significantly lower in the telemedicine group (mean difference -0.37, 95% CI -0.65 to -0.10, p-value <0.05). Telemedicine also significantly reduced the odds of hypoglycemia by 50% (OR 0.50, 95% CI 0.34 to 0.74, p-value < 0.05). Telemedicine reduced the number of mortalities compared to other care, but without significant difference.

Conclusion: Telemedicine significantly reduced the mean HbA1c and the odds of hypoglycemia for diabetes patients, but its effect on reducing hospitalization and mortality for outpatients with chronic disease remained to be evaluated.

Keywords: Chronic disease, COPD, diabetes, heart failure, inflammatory bowel diseases, outpatient, telemedicine.

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Background: Several studies showed pharmacist interventions improved clinical outcomes in several chronic and severe diseases, also tuberculosis (TB). Nevertheless, no practical guideline implicated for formal pharmacist intervention.

Objectives: To assist and promote coherence and adherence of Tb drug, and to participate in get reach of this lung infectious clinical goal.

Method: We researched and developed pharmaceutical services by using intensive drug counseling and providing pharmaceutical equipment as drug calendar among 56 tuberculosis patients in Nhongkrungsri hospital, during 2020-2021.

Results: 56 patients were counselled by TB drug literacies and administrated with Tb drug calendar, with 301 pharmaceutical cares visiting (average 5.3 visiting per person form standard 6 months Tb drug regimen) for each patient's full treatment regimens. Our patients were mostly found as male (40 patient, 71.4%) and mainly diagnosed with positive sputum test lung Tb (45patients, 80.4%). We found success rate of Tb drug combination of these pharmaceutical services as 98.5% during 6-9 months of individual drug exposes. Liver enzyme increasing was core adverse drug effects (10patients., 17.9%) from Pyrazinamide and Rifampicin.

Conclusion: We want to indicate drug intensive counselling and these pharmaceutical services showed us satisfied clinical outcomes of TB treatment. Otherwise, drug literacy and drug calendar should be stipulated for main complementary of pharmaceutical care process, especially in chronic and severe disease.

Keywords: Drug adherence, Tuberculosis, Pharmacist intervention

CODE036

Suicide literacy in Thai people

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Background: Several studies found that higher literacy levels about mental illness and suicide may decrease stigma levels and improve help-seeking behaviors to mental health services and thus reducing the number of suicidal acts.

Objectives: This study aims to assess the suicide literacy among the Thai population and demographic factors associated with suicide literacy.

Methods: A cross-sectional survey was conducted between July to December 2021. Of 2,590 voluntary participants who live in 4 provinces located in 4 regions of Thailand and stratified into 6 groups including 1,080 general population, 68 healthcare community volunteers, 86 community leaders, 380 unemployed persons, 488 patients with suicidal behaviors and 487 their relatives. Online face to face structured interview questionnaire by trained research assistants. Suicide literacy questionnaire consists of 12 items with 4 rating scale (1-4; 1=agree, 2= disagree, 3= unsure, 4= no answer), developed by Arunpongpaisal S. since 2020 (in PhD thesis) with content validity index of 0.8 by 3 experts in psychiatry and construct validity using exploratory factor analysis had 2 factors with total variance of 49.3% and Cronbach alpha = 0.7967. Total corrected scores of suicide literacy scale range 0 – 12. Data analysis used mean of suicide literacy scores and percentage of correct response,

Results: Of 2,590 participants were predominant in females (63.2%), with a mean age of 46.1 years (SD 15.2), married (59.3%), low education (≤ 12 years) 75.3%, and agriculture (34.7%). Mean of suicide literacy scores was 4.5 (SD 2.3) and mean percentage of correct response was 36.5. No significant correlation was found between suicide literacy and demographic factors.

Conclusions: Thai people had low suicide literacy with mean percentage of correct response only 36.5%. There may be value in directing mental health and suicide literacy programs to community people who are unfamiliar with mental disorders and suicide behaviors.

Keywords: factors, mental health, suicide literacy, Thailand

Psychometric properties of health literacy scale for covid survivors

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Background: There are many Health Literacy measures that have been used in previous studies. The Health Literacy scale for university students and the Health Literacy scale for headmasters for example have been analyzed to investigate their validity and reliability. Recently, research on the physical and psychological conditions of Covid survivors has been conducted among the Indonesian population. However, there was no information about the psychometric properties of the Health Literacy scale which was used in the study.

Objective: The objective of the research was to investigate the validity and reliability of the Health Literacy scale for Covid survivors.

Method: There were 248 participants consisting of 64 males and 184 females, with ages varying 14-67 years old. There were 168 singles, 73 were married, and 7 were widowed/divorced/separated in terms of marriage. Corrected item-total correlation was used to test the validity of this instrument Furthermore, Cronbach Alpha was conducted to test the reliability. We also conducted Exploratory Factor Analysis to discover groups of items.

Results: The results of statistical analyses showed that coefficients of corrected item-total correlation ranged from 0.492-0.746 and coefficient of Cronbach Alpha Reliability was 0,926. The result of Exploratory Factor Analysis showed that there were two groups of the items. Group 1 consisted of items number 1 to 11, and group 2 consisted of items number 12 to16. Based on the theory, item number 12 was included in group 1 (Health Literacy short version). However, in this research, it was included in Digital Health Diet Literacy.

Conclusion: Health Literacy Scale for Covid Survivors was a good scale because all items of the scale were valid, the reliability coefficient was high, and the result of Exploratory Factor Analysis showed that fifteen items grouped in concordance to the background theory, leaved out item number 12.

Keywords: Covid survivors, health literacy scale, validity, reliability

Status of stress, anxiety, depression of surgical patients at Vinmec Timescity international hospital in 2022 and some related factors

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Background: Psychology of patients related to surgery which they have to undergo is one of the important issues affecting to the outcomes of treatment. Many questions raising before and after surgery such as pain relief, incision and esthetic aspects that make them in different psychological states.

Objectives: We conduct the research aiming to assess the status of stress, anxiety and depression of surgical patients at Vinmec Timescity hospital in Hanoi.

Methods: A cross-sectional descriptive prospective study was conducted from February 2022 to February 2023 in 400 surgical patients in 3 departments at Vinmec Timescity hospital before and after surgery. The DASS 21 scale was used for collecting the information on psychology of patients. Data was collected and processed using Epidata 3.1 and SPSS 20.0.

Results: Before surgery, 1.5% of patients had depression, 13.3% had anxiety and 1.8% had stress respectively. In which, the rate of mild depression accounted for 1%, moderate level was 1%, severe level in 0.5%. The rate of anxiety at mild grade was 10.3%, moderate grade 10.3%, severe grade 2.5% and 0.5% had very severe anxiety; 3.8% of patients with mild stress, 1% with moderate stress, 0.3% with severe stress and 0.5% of patients with very severe stress. After surgery, 0.5% of patients had depression, 4% had anxiety and no one had stress. Of them, there are 1.5% of patients with mild depression and 0.5% of patients with moderate depression. The rate of patients with mild anxiety was 3%, moderate was 3.5% and severe was 0.5% respectively.

Conclusions: The study showed that the surgical patients were suffered from psychology problem which affected to the outcomes of treatment. Strengthening health counseling and education to patients for better understanding the disease and surgical procedure help to reduce this problem. We recommend all health staff including doctors, nurses should involve in this activity for assistance to patients, to assure the patients more relaxing and confidence when undergoing any surgeries, especially difficult cases.

Keywords: depression, surgical patients, Vietnam

Development of the depression and suicidal ideation screening test

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Background: COVID-19 pandemic affects people's mental health worldwide. The mental health department develops the depression and suicidal ideation screening test for early screening and intervention.

Objectives: To develop the psychometric properties of the depression and suicidal ideation screening test (2Q plus).

Methods: We conducted a cross-sectional study between 28 March 2022 and 18 April 2022. The participants were psychiatric patients who visited the outpatient department of thirteen psychiatric hospitals under Thailand's Department of Mental Health. We screened the participants with two questions for depression and one for suicidal ideation compared with the Mini International Neuropsychiatric Interview (MINI) major depressive episode (MDE) and suicidality modules as the gold standard, respectively. The sensitivity, specificity, accuracy, positive predictive value (PPV), negative predictive value (NPV), positive likelihood ratio (LR+), and negative likelihood ratio (LR-) were calculated.

Results: Two hundred eighty-three participants were screened. 61.5% of them had reported at least one symptom of depression in the past two weeks, compared with MINI. MDE module, the sensitivity was 93.4%, the specificity was 50.2%, the accuracy was 61.8%, the PPV was 40.8%, the NPV was 95.4%, the LR+ was 1.88, and the LR- was 0.13. In addition, 30.7% of them reported suicidal ideation in the past month. Compared with the MINI suicidality module, the sensitivity was 83.7%, the specificity was 94.7%, the accuracy was 91.1%, the PPV was 88.5%, the NPV was 92.3%, the LR+ was 15.79, and the LR- was 0.17.

Conclusion: The 2Q plus screening test was practical and easy to administer to screen the risk for depression and suicidality. It suits community health workers to screen people for further treatments.

Keywords: depression, psychometric property, screening test, suicidal ideation

Effects of mental health literacy and community-level capability development on sustainable health promotion of model community

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Background: Encouraging mental health literacy operation is for happiness of all ages in conduct of living. The driving to promote and prevent mental health problems in local communities, that is an important factor to reduce health risks in different groups of people, The development of cooperating focus on the national level between the National Health Foundation and the Thai Health Promotion Foundation.

Objectives: 1) To build mental health literacy at individual, family, community and network levels 2) To develop the sustainable capability of relevant sectors of community mental health crisis.

Method: Sample were 448, consisting of mental health working persons, village health volunteer and people. Methods were proactively outreaching, creating knowledge, developing potential, creating cooperation with the network, and providing mental health assessment services with Smart Pulse Biofeedback, including individual counseling and focus group.

Results: It found that 39.62% of the sample were in good physical health, 32.04 and 28.34% were risk and sick, 42.67% had sleep problems. 32.5 and 24.83% were stress and fatigue. After finishing the activity, 70.35% had the overall mental health power (RQ) scores higher than average level and the quality of life increased by 81.7%. Reenforcing mental health literacy and developing health capability effected to health promotion in people by 70.3% It effected to the referral system in community higher that expectations in community-level and Smart Pulse made people to aware in accessibility, capability of self-care, reduce the risk of crises in the model community. Therefore, the development of promotion and prevention of mental health at the community-level requires proactive work. Emphasis on integrating with all sectors will result in people in the community having a tangible better quality of life.

Keywords: community-level capability development, health promotion, mental health literacy, model community.

CODE021

Electronic Media Usage in Early Childhood in Khon Kaen Province Under the Supervision of Primary Caregivers of Various Ages

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Background: Early exposure to electronic media in young children under the age of two is linked to developmental delays, particularly in the area of language development.

Objective: This study aimed to investigate electronic media exposure among 18-months-old children in Khon Kaen province under the supervision of primary caregivers of various ages.

Methods: This study was a descriptive study. The population study was the primary caregivers who came to primary care units in Khon Kaen province to acquire immunizations for their 18-months-old infants. The data were gathered through face-to-face interviews using a structured questionnaire that included general information and the children's exposure to electronic media during the previous year. The results were analyzed by descriptive statistics and inferential statistics.

Results: In total, 259 primary caregivers participated in the study. The majority of primary caregivers were under 60 years old, accounting for 78%. We found that 52.1% (95%CI: 45.85, 58.35) of the children were exposed to electronic media. The majority of these (64.9%) had elderly caregivers as their primary caregivers. Overall, mobile phones account for 98.5% of all electronic media usage. The purpose of most electronic media used was for children to watch cartoons while their caregiver was working, accounting for 38.2%. It found that elderly primary caregivers used statistically significantly more electronic media in childcare than non-elderly caregivers, with an odd ratio of 1.96 (95% CI: 1.07, 3.61).

Conclusion: Elderly caregivers of early childhood are more likely to use electronic media for childcare than non-elderly caregivers. Elderly caregivers of young children are more likely to use electronic media for childcare than non-elderly caregivers. As a result, education and encouraging interaction with early childhood should be offered, as well as awareness of the use of electronic media for childcare in primary caregivers who are elderly.

Keywords: childcare, early childhood, electronic media use.

Rehabilitation for Bedridden Patient by Using Telehealth

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Background: A study of the rehabilitation for bedridden patient or dependency by using remote health technology aimed to propose the utilization of telehealth technology for physical rehabilitation of bedridden patients or those with household or community dependence together with the practice guidelines at the Tambon Health Promoting Hospital and extending the utilization of remote health technology for long-term care by promoting self-reliance through the community wisdom.

Methods: A research design was a mixed methodology by quantitative method integrated with qualitative and practical methods through telehealth technology to develop a learning program based on the guidelines of the Sirindhorn Institute for Rehabilitation of the National. A research was conducted in 3 steps: Phase 1 was developing content, knowledge and guidelines on health care for bedridden patients or those with dependence on 5 symptom groups, namely malnutrition, sepsis, difficulty in movement, constipation and insomnia. Phase 2 was a trial of a rehabilitation program through remote health technology, and phase 3 was a follow-up and assessment of health care and rehabilitation through telehealth.

Results: The results showed that a learning program tailored to the ability to learn and utilize telehealth for the care of bedridden patients or those with household or community dependency may be divided into two programs: the telehealth program for the rehabilitation and standard practice learning programs. The quantitative study found that personal factors and opinions of caregivers who do take care of bedridden patients or those dependence have a significant correlation. An action study found that caregivers lack holistic health care skills and knowledge. The ability to use technology is a limitation of remote learning in remote areas, internet connection stability is a constraint of accessing. However, in a group of family members or caregivers with access to technology, there were good learning and practice outcomes in all 5 syndromes of bedridden patients or those dependence as well as being satisfied with the use of remote health technology. Research has shown that learning via a portable computer (tablet) is more effective than learning via a smartphone and telehealth technology is suitable for learning and use at the community level. The follow-up and evaluation of using telehealth technology found that, the components of care at the household or community level were the cost of care, health personnel, multidisciplinary team, community participation and caregivers.

Conclusion: Policy recommendations such as integration of multilateral public-private partnerships, strengthening mechanisms to decentralize local government in the administration of Tambon Health Promoting Hospitals including the information technology structures to connect healthcare seamless systems. Academic recommendations such as, developing skills and enhancing long-term care giver attitudes through telehealth learning, content analysis of health media for learning through Telehealth technology.

Keywords: bedridden patient, rehabilitation, telehealth

The effectiveness of AI-assisted health literacy promotion innovation for diabetes risk group in Raksukkapap Clinic, Regional Health Promotion Center 5 Ratchaburi

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Background: Diabetes mellitus is a major non-communicable disease that can lead to other complications such as nephropathy, cardiovascular disease, and stroke. Therefore, as a prevention, it is important to promote health literacy in the diabetes risk group. More importantly, the tool to promote health literacy in this digital era has to be fast and convenient. In this regard, “On-Wan”, an artificial intelligence with a convolutional neural network functioning on Line application, was developed by the researchers to automatically process visual imagery and feedback on sugar and calorie contents in food.

Objectives: The quasi-experimental research aimed to study the effectiveness of the health literacy promotion innovation for the diabetes risk group.

Methods: It adopted a one-group pretest-posttest design for 36 patients in Raksukkapap clinic. Data were collected during February 1-28, 2023. The Donabedian model was used as a conceptual framework in this study. Data were collected before and after the experiment by using a questionnaire developed by the researchers. It consisted of 3 parts: (1) demographic data, (2) health literacy questions, and (3) the satisfaction of On-Wan. Data were analyzed by using descriptive statistics including percentage, mean, standard deviation, and paired-sample t-test.

Results: The results showed that the sample group had higher posttest mean scores than the pretest (p-value < 0.05) after participating in the health literacy program. The overall satisfaction of On-Wan was at a high level, 72.2% (mean = 4.68, SD. = .552). This program can be applied to prevent diabetes or other non-communicable diseases for risk groups.

Keywords: diabetes risk group, health literacy program, On-Wan

Promotion of mental health literacy in social media society: thematic analysis of a twitter conversation

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Background: Social media platforms have been growing space for interpersonal interaction. It has been emphasized as a potential space for a resource for mental health service users and possible means for reducing stigma and promoting help seeking behaviours. However, little research has been conducted to explore this phenomenon. During the COVID-19 outbreak, the Department of Mental Health, Thailand developed a web-based application for mental health self-screening (Mental Health Check-In). The application was used by millions of Thai people and have been discussed on social media platforms, especially Twitter.

Objectives: The aim of this study is to explain the phenomenon of promoting mental health literacy in the social media society in Thailand by using the conversations of the application on the website www.twitter.com as a case study.

Method: An electronic search was performed to identify material contributing to an online conversation entitled #mentalhealthcheckin and all the conversation that relate to the application was collected. Output from the search was combined in Microsoft Excel to be analyzable. The textual material from the conversations were reviewed and combined in a thematic analysis to identify common themes of discussion.

Results: 577 unique quotes were identified regarding the conversation about the Mental Health Check-In application. The majority of the material related to three overarching thematic headings: satisfaction to the application; causes of mental health problems during the COVID-19 outbreak; mental health awareness.

Conclusion: This study shows that social media platforms can be used as a space for people with mental health issues to share information and gain knowledge. It can also be used to provide feedback to mental health service providers. More research is needed to determine the benefits of using these networks for individuals, its effectiveness as a tool for providing feedback to service providers.

Keywords: mental health literacy, promotion, social media, twitter, web-based application

The effectiveness of SMART NCDs program for establishing health literacy in diabetic patients, Bantakhun hospital, Surat Thani province, Thailand

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Background: Non-communicable diseases (NCDs) have been a significant problem leading to mobility, mortality and total health expenditure. Thailand has certified controlling NCDs is a goal by 2025 according to the Political Declaration on prevention and control of NCDs.

Objectives: This study aimed to investigate the effectiveness of SMART NCDs program for establishing health literacy in diabetic patients, Bantakhun hospital, Surat Thani province, Thailand.

Methods: This quasi-experimental study was conducted between July to December 2022. The intervention program for 6 months was the 4 steps of SMART NCDs program were performed including: 1) diabetic health literacy assessment 2) health coaching 3) health modification behavior and 4) evaluated. Of these, 574 samples were purposely selected into the study who were type II diabetic patients with uncontrolled glycated hemoglobin (HbA1c) >7.0 mg%. The line official account was used to record the daily activities including; smart watch counted steps of walking, blood pressure, weight, food consumption and blood glucose level. The data were analyzed using descriptive statistics, paired t-test.

Results: The results found that an average of the total score of health literacy related to diabetics before and after participating in the SMART NCDs program was statistically significantly higher difference with 78.0 and 95.0, respectively ($t = 184.6, p < 0.01$). The health behavior modification behavior showed that the subjects who participated in the SMART NCDs program were significantly better in remission (3.8 and 4.7%), controlled (33.2 and 59.2%) and uncontrolled (63.0 and 36.1%). The average HbA1c before and after participating in the SMART NCDs program was statistically significantly lower with 8.6 and 6.7, respectively ($t = 154.1, p < 0.01$).

Conclusions: SMART NCDs program as digital technology was an alternative intervention to support patient awareness and self-care of NCDs patients. It could produce better clinical outcomes among diabetic patients and other non-communication diseases.

Keywords: Health literacy, SMART NCDs program

CODE053

Impact of local community health workers' response on maternal and child's health in rural Nepal: A COVID-19 pandemic overview

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Background: Community health workers (CHWs) are critical to achieving universal health coverage as they extend and manage care to underserved populations. Dhulikhel Hospital in collaboration with Possible institutionalized the concept of Professionalized CHWs aided with m-health platform to cater continuum of care in reproductive, maternal, neonatal, and child health (RMNCH) in Dolakha Nepal. With the emergence of COVID-19 in early 2020 RMNCH services were deprioritized, the role of CHWs became challenging yet crucial.

Objective: This paper assessed the contribution of the CHWs on RMNCH outcomes during COVID-19 and beyond.

Methods: We assessed care adaptations, examining women's and children's health data between 1/2019 and 1/2022 captured in the mHealth platform as part of care delivery by the CHWs, validated, and descriptively summarized along with the challenges and lessons learned during implementation.

Results: CHWs offered remote services tirelessly delivering RMNCH services to 33,030 households including 32,928 pregnancy surveillance, 3715 antenatal care, 2546 postnatal care, 11819 family planning counseling, and 9015 Under 2 care even during pandemic. The institutional birth rate which was 89.7% when COVID-19 emerged still increased to 94.12% by 2020 end and to 95.24% by 2021 end. Although dropped considerably in 2020 both pregnancy speed and the PNC speed improved back to 38.30% and 25% respectively by the end of 2021.

Conclusion: Despite the challenges posed by the pandemic, CHWs engaged in the continuation of critical services with some adaptations to the mode of delivery. Hence, their role during emergencies, particularly in low-income nations with vulnerable health systems, remains pivotal.

Keywords: community health workers, Covid-19, health literacy

The development of health literacy toolkit in Taiwan

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Background: In recent years, health literacy issues have attracted much attention. Experts and scholars regard health literacy as one of the important factors affecting health outcomes and services. In 2016, the 9th Global Conference on Health Promotion also called on governments to commit themselves and have policies to enhance citizens' health literacy as well as improve the health information environment. That is to say, raising health literacy achievement and improving the health literacy environment are important consensus in the health policies.

Objectives: Taiwan has listed the enhancement of health literacy as an important policy, and press ahead with the plan to enhance national health literacy. Therefore, HPA(Health Promotion Administration) not only manages to develop health literacy human resource to provide more friendly care based on higher health literacy but also refers to the practice of AHRQ (Agency for Healthcare Research and Quality) and CDC (Centers for Disease Control and Prevention) to develop many practical health literacy toolkits for medical service providers. In order to enhance the health literacy of all the people, HPA invites experts to develop a local "health literacy toolkit" to provide relevant tools for better services.

Methods: The "health literacy toolkit" includes 6 chapters: "Verbal Communication Pack", "Communication with Older Patients Pack", "Navigation Pack", "Health Data Pack", "Ask Questions Pack", and "Audio-Visual Teaching Aids Pack". With simple and understandable texts along with example and explanations, the toolkit can be a powerful tool for first-line medical professionals.

Results & Conclusion: The content of "health literacy toolkit" emphasize "How to do" skills, makes actions of health literacy and friendly service more specific and implementable. By improving the quality of health information, the toolkit is able to lead to effective communication and enhance the health literacy of all the citizen.

Keywords: health literacy, toolkit

Health literacy on type 2 diabetes mellitus among Tuberculosis patients

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Background: It was proven that having adequate health literacy is an important factor for preventing type 2 diabetes mellitus (DM) among tuberculosis (TB) patients. Although having DM might adversely affect TB treatment outcomes and reduce the likelihood of a favorable outcome and increase drug resistance, the risk of relapse, and death, there were few studies which explored health literacy on Diabetes disease among Tuberculosis patients.

Objectives: The aim of this study was to explore the health literacy of Tuberculosis patients on type 2 Diabetes mellitus.

Method: We explored literatures in the PubMed database and Google Scholar which reported health literacy of TB patients on type 2 diabetes mellitus.

Results: 21 papers were reviewed to explore health literacy on diabetes mellitus globally. A systematic review pointed out that limited health literacy reported widely varying (6%-94.2%) in Southeast Asia countries. Limited health literacy on DM was associated with education attainment, age, income, socio-economic factors, delayed diagnosis and behavioral factors. However, a study from Chinese found that health literacy and patient awareness were negatively correlated to diabetes control. A case-control study of Nepal also found that there was strongly association between level of diabetes literacy and unsatisfactory practice (95% CI-38.08% to 48%). However, there were a few studies which explore health literacy among TB patients about DM.

Conclusion: Based on the findings, health literacy on diabetes mellitus still limited worldwide. Health literacy was associated with education attainment, age, income, socio-economic factors, delay diagnosis and behavioral factors, but there were few studies in vulnerable population (TB) on diabetes health literacy. Thus, we need to explore more evidence the health literacy on DM among TB patients for effective management on vulnerable population and integrated intervention on TB-DM education promotion activities collaboration with tuberculosis.

Keywords: Behavioral, Health literacy, Knowledge, Diabetes Mellitus, Tuberculosis,

Health Literacy of The Population of The Republic of Kazakhstan

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Background: Health literacy is an important and integral indicator of the development of healthcare and society as a whole. Health literacy remains a crucial focus for the development of public health and health policies. Many European Member States have already developed and integrated health literacy policies into existing public health strategies and plans. In the Republic of Kazakhstan, there is a need to measure health literacy regularly and develop and implement a strategy to promote health literacy.

Objective: to study the literacy of the population of the Republic of Kazakhstan in accessing, understanding, evaluating and applying health-related information in health care, disease prevention and health promotion.

Methods: A survey was conducted among the population of several regions of Kazakhstan aged 18 years and older through a face-to-face interview, permanently residing in these regions. The study used the design of a cross-sectional study of health literacy using the international standardized questionnaire HLS-EU-Q in five cities of the Republic of Kazakhstan (Astana, Almaty, Shymkent, Aktobe, Ust-Kamenogorsk). The total sample consists of 3,000 respondents (55,5% women (n=1664), 44,5% men (n=1336)).

Results: The health literacy rate of the population is 75.32, which corresponds to a "sufficient" level. The main factors affecting the level of literacy are: age, family status, religion, education, average monthly income and social status of respondents. When considering the categorical values of literacy, it is important to note that 16.2% of respondents have an "insufficient" level of literacy, and 14.9% have a "problematic" level. Activities aimed at improving health literacy levels should be targeted at the 31.1% of respondents with "insufficient and problematic" levels of literacy.

Conclusion: The revealed level of health literacy requires immediate measures to improve the literacy of the population through the introduction of political and social reforms, as well as health care reforms.

Keywords: Health literacy, determinants of health, questionnaires, Kazakhstan

CODE025

Health Literacy in Food Handler of School in Khon Kaen municipality

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The illness history of student in 9 school under agency Khon Kaen municipality show that the incidence rate of Food Diarrhea disease in 9 schools under agency Khon Kaen municipality grow up in every year from 2018-2020. SRRT of Khon Kaen Provincial Health office investigated show risk factor of Food poisoning in student from Rectal Swab culture, Food handler while cooking meal for lunch. According to the investigation report for decision to training the Food handler and the school Health teacher in 9 schools intend to build Health Literacy by V-shape model with model SMCR, Sender is Public Health officer from Regional Health promotion 7 Khon Kaen, Message is knowledge about food Sanitation Program. ,Channel is the training and Receiver program were food handler and school health teacher in 9 schools total 41 person

After training Health Literacy program , the numeral of Assessment the CFGT Standardization of 9 schools were pass 100% ,assessment information about food sanitary Health literacy result in biological examination by Test kit for coliform Bacteria contaminated were not found every sampling. For example Hand Hygiene of Food handler were passed all school, Milk storage by keep cool and safety hygienic for all student and finally data of the incidence rate of Food Poisoning Disease in 9 schools under agency Khon Kaen municipality were reduced in 2021 -2022 B.C. by compared the statistic of illness information record of communicated disease from the data of epidemiology work group ,Khon kaen provincial health.

Key word: Food Handler / School Health teacher/ Health literacy Programme

Effectiveness of a life skills enhancement program (LSEP-V) for vocational students in Thailand: A quasi-experimental study from a middle-income country

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Background: Adolescence is a complex maturational and developmental process with diverse variation across individuals and cultures, especially among vocational students. However, implanting life skills can help pass through this portal to adulthood, thus resulting in emotional maturity and the mental capacity to deal with the onslaught of life's challenges. The purpose of this study was to verify the effectiveness of a Life Skills Enhancement Program for Vocational Students (LSEP-V) with the aim to increase the level of well-being and strengths, through variety of mental health literacy practices for vocational students aged 15 years -25 years in Thailand.

Method: Intervention groups from 22 colleges of both lower and higher level students (n=1,283) received 10 x 45 min-60 min 'LSEP-V' sessions. All participants completed the Five-Wellbeing Index (WHO-5) and Strength and Difficulties Questionnaire (SDQ) at pre, post, and 3 months follow-up. Analysis using One way ANOVA and t-tests were conducted to examine within group time effect from pre-treatment to post-treatment and from post-treatment to follow-up. The control group was another 13 colleges of vocational students (n=499) from nearby areas.

Result: The mean well-being score on the WHO-5 for the intervention group demonstrated a significant difference across the time ($p<0.001$). There were increases from the baseline at both the post intervention (95% CI - 0.811 to -0.283; $p<0.001$) and three-month follow-up (95% CI - 0.763 to - 0.257; $p<0.001$). The mean weakness score on the SDQ for the intervention group was significantly decreased at the three-month follow-up (95% CI 0.271 to 1.143; $p=0.002$).

Conclusion: The effectiveness of the LSEP-V was verified through this study using a quasi-experimental design on a large sample. It showed a medium-term increase in the well-being among the intervention group compared to the control group.

Keywords: Life skills; WHO-5; SDQ; Vocational student; Quasi-experiment; Thailand

Pediatric patient literacy and storytelling

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Background: Patients may experience idleness prior to outpatient care or when they undergo long hospital stays.

Objectives: In order to use idle time, increase happiness, well-being, resilience, and health literacy of pediatric patients (children and adolescents up to 18 years old), a storytelling initiative was developed in the outpatient clinic and ward of a pediatric hospital and also in a YouTube channel.

Methods: Protocols were developed for storytelling in face-to-face and digital modes. For both modalities, it was necessary: the selection of suitable stories, including stories about resilience, cultural, religious and bodily diversity, friendship, race and gender equality (Sexist, racist, violent and white superiority stories are not selected in the project); training the team of storytellers; creation of visual patterns for clothing and identification of storytellers. For face-to-face storytelling, a story menu was developed so that children can select the stories they want to hear; a hand hygiene methodology was established; and a schedule, with days and times for storytelling. For storytelling in the digital modality, the following processes were developed: scenography, recording and editing of stories in a standardized way; creating a YouTube channel; dissemination of stories on social networks.

Results: Storytelling engages children, adolescents and their families emotionally and cognitively. Face-to-face contact, through storytelling, expands the possibilities of language and vocabulary development, expands communication, human relationships, imagination, generates good feelings and good emotions within the health unit. The availability of the stories told on the YouTube channel makes it possible for children and adolescents to review the stories at any time. Between 2018 and 2023, our initiative assisted 2,540 in person and 7,518 on YouTube.

Conclusion: We hypothesized that the first steps towards health literacy can start with listening to stories in health units, when the patient can establish an affective and cognitive relationship between health and information.

Keywords: caregivers, children, communication, language development, literacy, storytelling, teenagers.

The analysis results of adolescent leadership development model in health region 1

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Background: Adolescents in the present era are still experiencing health problems, which have an impact on their growth and development into good adults in the future. The Department of Health has promoted Youth Friendly Health Service. They have developed a model to enhance the leadership potential of adolescents as part of a participatory learning activity plan. Educators have conducted training based on the aforementioned manual in Health Region 1, and have studied the results of the implementation of the leadership potential development model for adolescents in order to improve the appropriateness of the training program for adolescents.

Objectives: Comparing the knowledge and attitudes of adolescent leaders before and after the implementation of the adolescent leadership health literacy development model.

Method: The retrospective study studied from a sample of 172 adolescents who received training in Health Region 1 using a pre- and post-training knowledge and attitude assessment questionnaire.

Results: Before the leadership development training, the average knowledge score of adolescent leadership was 6.70 (SD 1.70). After the training, the average score increased significantly to 9.59 (SD 0.67), with a statistically significant mean difference of 0.00. The attitude towards leadership among adolescents was moderate level before the training, with an average score of 3.18, while after the training, it was high level with an average score of 3.81.

Conclusion: Training based on the manual for developing leadership potential among adolescents, using a participatory activity plan and group activities, improves knowledge and attitudes towards health and reproductive health among participating adolescents. Adapting the content to suit the age group and local context will enhance the completeness of the manual.

Keywords: adolescent, adolescent leadership, health behavior, leadership development, training

The effectiveness of lanna smart child program for self-care behaviors of obesity secondary school students.

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Background: School-age children with obesity are rapidly increasing and the epidemic is spreading around the world, and it is a public health challenge in the 21st century that must be resolved urgently in many countries.

Objectives: The effectiveness of the lanna smart child program on body weight reduction, Physical fitness and self-care behaviors of obese students.

Method: Quasi-experimental for two groups, pre-and post-test design. The samples were obese students in 2 schools under the Chiangmai provincial Secondary Education Service Area Office. Calculate the sample size using G* Power software package. A sample size group of 70 people was divided into the experimental and control groups each of 35 people. The experimental group received an 8-weeks the lanna smart child program that applied health behaviors modification guidelines during December 2020 to July 2021. The tools used were the lanna smart child program, physical fitness test and health behavior assessment form. Data were analyzed by descriptive and t-test statistical.

Results: Showed that after receiving program, the experimental group had a lower weight than before receiving program with a statistical significance ($p = 0.01$), physical fitness and self-care behaviors (health literacy) higher than before receiving program with a statistical significance ($p < 0.01$). When comparing between the experimental group and the control group, found that after receiving the experimental group had lower weight than the control group ($p < 0.01$), had physical fitness higher than the control group ($p = 0.02$) and had self-care behaviors higher than the control group ($p < 0.01$).

Conclusion: The lanna smart child program can make the junior high school students lose weight, Improved physical fitness and self-care behaviors. Suggest that educational institutions where students have obesity can use this lanna smart child program to control and prevention of obesity in students.

Keywords: lanna smart child program, obesity, self-care behaviors, students.

Effect of social media model to improve sexual health literacy among secondary school female students in southern provinces, Thailand

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Background: Adolescent pregnancy is one of major public health issues globally and in Thailand. Female adolescents are at high risk: of sexual and reproductive health problems like unintended pregnancies, abortion, childbirth related complications including sexually transmitted diseases (STDs) and AIDS due to poor sexual health literacy (SHL). Sexual health literacy (SHL) is one of very important factors to prevent teenage pregnancy.

Objectives: The aim was to examine the effect of social media model to improve sexual health literacy among secondary school female students in southern provinces of Thailand.

Method: This study employed a quasi-experimental research design using two groups the intervention and the control groups. The total number of 128 participants were participated in the study. 64 participants were placed in the intervention group and the control group equally. The study ran for 24-week with 4 serial measurements (0, 8, 16, 24 weeks of intervention). The intervention group received health education through social media model to improve sexual health literacy, while the control group attended regular school classes only and received neither social media model on sexual literacy. The sexual health literacy questionnaire composed of four elements including 1) accessing information, 2) understanding information, 3) appraising information and 4) applying/ practicing. A self-administered questionnaire was used Descriptive statistics including frequency, percentage, mean, and standard deviation (SD) were used to describe the socio-demographic characteristics: pair t-test, independent t-test, and One-Way ANOVA Repeated Measurement were used for data analysis.

Result: The baseline characteristics of both groups were similar. After the intervention program, the mean scores of both groups started to change in the week 8, 16 and 24. The mean scores of participants in the intervention groups had increased from the week 8, 16 and 24 respectively with statistically significant at the .05 level ($F = 489.82$, $p = 0.00$), while the mean scores of participants in the control group did not change much with statistically significant at the .05 level ($F = 10.72$, $p = 0.00$). In term of level of sexual health literacy, the scores among female students in the intervention group were sufficient (76.56%), whereas the scores of female students in the control group were inadequate (100%). After the intervention program, the scores in the intervention group showed higher level distribution of the sexual health literacy scores more than the control group.

Conclusion: Social media model has improved sexual health literacy (SHL) among secondary school female students.

Keywords: sexual health literacy, social media, Thailand

CODE010

Association of health literacy with metabolic control and vascular surrogates among patients with diabetes attending outpatient clinics; a cross-sectional study

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Background: The association of health literacy with metabolic control or clinical outcomes of diabetes is uncertain. This study evaluated the association of health literacy with metabolic control and surrogates of vascular disease among patients with adult-onset diabetes attending outpatient clinics in a tertiary care center in Sri Lanka.

Objectives: To determine the association of health literacy with glycaemic and lipid control, carotid intima media thickness (CIMT) and the presence of hepatic steatosis in patients with adult-onset diabetes.

Methods: A random sample of 305 patients (214 women) with adult-onset diabetes attending medical clinics at Teaching Hospital, Galle Sri Lanka was studied. Health literacy was assessed with the Sinhala version of the HLA-EU-16 questionnaire while a radiologist measured the CIMT and hepatic steatosis adhering to the standard protocols. Current HbA1c, lipids, serum creatinine and urine albumin/creatinine ratio were also measured.

Results: Mean (SD) age and weight of patients were 61.9(10.0) years and 56.9(10.5) Kg. 22.7% had hypertension while 18.2% had dyslipidaemia. Mean (SD) HLA-EU-16 score was 12.7(3.6) while 187 subjects had health literacy above 12. No significant correlations were found between HLA-EU-16 scores and glycated Hb, lipids, serum creatinine, urine albumin/creatinin ratio or CIMT. The mean values of the above measurements were not significantly different between those with and without adequate health literacy (defined as HLA-EU-16 score above 12). The prevalence of hepatic steatosis was not different between the two groups.

Conclusion: We found no association between health literacy and metabolic control or vascular surrogates among patients with long standing diabetes included in this analysis.

Keywords: diabetes, health literacy, HLA-EU-16, Sri Lanka

Effects of Health Literacy program (NESTPlus) on unpregnancy and abortion teenage life skill protection in higher education institution

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Background: Pregnancy Health literacy (PHL) and life skills among teenagers is considered a major protective factors for teenage pregnancy and abortion. However, it is no effective PHL program for teenage in Ubon Ratchathani province.

Objective: To examine the effect of PHL promotion program and life skill among teenager in Ubon Ratchathani province.

Methods: This research was quasi-experimental study. Four-hundred students aged 16-18 yrs. recruited to experimental and comparison groups. An Experiment group received NESTPlus program (n=200) and control group received standard program (n=200). The NESTPlus program included activities based on intensive HL building as nutrition, exercise & emotion, sex education & safe sex & sleep, teeth and plus (avoid smoking/ alcohol and take iron supplements in women). and duration of study were followed up at 12 weeks. Data were analyzed were using ANCOVA to assess program impacts.

Results: A total of 400 samples completed the study. Baseline PHL were not significant between groups. There were significant difference in the end point of PHL scores in the NESTPlus program were 13.94 (95% CI 9.5 to 18.5; $P<0.001$), and life skill were 12.1 (95% CI 8.2 to 17.7; $P<0.001$), which was more than those from the standard program.

Conclusion: According to our study population, the NESTPlus program allocates effectiveness in teenager. The intervention is an alternative model which improves intermediate outcomes (HL and life skill) to unpregnancy and abortion teenage life skill protection. However, long term study is still necessary.

Keywords: abortion, health literacy, life skill, pregnancy, teenage

Role of health literacy in the prevention of emerging and re-emerging diseases: medical students' perception

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Background: Emerging and re-emerging diseases are one of the major public health concerns worldwide. Medical students should acknowledge the importance of health literacy (HL) and effectively promote HL to community especially in the context of disease prevention and control measures.

Objectives: This pilot study aims to explore undergraduate medical students' perception on the health literacy for the prevention and control of emerging and re-emerging infectious diseases.

Method: This qualitative pilot study was conducted as a secondary data analysis of students' responses to pre-lecture preparation questions for the topic of emerging and re-emerging diseases in the undergraduate medical programme. The qualitative answers of pre-lecture preparation questions were extracted from the Google form and analyzed as thematic analysis by using RQDA software.

Results: A total of 18 students' qualitative answers were analyzed and five salient themes emerged in the findings. (1) Importance of HL in community, (2) Benefits of competent HL in community, (3) Role of HL in disease prevention, (4) Strategies to improve HL in community, and (5) Suggest focus on HL promotion activities. The students appreciated the benefits and importance of HL especially for the infectious diseases' prevention and control measures. Strategies to improve HL in community should initiate from the school health education, and further developed to social-media, mass-media, community campaigns, while collaborating with non-governmental organizations. HL promotion activities should encourage self-education, critical thinking, and utilization of credible sources. Students considered that underprivileged and low-income population should be targeted in these interventions.

Conclusion: Medical students appreciated the importance of HL for the disease prevention and control and suggested educational interventions, campaigns for the promotion of HL in community.

Keywords: emerging diseases, health literacy, malaysia, medical students, prevention, qualitative, re-emerging diseases

The correlation between eco-literacy and pro-environmental behavior of university students

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Background: Pro-environmental behavior is an act to reduce the negative environmental impact caused by human activities. Some studies find that ecoliteracy level affects pro-environmental behavior on elementary school, junior high school, and senior high school students.

Objectives: This research aims to see the correlation between ecoliteracy and pro-environmental behavior on university students.

Methods: The research method used is descriptive quantitative correlational study. The respondent consisted of 165 students from Soegijapranata Catholic University which were selected with incidental sampling technique. To measure ecoliteracy and pro-environmental behavior, the research instruments used are ecoliteracy scale and pro-environmental scale.

Results: The correlation coefficient is 0.552 and the significance value is $p < 0.050$, which means there is a significant correlation and positive correlation between ecoliteracy with pro-environmental behavior on Soegijapranata Catholic University students.

Conclusion: Based on this result, it can be concluded that the higher score of ecoliteracy impacts on the higher intensity of pro-environmental behavior.

Keywords: eco-literacy, pro-environmental behavior, university students

Translation and cross-cultural adaptation of the Thai-brief health literacy screening tool

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Background: Several health literacy screening tools have been developed, but they typically consist of numerous items. The four-item Brief Health Literacy Screening Tool (BRIEF) is one of the most efficient short screening tools, especially in emergency settings or in older adults. However, this questionnaire is not available in Thai yet.

Objectives: This study aimed to translate the BRIEF into Thai, following a WHO guideline.

Method: The BRIEF was independently translated into Thai by two experts. A bilingual expert panel evaluated, compared, and reconciled the translated versions. Using cognitive interviewing and debriefing, the translated BRIEF was administered to ten Thai adults and older adults to assess the clarity, readability, and comprehension of the translation. Then, the Thai BRIEF was translated back to English by two other independent translators, and the conceptual and cultural equivalence of the back-translated versions was evaluated with the original version. The pre-final Thai BRIEF was piloted with 18 participants living in a community in Khon Kaen, Thailand.

Results: In the cognitive interviewing, participants reported that this questionnaire was well comprehended; nevertheless, a few clarifications were suggested to include in the items for older adults. Each question of this questionnaire was revised until satisfaction was reached. In the pilot study, 14 participants were older adults, and nine were female. All participants were able to complete the questionnaire in two minutes. Overall, the internal consistency of the BRIEF-Thai in this pilot was good (Cronbach's alpha =0.86).

Conclusion: The BRIEF has been successfully translated into Thai and is found to be easily understandable and time-saving, which would be helpful to rapidly screen health literacy levels for Thai adults and older adults. The next step required is to evaluate the psychometric validation of the Thai BRIEF in larger populations.

Keywords: health literacy, questionnaires, Thai, translation, WHO guideline

CODE113

Digital health literacy on COVID-19 and its association with sense of coherence and well-being among youths of East and South-East Asia

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Background: The impact of COVID-19 on the youth has been reported in various aspects, including restrictions of social activities, interruption of occupational or schoolwork, anxiety about the future, and poor psychological well-being. Digital health literacy (DHL) might have an impact on the well-being of people, while the role of sense of coherence in the association of DHL and well-being is uncertain.

Objectives: This study aimed to assess the association between digital health literacy (DHL), sense of coherence (SOC), psychological well-being, and subjective health complaints (SHCs) among youths in China, Malaysia, and the Philippines.

Method: This cross-sectional study is a part of a global collaborative research project and population-based online survey conducted among youths in China (Mainland, Hong Kong, and Macau), Malaysia, and the Philippines. Data was analyzed using structural equation modeling (SEM) with path analysis.

Results: A total of 5042 youths participated in this study and a majority had high perceived levels of DHL (81.9%). Adequate SOC was reported by 70% of the participants, while 64.5% of them had perceived good psychological well-being. Nevertheless, a high percentage of participants reported experiencing SHCs (92%). DHL had a direct, positive association with SOC ($\beta = 0.28$, $p < .001$) and psychological well-being ($\beta = 0.06$, $p = .004$). Meanwhile, SOC was found to mediate the positive associations between DHL and psychological well-being ($\beta = 0.11$, $p = 0.004$), as well as the negative relationships between DHL and subjective health complaints (SHCs) ($\beta = -0.06$, $p = 0.008$).

Conclusion: This study provided evidence about the role of DHL on the psychological well-being and occurrence of SHCs among the youth during the COVID-19 pandemic. It also added the mediating role of

SOCs in that association to the existing literature. Governments and policymakers should consider DHL training and programmes for youths, to assist them in coping with public health situations or crises.

Keywords: digital health literacy, sense of coherence, subjective health complaints, WHO-5 well-being index, youths.

Longitudinal effect of electronic health literacy on health-promoting lifestyles among Chinese older adults: A three-wave longitudinal study

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Background: The importance of electronic health (eHealth) literacy has been increasingly emphasized in self-care, especially for older adults, who are the major users of healthcare services. Health-promoting lifestyles can play an important role in improving and maintaining health, however, its relationship with eHealth literacy remains unclear among older adults.

Objectives: This study aims to examine the effect of eHealth literacy on health-promoting lifestyles among Chinese older adults and the potential underlying mechanisms.

Methods: A three-wave longitudinal survey was conducted among older adults in Jiangxi Province, China, from February to November 2022. Data were collected at baseline (T1), 3-month (T2), and 6-month follow-up (T3) by online self-reported questionnaires.

Results: A total of 464 participants completed the three-wave surveys. The multivariate linear mixed model suggested that eHealth literacy was positively associated with health-promoting lifestyles (adjusted $\beta = 0.31$, 95%CI: 0.27~0.35, $p < .001$), after adjusting for covariates (i.e., time effect and significant background variables) and the random effect caused by repeated measures. Results of cross-lagged panel models supported that eHealth literacy predicted subsequent better health-promoting lifestyles (standardized $\beta = 0.14$, $p < .001$), while the paths from health lifestyles (T1/T2) to subsequent eHealth literacy (T2/T3) were non-significant. In addition, attitude towards eHealth would partially mediate the relationship between eHealth literacy (T1) and health-promoting lifestyles (T3) (Indirect effect and 95% CI: 0.02 (0.00~0.04), $p = .02$, mediated proportion 16.3%). In multi-group analyses, higher eHealth literacy predicted better health-promoting lifestyles in chronic patients while not in healthy older adults (standardized β : 0.15 ($p = .001$) vs 0.02 ($p = .67$)), and the indirect effect through attitude towards eHealth was also significant in patients while not in healthy older adults.

Conclusion: This study highlighted the importance of eHealth literacy and attitude towards eHealth in improving health-promoting lifestyles among Chinese older adults, especially in those with chronic diseases.

Keywords: chronic disease, eHealth literacy, health-promoting lifestyles, longitudinal study, older adults

Health Literacy among Myanmar Migrant Workers in Khon Kaen Province, Thailand

A cross-sectional study

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Background: Health literacy implies the achievement of a level of knowledge, personal skills, and confidence to act for improving personal and community health by changing personal lifestyles and living conditions. No previous studies about the health literacy of Myanmar migrant workers, in Khon Kaen province were found.

Objective: The aim of study was to describe the level of the health literacy of the Myanmar migrant workers in Khon Kaen Province.

Methods: The cross-sectional study was carried out among the Myanmar migrant workers who are 18 years and above, residing in study area for at least 6 months. Multistage random sampling method and HLS-EU-Q47 questionnaires tool were used to assess health literacy.

Results: A total of 423 participants were aged between 18 and 56 years (mean: 31 ± 7.94 years) and 61.7% were currently married. Three-fourths (76%) got more than 10000 bahts per month. Overall, 67.85% of participants had a low level of health literacy. The workers who had got income (≥ 10000 baht/month) were 2.14 times more likely to have high health literacy (OR= 2.14, 95% CI: 1.24-3.69, p-value-0.006) compared to those got income (< 10000 baht/month). The participants who can speak Thai had high health literacy (OR = 1.8, 95%CI: 1.11-2.99, p-value 0.01) compared to those participants who cannot speak Thai.

Conclusion: One third of workers had a low level of health literacy. Workers who can either speak Thai and income had significant association with high level of health literacy. Therefore, Health promoting programs should be carried out in Myanmar language in Myanmar workers.

Key Words: Health Literacy, Myanmar migrant, Thailand

Prevalence of limited hypertensive health literacy among Myanmar migrant workers in Northeastern Thailand

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Background: In the aspect of hypertension, limited health literacy was considerably high worldwide. Although hypertensive health literacy in general population was explored by some studies, there was no study specific for hypertensive health literacy among Myanmar migrant workers in Thailand.

Objectives: This study was conducted to explore the prevalence of limited hypertensive health literacy among Myanmar migrant workers in Northeastern Thailand.

Method: A cross-sectional analytical study was conducted among Myanmar migrant workers with the age between completed 18 years to 59 years old in Khon Kaen Province, Northeastern Thailand from Feb 2023 to April 2023. Multistage random sampling procedure was applied to select the required sample. A validated and reliable structured questionnaire was used to collect the data. Descriptive statistics and multiple logistic regression were used to analyze the data. The association between limited hypertensive health literacy and each factor after controlling other covariates were described by adjusted OR, 95% CI. P-value of <0.05 were considered statistically significant.

Results: Of 406 participants, the overall prevalence of limited hypertensive health literacy was 54% (95% CI: 0.49-0.59). Among the participants, 56% were male and 68% of them were married. Factors associated with limited hypertensive health literacy were primary and no education (AOR=2.26, 95% CI: 1.37-3.73), less than 48 months duration of stay in Thailand (AOR=2.06, 95% CI: 1.34-3.16), poor and fair level of knowledge on hypertension (AOR=2.07, 95%CI: 1.23-3.49) and poor and fair level of attitude towards hypertension (AOR=2.52, 95%CI: 1.63-3.90).

Conclusion: More than half of the study population was limited in hypertensive health literacy. Some sociodemographic factors, knowledge and attitude towards hypertension were associated with this outcome among Myanmar migrant population in this area. These findings suggested the need to promote the hypertensive health literacy of this vulnerable group by means of all health domains and all dimensions of health literacy.

Keywords: attitude, education, health literacy, hypertension, knowledge

CODE134

Health literacy and self-care behaviors to prevent PM2.5 impact of village health volunteers at special economic area in Chiang Rai province

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Background: Village Health Volunteer (VHV) is the backbone of primary health care development in Thailand more than three decades. According to the Ministry of Public Health on VHV Act 2011, VHV is taking the lead in changing the health behaviors model, improving the quality of life, and building community participation. Therefore, VHVs with high health literacy are needed to efficiently provide care and knowledge to the people in their community.

Objectives: To assess cognitive skill aspect of health literacy on PM2.5 prevention and self-care of VHVs at Special Economic Area in Chiang Rai province.

Method: A cross-sectional survey was conducted between August to December 2021 at Maesai, Chiang Saen and Chiang Khong district, Chiang Rai Province. 797 VHVs were recruited and collected data using HL questionnaire with 5-level Likert scale which was developed by Department of Health. Descriptive statistics were analyzed general data of frequency, percentage, mean, standard deviation and Correlational, Chi-Square were used for statistics test.

Results: The study showed that HL of VHV's had moderate level (3.26 ± 0.581), including accessing information (3.36 ± 0.718), understanding (3.23 ± 0.718). 0.657), appraising (3.22 ± 0.721) and self-care behaviors (3.23 ± 0.662). However, three behaviors were at good level compose of "I monitor PM2.5 situation to reduce exposure and protect myself" (3.68 ± 1.02), "I suggest people stay in home or wear mask when outing in orange or red of PM2.5 situation" (3.74 ± 0.92) and "I and my family clean the residence to prevent accumulation of PM2.5" (3.88 ± 1.08) respectively.

Conclusion: HL and self-care behaviors among VHVs were at moderate level. These findings would be of benefit for relevant agencies in planning and developing the training curriculum, which would be passed through and impact on raising personal and community health literacy on PM2.5 prevention.

Keywords: health literacy (HL), village health volunteer (VHV), self-care behavior PM2.5

Effectiveness of a self-perineal wound care promotion program for postpartum mothers: Self-assessment of perineal wound healing

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Background: Mothers who have perineal wounds after giving birth may face complications such as separation or infected wounds. So, self-assessment and caring regarding perineal wounds are necessary to them. Nurses are responsible to educate these mothers about assessment caring. A self-perineal wound care promotion program had developed and implemented to educate postpartum mothers regarding self-perineal wound care.

Objectives: This study aimed to investigate the impact of a self-perineal wound care promotion program on the knowledge and practice of postpartum mothers.

Method: This quasi-experimental research compares before and after entering the program. The participants included all first-time postpartum mothers with perineal wounds who received services at Health Promoting Hospital, Health Center 1, Chiang Mai, between 7th April and 28th May 2021. The participants were 24 postpartum mothers who were selected by random sampling. Inclusion criteria were 18 years old or above, first pregnancy, communication in Thai, and being able to get an examination after 7- days of delivery. The data was collected using a record form for REEDA Score assessment, and a mirror had used for self-assessment.

Results: Following the program, postnatal mothers exhibited significantly more knowledge of perineal self-care (p -value < .001). There was no perineal wound infection among participants 7 days after delivery. Perineal wound separation had found in a participant during hospitalization. The perineal lesion was first graded according to the REEDA Score and completely healed on the 7th day.

Conclusion: Implementation of a self-perineal wound care program improved postpartum mothers' knowledge and practice of self-perineal wound care.

Keywords: knowledge and practice, perineal wound healing, self-assessment.

The impact of health literacy on quality of life and healthcare utilization: A cross-sectional study in Hong Kong

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Background: Health literacy (HL) is increasingly recognized as an important determinant of a range of health outcomes, as it links a person's ability to process and use health-related information. This study aimed to investigate the impact of HL (functional, interactive, and critical HL) on quality of life and healthcare utilization among Chinese Hong Kong adults.

Methods: A cross-sectional study was conducted between August and September 2022. A validated Hong Kong version of HL scale was used to measure HL. Descriptive statistics, Chi-square tests, Tobit regression, and multivariable regression were performed.

Results: Of 401 participants 47.1% were males, 36.4% were aged 55 or above, and a large proportion (52%) had inadequate HL. In the analysis of HL and quality of life, people with adequate functional (coef. = 0.049, $p = 0.029$) and interactive HL (coef. = 0.119, $p < 0.001$) were more likely to report higher scores in quality of life. Regarding the association between HL and healthcare utilization, people with adequate critical HL (OR = 0.436, $p < 0.001$) were more likely to have a family doctor. There was no significant association between HL and emergency visits and hospitalization.

Conclusion: This is the first study describing the impacts of different aspects of HL on the quality of life and healthcare utilization in Hong Kong. Function and interactive HL might help people to understand medical information and communicate their healthcare needs to healthcare providers, thereby improving their quality of life. Critical HL may help people weigh the risks and benefits of treatment options, and make decisions that align with their values and preferences. More empirical studies are needed to have a clear picture of the associations between HL and self-management for health.

Keywords: Chinese Hong Kong adults, healthcare utilization, quality of life

The important role of health literacy in health eating behavior among adults during the Covid-19 pandemic

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Background: Health literacy is essential in improving individual health behaviors and outcomes, particularly during the COVID-19 pandemic. Low health literacy people may experience lower health status due to being unable to understand and utilize health information to protect and improve their health. Health literacy may affect people's healthy eating behavior (e.g., the frequency of food and beverage consumption) and indirectly affect their dietary intake. Meanwhile, healthy dietary intake has shown protective effects on the immune systems and health outcomes during the COVID-19 crisis.

Objectives: This study aimed to analyze the association between health literacy and health eating behavior.

Methods: This research used cross sectional design with sample size of 85 COVID-19 survivors, aged 18 and older. Data collection includes social demographic factors (age, gender, education, occupation, social status), Health Literacy (using HLS-SF12), and Health Eating Behavior (using HES-5).

Results: Most of the respondents are women aged 28.52 ± 10.04 year, have higher education, have a job, and have a middle social level. Frequency of fruits ($\beta = 0.020$, 95%CI -0.046 to 0.087, $p=0.608$), vegetables ($\beta = -0.008$, 95%CI -0.070 to 0.053, $p=0.786$), and whole grains consumption ($\beta = -0.025$, 95%CI -0.094 to 0.044, $p=0.473$) was not associated with health literacy. However, frequency of dairy ($\beta = -0.070$, 95%CI -0.134 to -0.006, $p=0.032$), and fish consumption ($\beta = -0.076$, 95%CI -0.145 to 0.007, $p=0.031$) was associated with health literacy.

Conclusion: Health literacy is associated with healthy eating behavior, for example, the frequency of dairy and fish consumption. Healthy eating behavior is needed to achieve maximum nutrient intake. To improve healthy eating behavior, it is necessary to have a program that can improve health literacy. Therefore, health providers may need to pay more attention to increasing health literacy by holding educational promotion programs to improve healthy eating behavior.

Keywords: adults, Covid-19, healthy eating behavior, health literacy

CODE 171.

Antenatal care services model promoting iodine deficiency prevention literacy among pregnant women in health region-9 during the new normal

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Background: Iodine deficiency during pregnancy has effect both neurological and physical development of newborns.

Objectives: This research and development were to 1) examine situations of antenatal care services under COVID-19 pandemic in iodine-deficiency areas in health region 9, 2) develop antenatal care service model to promote health literacy in iodine deficiency prevention among pregnant women according to the new normal, 3) evaluate effectiveness of developed model.

Methods: The study was comprised of 3 phases: 1) situational study, 2) develop antenatal care services model to promote health literacy in iodine deficiency prevention, 3) measure effectiveness of the developed model. Samples were 70 pregnant women receiving the first antenatal care at community hospitals, divided equally into experimental (n=35) and control (n=35) groups. Instruments were questionnaires to assess knowledge on iodine deficiency, health literacy in iodine deficiency prevention, iodine consumption behavior, and tests for urinary iodine. The data were analyzed using descriptive and inferential statistics as well as content analysis.

Results : 1) antenatal care services during COVID-19 pandemic were mostly available but service adjustments as well as telephone appointments were added to reduce risk for COVID-19 transmission. Health education was adjusted to one-on-one; 2) newly developed antenatal care service model helped improve skills in 6 aspects: accessing, understanding, questioning, decision making, behavior modification and informing others with integration into both conventional and online. 3) regarding effectiveness of the developed service model, it was found that health literacy scores both overall and by sections among the experimental group were significantly higher than those from the control group. Iodine consumption behaviors as well as urine iodine were also significantly better among the experimental group ($p<0.05$). No significant difference was found in knowledge regarding iodine deficiency.

Conclusion: Therefore, this model should be used to design service activities in the antenatal clinic to prevent iodine deficiency.

Keywords: Health literacy, Model development, Iodine, Pregnant women

CODE031

Prescribing pattern of antidepressants among patients with depression in a mental hospital of Nepal

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Background: Depression is one of the major mental disorders and on the verge of emergence. Study on rational prescription of antidepressants is important since their inappropriate use may lead to precipitation of depressive symptoms.

Objectives: To study prescribing patterns of antidepressants among patients diagnosed with depression and observe its concordance with recommended guidelines.

Methods: This retrospective study was conducted in Mental Hospital Patan, Nepal. All the patients (≥ 18 years) diagnosed with depression and prescribed at least one antidepressant were enrolled. Records of patients were selected on a daily registration basis from 2018/01/15 to 2018/05/14. Data collection form was designed to record details of eligible patients from the hospital. Statistical Package for the Social Sciences (SPSS) version 21 was used for data analysis.

Results: A total of 114 records were reviewed. More than half of patients (51.8%) were female. Patients in the age group of 18-27 years were maximum in number (25.4%). It was observed that Selective Serotonin Reuptake Inhibitors SSRIs (74%) were the most commonly prescribed antidepressant (escitalopram (33.33%) and fluoxetine (33.33%)). The most frequently prescribed dosages for fluoxetine fell within American Psychiatry Association (APA) and Centers for Medicare & Medicaid Services (CMS) guidelines and specified in the Antidepressant Treatment History Form (ATHF); other antidepressants were found to be prescribed at lower than recommended doses.

Conclusion: Prescribed doses for antidepressants were found to be lower than that recommended by the available guidelines. Further studies need to be conducted to understand more on prescribing pattern of antidepressants in Nepal.

Keywords: antidepressants, depression, escitalopram, fluoxetine, prescribing pattern, SSRIs

Relationship among fear of COVID-19, health literacy, and COVID-19 survivors' quality of life

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Background: COVID-19 pandemic affected humans in all aspects, including the survivors' quality of life. COVID-19 survivors were afraid of COVID-19 due to their experience dealing with the symptoms. Besides, the survivors also had to learn a lot of information regarding COVID-19 to avoid misinformation and confusion regarding the treatments and post-infection recovery. Previous studies found that prolonged COVID-19 fear could lead to life functions and mental health impairment, thus worsening their quality of life. It was also found that health literacy helped the survivors to engage in healthy and active behaviors to improve their level of functioning post-infection, which leads to improved quality of life.

Objectives: This study aims to determine the relationship between fear of COVID-19, health literacy, and COVID-19 survivors' quality of life.

Method: This study was conducted on 248 people aged 17-66 years old. The instruments used were FCV-19S, health literacy scale, and SF-36. Linear regression and Pearson product-moment correlation were used to analyze the data.

Result: Analysis found that there is a significant relationship between fear of COVID-19 and health literacy with quality of life ($R = .327$, $p = .000$). Health literacy is positively related to the quality of life ($r = .150$, $p = .018$), and fear of COVID-19 is negatively related to the quality of life ($r = -.306$, $p = .000$). Independent variables explain 10,7% of the dependent variable.

Conclusion: It can be concluded that COVID-19 survivors' quality of life is affected by their fear of COVID-19 and health literacy regarding COVID-19. COVID-19 survivors are suggested to seek professional help regarding their fear of COVID-19 and improve their health literacy for a better quality of life.

Keywords: COVID-19 survivors, fear of COVID-19, health literacy, quality of life

Digital Health Literacy of Healthy among Pregnancy Women in Suratthani Province : A Case Study for Promoting Health Literacy

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Background: Digital health literacy is an essential element for the successful transformation of health. Digitally health literate people can more actively manage personal health and care. Better digital health literacy can lead to enhanced prevention and improved wellbeing.

Objectives: To understand the characteristics of healthy pregnancy women having a high level of digital health literacy.

Methods: Data were collected by using indepth interviews with a tape-recorder. The saturated data were found at 12 participants. Tape-recorded interviews were transcribed verbatim. Data were analyzed by using content analysis.

Results: The characteristics of a healthy pregnant woman in Suratthani Province

included an accessing to digital health information (such as a social participation, attitudes, perceived health status and skill comprehensive use of the internet); Understanding to digital health information (such as ability to use computers and other communication technologies to find, read and understand health information); Appraise digital health information (such as enthusiasm for searching data and deep understanding of health information, exchange communication of health information, skills to assess health data from online and digital sources); and Applying digital health information (such as realizing the importance and health–context needs of health information and evaluate data with understandings).

Conclusion: The implication of this research is crucial to understand the conditions in healthy pregnancy women. This should promote pregnancy women to access, understand, appraise and apply the health information in self-care leading to good health and sustainable.

Keywords: Digital Health Literacy, Pregnancy Women, Promoting Health Literacy

Health literacy on Tobacco Use among working aged people

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Background: Tobacco use is one of the most leading causes of preventable death, which are killing 8.7 million of population every single year that are resulting in 10 millions more suffering from the illnesses and around 1.2 million are dying from effects of second-hand smoke. However, a lot of previous studies identified many factors influencing tobacco use among working-aged people, there were few studies researching on health literacy on tobacco use among the working-aged people.

Objective: This study aimed to find out the health literacy on the tobacco use among the working age people.

Method: A search for appropriate articles was carried out by using Google Scholar, PubMed, and Science Direct to explore the reported significant factors on health literacy of tobacco use.

Results: A total of study 12 studies which met inclusionary criteria were reviewed to find out health literacy on tobacco use globally. A systematic review indicated that the prevalence of poor health literacy was about 25% - 30% was significantly related to health-risk behaviours such as smoking, and betel chewing according to the status and determinants of health literacy, and association between health literacy and health-risk behaviours among Myanmar population. Other studies pointed out that lower health literacy was associated with higher nicotine dependence, more positive and less negative smoking outcome expectancies, less knowledge about smoking health risks ($P < 0.005$). Another study showed that the results showed that the adoption of smoking preventive behaviours had significant relationship with variables such as health literacy, gender, father's education and not smoking ($P < 0.05$) according to the relationship between different levels of health literacy and smoking prevention among medical sciences student

Conclusion: This study encourages efforts to improve health literacy in the Myanmar by enhancing health education and health promotion activities. It is also important to improve their socio-economic status.

Keywords: Heath Literacy, Smoking, Tobacco Use, Working-aged People

Factors influencing cervical cancer screening uptake among reproductive aged women (30-60 years) in Maesot, Tak province, Thailand

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Background: Cervical cancer is a significant public health issue in Thailand. The number of women who have had cervical cancer screenings has grown over time, but if major obstacles are not removed, it will be challenging to maintain this success. Nevertheless, knowledge of cervical cancer persisted as a highly significant direct predictor of screening practices.

Objectives: This study aimed to identify the magnitude and factors influencing cervical cancer screening uptake and among reproductive aged women (30- 60 yrs.) in Maesot, Tak Province, Thailand.

Methods: This cross-sectional study was conducted among 422 reproductive women in Maesot, Thailand. A structured questionnaire was developed and used to assess socioeconomic status, marriage and childbearing history, reasons for no uptake, accessibility of health care service, and cervical cancer screening uptake. The logistic regression was used to determine the magnitude and associated factors of cervical cancer screening uptake after controlling for other covariates.

Results: Their average age was 38.54 ± 7.96 years. Nearly 60% of respondents were married. About two third of respondents were employed. About one-third of respondents were high school level of education. The magnitude of cervical cancer screening uptake was 15%. Awareness of cervical cancer (AOR= 3.78, 95%CI: 1.77-18.49, p value<0.001) and education level awareness of cervical cancer screening (AOR= 5.22, 95%CI: 1.82-32.25, p value<0.001) were strongly associated with cervical cancer screening uptake. Moreover, other factors that were also associated with cervical cancer screening uptake were accessibility of health care services and awareness of cervical cancer screening.

Conclusion: Only 14% of reproductive women did cervical cancer screening uptake. The findings highlighted to development intervention aimed to improve the cervical cancer screening uptake among reproductive-aged women in Mae Sot, Tak Province.

Keywords: accessibility of health care service, awareness of cervical cancer, cervical cancer screening uptake, reproductive-aged women

Sociodemographic differences in digital health literacy among informal caregivers in Germany

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Background: Dealing with digital health information is becoming increasingly important and offers informal caregivers a variety of opportunities. To be able to deal with and respond to digital health information appropriately, digital health literacy of informal caregivers is in demand.

Objectives: The aim of the study was to describe the digital health literacy levels of informal caregivers and to analyze differences concerning sociodemographic variables.

Method: An online questionnaire was disseminated between December 2022 and February 2023 among informal caregivers in Germany and comprised sociodemographic variables (gender, age, city size, socioeconomic status, educational background) and digital health literacy indicated on three subscales of the DHLI on a 4-point Likert Scale (1 = very difficult, 4 = very easy). Descriptive analyses and ANOVAs were computed.

Results: Overall, 92 informal caregivers participated in the study, 41.3% of whom live in a large city with a population over 100,000. The mean age of the participants was 54,25 (SD=13,59), 85,4% were female. The digital health literacy levels were overall indicated as moderate (M=2.49) with less problems in searching and finding of health information (M=2.67) but with difficulties in the evaluation of information quality (M=2.19). While the digital health literacy does not differ significantly by city size, significant differences between age groups ($p=.002$), socioeconomic status ($p=.002$) and educational background ($p=.007$) could be observed. Especially the age group older than 60 years with lower socioeconomic status and lower educational background reports difficulties.

Conclusion: The results indicate that informal caregivers with higher age, lower education and lower socioeconomic status are in risk for being disadvantaged in using digital health information appropriately. They highlight the risk of social inequity in digital health literacy among informal caregivers. These findings should be investigated in further studies and tailored supportive interventions should be developed.

Keywords: digital health literacy, health information, home care, informal caregiver, social inequality

CODE 125.

Association of environmental health literacy (EHL) with risk perception, avoidance behaviors, and trust for stakeholders among residents in Taiwan

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Background: Environmental health literacy (EHL) is a comparatively new framework for conceptualizing how people understand and use information about potentially harmful environmental exposures and their influence on health.

Objective: To assess the influence factors on EHL among residents near the petrochemical industry in Taiwan.

Methods: A validated questionnaire was developed through focused groups with residents and political leaders near the petrochemical industry and a literature review. The content of the EHL questionnaire included demographics, the EHL scale, avoidance behaviors, risk perception, and trust for stakeholders. EHL scales include four domains (access/obtain, understand, process/appraisal, apply/use information toward petrochemical pollutants) of EHL. Two groups of residents near the petrochemical industry (exposure group) and the general population (control group) voluntarily and anonymously filled out the EHL questionnaire in petrochemical and non-petrochemical communities. Multiple regression and moderation analysis were used to assess the association between the EHL with avoidance behaviors, risk perception, and trust for stakeholders in residents.

Results: There were no significant differences between the two groups regarding the scores of EHL, risk attitude, and avoidance behaviors, however, differences were found in risk perception and trust for stakeholders. In addition, significant differences were found in age and educational level in all four domains (access/obtain, understand, process/appraisal, apply/use information toward petrochemical pollutants) of the EHL. EHL scores were significantly associated with risk perception, experiences toward environmental action, and information sources. Interaction effects of EHL and risk attitude were found in risk perception, experiences toward environmental action, and trust for stakeholders.

Conclusion: EHL on the petrochemical industry connects understanding of how environmental exposures to petrochemical pollutants influence health with individual and community action, by explicitly incorporating elements of the development of skills and avoidance behaviors that enable health protective decisions. It is crucial to building community-based participatory research in Taiwan which has the potential influence to enhance EHL so residents may more effectively facilitate action and prompt individual and community-level actions to protect their health.

Keywords: EHL, Petrochemical Industry, Community-Level Actions

The impact of a training program for domestic workers in preventing fall of older people in the community

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Background: Fall is one of the major causes of morbidity in older persons, which decreases their quality of life and increases health care costs. Globally, about one third of community-dwelling older persons aged 65 or above fall every year. In 2020, about 350,000 domestic workers (DWs) were employed in Hong Kong and more than 20% of them are responsible for taking care of the older persons at home. However, there are scanty training resources provided for the DWs in preventing fall of older persons they are caring for at home. The purpose of the study and question addressed was to investigate the effects of a training program on the knowledge of, preventive measures adopted, and the work stress of domestic workers relating to fall risk of older person they are caring for.

Objectives: The aim of this study was to explore and evaluate the overall effect of this program on domestic workers, and on their knowledge and practice, to reduce fall risks of older persons in the community.

Method: Thirty-five domestic workers caring for one older people aged 65 years old at home were recruited from a DW Community Centre for joining the fall preventive training program. The outcomes were measured at baseline, at the end and at 3 months after completion of the training program.

Results: There were increase of knowledge and preventive measures related to fall risk, and reduction of work stress level of DWs. The feasibility and acceptability of the training program were reflected by full enrolment within one week with over 95% attendance and completion at three months.

Conclusion: Training program in reducing fall risk and preventing fall of older persons was generally accepted by DWs. The preliminary effects of this training will provide health professionals with information on how best to promote the practices of domestic workers on preventing falls of older persons in the community.

Keywords: domestic workers, DWS, fall prevention training program, older persons

Self-care practices of hypertensive adult female patients in the City of Marikina amidst the COVID-19 lockdown: a phenomenological inquiry

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Background: Hypertension is among the leading causes of morbidity in the Philippines owing to urbanization and individual lifestyles. Upon the advent of COVID-19 in the Philippines, Enhanced Community Quarantine (ECQ) was imposed from March-May 2020. Mobility restrictions and shifts in focus of the health system affected individual health behaviors and provision of healthcare services for hypertensive patients.

Objectives: To understand and describe daily experiences, self-care practices (SCPs), and barriers and facilitators involved in the management of hypertension of selected female hypertensive patients in Marikina City during the ECQ.

Methods: Descriptive phenomenological design complemented with purposeful sampling was employed to gather in-depth information regarding lived experiences of female hypertensive patients aged 40-59 in the City of Marikina, specifically SCPs for hypertension management amidst the pandemic-induced ECQ.

Results: Inductive thematic analysis using Microsoft Word and Google Sheets following 13 in-depth interviews revealed three themes highlighting health literacy among the hypertensive patients: prioritization (*pagpapahalaga*), where SCPs were preserved through personal values and social structures; adaptation (*pakikibagay*), where SCPs were adapted in response to the COVID-19 pandemic; and appeal (*panawagan*), signifying recommendations on government support for hypertensive patients.

Conclusion: Findings indicate that changes in individual, social, and macro-level factors brought by the COVID-19 pandemic affected personal and organizational health literacy among patients. Adherence to recommended self-care practices can thereby be strengthened when health awareness is supported by refinement of existing local and national healthcare policies. The authors recommend incorporating more patient-centered approaches like including provisions on what patients can do by themselves in resource-limited settings. Improving health literacy and ensuring patients obtain factual and appropriate guidance on how to manage their hypertension is important in drafting interventions and creating policies for long periods of lockdown.

Keywords: ECQ, hypertension, self-care practices

Relationship among fear of COVID-19, resilience and quality of life in Indonesian adolescents COVID-19 survivors

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Background: COVID-19 pandemic has caused unprecedented changes in adolescents' lives and adversely affect their quality of life. Disruptive changes, increasing number of cases, and persistence of the symptoms for the survivors can increase their fears of COVID-19. This negative emotion may play an important role for any psychological problem that can decrease their quality of life. Some studies had found that resilience can promote adjustment and positive coping for people when facing chronic illness. Resilience was also found as a protective variable for quality of life.

Objectives: This study aims to assess the relationship among fear of COVID-19, resilience, and quality of life in Indonesian adolescents COVID-19 survivors.

Method: This study was conducted on 33 adolescents aged 12-17 years old who tested positive on COVID-19. The instruments used were Fear of COVID-19 Scale, Brief Resilience Scale, and RAND-36. Pearson product-moment correlation was used to analyze the data.

Results: Analysis found that there was no correlation between fear of COVID-19 and quality of life ($R = -.152$, $p = .199$). It was due to the correlation between fear of COVID-19 and quality of life was not linear but cubic. There was also no correlation between resilience and quality of life ($R = .057$, $p = .377$), because the adolescents COVID-19 survivors' quality of life was not determined by resilience.

Conclusion: Low level of Fear of Covid-19 positively correlated to quality of life, but at some level, they were negatively correlated, while the correlation between resilience and quality of life still not knowing. Both things are interesting for further discussion.

Keywords: fear of COVID-19, resilience, quality of life

The experience in applying health literacy of uncontrolled diabetic patients in Bang Sai Hospital Network

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Background: There are many activities to increase health knowledge for apply in practice to good disease control. However, approximately 65 percent of diabetic patients were found to have good health literacy but still unable to control their disease level. This may be caused by the application of health knowledge gained from different health personnel.

Objectives: To describe the experience of applying health literacy among patients with uncontrolled diabetes.

Method: Qualitative research, data were collected by in-depth interviews among 12 patients with type 2 diabetes mellitus aged 35-59 years with A1C >7% and good health literacy by purposive random sampling. A semi-structured interview was used to collect data. Analyzed the data by content analysis.

Results: The experience of diabetic patients in applying health literacy to health behaviors depended on 5 issues: 1) Confidence about health information, informants or data sources. 2) Disease conditions; severity of the disease or comorbidities. 3) Difficulty of practice, compliance with lifestyle and factors supporting the practice. 4) Motivation for continuous implementation. 5) Alternatives events or instances, traditions, cultures, beliefs.

Conclusion: Healthcare providers should design recommendations that enable people with diabetes to put health literacy into action with accurate and clear information. The severity of the disease and the progression of the disease were informed. Practices are designed that are simple and consistent with lifestyles, limitations, available support, not contrary to beliefs and cultures. Practices are constantly monitored. So that diabetic patients can apply health knowledge to self-care until they can lower their blood sugar levels.

Keywords: Diabetic patients. Health literacy. Qualitative research. The experience.

Anxiety, depression among hemodialysis patients during the COVID-19 pandemic: the roles of health literacy, hemodialysis dietary knowledge, and physical activity

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Background: Anxiety and depression are highly prevalent in patients undergoing hemodialysis and may be exacerbated during the COVID-19 pandemic. There is a lack of studies investigating the impacts of health literacy (HL), hemodialysis dietary knowledge (HDK), and physical activity on these mental health issues.

Objectives: This study aimed to investigate the associations of HL, HDK, physical activity, and other factors with anxiety, and depression among hemodialysis patients.

Methods: A cross-sectional study was conducted from July 2020 to March 2021 at 8 hospitals across Vietnam. Data of 875 hemodialysis patients were analyzed, including socio-demographic, anxiety (the generalized anxiety disorder scale, GAD-7), depression (the patient health questionnaire, PHQ-9), suspected COVID-19 symptoms (S-COVID-19-S), health literacy, digital healthy diet literacy, HDK, and physical activity (the international physical activity questionnaire short version, IPAQ-SF). Logistic regression models were used to analyze the data.

Results: In the multivariate analysis, S-COVID-19-S was associated with a higher likelihood of anxiety (odds ratio, OR, 20.76; 95% confidence interval, 95%CI, 8.85, 48.70; $p < 0.001$) and depression (OR, 12.95; 95%CI, 6.67, 25.14, $p < 0.001$). By contrast, patients with higher levels of HL, HDK, and physical activity were less likely to have anxiety ($p < 0.001$) and depression ($p < 0.001$).

Conclusion: Higher HL, HDK, and physical activity scores potentially protect hemodialysis patients from anxiety and depression during the pandemic.

Keywords: Anxiety; depression; digital healthy diet literacy; health literacy; hemodialysis; hemodialysis dietary knowledge; physical activity; Vietnam.

Social capital and quality of care and health information: rethinking health literacy among community-dwelling older persons in Hong Kong

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Background: Social capital is considered a fundamental determinant of health-related outcomes across age groups. However, empirical evidence to support its relevance to health outcomes, particularly how it affects health, remains weak across places. An important area in these debates concerns health literacy. Specifically, how social capital shapes health literacy characteristics and implications among different population groups. In Hong Kong, one group that requires more research attention but, unfortunately, has witnessed less in older persons. This paper explores how strong and weak structural social capital influences quality health care consultation and health information available to older persons in Hong Kong.

Methods: Data were derived from 24 in-depth interviews among older persons aged 65 and above across ten districts in Hong Kong.

Findings: Findings show that both cognitive and structural aspects of social capital influenced critical healthcare decision-making (e.g., where and who consult about health), contributed to effective medical consultation (e.g., speaking on behalf of the patient), aided in fact-checking health information, and served as an option for seeking a second opinion.

Conclusion: While health literacy can be considered a fundamental determinant of the health and well-being of older persons, it is important to acknowledge the role of social capital in strategies to strengthen their health literacy. This is especially critical given that social capital appears to be essential to community-dwelling older persons in both clinical and non-clinical settings.

Keywords: health literacy, Hong Kong, older persons, social capital

Technology commitment among informal caregivers in Germany: results of an online survey

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Background: Digital technologies are discussed as possible solutions for support of informal caregivers (IC) in home care settings. However, it is important to know the willingness and needs of IC to use such options.

Objectives: The aim is to describe technology commitment as well as usage of digital devices and attitudes towards digital support options among IC.

Method: An online study was conducted among IC in Germany. Technology commitment was assessed using a standardized scale consisting of three subscales with 5-point Likert Scales (1= not true at all, 5= completely true). User frequency of digital devices was assessed on a 5-point Likert scale, attitudes towards digital support options were assessed on a 4-point Likert scale.

Results: Overall, 92 IC with a mean age of 54.25 (SD=13.59) participated in the study. The overall technology commitment was indicated as moderate (M=40.51). 86.5% of the respondents use a smartphone or cell phone daily. In contrast, 45% use tablets never or less than once a month. 87.6% have consulted websites with information on health and care topics. Only 34.8% used health-related apps. The use of digital and technical support in the area of mobility and activation has a high level of agreement among the respondents (M=3.4), while the use for physical tasks, e.g. in personal hygiene, has a lower level of agreement (M=2.6). 66.3% of respondents rate digital and technical support options more as an opportunity than a risk. Concerns about costs (60,5%) and data protection (67,4%) are common.

Conclusion: The results show that IC often uses digital devices that have been established for a long time and that use of future digital and technical support is seen less in physical tasks. The results provide useful hints for the further development of digital and technical devices as well as targeted support of digital health literacy.

Keywords: digital devices, digital health literacy, health apps, home care, informal caregiver, technology commitment

Developing an online assessment tool (Si Cerdik) for measuring digital health literacy

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Background: Previous research has developed various questionnaires to measure digital health literacy among the general population and healthcare workers. However, these questionnaires are primarily published and not readily accessible to the public, making it difficult for individuals to assess their digital health literacy level.

Objectives: This study aims to develop a self-assessment digital health literacy application (Si-Cerdik) that gives the public an easily accessible tool to measure their digital health literacy level.

Method: The development process of the application used the Design-Science Research Methodology, which consists of four stages: 1. problem awareness, 2. alternative solutions, 3. development, and 4. evaluation.

Results: The Si-Cerdik application can be used to measure health literacy independently through the website. The application consists of four assessments that can measure health literacy: the HLS-EU-SQ10-IDN questionnaire to measure health literacy, the PHIC4PHC questionnaire to measure digital literacy in health workers, and the DHLC questionnaire to measure digital health literacy in the community, and TB-Literacy to measure tuberculosis literacy in the general public. The evaluation results showed that the Si Cerdik application is considered beneficial for users to measure their health literacy independently by 54.5%. The application was also perceived as good by 52.3% of users and had good security levels by 43.2%. Additionally, 47.7% of users found the application comfortable, but 47.7% found it confusing.

Conclusion: The Si Cerdik application is an effective tool for measuring digital health literacy, allowing users to improve their health literacy level. However, further improvements are necessary to enhance the application's ease of use and clarity.

Keywords: digital literacy, health literacy; information system, questionnaire.

POSTER PRESENTATIONS

CODE 002

Effects of Health Promotion Program on Health Literacy and Prevention Behavior of COVID-19 among Caretaker and Teachers of Children in Early Childhood Development Centers

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Background: Health literacy is an essential for practices in prevention of Coronavirus Disease 2019 (COVID-19) among caretaker and teachers.

Objectives: The purpose of this quasi-experimental research pretest-posttest design was conducted to study the effects of health promotion program on health literacy and prevention behavior of COVID-19 among caretaker and teachers of children in early childhood development centers.

Methods: A sample of 32 caretaker and teachers of children in early childhood development centers in Nakhonsawan provide, Thailand. The experimental group participated in health promotion program based on the concepts of Pender's health promotion model, received 12- weeks includes educating group discussion, practice skills of health literacy 5 skills access, understand, communicate, appraise and apply, exchange learning through Line group and praise the caretaker and teachers of children of the role models. Data were collected through a 3-part questionnaire: personal data, health literacy, and COVID-19 prevention behaviors. Instruments were examined for content validity by qualified experts, Content Validity Index (CVI), yielding values of 0.95 and 0.97, respectively. Reliability was tested by Cronbach's alpha coefficient, yielding values of 0.87 and 0.92, respectively. Data were analyzed using descriptive statistics, Paired sample t-test.

Results: Results were as follows; the Mean score on health literacy of the experimental group, after receiving the health promotion program was statistically significantly higher than before at the 0.01 level, and the mean score on COVID-19 prevention behaviors of the experimental group, after receiving the health promotion program was statistically significantly higher than before at the 0.001 level.

Conclusion: The findings of this study suggested that this program should be recommended for prevention COVID-19 in Early Childhood Development center.

Keywords: Health promotion program, Health literacy, Prevention behavior of COVID-19, caretaker and teachers of children, Early childhood development centers

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Background: Teenagers are found to have insufficient sexuality education. This study therefore determines the literacy among the teenagers in different aspects.

Objectives: The purpose of this cross-sectional research was to study situation of sexuality education literacy and life skills among teenagers aged 10-19 years in primary and secondary education institutions in health region 7.

Method: The subjects were 900 students, studying in grades 4-6 and grades 7-12 of municipal in health region 7, selected by multi-stage random sampling. Result: The sample of this research was female 61.6 %, aged 10-19 years, mean age 14.09 years

Results: Most of them were 10-14 years old, 59.6 %, study in grades 7-9 : 48.9 %. The sample had a sufficient level of sexuality education literacy and life skills ($\bar{x} = 3.87$). Life skills for preventing sexually risky were creative skills, understanding others skills, interpersonal skills, critical thinking skills and stress management skills all of them were at a very good level ($\bar{x} = 4.2$), ($\bar{x} = 4.2$), ($\bar{x} = 4.12$), ($\bar{x} = 4.12$) and ($\bar{x} = 4.1$) respectively. Decision making skills, problem solving skills, effective communication skills and self-awareness skills, were at a moderate level ($\bar{x} = 3.99$), ($\bar{x} = 3.91$), ($\bar{x} = 3.84$), ($\bar{x} = 3.3$) respectively. However, emotional coping skills was at a problematic level ($\bar{x} = 2.9$)

Conclusion: Integrated with agency of mental health promotion should give advice concerning the coping with emotion for teenagers as well as their families to prevent problems that may arise in the future, because if teenagers cannot cope with emotions, they will suffer from depression and stress, that may lead to social problems.

Keywords: Health Literacy, Sex Education, Life Skills

Implementation of Health Literacy in Public Health Professionals in the Northeastern Thailand

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Background: Promoting health literacy in the country The goal is that all Thai citizens have the skills to access and process health information for decision-making. Thai society is a Health Literate Societies. The Department of Health focuses on people of all age groups to have good health. Therefore, in driving health promotion policies, it is necessary to drive systematic work and emphasizing the participatory drive between health centers and network partners.

Objectives: The aims of this study were to study the knowledge of the use of the “Sasuk Unjai” program for public health personnel in the Northeast, to study the satisfaction of using the “Sasuk Unjai” program among public health personnel in the Northeast, and to study opinions on issues of driving health literacy policy of public health personnel in the Northeast.

Methods: Data were collected using quantitative and qualitative questionnaires during December 2022 and lesson learned of working under the structure of health literacy and controlling of health threatening risk factors in the area health 7. The data were then analyzed for descriptive statistics as presented in number, percentage, and standard deviation, and explaining approach of qualitative content.

Results: The results revealed that the samples had high levels of overall health literacy of using Sasuk Ounjai Program (\bar{x} 4.02, S.D. 0.465). Accessibility of the program was found in the highest levels (\bar{x} 4.28, S.D. 0.522) and decision-making to use the program was found in the least levels (\bar{x} 3.80, S.D. 0.465). The satisfaction of using “Sasuk Ounjai Program” was overall found in the high levels (\bar{x} 3.81, S.D. 0.791). The qualitative data suggested that the policy regarding health literacy was agreeable, because this policy brought about education and ability in people to apply the knowledge in their daily lives. In terms of organizational implementation of health literacy, public health professionals and networks played significant roles to implement the policy as they are a knowledge deliver to the people. Recommendations to the Health Department were to encourage the policy implementation in all areas and to support cooperation between the professionals who were responsible for health literacy and local authorities who implemented Sasuk Ounjai Program.

Conclusion: Implementation of policies at the health literacy level should be driven systematically in collaboration with other ministries. in order to be able to create knowledge for people covering all sectors at the health district level, clear responsible persons are assigned to increase communication to cover target groups and integrate work with all academic centers.

Keywords: Literacy, literacy policy, Sasuk Ounjai Program

The use of entertainment-education for improving mental health literacy in adolescents:

A literature reviews

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Background: It is well known that promoting mental health literacy can prevent serious mental problems among adolescents, a vulnerable period to develop an adverse mental illness continuously to adulthood. Entertainment-Education (E-E) is considered an educational tool for improving health knowledge and behavior, as well as it can be used for reducing health stigma. However, the effectiveness of E-E through various types of media that were used in the field of mental health remains under-explored.

Objectives: This study aims to investigate the utility and potential of E-E in improving mental health literacy, reducing mental illness stigma, and improving knowledge and attitude toward help-seeking in adolescents ages 10 to 19 years. Another aim is to explore the potential between using different communication channels such as films, radios, or comic books.

Method: A systematic search was conducted using six databases including PubMed, ERIC, Scopus, Embase, Cochrane, and ProQuest. This study identified research published in English between January 2000 to February 2022, of which nine studies met the inclusion criteria. Criteria were chosen according to a PICO model and the PRISMA 2020 checklist has been used during this literature review process.

Results: Nine studies were analyzed into three key main themes: (i) mental health literacy; (ii) mental health stigma; (iii) knowledge, attitude, and behavior toward seeking mental health care and coping skills. The significant positive effects were shown in all three main themes.

Conclusions: Findings suggest that E-E is an effective method to increase adolescents' mental health literacy. Further robust evaluative studies are needed to guide future practice.

Keywords: entertainment-education, mental health literacy, stigma, help-seeking, adolescents

The effect of resilience quotient on job burnout among village health volunteers in Wang-thong District, Phitsanulok Province

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Background: This is a quasi-experimental research was one repeat measurement groups, design

Objectives: Study the effects of resilience enhancing program on job burnout among village health volunteers.

Method: Total of 34 samples were village health volunteer with burnout and had lived in Wang-thong District, Phitsanulok Province. During the period of twelve weeks intervention, the experimental group received resilience enhancing program on job burnout among village health volunteers. Resilience enhancing program comprised of activities; Discovering reality, Critical reflection, taking charge and Holding on. Research instruments were the Resilience Quotient screening questionnaires Thai version and the Maslach burnout inventory (MBI) questionnaires Thai version. The Cronbach' alpha coefficients of such two questionnaires were .744 and .910 respectively. The data were analyzed by percentage, mean, standard deviation, Repeated measure ANOVA and test the difference in pairs with the Bonferroni method.

Results: 1. After intervention and a follow-up period of 3 months, experimental group had a significantly higher mean score of resilience quotient than before the intervention (P-value < .05) 2. After intervention and a follow-up period of 3 months, experimental group had a significantly lower mean score of Maslach burnout inventory (MBI) than before the intervention (P-value < .05)

Conclusion: Resilience enhancing program on job burnout among village health volunteers could be helpful in increasing resilience quotient and assistant in reducing job burnout among village health volunteers. Such program could be applied into an activity for empowering and prevent burnout on the job of other village health volunteers.

Keywords: Job burnout, Resilience enhancing program, Resilience quotient, Village health volunteers

Curdlan production: Effect of Carbon and Nitrogen sources, characterization, and applications in healthNatasha Aquinas¹, Ramananda Bhat M¹, Subbalaxmi Selvaraj¹¹ Department of Biotechnology, Manipal Institute of Technology, Manipal Academy of Higher Education (MAHE), Manipal, Karnataka 576104, India

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Background: Curdlan is an exopolysaccharide that comprises of repeating glucose units joined together by β -1,3 bonds. It is found as a colourless, odourless, and tasteless powder after processing. It can form two types of gels namely, thermo-reversible and thermo-irreversible gel. It is non-toxic and biodegradable. Since it can mimic the mouth feel of fatty food products, it can be used in fat-replacement. Some studies have shown curdlan does not have a caloric value. Therefore, its use in food helps diabetics. However, curdlan is not very well known and hence, awareness on its applications is very limited.

Objectives: To determine best carbon and nitrogen source for the isolated curdlan-producing organism and to characterize curdlan produced.

Method: The original carbon source 'Sucrose' in the fermentation media was replaced by others such as glucose, fructose, maltose, lactose. Similarly, optimization of nitrogen source was done by replacing $(\text{NH}_4)_2\text{HPO}_4$ with urea, peptone, ammonium nitrate and ammonium sulfate. Physical parameters were kept constant along with other media constituents. pH was maintained at 7.0, temperature at 30°C and agitation speed 180rpm. Fourier-transform infrared spectroscopy (FTIR) analysis was done to investigate the presence of functional groups in curdlan which would also help in confirming its identity.

Results: Curdlan yield (g/L) was checked when various carbon and nitrogen sources were utilized. Curdlan production was maximum (0.45g/L) when sucrose was used as the carbon source and urea was used as the nitrogen source. The FTIR spectra showed characteristic peaks for biopolymer curdlan such as at $\sim 890\text{ cm}^{-1}$ and others.

Conclusion: The effect of carbon and nitrogen sources on the yield of curdlan was evaluated. Sucrose was the best carbon source and Urea was the best nitrogen source for curdlan yield from this isolated organism. The FTIR spectra confirmed that the obtained biopolymer was indeed curdlan.

Keywords: Biopolymer, Exopolysaccharide, Fermentation, FTIR spectroscopy

Development of adsorbent derived from industrial waste for CO₂ captureDarika Permporn¹, Nisit Inlee¹, Rattabal Khunphonoi²¹ Regional Health Promotion Center 10th Ubon Ratchathani, Ubon Ratchathani, 34190, Thailand² Department of Environmental Engineering, Faculty of Engineering, Khon Kaen University, 40002, Thailand

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Background: In 2022, the health data center of the ministry of public health, Thailand demonstrated illness from air pollution of the population in the regional health 10th Ubon Ratchathani that increase from 293,303 cases to 566,663 and 756,409 cases in 2021 and 2022, respectively. Carbon dioxide (CO₂) is one of air pollution, leading to a serious concern due to its effect as greenhouse. Therefore, the development of effective CO₂ capture and storage (CCS) techniques is urgent and essential to mitigate this problem. CO₂ capture with solid wastes has attracted sustained interest due to its adsorption capacity and solid waste utilization. Particularly, the huge number of solid wastes can facilitate the economics of CCS and waste management.

Objectives: In this work, we examined the development of activated carbon from pulp and paper industry waste (black liquor) and sludge for CO₂ adsorption.

Method: Lignin was prepared by the precipitation of black liquor by using phosphoric acid. Lignin and sludge were hydrothermally synthesized in various weight ratios and then chemically activated. The structure and properties of obtained materials were characterized by scanning electron microscopy (SEM), X-ray diffraction (XRD), fourier transform infrared (FTIR), and Brunauer-Emmett-Teller (BET) analyses. The CO₂ adsorption was analyzed by physisorption and chemisorption.

Results: The findings demonstrate that lignin and lignin mixed with sludge base material can absorb CO₂ both physically and chemically. The combination of lignin with the sludge showed higher CO₂ adsorption compared with lignin alone, at 26.24 mmol/g chemisorbed CO₂.

Conclusion: Lignin precipitated from black liquor can be applied for CO₂ capture. The mixing of lignin and sludge showed higher CO₂ adsorption performance due to CaO in sludge. The CaO is base that enhance its CO₂ adsorption capacity due to the acid–base interaction between the adsorbent surface and gas molecules.

Keywords: Lignin; Sludge; Recycling waste; Capture CO₂

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Background: Thailand has attained the status of an aging society. The elderly club is one crucial policy to enhance the quality of life and health promotion.

Objectives: Evaluate health promotion programs using individual wellness plans for the elderly in clubs in health area 7, Thailand.

Method: A quasi-experimental study one group pretest-posttest design was performed to explore 530 elderlies from 16 Elderly Clubs. The five processes of the program are to 1) Provide health knowledge using course 4 Smart “Walk, Brain, Eat, Sleep” at least once a month, 3 hours each time, for six months. 2) Assess health status/health risks 3) Design an Individual Wellness Plan 4) Review and improve the Individual Wellness Plan and implement the plan for six months and 5) Assess health status/health risks again. Health conditions and behaviors before and after program were compared using the Paired t-test and McNemar’s Chi-square statistics.

Results: Mean age (minimum-maximum) of the subjects was 69.68 ± 5.85 years (60 - 91 years), mostly 418 females (78.9%). Waist circumference after using the program decreased significantly (81.29 ± 10.70 VS 80.58 ± 9.99 ; $p=0.001$). Mean systolic and diastolic blood pressure reduced 124.95 ± 11.47 VS 121.95 ± 10.54 mmHg ($p=0.001$) and 75.39 ± 8.40 VS 72.61 ± 7.37 mmHg ($p=0.019$). The risk of falls decreased from 8.9 to 5.1% ($p=0.013$), and the mean time up and go test decreased from 13.16 ± 8.93 s to 12.25 ± 10.23 s ($p=0.019$). Brain condition by Abbreviated Mental Test (AMT) increased from 8.46 ± 1.30 to 8.67 ± 1.27 ($p=0.001$). The mean score of health behaviors tends to increase (5.63 ± 1.73 to 5.72 ± 1.93 points ($p=0.263$)). Brushing teeth before bedtime increased from 60.6% to 66.4% ($p=0.023$).

Conclusion: This program was effective in enhancing health literacy. A policy plan should be applied to other clubs and expanded to those who do not attend the elderly clubs in the future.

Keywords: Elderly, Health Literacy, Health promotion, Individual Wellness Plan

Health Literacy and Associated Factors in Thai Elders : Health Area 7, Thailand

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Background: Thailand is an aging society. Health literacy of the elderly is important for the elderly to have good health and quality of life.

Objectives: This study aimed to describe the situation of health literacy and determine the factors associated with health literacy among Thai older persons who live in health Area 7, Thailand

Methods: A cross-sectional descriptive studies was performed to explore 4,080 elderlies from Health Area 7, Thailand. Health Volunteers who was trained collect data by interviews during April-June 2022. The data were analyzed using descriptive statistics and the Chi-square were used to determine the associations among the factors related the health literacy.

Results: Mean age (minimum-maximum) of the subjects was 69.79±7.28 years (60 - 97 years), The results showed that most elderly were female (57.3%) , married status were couple (62.8%), educated were primary (88.5) , Hypertension (33.7%) Diabetes mellitus (22.8%). 57.3% of subjects had critical health literacy. Factors significantly associated with health literacy included age education underlying disease and Health problem (Vision impairment, Hearing, urinary incontinence , Movement)

Conclusion: Health literacy of Thai elders in health area 7 was 57.3% and associated factors was age education underlying disease and health problem. The health literacy were considered as having the limited literacy, among Thai older persons represents an important challenge for Thai health policies and health practitioners across Thailand. Knowledge of health literacy is needed to provide the foundation for developing strategies to mitigate effects of low health literacy on health outcome. The social gradient could be taken into account when developing public health strategies to improve health equity and quality of life.

Keywords: Elderly, Health literacy, Thailand

Background: The current health literacy of the Thai elderly is still insufficient. Most of the elderly have listening and reading skills and writing decreased with increasing age affect knowledge and understanding of health information is inaccurate. Therefore, the development of health literacy for the elderly is important to ensure that the elderly have good health and quality of life.

Objectives: The action research aims to study situation of elderly health, development of health literacy and compare of health literacy before and after used to individual care plan in Khon Kaen, kalasin, Mahasarakam and Roi Et Province.

Method: Purpose sample was used to recruit 60 elderly people. The data were collected from group meetings, non - participant observation and interview questionnaires. Descriptive statics, namely frequency, percentage, mean, standard deviation, range and paired t-test were used with quantitative data. Qualitative data was analyzed using content analysis.

Results: The results showed that most elderly were female age between 60-69 years old , married status were couple, educated were primary, occupation were farmer, body mass index were Obesity (25.0-29.9 kg./m²) ,waist circumference >height 10 cms. (82.9%) Diabetes mellitus (52%) Hypertension (42%) teeth check-up (42.9%) depression (2.9%). The process of development of health literacy begins with study to situation, then designs enhanced health literacy used individual wellness plan of elderly, discussion between elderly. The results showed that the average score of knowledge, health behavior, and health literacy after intervention was higher than at a statistically significant (p-value<0.001).

Conclusion: this study makes the elderly have knowledge, behavior and knowledge of good health. can be used to develop a model for building health literacy As well as being used to make the elderly have a good quality of life.

Keyword: Elderly, Health literacy, Health Promotion Behaviors

Health literacy and factors affecting of sexual risk behaviors among adolescents and youth in Ubon Ratchathani province, Thailand

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Background: Adolescences and Youth are the continuation of life from child to adult. They have curiosity having sexual desire which leads to increased sex drive among adolescents. Health literacy is therefore important to make this age group have safe sex. However, we still do not understand and do not know the magnitude of the sexuality and health literacy.

Objectives: To evaluate between health literacy and factors and sexual risk behaviors of adolescents and youth.

Method: This study was a crosssectional analytical study. The population is Adolescences and Youth, aged 15-24 years in higher education institutions in Ubon Ratchathani province in 2023. Using adjusted odd ratios (AOR) and 95% confidence intervals (CI) from multiple logistic regression.

Results: The sample consisted of 450 people. The prevalence of sexual intercourse was 34.89 % who using a condom sometimes and not using a condom 32.37%, 7.91% respectively. The most of them were high level health literacy 56.67% and being aware of the reduction of risk sexual behavior 64.22%. Factors affecting of sexual risk behaviors were nightlife 2.70 times (95%CI: 1.66-4.39, p-value =<0.001), access to video clips to stimulate sexual arousal 1.70 times (95%CI: 1.05-2.75, p-value =0.032) and drinking alcohol 1.83 times (95%CI: 1.11-3.04, p-value =0.018) when controlling for other risk factors, it was found that health literacy increased risk of sexual intercourse not statistically significant.

Conclusion: It can be seen that health literacy in this study did not affect unintended sexual intercourse. Therefore, guidelines for creating health literacy should be developed so that adolescents and youth have desirable behaviors. Focus on developing life skills and organizing a good health service system.

Keywords: Health literacy, Sexual risk behavior, Adolescents and youth

Health literacy on noncommunicable diseases among working age populationJenwit Sornpom¹¹Regional Health Promotion Center 10 Ubonratchatani*Corresponding Author: Jenwit Sornpom, Email: boyddd.19@gmail.com

Background: Noncommunicable diseases (NCDs) such as the most common types of type 2 diabetes, hypertension and dyslipidemia, were the major public health problem. However, in Health region 10 Thailand, the data on the magnitude of NCDs were lacking and not applying to evaluation Health Literacy (HL) on NCDs.

Objective: This study aimed to estimate the most common type of NCDs and assessed the relationship between Health Literacy and NCDs.

Methods: Participants answered questionnaires via the Health for you (H4U) application in health region 10, 2022. The relationship between these factors and the most common type of NCDs was evaluated by using adjusted odd ratios (AOR) and 95% confidence intervals (CI) from multiple logistic regressions.

Results: The prevalence of type 2 diabetes is 7.79%, hypertension is 9.92% and dyslipidemia is 3.58%. Results showed that 25,092 participants who had a very high level of HL could protect type 2 diabetes were 13% (AOR = 0.87; 95%CI: 0.79 to 0.97; $P < 0.001$), compared to the low HL working age population. Participants who had a very high level of HL could protect hypertension were 15% (AOR = 0.85; 95%CI: 0.78 to 0.93; $P < 0.001$), compared to the low HL working age population, and participants who had a very high level of HL could protect dyslipidemia were 16% (AOR = 0.84; 95%CI: 0.78 to 0.93; $P < 0.001$), compared to the low HL working age population.

Conclusion: Our study found that working age population with good health literacy can reduce the chances of developing noncommunicable diseases. However, the magnitude of change in the study was low significant. Therefore, the efficiency of health literacy building must be optimized to achieve better results.

Keywords: Health Literacy, Noncommunicable Diseases, working age population

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Background: Falls are frequent in the elderly and affect mortality, morbidity and loss of functional capacity. Therefore, the development of fall prevention program for the elderly are necessary.

Objectives: This study aimed to investigate the effects of a fall prevention program on risk of fall and fall prevention behavior among community-dwelling older adults.

Methods: The quasi-experimental research one group pretest-posttest design was performed to explore 3,804 elderly who lived in 4 Tambon 4 Province in health area 7 Thailand. The instruments used in this study were composed of the demographic characteristics interview protocol, the risk of fall by Thai-FRAT questionnaire, the safety assessment of internal and external home environment questionnaire, the fall prevention behavior interview protocol, and the fall prevention program: Knowledge on fall prevention, E75 exercise and modify environments. Data were analyzed by means of descriptive statistics, and paired t-test.

Results: The results of the study showed that the number of samples had a statistically significant decrease risk of falls from 23.1% to 19.1% ($p < 0.001$) and increase physical activity from 42% to 44% ($p < 0.001$)

Conclusion: This program was effective to prevention of falls. Therefore, it should be promoted for continuous use to prevent falls among older adults in the community.

Keywords: Elderly, Fall, Health promotion

Model 4C home isolation treatment of the Health Promotion Center 3,**Nakhon Sawan**

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Background: Health District 3 has an increasing number of COVID-19 patients resulting in a high bed occupancy rate. Applying management concepts to patients with COVID-19 who are asymptomatic or mild to be treated by isolation at home. Therefore, it is an approach that must be taken to obtain tangible results urgently. The focus is on patient safety and quality of care.

Objectives: To develop a home isolation care service model, infectious waste management wastewater collection in the community and assess perceptions, behaviors, health literacy. Reduce social stigma of home isolation patients.

Method: service process innovation. Gather leaders from all groups brainstorm together. Determine service target areas. Service unit design, manpower, technology, equipment, computer systems and coordinating with the network by establishing a daily progress report (PDCA), there are 4 main service units, consisting of 1) Call center 2) Care team 3) CLX team and 4) Community and Communication team. listen to suggestions. Set target groups step down from provincial hospitals and assigning roles and responsibilities together, including assessing readiness and the patient's home environment. Set up a delivery system for medicines, food supplies, and collecting infectious waste every Sunday. Field assessment with 23 district hospitals, Muang Nakhon Sawan District. Collecting data to monitor community resistance. Wastewater sampling in various settings.

Results: Among 105 patients receiving Home Isolation service, it was found that most of the behavioral behaviors of HI patients were aware of the way to contact medical personnel when experiencing abnormal symptoms. Managing your own infectious waste self-care during treatment. Preventing the spread of infection to members of the house and symptom reporting through the DIETZ COVID TRACKER, recording daily health results were 100.0, 95.2, 94.3, 75.2 and 47.6 percent, respectively, and SARS-CoV-2 carcass RNA was detected in wastewater from 2 stations, found that the municipal fresh market and the wastewater treatment plant. The infection began to return after being undetected for 2 weeks.

Conclusion: Concrete participation of the organization. Make people able to access services equally. and has a database working with networks in the Health and Non-Health sectors to help clear advocacy work and access information from the area to support and drive health and environmental health promotion work.

Keywords: Home Isolation, Covid-19, 4C

Health Promoting Behaviors in Stroke Prevention for Risk People in the Community: Action Research

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Background: Stroke is an important preventable cause of death and long-term disability worldwide. Preventing through having health promoting behaviors might be easier and more effective than reversing existing damage.

Objectives: This study aimed to develop and evaluate a model of health promoting behaviors in stroke prevention among risk people in the community.

Method: These action research participants included 20 village health volunteers, and 100 stroke risk people. The study involved three main phases: look, think, and act based on Stringer (2014) from April – September 2022. Data collection was performed using focus group discussions, stroke risk scorecard, stroke knowledge questionnaires, and the Health Promoting Behaviors among People at Risk of Stroke's Questionnaire. The reliability of the research instruments was approved prior to collecting data. Qualitative data were analyzed using content analysis while quantitative data were analyzed using descriptive statistics, t-test, and Mann - Whitney U.

Results: The main findings reflected the model of health promoting behaviors in stroke prevention among risk people in the community consisted of raising awareness of stroke risk people, improving capacity, providing education material, and building self-confidence for village health volunteers. An evaluation was performed after the implementation indicating that village health volunteers and stroke risk people modified their health promoting behaviors, median scores of health promoting behaviors, and stroke prevention knowledge before and after an intervention differed significantly ($p < .001$).

Conclusion: The results indicate that the model of health promoting behaviors in stroke prevention among risk people in the community through the village health volunteers is useful to enhance stroke prevention knowledge and modify health promoting behaviors among stroke risk people.

Keywords: Health Promoting Behaviors, Risk People, Stroke Prevention

**Health Literacy and Health Behavior, 3E 2S for Stroke Prevention among village Health Volunteers in
Hangdong Municipality
Hang Dong District Chiang Mai Province**

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Background: Health literacy is the abilities and skills to access health information. The cognition to analyze, self-assessment and self-management, as well as to advise individuals, families, and communities.

Objectives: The purposes of this survey research were to examine the level of health literacy, health behavior, and personal factors which to health literacy in the prevention of stroke among public health volunteers in Hang Dong Subdistrict, Hang Dong District, Chiang Mai Province.

Method: The samples in this study were 92 public health volunteers in Hang Dong Subdistrict Municipality Village were recruited. The research instruments consisted of (1) demographic data form (2) the health literacy assessment form which comprised of six components including: cognitive skills, access skills, communication skills, self- management skills, Media and information literacy skills, and decision skills, and (3) the health behavior assessment form were analyzed by using descriptive statistics and correlation analyzed by chi-square test.

Results: The results showed that the overall health literacy and health behaviors 3E 2S in the prevention of stroke among public health volunteers in Hang Dong Subdistrict was at an average level (77.9%, Mean = 47.94, S.D. = 6.37). It was found that educational factors were statistically correlated with the overall health literacy score ($R=0.214$, $p<0.05$).

Conclusion: These results can be used in planning for promoting health literacy and to share with the community so that people can be healthy and safe from having a stroke.

Keywords: Health Behavior 3E 2S, Health Literacy, Public Health Volunteers, Stroke Prevention

CODE 084

Mindfulness creates happiness and creates value in the waiting period for patients and relatives

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Background: Phrasrimahaphodi Psychiatric Hospital has an average of 379 outpatients receiving daily services. The average time for treatment takes about 25 minutes per case, resulting in at least 25 minutes of waiting time for patients and relatives who receive services.

Objectives: To study the effect of using mindfulness to create happiness in conjunction with mental health education. To create awareness and value waiting time for patients and relatives.

Methods: This study is qualitative research. The instrument used a waiting period value creation form and in-depth interviews with 20 patients and their relatives. Data were analyzed by using content analysis.

Results: The findings reported: 1) creating the value of waiting periods through mental health education and mindfulness training resulting in the value of waiting time of 20-25 minutes/time/case. 2) the interview found that “patients and relatives said are ready and concentrate more on listening to mental health knowledge,” “have more mental health knowledge,” “feel relaxed reduce anxiety during the waiting period and can be applied in daily life.”

Conclusion: Mental health education combined with mindfulness training can be used to value waiting time for patients and relatives in the outpatient service system. It makes patients and relatives more well-versed in mental health and relaxes by practicing mindfulness to create happiness.

Keywords: Mindfulness creates happiness, mental health knowledge, the value of waiting time

**Health Literacy of Sexual Education and Life Skills for Teenagers
in the College under the Office of Vocational Education Commission in
Ubon Ratchathani**

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Background: The second-year vocational certificate students who were students from vocational colleges had a higher percentage of having had sex than students from grade 5 who were students from general schools. In 2021, Ubon Ratchathani Province have the highest live birth rate among women aged 15-19 years about 39.58 percent.

Objective: To study health literacy of sexual education and life skills for teenagers.

Methods: This work is a cross-sectional descriptive study. The sample is student under the office of vocational education commission of Ubon Ratchathani about 400 people that was selected by stratified sampling. The data were analyzed including number, percentage, mean and standard deviation.

Results: The result demonstrates that the major sample has a very good level of sexuality education literacy and life skills ($\bar{x}=4.04$). The health literacy level of sexual education and life skills is a very good level for 3 aspects: 1) behavioral changes, 2) decision, and 3) comprehension ($\bar{x}=4.24, 4.15$, and 4.06 respectively). Information access and inquiries have a fair level ($\bar{x}=3.99$ and 3.75 , respectively). Life skills found that preventing sexually risky behaviors and reducing violence among teenagers have very good scores for 3 areas: 1) understanding others skills, 2) creative thinking skills, and 3) interpersonal skills ($\bar{x}=4.09, 4.08$, and 4.05 , respectively). The emotional skills, self-awareness skills, and decision-making skills have the lowest scoring ($\bar{x}=2.96, 3.18$, and 3.50 , respectively) that should be developed.

Conclusions: The overall level of proficiency in sex education and life skills have very good level. However, the average score of life skills in preventing sexual risk behaviors and reducing violence among adolescents and emotional coping skills has about inadequate level. They must train themselves to have strengths in analytical skills, decision-making, and proper conduct.

Keywords: Health Literacy, Sexual Education, Life Skills, Vocational Education

Health literacy school curriculum for elementary school students.Piyaphon Da inwong¹¹Regional Health Promotion Center 4 Saraburi Department of health

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Objectives: The purpose of this research was to develop a health literacy school curriculum according to the context of the area to enhance the capacity for health in the digital age for elementary school students.

Methods: The steps involved are: 1) Public relations for schools to apply to participate in the health literate school project. 2) Create processes and participation of all agencies and network partners. 3) Create understanding, target and inspire. in co-developing

a curriculum for health literate schools 4) Explore the situation student health status in the pilot area 5) Return health information to areas and network partners. 6) Co-design curriculum for health literate schools according to the context of the area. Using V-Shape and Active leaning principles. 7) Criticism of the course by experts. 8) Bring the course to trial in the target area. 9) Summary of performance 10) Expand the results to schools in the network of health literate schools.

Results: Results of the study Get a well-rounded school curriculum that matches the school context to enhance health competencies for elementary school students. The curriculum can be used in learning management in schools.

Conclusion: To verify the effectiveness of the curriculum, the researchers used experimental research methods. The experimental plan was a randomized pretest-posttest control group design with primary school students in two classrooms. The sample group consisted of 30 students in each classroom. The results showed that the mean scores of the experimental group students on health literacy and desirable health behaviors were significantly higher than the control group students at a statistical significance level of 0.05. in a very good level After the curriculum was trialed and reviewed by experts, the researcher made improvements based on recommendations to further build the complete curriculum.

Keywords: Health literacy school, V-Shape

Patient safety culture and its related factors in some district health centers of Thua Thien Hue province

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Background: Nowadays, the patient safety culture is increasingly receiving more attention from health facilities, and health care organizations in the world, especially when the consequences of adverse health events prolonged hospital stay and increased treatment costs of patients. This study was to help provide a more deeply understanding about the patient safety culture, creating a safe environment for medical examination and treatment at some district health centers of Thua Thien Hue province.

Objectives: (1) To describe the current situation of patient safety culture of medical staff at some district health centers of the Thua Thien Hue province by using the recognized Vietnamese version of Hospital Survey on Patient Safety Culture (HSOPSC) of the Agency for Healthcare Research and Quality (AHRQ). (2) To find out some factors related to the patient safety culture of the subjects in the study area.

Methods: A cross-sectional survey was conducted on 307 healthcare workers in Phu Vang District Health Center and Quang Dien District Health Center. The chi-square test was used to find out factors related to patient safety culture at the $p < 0.05$ significance level.

Results: The proportion of good awareness about patient safety culture at Phu Vang District Health Center and Quang Dien District Health Center was 73%. Professional title, professional qualifications, time working at the medical center, and time working at the department were found to be associated with patient safety culture ($p < 0.05$).

Conclusion: The issue of patient safety culture had many points to improve. Evaluating the patient safety culture should be considered to provide a foundation for implementing specific improvement actions.

Keywords: healthcare workers, HSOPSC, patient safety culture, survey

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Background: Mental health literacy is significant to promotion and prevention of mental health problems. Mental health literacy among Thai people is decreasing *continually* between 2020-2022. Healthcare provider is a key man of implementation, but people participated very little. Nowadays, internet of thing is an influencer to communicate healthcare knowledge online. The Mental Health Center 10 (MHC10) has seen the opportunity to improve literacy among people using a network of mental health communicators in public sector.

Objectives: To develop mental health communicator network in public sector and design mental health literacy communication in new normal via online and working area of each network.

Method: 1) Snowball method was employed using a group of knowledgeable keyman in mental healthcare communication; 2) Communication learning exchange forum was held to share experiences and design a pilot of mental health knowledge communication; 3) Four online pilot broadcasts showed a likelihood of implementation; 4) Significant ones were sought for; 5) Lessons learned were taken from pilot broadcasts; and 6) Mental health knowledge was delivered to network in electronics form, and hard copy.

Results: Six public sectors in Ubonratchathani were in mental health communicator network. Four topics to communicate online included LGBTQ, social skill to immunize children from bully, how to raise children in 5G era, and role of volunteer teacher. Results of pilot broadcast showed that there were 26,832 listeners, and 6,796 responses from audiences. 56.5% were female, 60% were 35-44 years of age, 17.89% lived in Ubonratchathani. Audiences were scattered over domestic and abroad. The most viewed topics were LGBTQ. Mental health communicator network increased. Knowledge is delivered online and via working area. A concrete plan to enhance mental health communicators' competency was prepared.

Conclusion: Mental health communicator network in public sector is an important mechanism to create mental health literacy among people in community.

Keywords: network development, mental health literacy, public sector network, mental health communicator

Motivational interviewing for addressing COVID-19 vaccine hesitancy

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Background: According to the World Health Organization, vaccine hesitancy is one of the greatest threats to world health, and there are few effective solutions in place to address this rising issue. In Chiang Mai, just 63.08% of people received their vaccinations, which is less than what was anticipated by public health policy. By attempting to persuade them, motivational interviewing may result in a rise in vaccination rates.

Objectives: to use motivational interviewing to boost the COVID-19 vaccination rate among those who have vaccine reluctance.

Methods: Following the Department of Health's concept of health literacy, data collection consists of three steps: 1) proactive visits to groups of people with limited access to vaccines, such as bedridden patients in Group 608, by Suanprung psychiatric hospital's multidisciplinary team between November 5–6, 12–14, and 19–23, 2021; 2) assessment of vaccination need and provision of information about the COVID-19 vaccine, such as vaccine safety and side effects; and 3) enhanced understanding of the COVID-19 vaccine by using the 3As: affirm, ask, and advice.

Results: Of the 333 individuals who received the motivational interviewing technique, 82.88% agreed to receive the vaccine. Individuals have a favorable opinion of the vaccine.

Conclusion: Motivational interviewing has been shown to be successful in reducing vaccine hesitancy and increasing vaccine acceptance.

Keywords: motivational interviewing, vaccine hesitancy

Promotion of nutritional health literacy for overweight children who treated to pediatric and adolescent's psychiatric clinics

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Background: Obesity and overweight are serious public health issues that lead to metabolic syndrome, which raises the risk of diabetes, stroke, and death. Nowadays, there is an increasing frequency across all age categories, particularly among preschoolers and adolescents. Several factors, including psychiatric medicines, heredity, eating habits, and physical activity, contribute to it in juvenile and adolescent mental patients. According to a survey of patients receiving assistance in child and adolescent psychiatric clinics, 91.1 percent had inappropriate eating habits in both quantity and proportion, and 86.7 percent of patients and caregivers lacked nutrition knowledge and understanding. Consequently, it is essential to promote nutritional literacy.

Objectives: To reduce the body weight of child and adolescent psychiatric patients who are overweight.

Methods: The quasi-experimental study sought to investigate the effect of nutrition literacy counseling on body weight control in overweight child and adolescent psychiatric patients. Data were gathered from June 1 through December 30, 2022. A purposive sample consisted of 32 participants who are overweight. A program to promote nutritional literacy is one of the research tools. A program that emphasizes involvement, accessibility, comprehension, inquiry, and decision-making in accordance with the physical and mental context was designed using the notion of increasing health awareness. It encourages patients to make choices using five food groups and food exchange models.

Results: Patients' body weight was reduced by 71.9 % after a three-month follow-up period. The caretakers were more knowledgeable about nutrition.

Conclusion: Nutritional literacy may help overweight children and adolescents in psychiatric care lose weight.

Keywords: Nutritional literacy, obesity, overweight

Health literacy of the correct and safe use of traditional Thai medical cannabis

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Background: Currently, the Thai people are still misinformed about the usage of medical cannabis. At the Thai Traditional Medicine Cannabis Clinic, Suanprung Mental Hospital, 69 Thai patients were given medical cannabis consultations in 2020. Counseling topics include sleeplessness (47.83%), bodily problems (33.34%), and the process of care (18.84%).

Objectives: To provide a guideline for increasing patient health literacy about medical cannabis.

Methods: According to the Department of Health's conceptual framework on health literacy, the following measures need to be implemented: 1) Publicity through hospital media and online media 2) Creating an understanding of indications, properties, and limitations, 3) sharing health problems and self-management guidelines 4) The service recipient decides to receive therapy and selects the appropriate cannabis product. 5) Develop proper cannabis-use behavior 6) Inform others about their actual outcomes.

Results: Patients demonstrated a high level of comprehension (95.6%) about utilizing Thai medicinal cannabis after receiving traditional Thai medical cannabis information.

Conclusion: As a result, counseling could improve patients' health literacy about medical cannabis.

Keywords: Health literacy, cannabis, Thai traditional medicine

The effects of sleep hygiene literacy program on insomnia elderly patients in health promoting hospital, regional health promotion center 9th, Nakhonratchasima

Pharanwit Anundilokrit

Objectives: This is a quasi-experimental study in the two-group model that aimed to assess the effects of a sleep hygiene literacy program on insomnia elderly patients in Health Promoting Hospital, Regional Health Promotion Center 9th, Nakhonratchasima, both before and after the study of the experimental and comparison groups.

Methods: The experimental group consisted of 17 older people aged over 60 years old with insomnia who were treated at Health Promoting Hospital, Regional Health Promotion Center 9th, Nakhonratchasima. They have participated in a sleep hygiene literacy program by applying the principle of "10 ways of sleeping well". This also allowed the elderly to find the causes of their insomnia and introduced the principle of "10 ways of sleeping well" to adapt to the conditions of their problems. However, the program consisted of 3 sessions of sleep hygiene literacy every 4 weeks, and the 17 elderly of the controlled group were aged over 60 years old with symptoms of insomnia and received regular treatment for 12 weeks in the Health Promoting Hospital, Health Center 9th, Nakhon Ratchasima and compared the behavioral outcomes in sleep hygiene and sleep quality between experimental and controlled groups, using independent t-test statistics and comparing pre- and post-test results with paired t-test statistics and statistically significant at the 0.05 level.

Results: The study found that after receiving the program, the experimental group had better average scores on sleep hygiene behaviors than before (pre-experiment \bar{x} =50.00, SD=4.73; post-experiment, \bar{x} =56.94, SD=4.51) and better than the controlled group. (controlled group: \bar{x} =50.53, SD = 4.93). In terms of sleep quality, it showed that after attending the program in this research project, the overall sleep quality of the experimental group was better than before the experiment (pre-experiment: \bar{x} =10.35, SD=2.87; post-experiment: \bar{x} =7.47, SD=3.52). The composition of sleep quality before and after the program was statistically different, i.e. subjective sleep quality, the duration from going to bed until falling asleep (minutes), and sleep variances.

Conclusion: This study demonstrated the effects of sleep hygiene literacy programs on the elderly with insomnia. Nevertheless, future research should be deployed to other target groups with similar characteristics, and the effectiveness of such programs should be further studied in the long term.

Keywords: elderly, insomnia, sleep hygiene, sleep quality

The Relationship Between Health Literacy and Condom Use Behavior among students at an educational institution in Nakhon Sawan province

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Background: Health literacy skills in students related to condom use is become more relevant to them understands, actions and behaviors to prevention of sexual transmitted disease (STDs) and unintended pregnancy.

Objectives: This research aimed to study health literacy level on condom use, condom use behaviors, and relationship between health literacy and condom use behavior among students at educational institute in Nakhon Sawan province.

Method: Population consisted of 1,747 students, level 1st-4th level that studying at institute. The samples size were 355 students calculated by Kejcic & Morgan table and selected by Simple Random Sampling. Data were applied during 1-28 February, 2023 using Google forms as an online survey. Data was analyzed using percentage, mean, standard deviation and Pearson product moment correlation coefficient.

Results: The result of majority of samples reported female (60.27%), 18-24 years old (93.24%), 2nd level (35.77%) had sufficient level (87.62%) of the health literacy skill, condom use behavior had middle level (75.97%). Overall relationship between the health literacy and condom use behavior were statically significant with p-value < .05 ($r = 0.521$, p-value < .001)

Conclusion: This study showed that the majority of students had sufficient level of overall health literacy and was correlated with their actual condom use behaviors. Monitoring and evaluation are essential to Health literacy and condom use behavior program of students. That should be implemented continuously in improving their health literacy condom use behavior which may be to prevention of sexual transmitted diseases and unintended pregnancy, too.

Keywords: condom use behavior, health literacy, students

Comparative study of diagnostic of acute myocardial infarction in patients by high-sensitivity cardiac troponin-I , between high-sensitivity cardiac troponin-T

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The Hight Sensitive Troponin Test provides an earlier diagnosis of heart attack in people with angina and is more sensitive to diagnosis. The prospective study research aimed of Accuracy of Cardiac protonin analysis method high-sensitivity cardiac troponin I (hs-cTn-I) and high-sensitivity cardiac troponin T (hs-cTn-T) of the chest pain of patients were. admitted to the emergency department of Lam Thap Hospital. The sample were of the results of blood test of NSTEMI and unstable angina in the chest pain of patients admitted to Emergency Department at Thap Hospital who were diagnosed by ECG. hs-cTn-I and hs-cTn-T at 0-, 1- and 3-hours post-treatment. With 73samples. Analyses were performed for data to determine mean, standard deviation Coefficient of Variance, bias index, Tolerances in Clinical Chemistry Accuracy, accuracy, sensitivity, specificity, positive predictive value, negative predictive value, assay efficiency values by Receiver Operating Characteristic (ROC) and Area Under the Concentration-Time Curve (AUC). The results indicated that of the efficiency of the hs-cTnI (AUC=0.81, 95%CI: 0.75-0.86) level was significantly higher compared to hs-cTnT (AUC=0.79,95%CI: 0.65-0.82). Significant ($p<0.05$), while at hours 1 and 3, the diagnostic performance of hs-cTnT levels (AUC=0.71, 95%CI: 0.62-0.78 and AUC=0.65,95) was found. %CI: 0.61-0.70). **Conclusion:** The hs-cTnI method with greater advantages suitable for screening NSTEMI patients. But hs-cTnT with better all-country performance is suitable for screening NSTEMI patients? Receive treatment 1-3 hours.

Keywords: high-sensitivity cardiac troponin, myocardial infarction, NSTEMI, unstable angina

Environmental health literacy assessment scale development for residents living near the petrochemical industries

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Background: Environmental health literacy (EHL) includes an understanding of the connection between environmental exposures and health, and the use of environmental health information to make informed choices, reduce health risks, improve the quality of life, and protect the environment with a wide range of skills and abilities needed.

Objective: This study aims to analyze the differences in perceptions of environmental pollution exposure among respondents living near the petrochemical industries using the "Environmental Health Literacy Assessment Scale" that has been initially constructed.

Methods: This is a cross-sectional study and quantitative methods were conducted. We developed a validated survey instrument to assess the level of EHL for participants who live in places that have higher/lower levels of air pollution. Participants voluntarily and anonymously filled out a questionnaire. Participants were also informed that the data would be handled confidentially. For the baseline survey, we recruited 1,356 residents who live in rural or urban regions. A semi-structured questionnaire was applied. The questionnaire items will be focused on five sections which included demographic data, environmental health issues (knowledge), environment-health awareness, and action to reduce personal health risks or exposure to pollution.

Results: Regarding validity and reliability tests for EHL, content validity, and internal consistency reliability were used in this study. For our scale, the range of Cronbach's alpha (α) score was from 0.72 to 0.91. In this preliminary result, we found that participants who had eco-friendly experiences tended to have a better level of environmental health literacy.

Conclusions: Our study findings will provide background information about the level of EHL in Taiwan. This study makes an important contribution to the field of EHL research. The public will enhance their awareness of environmental health, raise their awareness of potentially harmful environmental exposures, and choose effective hedging actions to maintain health and wellness.

Keywords: Environmental health literacy, risk assessment, petrochemical industries

Effects of Health Literacy Program on Serious Adverse Drug Reaction among Methadone Maintenance Patients

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Background: Drug overdose and serious adverse drug reactions (ADR) have increased rapidly over the last decades, especially among patients under Methadone Maintenance. Promoting patients' adequate health literacy will result in desirable health outcomes, such as a decreased drug overdoses, and adopting proper health behaviors. Health literacy programs can be conducted by pharmacists before dispensing medications, such as performing group intervention by providing basic information about medications through media such as VDO or flip images. Thus, this study aimed to verify how health literacy programs affect health knowledge and clinical outcomes (serious ADR and drug overdose) among Methadone Maintenance patients (MMP).

Method: This pre-experimental, pre-posttest research was conducted at Thanyarak Mae Hong Son Hospital, Thailand. Participants were enrolled between January and September 2022 (n=37). Incidence of methadone overdose, serious ADRs and Pre-Posttest were collected, and a paired samples t-test analysis was performed.

Results: The data showed zero cases of serious ADR/drug overdose among participants attending a Health literacy program. Results showed a higher increase in the posttest score from 2.14 to 3.57. ($p < 0.05$) Methadone indication, ADR, the appropriate timing of administration and the distinction between methadone and opioids were all major problems.

Conclusion: Health literacy programs in MMP can promote health behaviors and clinical outcomes. MMP should receive a health literacy program to ensure medication safety. However, the program should be designed according to the factors of patient socio-demographics.

Keywords: Adverse drug reaction, health literacy, methadone maintenance, overdose

Factors associated with Iodine Status of over-24-week Pregnant Women who Received Iodine Supplement Tablets in the 7th Health Area

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Background: The Ministry of Public Health Thailand determines a benefits package under the National Health Security Act to dispense iodine supplement tablets to pregnant women throughout their pregnancy. However, there is little known about factors associated with iodine status among the over 24 weeks pregnant women who take iodine tablets.

Objectives: This study aimed to examine factors associated with iodine status of over-24-week pregnant women who received iodine tablets.

Method: Totally, 3113 pregnant women were recruited in the study. Questionnaires were used for data collection. Urine was also collected to examine iodine content. Data were analyzed using multiple logistic regression statistics.

Results: This study found that the median iodine content of pregnant women was 126.80 µg/l, indicating an inadequate intake of iodine according to World Health Organization criteria of 150-249 µg/L median urinary iodine (UI) concentration. Factors affecting the iodine status in pregnant women with UI less than 150 µg/L were being secundigravida (AOR=1.19, 95% CI: 1.03–1.38); joining factor of having no adherence to iodine supplements tablets, having seafood less than 3–4 times a week, and using iodized salt irregularly (AOR=1.17, 95% CI: 1.01–1.38). Taking Iodine supplement tablets greater than 150 mcg/day reduced the risk of iodine deficiency by 21% (AOR=0.79, 95% CI: 0.68–0.91). No provincial policy implementation increased the risk of iodine deficiency (AOR=1.06, 95% CI: 1.00–1.11).

Conclusion: Pregnant women, even if taking iodine supplement tablets, are likely to have insufficient iodine intake. Consumption of Seafood and Ionized salts is vital. Building health literacy for all pregnant women, both in the first and second pregnancy, is also needed. Policy relating to iodine and pregnancy should be implemented to prevent iodine deficiency at the provincial level and other levels.

Keywords: iodine, iodine supplement tablets, nutritional status, pregnant women

Background: Mae Hong Son Province borders several Myanmar states and Thai provinces. Drug access can be convenient in places, and drug smuggling by cartels remains a problem. As a result, each target group should have specific drug prevention recommendations. Strengthening drug immunity according to the target populations of children, adolescents and laborers will lead to proper awareness and skills, so they will no longer be involved in drug abuse.

Objectives: This study aimed to develop a model for promoting substance health literacy using community participation based on the health literacy concept.

Method: Phase 1, involving group discussion and in-depth interview was conducted with 35 participants to explore the problems and needs for promoting substance health literacy in the community. Totally, 4 community leaders, 25 individuals (teachers, students and youth) and 6 healthcare providers were selected. Phase 2 created a model for promoting substance health literacy.

Results: The laborers and forest hunters of the community became the center of a methamphetamine epidemic, and individuals combined methamphetamines and alcohol. As a result, people start acting out inappropriately and rioting and the elderly start smoking opium with their pension money. Youth smoked cigarettes and used marijuana openly. Most were ignorant of the risks associated with smoking. Additionally, raising community health awareness regarding drugs and addictive substances was ambiguous and insufficient. The model for promoting substance health literacy consisted of knowledge bases for developing skills in 5 areas: accessibility, comprehension, questioning, decision-making, and application skills. Following the model's implementation, substance health literacy significantly increased in the target group. ($p < .05$)

Conclusion: Developing substance health literacy models using community participation could raise health literacy and help reduce the occurrence of drug and substance abuse in the community.

Keywords Addiction, Community participation, Health Literacy, Model development, Substance abuse

The development of motion infographic media to disseminate knowledge of cannabis in Thailand for high school students

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Background: With medical cannabis policies in 2019, there has been a growth in illegal business of various cannabis products. However, there is an increasing number of outbreaks and the effects of cannabis use broadly especially in the high school students. So, one of the main issues concerning that needs to be addressed is the knowledge and understanding in cannabis. Also, the use of motion infographic media has been developed to be used as a communication tool in many areas which can attract attention from viewer.

Objectives: The objectives of this research were to: 1) develop motion infographic to disseminate knowledge of cannabis in Thailand for high school students 2) study the quality of motion infographic 3) study the satisfaction of students after watching motion infographic and 4) compare students' knowledge score.

Method: The sample were 30 high school students selected by purposive sampling. The data were analyzed by mean, standard deviation and dependent t-test.

Results: The findings were: 1) the evaluation by the experts for quality of motion infographic were at high level 2) the students' the satisfaction of motion infographic were at high level and 3) the students' knowledge mean score for the posttest is higher than the mean score of the pretest at .05 level of significance.

Conclusion: In conclusion, motion infographic media can disseminate knowledge of cannabis in Thailand for high school students. Motion infographic media can make students understand the content that needs to be presented clearly. Furthermore, it can be used for educating and promoting correct health literacy on cannabis for high school students.

Keywords: cannabis, digital media, health literacy, marijuana, motion infographics

Health Literacy on COVID-19 and Associated Factors among People in Mukdahan Province, Thailand

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Introduction: The outbreak of COVID-19 continues to be an ongoing epidemic. Having the right health literacy and preventive behaviors is important in reducing the spread of COVID-19.

Objectives: To study health literacy and factors related to health literacy in the prevention of COVID-19 in people in Mukdahan Province, Thailand

Methods: This research is a cross-sectional analytical study. Data were collected from 581 people aged between 18-59 years in Mukdahan Province by using multi-stage sampling followed by random sampling. A questionnaire with a Cronbach's alpha coefficient between 0.70 – 0.94 was used. The factors related to health literacy in preventing COVID-19 were analyzed using Pearson Product – Moment Correlation Coefficients statistics and Multiple logistic regression.

Results: Most of the samples were female, 61.3% aged 41-50 years, 22.5% had never contact COVID-19, 84.5%. Their family members never contact COVID-19, 76.2%, most received 2 doses of the COVID-19 vaccine, 55.6%. Prevention behaviors and health belief perceptions in preventing COVID-19 were at a moderate level at 50.8% and 68.5%, respectively. And health literacy in preventing COVID-19 were at a good level at 74.2%. Factors related to health literacy in preventing COVID-19 include preventive behaviors for COVID-19 by people with behaviors to prevent COVID-19 in good level will health literacy in COVID-19 prevention is 1.1 times more than people with COVID-19 prevention behaviors moderate ($OR_{adj}=1.11$, 95%CI=0.06-0.20) and health belief perceptions in preventing COVID-19 by people with perceptions on health beliefs about COVID-19 in good level will have health literacy in preventing COVID-19 more than 6% of people with a moderate perception of health beliefs ($OR_{adj}=0.06$, 95%CI=0.02-0.17).

Conclusion: Building health literacy in the prevention of COVID-19 for the people Therefore, the focus should be on the application of health belief perceptions to change health behaviors in the prevention of COVID-19 infection.

Keyword: COVID-19, prevention behavior, health belief model, health literacy

Cancer Health Literacy: How to Use Medical Tests to Find Cancer Early

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Background: With the development of medical technology, many new technologies can help us detect cancer early. Many people can be caught early by checking for specific markers in the blood. These techniques can detect lesions with great precision, improving the chances of early detection.

Objectives: To help medical technicians understand how to use medical technology to improve the public health literacy of cancer, interpret the results, detect cancer early, and carry out effective treatment and prevention.

Method: 1. Routine testing: such as cancer gene testing, blood testing, urine testing, etc. 2. Medical image detection: use X-ray, CT, MRI, PET and other image detection technologies to detect tumours. 3. Pap tests can be used for cervical screening in women. 4. Popularization of knowledge: educate the public about basic medical knowledge and medical reports and improve self-care awareness.

Results: 1. Regular physical examination: blood tests, imaging examinations, etc., can help you better understand your health status. 2. Pay attention to physical changes: usually a signal of an underlying disease. When you find any abnormality in your body, you should go to the hospital for examination as soon as possible to confirm whether there are potential health problems 3. Know your cancer risk: Different people have different cancer risks. You should be clear about your risk groups and try to reduce the corresponding risk factors according to your situation.

Conclusion: The detection of early cancer is not absolute. We need more science and technology research to fight cancer. We can effectively prevent and treat cancer and protect human life and health by continuously researching, innovating, and improving people's health literacy.

Keywords: blood test, cancer risk, early cancer, medical image test, medical technologies, medical test, Urine Test

Health literacy on Coronavirus disease 2019 prevention behavior among students in Muban Chombueng Rajabhat University, Ratchaburi Province, Thailand

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Background: Thailand has experienced the COVID-19 pandemic since January 2020 that causing a severe epidemic of disease especially crowded communities such as universities in severe disease outbreak areas or red areas like Ratchaburi Province which could be the source of clusters of epidemics.

Objective: The objective of this research was to study health literacy and prevention behavior of the coronavirus disease 2019 (COVID-19) and determine factors predicting prevention behavior of the coronavirus disease 2019 (COVID-19) among students in Muban Chombueng Rajabhat University, Ratchaburi Province, Thailand.

Methods: The research was conducted on 188 students. The data were collected from April to July 2022 by using the online questionnaires. Data were analyzed by using frequency, percentage, mean, standard deviation, Pearson's correlation coefficient and stepwise multiple regression analysis.

Results: The result showed that the health literacy was at a good level about 51.60%.

and prevention behavior of Coronavirus disease 2019 was at a good level about 91.50%.

The significant predictors of prevention behavior of Coronavirus disease 2019 were attitude and knowledge access about COVID-19 (p-value < 0.001). They accounted for 38% with the significant level of 0.05.

Conclusion: The result can be the guideline for policy-making in order to insert the content of health literacy and to promote attitudes about prevention behavior of the coronavirus disease 2019 in the context of university more efficiently.

Keywords: attitude, COVID-19, health literacy, knowledge access, prevention behavior

Evaluation of weekly iron supplement program in prevention of anemia among infant in regional health 6 Thailand

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Background: The prevalence of iron deficiency anemia (IDA) in children younger than 24 months of age in the health region 6 in year 2018 was 34.3%, and an iron supplement rate was 25.9%. The health region 6 board conducted the weekly iron supplement program to Thai infant as the main public health policy since 2019. The effect of weekly iron supplement program among infant of the health region 6 Thailand was not evaluated.

Objectives: The retrospective cohort study to determine the prevalence of IDA in infant aged 6-12 months and to evaluate the effects of weekly iron supplement program among infant aged 6-12 months in the health region 6.

Methods: The database of Thai infant aged 6-12 months visited public health service in the Health Region 6 Thailand from June 2020 to September 2021 was reviewed, to compare the prevalence of IDA between non-supplement and at least 1 month of 12.5 mg (2 mg/kg/day) weekly iron supplementation group. In anemia infant, the cause of anemia had been investigated and treatment before iron supplement. IDA was defined by hemoglobin less than 11 g/dL and increased at least 1 g/dL after treatment. Data was analyzed using frequency, unpaired t-test and Chi square.

Results: Of the total 46,068 infants, significantly higher prevalence of IDA in non-supplement than weekly iron supplement group, that were 12.1% (3,403 cases) and 10.2% (1,812 cases) respectively (p value < .001). The mean hematocrit of non-supplement and supplement group were 35.30 (SD=2.70) and 35.66 (SD=2.74) respectively. The mean hematocrit level was significantly lower in non-supplement than the supplement group (p value < .001).

Conclusion: The study showed lower prevalence of IDA after implementation of the weekly iron supplement program. Further study should evaluate other factors that effect to the prevalence factors of IDA.

Key words: anemia, infant, iron deficiency, iron supplement

The impact of pharmacist-led pharmaceutical care service on Patient-Reported Outcomes Measure of Pharmaceutical therapy (PROMPT) in patients with schizophreniaWasanan Phonphairin¹, Korakot Buathet¹, Supranee Tantanokit¹, Tatta Sriboonruang²¹Pharmacy Department, Srithanya Hospital²Department of Pharmacy Practice, Faculty of Pharmaceutical Sciences, Chulalongkorn UniversityCorresponding Author: Tatta Sriboonruang Email: tatta.s@pharm.chula.ac.th

Background: Patients with schizophrenia who have well-controlled their symptoms could easily get back to live their lives in the community. Their symptoms were mainly controlled with several medications especially antipsychotics. The patient's medication adherence is the key factor. Any strategies that could improve patients' attitude or understanding are strongly belief to improve their adherence and controlled their illness respectively. Leading to the development of the pharmacist-led pharmaceutical care service incorporate with other healthcare professional provide for the in-patients with schizophrenia at Srithanya hospital. To follow up and assess the results of the program is the aim in this study.

Objectives: The objective of this study is to assess the impact of the pharmacist-led pharmaceutical care service on patient-reported outcomes measure of pharmaceutical therapy (PROMPT) questionnaire in patients with schizophrenia.

Methods: The study design was an open-label, parallel group, designed to enroll 130 participants who were patients with schizophrenia and were admitted inpatient ward, Srithanya hospital between January to June 2021. They were randomly assigned into two groups, controlled group (CG) received standard care and intervention group (IG) received pharmaceutical care service add on standard care. The primary outcome focus on Pharmaceutical-related quality of life using short form-PROMPT which consists of eight domains, as follows: (a) Medicine and Disease Information (5 items); (b) Medicine Effectiveness (2 items); (c) Impacts of Medicines and Side-effects (1 item); (d) Psychological Impacts of Medication Use (4 items); (e) Convenience (1 item); (f) Availability and Accessibility (1 item); (g) Therapeutic Relationship with Healthcare Providers (1 item); and (h) Overall QoL (1 item). It was measured at baseline and 8-week period and tested for the difference between groups of study using ANCOVA. The study was approved by ethical committees of Srithanya hospital with approval number [STY.COA008/2564](#).

Results: At 8 weeks, the intervention group yielded a significantly higher means difference between posttest and pretest in all 8 domains of the Pharmaceutical-related quality of life outcomes especially in the Medicine and Disease Information domain score of the PROMPT ($p = 0.001$) than the control group.

Conclusion: The findings have shown the significant increase in PROMPT score in all 8 domains in group of patients with schizophrenia who received pharmaceutical care service add on standard care.

Keywords: patient-reported outcomes measure of pharmaceutical therapy, PROMPT, pharmaceutical care, schizophrenia

A comparative study of Honeymoon period in young-onset and late-onset Parkinson's disease patients who received Levodopa as first treatment in Chiang Mai Neurological hospital

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Background: Parkinson's disease is common neurodegenerative disease in all ages, according to guideline avoidance of levodopa used should be considered especially in YOPD for reasons of increasing motor fluctuations risk and shorten Honeymoon period, but using levodopa as first treatment still occurs. Therefore, researchers have decided to test hypotheses to provide information for prescription in further treatment.

Objectives: To compare the honeymoon period between YOPD and LOPD patients who received Levodopa as first treatment.

Method: A descriptive study by using a causal comparative that collect data retrospectively from medical records of 62 patients who received Levodopa as first treatment. In addition, all patients who participating in the study required to show abnormal movement signs which associated to motor fluctuations. The researcher will perform a comparison analysis of Honeymoon period by using Mann-Whitney U test.

Results: All patients were divided into 31 in each group. The median age at diagnosis was 46 and 60 years each group and also received levodopa in similar daily dose throughout the treatment period. When the motor fluctuations occur, the researcher analyses duration of honeymoon period which was the main outcome of the study, it was found that YOPD and LOPD group had a significantly different of median duration(IQR), equal to 3(4) and 7(4) years which $p < 0.01$ and the most common motor fluctuations symptoms was peak-dose dyskinesia, which was 51.61% and 67.74% of the total patients in each group.

Conclusion: The main outcome of the study showed that YOPD group had the duration of honeymoon period shorter than LOPD group, although all patients got similar type of medicine and daily dosage of levodopa. As a result, PD patients especially in YOPD should be treated by "levodopa-sparing strategy" to provide the most effective and safe treatment by extending the honeymoon period as long as possible.

Key words: Honeymoon period, late-onset parkinson's disease, levodopa, motor fluctuations, parkinson's disease, Symptom fluctuations, young-onset parkinson's disease (YOPD)

Results of health literacy program to control individual weight through the flit for you project of Health Promotion Center 7

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Background: Obesity and diet-related non-communicable diseases (NCDs) are affecting countries worldwide and increasingly developing countries including Thailand Gradual decrease in the prevalence of under-nutrition across the Thai population, the extent of over-nutrition has increased. The prevalence of over-nutrition rose almost fivefold between 1991 and 2014 among Thai men (from 7.7% in 1991 to 33% in 2014) and almost tripled among Thai women (from 15.7% in 1991 to 42% in 2014) .

Objectives : Evaluate control weight program and life style modification follow by life style medicine eating , exercise ,stress evaluate ,sleep quality, substance use, and relation in person about 8 weeks.

Methods: Announcement to recruit general public with a body mass index of more than 30 m², totaling 15 people, taking a total of 8 weeks. Participants received 3 free meals per day for 45 days, free access to the fitness center throughout the project, received a smart watch Hauwei band 7 . Including blood tests, health assessments and health checks. and sleep monitoring. The researcher took care of one participant, aged 41 years, without underlying disease, body mass index 30.

Results:The results of the assessment of 6 aspects of one person in group revealed that health literacy in eating. have more points However, other health literacy scores were unchanged and the weight is unchanged.

Conclusion: health literacy program to control individual weight through the flit for you project of Health Promotion Center 7 is successful for improving health literacy, especially food selection, calculating food calories, and adjusting eating behavior.

Keywords: health literacy, weight , lifestyle modification

The Effectiveness of Parent Training and Social Skills Group Training for Children with Autism Spectrum Disorder

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Background: Autism spectrum disorder (ASD) characterize by language and social difficulties that can harm an individual's well-being. Therefore, social skills training for children and adolescents with autism spectrum disorder (ASD) is essential across the lifespan.

Objectives: This study examined the effects of parent training and social skills group training programs for young children with autism spectrum disorders (ASD).

Methods: Six children (7-10 years old) with autism spectrum disorders (ASD) and six parents were selected by purposive sampling. They were attending public schools in Surat Thani. They attended parent training and social skills group training program for two days. The outcome was self-reported knowledge, attitude, and practical skills of parents. Assessments were made at baseline, post-program, and 3-month follow-ups.

Results: This program improves parents' knowledge, attitude, and practical skills.

Conclusion: Parent training and social skills group training programs have value as an intervention for ASD in a routine clinical setting. Future research should focus on comparing different social skills training protocols.

Keywords: autism spectrum disorder, parent training, social skills group training

A study of resilience quotient among Thai people during the COVID-19 outbreak

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Background: During the COVID-19 outbreak, most Thai people experienced psychological distress such as stress, anxiety, and depression. Several studies indicate that resilience is a critical protective factor that may relieve the symptoms of emotional pain.

Objectives: This study aims to investigate and compare the level of resilience quotient (RQ) among the general population and the risk group for COVID-19 infection in the working-age population, and to examine the relationship between RQ and biosocial factors and the impact of the COVID-19 outbreak.

Method: This was a cross-sectional study of the working-age population (ages 25 – 60 years). Data were collected from 1,537 individuals in the general population group and 2,017 individuals in the COVID-19 infected risk group under stratified random sampling. RQ was measured using the online RQ assessment from February to August 2021. The data were analyzed using descriptive statistics, independent t-test, and one-way ANOVA.

Results: The level of RQ among the general population was "normal" ($\bar{x} = 57.98$), whereas the risk group for COVID-19 infection was "lower than normal" ($\bar{x} = 54.16$). The results showed that these two groups had differences in the region, age, marital status, education level, occupation, feelings of anxiety due to the COVID-19 outbreak situation, and the impact of COVID-19, which had a significant difference in RQ scores ($p\text{-value} < .05$). The general population had a significantly higher mean resilience score than the COVID-19 infected risk group ($p\text{-value} < .05$).

Conclusion: Resilience in the domain of willpower is the main protective factor against mental health problems. Thus, promoting resilience following biosocial factors and the impact of the COVID-19 outbreak may be beneficial.

Keywords: COVID-19, resilience, working age

Effect of mutual support with mindfulness program on burden of caregivers of patients with behavioral and psychological symptoms of dementia

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Background: Dementia is a condition which the ability of the brain to function is diminished. 90% of dementia patients have behavioral and psychological problems which are problems that affect caregivers in term of burden caring.

Objective: This research aimed to study the effect of Mutual Support with Mindfulness Program on burden of caregivers of patients with behavioral and psychological symptoms of dementia.

Methods: This research was a quasi-experimental with two groups and repeated time design. The sample were caregivers of patients with behavioral and psychological symptoms of dementia who received treatment for psychiatric condition at the Specialized Outpatient Clinic, Suansaranrom Hospital, Surat Thani, Thailand. The sample size was fifty-six persons who were selected by purposive sampling technique. The samples were divided to experimental group and control groups (Twenty-eight persons for each group). The experimental group was treated by the Mutual Support with Mindfulness Program and the control group was treated by the usual care. The research instruments were 1) Intervention; Mutual Support with Mindfulness Program, 2) Questionnaires; Burden questionnaire of Caregivers of Patients with Behavioral and Psychological Symptoms of Dementia. The descriptive statistic and two-way repeated measures analysis of variance were used in data analysis.

Results: The research found that the mean scores of caregiver burden between experimental group and control group were significantly different at the level of 0.05.

Conclusion: The result indicated that the Mutual Support with Mindfulness Program can decrease burden of caregivers in caring of their patients with Behavioral and Psychological Symptoms of Dementia. Therefore, mental health personnel should implement this program in their services to provide quality care to patients with Behavioral and Psychological Symptoms of Dementia.

Keywords: Burden, Mutual Support with Mindfulness Program, The Behavioral and Psychological Symptoms of Dementia

Effect of self-esteem enhancing program on solving problem in elderly with major depressive disorder at Saunsaranromhospital, Suratthaniprovince

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Background: Low self-esteem feeling is one of causes to depressive disorder in elderly people which affects their own solving problem.

Objectives: The research aimed to compare the score of self-esteem and problem-solving in elderly with major depressive disorder (within and between treatment and control group).

Methods: This research was a quasi-experimental with two groups and repeated time design. The sample were selected 60 elderly patients with major depressive disordering outpatient department at Saunsaranrom hospital, Suratthani province during October 2019-March 2020. Thirty participants receiving the self-esteem enhancing program conventional care were assigned to the treatment group and the others assigned to the control group with regular nursing care. The research instruments consisted of 1) the Self-esteem enhancing program based on self-efficacy of Bandura theory, and Maslow's Hierarchy of Need, 2) demographic data questionnaires, 3)Thai Geriatric Depression Scale,4)Self-esteem Questionnaires, and 5)Problem-Solving Inventory. The Data was analyzed by repeated measures Analysis of Variance.

Results: The results were as follows; 1. The Self-esteem and Solving problem score in Elderly with Major Depressive Disorder who received Self-esteem Enhancing Program was significantly higher score at post and after conduct the program 1 and 3 months follow up phase than before receiving the program with p value less than 0.05. 2. The Self-esteem and Solving problem score in Elderly with Major Depressive Disorder who received Self-esteem Enhancing Program was significantly higher score at post and after conduct the program 1 and 3 months follow up phase than control group who received regular nursing care with p value less than 0.01.

Conclusion: The results showed that the program can enhance self-esteem and solving problem score in elderly with major depressive disorder.

Keywords: Self-esteem, Self-esteem Enhancing Program, Problem solving, Elderly with Major Depressive Disorder

CODE002

Effects of Health Promotion Program on Health Literacy and Prevention Behavior of COVID-19 among Caretaker and Teachers of Children in Early Childhood Development Centers

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Background: Health literacy is an essential for practices in prevention of Coronavirus Disease 2019 (COVID-19) among caretaker and teachers.

Objectives: The purpose of this quasi-experimental research pretest-posttest design was conducted to study the effects of health promotion program on health literacy and prevention behavior of COVID-19 among caretaker and teachers of children in early childhood development centers.

Methods: A sample of 32 caretaker and teachers of children in early childhood development centers in Nakhonsawan provide, Thailand. The experimental group participated in health promotion program based on the concepts of Pender's health promotion model, received 12- weeks includes educating group discussion, practice skills of health literacy 5 skills access, understand, communicate, appraise and apply, exchange learning through Line group and praise the caretaker and teachers of children of the role models. Data were collected through a 3-part questionnaire: personal data, health literacy, and COVID-19 prevention behaviors. Instruments were examined for content validity by qualified experts, Content Validity Index (CVI), yielding values of 0.95 and 0.97, respectively. Reliability was tested by Cronbach's alpha coefficient, yielding values of 0.87 and 0.92, respectively. Data were analyzed using descriptive statistics, Paired sample t-test.

Results: Results were as follows; the Mean score on health literacy of the experimental group, after receiving the health promotion program was statistically significantly higher than before at the 0.01 level, and the mean score on COVID-19 prevention behaviors of the experimental group, after receiving the health promotion program was statistically significantly higher than before at the 0.001 level.

Conclusion: The findings of this study suggested that this program should be recommended for prevention COVID-19 in Early Childhood Development center.

Keywords: Health promotion program, Health literacy, Prevention behavior of COVID-19, caretaker and teachers of children, Early childhood development centers

CODE004

Situation of sexuality education literacy and life skills among teenagers aged 10-19 years in the health region 7

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Background: Teenagers are found to have insufficient sexuality education. This study therefore determines the literacy among the teenagers in different aspects.

Objectives: The purpose of this cross-sectional research was to study situation of sexuality education literacy and life skills among teenagers aged 10-19 years in primary and secondary education institutions in health region 7.

Method: The subjects were 900 students, studying in grades 4-6 and grades 7-12 of municipal in health region 7, selected by multi-stage random sampling. Result: The sample of this research was female 61.6 %, aged 10-19 years, mean age 14.09 years

Results: Most of them were 10-14 years old, 59.6 %, study in grades 7-9 : 48.9 %. The sample had a sufficient level of sexuality education literacy and life skills ($\bar{x} = 3.87$). Life skills for preventing sexually risky were creative skills, understanding others skills, interpersonal skills, critical thinking skills and stress management skills all of them were at a very good level ($\bar{x} = 4.2$), ($\bar{x} = 4.2$), ($\bar{x} = 4.12$), ($\bar{x} = 4.12$) and ($\bar{x} = 4.1$) respectively. Decision making skills, problem solving skills, effective communication skills and self-awareness skills, were at a moderate level ($\bar{x} = 3.99$), ($\bar{x} = 3.91$), ($\bar{x} = 3.84$), ($\bar{x} = 3.3$) respectively. However, emotional coping skills was at a problematic level ($\bar{x} = 2.9$)

Conclusion: Integrated with agency of mental health promotion should give advice concerning the coping with emotion for teenagers as well as their families to prevent problems that may arise in the future, because if teenagers cannot cope with emotions, they will suffer from depression and stress, that may lead to social problems.

Keywords: Health Literacy, Sex Education, Life Skills

CODE005

Digital literacy used in electronic online journal system among personnel's of the Regional Health Promotion Centre 7 Khon Kaen.

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Background: Digital literacy is one of significant abilities for health personals to be able to properly and effectively use digital technology as a tool for data searching and publishing.

Objectives: This descriptive qualitative research aimed to determine digital literacy used in the electronic online journal system among the personnel of the Regional Health Promotion Centre 7 Khon Kaen.

Method: The key informants included ten personals who had submitted an article through the electronic online journal system of the Regional Health Promotion Centre 7 Khon Kaen. Data was collected using in-depth interview method and subsequently analyzed using content analysis.

Results: The results revealed that digital literacy used in the electronic online journal system among the personals of the Regional Health Promotion Centre 7 Khon Kaen were comprised of three components as follows: 1) Use—most of the informants had basic skills of browser surfing, but were not familiar with the particular functions of online journal system and English menu causing mistaken data entry which was further required staff consultation and following the written instructions. 2) Understand—most of the informants used the online journal system to search for data and research articles. However, the citations to the journal were quite few and the system was not utilized for the maximum benefits yet. 3) Create—the knowledge transfer or publication to public through digital media were mostly academic data or research to resolve problems in the responsible areas according to the organizational policy.

Conclusion: The researchers in the centre should be encouraged to involve in data and article searching through the system for the continuous extensive operation of problem solving and benefit maximization of the online journal system.

Keywords: Digital literacy, online journal system, descriptive qualitative research

CODE009

Health Literacy in Utilization of Sasuk Sure Program among Public Health Professionals in the Northeastern Thailand

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Background: Health literacy is an issue of the national strategy for human resource development and capacity building. The Ministry of Public Health plans to reform the country in public health related to health literacy with the goal of making Thai people aware and as smart as up-to-date with health information. Therefore, there is a countermeasure to information using the Sa Suk Sure program. to create health awareness among the people.

Objectives: This cross-sectional descriptive research aimed to determine health literacy and satisfaction regarding utilization of Sasuk Sure among the public health professionals in the northeastern Thailand.

Methods: The samples included fifty public health professionals who were responsible for health literacy in the northeastern Thailand. Data were collected through quantitative questionnaires during the workshop of building health literacy under the activity of new public health promoting health conscious among Thai people in December 2022. The data then were analyzed for descriptive statistics as presented in frequency, percentage and standard deviation.

Results: The results revealed that the public health professionals in the northeastern Thailand had overall health literacy of using Sasuk Sure Program in the high levels ($\bar{x} = 3.89$, S.D. 0.863). Recommending Sasuk Sure Program to others was found in the highest levels ($\bar{x} = 4.17$, S.D. 0.906) and improving accessibility function was found in the least levels ($\bar{x} = 3.62$, S.D. 0.758). The satisfaction of using Sasuk Sure Program was found in the highest levels ($\bar{x} = 3.88$, S.D. 0.851).

Conclusion: These results suggested that implementing policy to practice should be proactive as well as there should be promoting health literacy in the responsible professionals in all different levels to recognize the necessity of Sasuk Sure Program for further sustainable improvement.

Keywords: Healthy literacy, Sasuk Sure Program, public health professionals

CODE011

Building a framework of dyadic self-management program for person with mild dementia and their family caregiver

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Background: Self-management might improve the ability of living with chronic condition for people with incurable diseases. Dementia is also a chronic disease, but self-management is rarely applied on this population.

Objectives: The purpose of this study was to develop a framework of dyadic self-management program for person with mild dementia and their family caregiver.

Method: This study was an action study from August 2020 to July 2021. Ten persons with mild dementia and 15 family caregivers were recruited to participant focus group, dyadic interviews or individual interview. Eight self-management coaches also were invited for participatory observation and group discussion.

Results: The findings showed that the persons with dementia and their caregiver were influencing each other. Their living social environment also deeply affected their health. Participants demonstrated that they have high need for self-management and high willingness to participate self-management program. Participants in the new dyadic self-management program evidenced that cognition, expression, and sleep quality of persons with mild dementia have subjectively improved. Both persons with mild dementia and family caregivers believed their lifestyle were healthier and quality of relationship were better than before participation. Participants suggested that the program should add the uniqueness of dementia adjustment, such as memory techniques to cope with memory changes, family relations and communication enhancement into the connotation of future development of self-management.

Conclusion: A new framework of dyadic self-management program for person with mild dementia and their family caregiver was built. A dyadic self-management program might assist persons with dementia and their caregivers to develop the ability of balance mechanism, and improve their self-management and quality of life.

Keywords: dementia, family caregiver, life style, quality of life, self-management

CODE012

An Intermediate Care in Stroke Patients by Home Health Care Chiang Mai Neurological Hospital

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Background: An intermediate care reduces disability and complications of stroke patients. Most stroke patients need to take care of their health at home. Home health care is necessary for this group of patients whether on-site home visit or telemedicine.

Objectives: The purpose was to study the effects of home health care for intermediate-care stroke patients.

Method: This study is cross-sectional. This is a specific study in patients who received treatment at Chiang Mai Neurological Hospital from January 1st, 2021, to August 30th, 2022. There were 90 cases in total, of which 45 were telemedicine home visits and 45 were on-site home visits. Descriptive statistics were used to analyze and analyze data relationships with Exact Probability Test statistics.

Results: When demographic data was tested for statistical differences, the study discovered that both the sample groups who received telemedicine home visits and on-site home visits showed no difference at the significance level of 0.05. Comparing differences data on the level of ability to perform daily activities (ADL) and the level of MRS disability found that the care of intermediate-care stroke patients by home visit both improved patients' ability to perform daily tasks, and the level of disability in stroke patients differed at the 0.05 significance level.

Conclusion: Home health care, on-site home visit or telemedicine home visit, can improve patients' ability to perform daily tasks, and the level of disability in intermediate-care stroke patients.

Keywords: Home Health Care, Intermediate Care, Stroke, Telemedicine

CODE014

Health literacy related to COVID-19 antigen self -test behavior of service recipients at metropolitan health and wellness institution, Bangkok

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Background: Coronavirus Disease 2019 (COVID-19) is a respiratory tract infection caused by Severe Acute Respiratory Syndrome Coronavirus 2, which began to spread in China, then spread through the whole globe in 2020. Thailand has been more than 24,299,923 patients and more than 827730 deaths internationally.

Objectives: Study the relationship between health literacy and COVID-19 antigen self -test behavior of participants of metropolitan health and wellness institution.

Method: The study population was participants from October 2021 to September 2022. The population of 230 patients is studied by a systematic sampling method. Data were collected by questionnaires and analyzed by descriptive and chi-square.

Results: The result revealed that most participants had health literacy performance as the following. 79.1% of participants had the ability to seek information and medical services. 83.5% had strong comprehension skills. 79.6% had good conversational skills. 81% had good decision-making skills. 81.3% had strong self-management skills. Last, 87.4% had the ability to share and inform health-related information with others. Moreover, about half of the participants (50.9%) had a moderate ability to perform COVID-19 antigen self -test. The correlation analysis showed a statistically significant relationship between health services, decision-making skills, self-management skills, and communication skills, with a significance level of 0.05 (p-value=0.028, 0.030, 0.001, and 0.001, respectively).

Conclusion: The hospital should have a policy to encourage patients for COVID-19 antigen self -test (ATK). The policy has enhance our patient to increase health literacy skill for protect themselves from COVID-19 and not spread it from themselves to their families, community, and society.

Keywords: Antigen test kit (ATK), Antigen self -test , Health literacy

Factors related to breastfeeding health literacy in Taiwan

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Background: World Health Organization (WHO) and United Nations Children's Fund (UNICEF) suggest that infants should be exclusively breastfed for the first six months. The exclusive breastfeeding rate has declined in Taiwan due to insufficient milk, young mothers, low socioeconomic and educational levels, lack of breastfeeding knowledge, and low self-efficacy. If women are empowered, they will have knowledge and decision-making skills related to breastfeeding so that the breastfeeding rate may be elevated, and breastfeeding can be prolonged. Emerging evidence has shown that better health literacy is related to positive breastfeeding behavior. However, a comprehensive understanding of factors related to women's health literacy of breastfeeding is lacking in Taiwan.

Objectives: To explore the influencing factors of breastfeeding health literacy among Taiwanese pregnant women.

Method: A cross-sectional and descriptive study design was conducted. A convenience sample of 1200 pregnant women over 20 years old was recruited. Hierarchical multivariate regression analysis explored the factors related to breastfeeding health literacy.

Results: Breastfeeding experience, the number of pregnancies, breastfeeding methods, and healthcare providers offering breastfeeding-related knowledge were significant predictors after controlling education level and medical institution.

Conclusion: Women who received breastfeeding information from healthcare professionals and had previous breastfeeding experiences have higher levels of health literacy. Higher breastfeeding health literacy enhances women's willingness to practice exclusive breastfeeding. Hence, healthcare providers are obligated to provide breastfeeding information to improve women's breastfeeding literacy and increase the exclusive breastfeeding rate.

Keywords: breastfeeding health literacy, exclusively breastfeeding, health care providers

Effectiveness of COVID-19 Self-risk Assessment to Prevent Transmission among Working Age Group

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Background: In early of 2021, there was not any tool for people usage as self-risk assessment.

Objective: To develop and evaluate risk level power and predictive value of the self-assessment test application Thai Save Thai (app.TST) for people to know self-risk level of COVID-19 infection as verify of entry before entering anywhere in early of the year 2021.

Methods: This research and development organized into 2 phases. The first phase risk level of discrimination power. The subjects were recruited from factory workers by population sampling with proportional allocation selection who digitally assessed app.TST for 3 consecutive times within 2 weeks apart each time (There were 4,400, 4,870, and 3,870 subjects who participated in first, second, and third assessment) during May-July 2021. The second phase to evaluate predictive value of the test among 320 subjects who assessed TST at Department of Medical Sciences before collecting sample for reverse transcription polymerase chain reaction (RT-PCR) test during May-July 2022.

Results: The risk level discrimination power revealed that percentage of normal results were 44.4, 38.8, 29.2, respectively. Low risk results 54.3, 60.8, 70.5, respectively. High risk results 0.2, 0.02, 0.1, respectively. Very high-risk results 1.1, 0.36, 0.21, respectively. Infection results 0.02, 0, 0.05, respectively. The predictive value of the app.TST showed that the infection level had a sensitivity of 95.65%, and a specificity of 75%. The very high-risk level had sensitivity of 85.71%, and a specificity of 63.93%, a high-risk level had sensitivity of 75%, a specificity of 28.06%, and a low risk level had sensitivity of 90%, a specificity of 27.08%.

Conclusion: Application Thai Save Thai is a self-risk screening tool which consists of the property to discriminate risk level and predictive value at infection and very high-risk assessment results.

Keywords: Self-risk assessment, COVID-19 infection transmission, Verify of entry

Clean Tooth Good Gum Project in Grade 4 students at Wat Suwan Khiri Khet School , Karon , Phuket

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Background: According to the 8th National Oral Health Survey in 2017, it was found that in school-aged children 12 years, the prevalence of dental caries was 52.0%. Data collection from school health teachers was found that the students did not brush their teeth after lunch due to no toothbrush storage , lack of knowledge and skills of oral hygiene care.

Objectives: To educate brushing skills and encourage students to have a positive attitude towards oral health care.

Methods: 29 students took a test which is a questionnaire before the project started. Then they were educated dental knowledge and brushing skills. The students were divided into small groups to practice brushing their teeth. Later tooth brushing activities after lunch was set up and monitored by school health teachers . After 1 month , the participants did a posttest of dental knowledge .They also were motivated and followed up by plaque staining after 2 months and 3 months.

Results: 20 students did both pretest and posttest. It showed that the mean score of pretest and posttest was 6.35 and 7.45 out of 10, respectively. 14 out of 20 students which is equal to 70 %, got higher score of posttests compared to pretest .Level of the percentage of score was divided into 3 levels which were low (score<60%) , medium (score =60 – 79%) high score >80%). The number of students with low level of percentage of score decrease from 6 to 1 which accounted for 30 to 5 % .Meanwhile the percentage of students with medium level and low level of score increased 10 % and 15% respectively.

Conclusions: Students have had a good attitude and increased brushing knowledge after projects and the brushing activity after lunch continues in the school.

Keyword: dental caries , toothbrush storage , oral hygiene care , plaque staining

Enhancing Substance Abuse Literacy among High School Students in Mae Hong Son, Thailand

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Background: Health literacy is a new and important skill required for healthy behavior and encouraging young people to develop their abilities at the personal level to maintain their own health. Mae Hong Son Province borders neighboring Myanmar, and drug cartels have drug smuggling complications making it easier for children and youth to become addicted.

Objectives: This study aimed to explore the situation of substance abuse among students and improve substance abuse literacy according to Nutbeam's concept of health literacy.

Methods: This study constitutes a descriptive study targeting 400 secondary school students in November 2022. The ASSIST screening test and V-shape model-based, health literacy learning activities were conducted. Data were analyzed using descriptive statistics, percentages and averages.

Results: The main drugs and addictive substances in the past 3 months included cannabis. The average age was 16 years, and 75.9% of participants were at moderate risk, 17.2% were at high risk and 3.4% were at lower risk. Students could comprehend and were able to apply the V-shape model process to promote health literacy, consisting of 6 components: access, understanding, questioning and communicating, decisions, behavioral change and word of mouth.

Conclusion: Through the process of promoting health literacy using V-shape model tools, students were able to comprehend information on drug and substance abuse and communicate desirable behaviors with their families. It should be prepared as a knowledge set for student groups to improve their health literacy.

Keywords: Health Literacy, Student, Substance Abuse, V-shape, Youth

CODE130

Health Literacy, Health Behaviors, and Body Mass Index Among Older People in Chiangmai
Neurological Hospital

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Background: For the good outcomes in health of the older people, there are needs of knowledge understanding, and decision-making ability to manage their health determinants, that leading to good health-behaviors in self-care.

Objectives: To study health literacy, health behaviors, and body mass index (BMI) among older people in Chiangmai neurological hospital.

Method: This descriptive research was studied in 109 older-people subjects, 60 years old of age and older attending in OPD of Chiangmai neurological hospital. The research instruments were composed of individual-data subject record form, health-literacy questionnaire, and health-behavior questionnaire.

Results: There were 62 female subjects (56.9%), age average 67.26-year-old, and most of their BMI more than 23 kg/m² (75%). Their health literacy (HL) was generally in adequate level. Differentiated into each aspect of HL, health-data access was in very-good level, knowledge-understanding, communication skill, and self-management were in good level, and decision-making was in adequate level. Most of their health behavior was in good level. Health literacy was related to health behavior, statistically significant ($p < 0.05$). Analyzed into each aspect of HL, health-data access, media literacy, and decision-making were related to health behaviors positively in adequate level, statistically significant ($p < 0.05$). And knowledge-understanding aspect of HL was related to BMI positively in low level, statistically significant ($p < 0.05$).

Conclusion: The promotion of health literacy in knowledge-understanding aspect and health behaviors of the overweighed older-people is important for success in health promotion of older people.

Keywords: Body Mass Index, Health Behaviors, Health Literacy, Older People

Mental health literacy of codependent wives of alcoholics

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Background: Mental health, which is an integral and fundamental part of the general state of health, is described by the World Health Organization 2018. Alcohol codependency are combined into one group called Alcohol Use Disorder (AUD) (NIAAA, 2021). Codependent expectancies among wives of alcoholics are developed, in part, through exposure to health messages, the understanding of which may be influenced by mental health literacy. Wives of alcoholics have been identified in the mental health literature as being more vulnerable to the development of mental disorder's symptoms as depression, fears and anxiety (Erdenebayar L, 2016).

Objective: The aim is to study psychological and behavioral changes which are reflected in mental health literacy among the wives of alcoholics and develop preventive recommendations reflected in psychological and behavioral changes.

Methods: Matched Pair Case-Control Study tool and ANOVA, CI, Open Epi Info.

Results: The percentage of people who get angry and upset is 95.52% (CI 86.16-104.88), The percentage of people who try to prove their well-being to others is 46.27% (CI 41.73-50.80); The share of lonely people is 53.73% (CI 48.47-59.00), The proportion of people who were depressed and in life was 74.63% (CI 67.31-81.94), respectively.

Conclusion: Findings are considered in the design of preventive recommendation in mental health literacy to codependent wives of alcoholics. Practice implications: Health literacy should be explicitly considered in the design of alcohol prevention messages.

Keywords: Behavior, Codependent, Anxiety and Wives of alcoholics

Sexual health literacy and preventive pregnancy behaviors among adolescents in Chanthaburi Province, Thailand

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Background: Sexual health literacy (SHL) is an important factor in the prevention of pregnancy behaviors.

Objectives: This study aimed to explore: 1) the level of sexual health literacy, and 2) the association between sexual health literacy and preventive pregnancy behaviors.

Method: The cross-sectional survey research with two-stage cluster sampling involved from a total of 4,653 students from 71 schools in ten districts of Chanthaburi Province. An appropriate sample size was calculated and determined to be 355 students in ten districts. An online self-report questionnaire was used to gather data from 2020–2021, Sorensen's concept of health literacy was applied. The data were analyzed using descriptive statistics, and a chi-squared test was used to determine the relationship of each factor with pregnancy prevention.

Results: Two-thirds of the respondents were female, and most of their parents worked in agriculture. Three-quarters of the respondents had good or very good relationships with their parents. More than half drank alcohol and less than one-tenth ever nightlife. Additionally, one-third of family members had a history of teenage pregnancies. One-quarter had hugged their boyfriend/girlfriend, nearly one-fifth had kissed their boyfriend/girlfriend, and fourth-fifths had inappropriately low sexual health literacy. However, fourth-fifths had inappropriate preventive pregnancy behaviors. The significant factors associated with preventive behaviors were gender, family members with a history of teenage pregnancies, drinking alcohol, participating in nightlife, accessing sexual health information and services, sufficient understanding of practical sexual health and services, sexual health appraises, decision making regarding sexual practice, and overall sexual health literacy.

Conclusion: The results showed a low score of SHL and preventive behaviors of pregnancy. Therefore, the public health officer and teachers should develop a program to enhance SHL and preventive pregnancy behaviors among adolescents, especially among adolescents who have family members with a history of teenage pregnancies, alcoholic drinking, and engagement with nightlife.

Keywords: Sexual health literacy, teenage pregnancy, unintended pregnancy, students

Health literacy and performance roles in controlling and preventing COVID-19 among village health volunteers in Ubon Ratchathani Province, Thailand

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Background: The global COVID-19 outbreak is affecting every aspect of life. In Thailand, Village Health Volunteers (VHVs) are an important force in the surveillance and control of COVID-19.

Objectives: To study the level of health literacy in COVID-19, the level of compliance roles with control and prevention of COVID-19, and factors related to the performance of these roles among village health volunteers in Mueang Ubon Ratchathani District, Ubon Ratchathani Province.

Methods: cross-sectional descriptive research. Data collection with village health volunteers Ubon Ratchathani Province, number 175 by the simple sampling method. A questionnaire with Cornbrash's alpha coefficient of confidence between 0.73 and 0.80 was used. Data were analyzed by descriptive statistics. and analyzed the relationship with Chi-square test.

Results: 88.0% of the sample were female, 66.9 % were aged between 40 and 59 years old, 61.7% had never been sick with COVID-19, 65.1% had 3 doses of the COVID-19 vaccine, had overall health literacy that was at a good level (56.6%), the VHVs performed at a good level (78.3%), and general health literacy, skills for accessing health information and health services, communication skills, decision-making skills, and media literacy skills have a relationship with the performance of the roles of the VHVs that is statistically significant ($p < 0.05$).

Conclusion: Health literacy is a factor that correlates with their performance according to their roles. Therefore, health literacy should be promoted to village health volunteers so that village health volunteers can increase their potential in controlling operations. Continue to prevent COVID-19 in the community.

Keywords: Health literacy in COVID-19, Role of control and prevention COVID-19, Village health volunteers

Health literacy and performance roles in controlling and preventing COVID-19 among village health volunteers in Ubon Ratchathani Province, Thailand

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Keywords: Health literacy in COVID-19, Role of control and prevention COVID-19, Village health volunteers

Participation model of community leaders in controlling and preventing risk factors for diabetes and hypertension in the elderly in

Ban Khao Kaew community

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Abstract

Background: This research is a participatory action research study. (Participatory Action Research: PAR)

Objectives: The purpose of this study was to study the participation model of community leaders in controlling and preventing risk factors for diabetes and hypertension in the elderly in Ban Khao Kaew community. Nuea Klong Subdistrict Nuea Khlong District Krabi Province.

Method: The study population was selected by purposive selection. Network partners and 20 community leaders by using A-I-C techniques to analyze problems and operational guidelines. This was a model for participation in controlling and preventing risk factors for diabetes and hypertension in the elderly. And behavioral data were collected from 113 elderly people who were at risk of diabetes and hypertension. It depends mainly on the willingness and voluntarily of the research participants. Data were collected using an interview form. Data were analyzed using a packaged program. Descriptive statistics were used: number and percentage.

Results: The results showed that. Controlling and preventing risk factors for diabetes and hypertension in the elderly. Consists of Improving 5 behaviors: eating, exercising, not stressing, not smoking and not drinking alcohol. With activities, awareness raising campaign, creating commitment measures, Prepare signs indicating smoking and drinking prohibition points, growing vegetables at home build an edible fence.

Conclusion: From doing so able to reflect and return information to the community. By pulling the community leaders as a connecting point and starting to create the participation of network partners. and can lead to solving diabetes and hypertension problems in the elderly in the community.

Keywords: participation; community leaders; risk factors; diabetes; hypertension

The effects of health literacy enhancement program on hypertension prevention behavior of pre-hypertension risk group who receive the COVID-19 vaccination

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Background: Before the vaccination, blood pressure is measured in the adult population of Thailand receiving the COVID-19 vaccine. This is an excellent opportunity to examine the pre-hypertension risk group. The primary cause of hypertension, classified in the non-communicable diseases (NCD) category is ranked in the category of non-communicable diseases (NCD), is a poor lifestyle. To alter the health behaviors of those in the pre-hypertension risk group and lower the morbidity rate associated with hypertension, the concept of health literacy has been used as a measure.

Objective: The purpose of this study was to examine how a program to improve health literacy affected the prevention of hypertension in pre-hypertension risk groups getting the COVID-19 vaccination service.

Method: It is experimental research that will be frequently assessed in a single population group. Participants in the research had to be at least 18 years old, at-risk for pre-hypertension, and have received the COVID-19 vaccination at Buntharik Hospital's vaccination service unit between May and September 2021. There is no random procedure because data is gathered from a sample group that passes the selection criteria for everyone.

Results: The results of the research showed that the mean scores in health literacy and hypertension prevention behavior were significantly higher after getting the program than they had been before ($p < 0.05$). Furthermore, compared to before starting the program, the mean systolic and diastolic blood pressure were significantly lower ($p < 0.05$).

Conclusion: According to the study's findings, the health literacy enhancement program increased health literacy, encouraged hypertension prevention behavior, and lowered blood pressure in the population at high risk for developing hypertension. Therefore, it is suggested that the initiative improve health literacy increase learning results and encourage hypertension prevention behaviors

Keywords: Covid 19, health literacy enhancement program, pre-hypertension risk group

CODE 145

The survey of health literacy and health risk behavior among high school adolescents, Muang Chiang mai, Chiang mai province

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Background: The development of projects to promote adolescent well-being In order to solve the problem, there needs to be information on health literacy and risk behaviors in adolescents . In the past, the Health district 1 did not reach the goal set by the Department of Health due to the lack of necessary information to support the problem solving.

Objectives: To explore the health literacy and risk behaviors of high school adolescents in schools. Muang, Chiang Mai

Method: Descriptive study in 396 high school students in 4 schools in Muang District, Chiang Mai Province. By using the Health literacy assessment to reduce health risk behaviors of Thai Adolescents aged 12-19 years questionnaire of the Division of Health Education Department of Health Services Support, Ministry of Public Health.

Results: The survey was found that in the overall picture of health literacy in all 9 areas, there is a fairly high level of knowledge. An average of 3.16 (SD 0.21) for behaviors reduces adolescent health risk. There is quite a large level of frequency of practice. It has an average of 3.21 (SD 0.79).

Conclusion: Health literacy and risk behaviors may vary according to the local context. The survey target groups should be expanded to use the data as a representative of the provinces and districts, and use the survey data to develop innovations for reducing health risk behaviors in adolescents.

Keywords: Adolescent, Health literacy, Health literacy survey, High school health risk behaviors

CODE 146

Parental underestimation of child's weight and nutritional habits of primary school children in Almaty, Kazakhstan

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Background: Childhood obesity is one of important public health problems in Kazakhstan. Parental knowledge and competencies in nutrition and health related areas are relevant for estimation of child's weight. Such literacy could support parents in determining child behaviours and habits to prevent or manage their child's overweight or obesity.

Objectives: This study aimed to examine the parents' underestimation of primary school children's weight status and assess some nutritional habits of children.

Method: A cross-sectional study was conducted in Almaty, Kazakhstan. A representative sample of 2131 primary school children aged 7-10 years and 1753 parents was examined. Children's weight and height were measured and parents completed questionnaire on child's sociodemographic and nutrition characteristics. Child's weight status was assessed as BMI-for-age Z –scores based on the 2007 WHO recommended growth reference. If children with overweight were perceived by their parents as "underweight" or "normal weight", it was considered as parental underestimation.

Results: Overall, 58,8% of parents underestimated the weight of their children classified in overweight category. For children, who were classified as obese, 25.2% parents perceived their child's weight as "normal" and 66.4% as "little overweight".

21,5% children do not eat breakfast every day. On average, 62.0% -do not eat fruit and/or vegetables every day. Only one third of children (38.4%) help parents to prepare meal at home and 23.0% of families order food via internet 2-3 and more times per month.

Conclusion: The study demonstrated that more than half of parents underestimate weight status of their children with overweight or obesity. Parental weight and dietary perceptions might be important factors of child's physical development and nutrition. There is a need for promoting a realistic parental perception of child's weight. Raising health literacy in children's weight categories and healthy nutrition recommendations among parents could potentially help in childhood obesity prevention and management.

Keywords: child's weight, nutrition, overweight and obesity, parental, primary school children, underestimation

The Effects Of Health Literacy Enhancement Program On Self-protection From Fine Particulate Matter (PM_{2.5}): Case Study In Tha-KhunRam, Khampangphet Province

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Background: Air pollution is a major cause of premature death, respiratory and cardiovascular problems worldwide. The health literacy enhancement program is a tool for increasing community and personal knowledge and understanding of PM_{2.5} self-protection. Village health volunteers play an important role in Thailand's primary health care system. Their work focuses on educating and disseminating disease prevention and control information from public health authorities to the general public.

Objectives: This study aimed to assess the effect of a health literacy enhancement program on self-protection from PM_{2.5} on village health volunteers .

Method: The participants were 40 village health volunteers who are working in Tha-KhunRam, Khampangphet Province. Self-evaluation questionnaires were used to collect the data during December 2022 and February 2023, which was then analysed using a paired t-test. The outcomes were presented as percentages, averages, and standard deviations (SD).

Results: The results demonstrated that 54.3 of village health volunteers were women. Sixty-eight-point six per cent of the target group have been village health volunteers for more than 10 years. Before the implementation of the program, the average knowledge level of health literacy for PM_{2.5} self-protection was 3.71±0.76 and the average behavior level was 3.89±0.71. Following the implementation of the program, the average levels of self-protection knowledge in regards to PM_{2.5} had higher at 4.40±0.59, and the average levels of self-protection behavior were 4.39±0.63.

Conclusion: The findings of this study demonstrate that the health literacy enhancement program aided the comprehension and knowledge of self-protection from PM_{2.5} among the village health volunteers. The Department of Public Health should implement this program both online and on-site to make it easier for village health volunteers to continue this self-improvement. The findings of this study can be used to improve future health literacy programs and expand in other areas.

Keywords: Health literacy enhancement program, PM_{2.5}, Village health volunteers

Improving the quality of wound care in community in Vietnam

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Background: Wound care is one of common medical cares in Vietnam. However, due to the overload of hospitals, patients often have to be discharged when their wounds are not completely healed, so they must be cared for in the community or at home. This can affect the effectiveness of the healing process or lead to unexpected complications such as infection, bleeding.

Objectives: The study aim is to assess the status of wound care in Community in the North of Vietnam through two large hospitals in Vietnam to propose for building a network of community wound care.

Methods: Statistics of traumatic injured patients requiring continued to be monitoring and caring in the community after discharge from hospitals and their needs. The study was conducted at two leading hospitals for trauma care in Vietnam, Viet Duc University Hospital (Hanoi) and Vietnam National Burn Hospital through 2022. The data was collected and processed by software SPSS.22.0.

Results: In 2022, Viet Duc University Hospital (VDUH) performed for 75,300 major operations. The number of trauma patients receiving wound care is 960, the number of patients who need to take care of their wounds when they are discharged from the hospital is 820 (accounted for 85.4%). However, only 45.2% of patients and their families know where to buy wound care products; 73.2% were consulted for wound care upon discharge; 85.3% know how to seek medical care near home when there is a problem. In the same period, Vietnam National Burn Hospital performed surgery for 7,560 cases. The number of trauma patients treated for their wounds is 5,463 the number of patients who need to take care of their wounds when discharging from the hospital is 207 (accounted for 3.8%). However, only 25.6% of patients and families know where to get wound care products; 100% received health communication on wound care when discharged; 35.47% know how to find medical facilities near home when needed.

Conclusion: Wound care needs in community is an important part of medical care, helping to improve the quality of medical care in a situation where hospitals are overloaded and shortage of health staff. Therefore, besides to the medical staff's role for health education to patients and their families upon discharging from the hospital, it is necessary to build an effective wound care network up in community as well.

Keywords: Traumatic injury, Wound care, Community

CODE 165

The driven model of health literacy in the 4th Health Region

At present, it is found that many people have illnesses with chronic non-communicable diseases caused by inappropriate health behaviours. The health literacy situation in the 4th health region found that people had a moderate level of health literacy. Representing 69.8 percent and having insufficient health literacy at 10.63 percent, therefore, the concept of health literacy was used as a basis for creating change and raising the level of health literacy among the population of the 4th health region.

Implementation activities to drive health literacy aim to encourage personnel and the target group to have skills and change in health behaviour. By the following activities

1. Announce policies and establish a committee to drive health literacy.
2. Choose the target area by type of setting, including health service units, markets, factories, and elderly clubs
3. create health literacy by bringing the model of Pikulthong health literate organization to expand.
4. Follow-up and visits to empower and exchange knowledge.

The results showed a model to drive health literacy that is appropriate according to the area and develop potential health literacy skills for health officers and target people. The success factor is 1. executives give priority. 2. The budget for support. 3. Good team, 4. A forum to exchange and learn about health literacy. Guidelines for further development to expand the drive of health literate organizations to other organizations such as local agencies and other government agencies in the 4th health region.

Keywords: Health Literacy, the 4th Health Region, Health literacy model.

CODE 168

Building health literacy with 8 saving behaviors for good health

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Background: Promoting health behaviors that prevent chronic non-communicable diseases (NCDs) among working-age groups through the "saving health account" model, which emphasizes adopting eight desirable health behaviors to improve health literacy among individuals and communities, leading to a better quality of life.

Objectives: The objective was to evaluate the effectiveness of the eight saving behaviors model for good health in promoting health literacy among working-age groups.

Methods: The study used a participatory action research approach to focus on the eight behaviors for good health. A purposive sampling method was used, and the sample consisted of 66 executives and employees in a private establishment in Lamphun Province. Research instruments included questionnaires, records of health check-up results, and performance test results. Descriptive statistics were used to analyze the data and compare mean differences.

Results: The majority of the sample group consisted of women working in production and sewing, aged between 50-59 years. About 25% of the sample group had chronic NCDs .After adopting the multi-program health savings account model. The sample group had a lower mean of blood lipids compared to 2021, indicating improvements in their overall health. Moreover, physical fitness measurements, including hand grip strength, weakness, and heart rate, significantly improved after using the multi-program health savings model. The statistical analysis showed a p-value of less than 0.001 and 0.003, indicating the effectiveness of the eight saving behaviors for good health.

Conclusion: It is crucial to continuously encourage individuals to adopt these health behaviors, and relevant agencies should provide incentives, such as rewards or welfare arrangements, to promote a better quality of life. By adopting these behaviors, individuals can take charge of their health and reduce the risk of chronic diseases, leading to a better quality of life.

Keywords : 8 health behaviors, health savings, promoting health in the workplace

CODE 174

Health literacy of the breastfeeding logistic among breastfeeding women in the regional health promotion center 7, Khon Kaen

Sujitra Khunnoi

To build awareness of the value of breast milk and the supportive system for transportation for breastfeeding women, this research and development aimed to develop the model of breast milk logistic by the transportation companies and to evaluate the aforementioned model. The eleven post-partum mothers were recruited.

The results revealed that there were increases of continuity of breast feeding. The routes were Bangkok to to Phuket (54.5% increase), to Choburi/Rayong (18.1%), to Changmai (9.09%), to Khon Kaen (54.5%), to Makasarakam (27.2%), to Sakornakorn and Roi-et (9.1%). The transportation was 72.7% airplane and 18.2% bus. The average amount of milk bag transported per time was 4-20 bag/time. The satisfaction was found in the highest level (72.7%). The key success for exclusive breastfeeding included the logistic system and attitude toward enhancing the bonding and attachment between mother and their infants.

Keywords: Logistic, Breastfeeding, Health literacy system network, Transportation,

CODE 177

Program Development of Caregiver Training: Rehabilitation for Instrumental Activities of Daily Living in the Elderly with BPSD of Dementia

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Background: Home cognitive rehabilitation program is an essential part of care for dementia patients with behavioral and psychological problems (BPSD).

Objectives: To develop and evaluate the effectiveness of an Instrument daily living rehabilitation program in dementia patients with BPSD.

Methods: The research was conducted in 4 steps: Step 1, analysis of the situation to determine objectives, Step 2, curriculum design, Step 3, curriculum implementation, and Step 4, curriculum evaluation. The 20 caregivers were trained for using this program and test its implementation in terms of caregiver's satisfaction of the program, knowledge, attitude, and skill towards caring for the patient and instrumental daily functionality scale data were analyzed by frequency distribution, percentage, mean, standard deviation and statistical t-test, Paired samples t-test

Results: The developed curriculum, consisting of three components, i.e., knowledge, attitude enhancement and rehabilitation skills in instrumental daily routines has passed the quality inspection by 5 experts, the mean was 4.57 (IOC) was 1 (SD = 0.69). After the trial with 20 caregivers, the overall satisfaction assessment results were at a high level. (mean = 4.39, SD = 0.38), knowledge increased significantly after training ($t = 5.13$, $p < 0.05$) The attitude level increased statistically significantly ($t = 3.86$, $p < 0.05$) and rehabilitation skills at Good Level 100%. And the scores of the ability to perform instrumental daily activities (Chula ADL Index) were significantly increased, ($t = 3.45$, $p < 0.05$).

Conclusion: The Instrumental daily living rehabilitation training course was well-received by caregivers and enhanced their knowledge and skill in home-based care of dementia patients with BPSD and can help restore the ability to perform instrumental daily activities of dementia elderly with BPSD.

Keywords: Caregiver, curriculum, dementia elderly with behavioral and mental problems, Instrumental daily living rehabilitation

CODE 181

Health literacy approach employing “Tiktok platform” to improve self-care behaviors and health impacts in breast cancer patients enduring radiation treatment

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Background: Breast cancer is the most common cancer among women across the world. It is the third leading cause of female mortality in Thailand. Although radiation is a topical treatment used to manage and prevent disease recurrence, the majority of breast cancer therapies are combined treatments. Present era, social media, particularly the "Tiktok application" has a powerful effect on breast cancer patients. Thailand has 38 million accounts, which ranks it the eighth in the world.

Objective: The purpose of this study was to examine the way a social media health literacy model improved self-management for breast cancer patients undergoing radiation.

Methods: This study included 50 breast cancer patients being treated with radiation at Udon Thani Cancer Hospital. They were allocated into two groups of 25 patients at random. Over a three-week period, the control group received standard care from a radiotherapy nurse who provided care based on the problems encountered, whereas the experimental group received two group health literacy sessions, two individual sessions, and as many social media (TikTok) sessions as desired. The quality assurance testing of the research tools was successful. The validity was reviewed by three experts; the content validity index was 0.99, and the Pearson correlation value was 0.97. Independent t-test statistics were employed.

Result: The findings revealed that the mean radiation knowledge score, behaviors, and complications of breast cancer patients receiving irradiation in the experimental group were significantly greater than the control group ($P < 0.01$). Not only that, but skin complication radiation outperformed in the experimental group than in the control group ($P < 0.01$). **Conclusion:** The health literacy model media potentially enable other cancer patients undergoing radiotherapy. It contributes to improved health care.

Keywords: Breast cancer, health literacy, radiation therapy, social media, tiktok

CODE 182

Health Literacy Organization on The Organic waste Management in the Community by Black Soldier fly larvae (BSFL)

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The authors found that garbage disposal is not properly done in the environment. Most people don't know how to separate and dump all types of garbage together which is up to 60% of organic waste that can be decomposed and used. The purposes of this study were to create and develop The Health Literacy Organization (HLO) for people and communities through organic waste Management by Black Soldier fly larvae (BSFL).

The sample consisted of 35 people who were community leaders from 7 villages in Bongen Sub-district, Ladlumkaew, Pathumthani Province, Thailand. The instruments used were the 13-step of HLO and Participatory Action Research (PAR). The result of the study was 1) The Black Soldier fly larvae (BSFL) rapidly feed on various types of organic waste and reduce decompose shorter period than conventional composting. 2) Produce high proteins animal feed from larvae for example chicken, fish, frog, etc. and organic chicken eggs. 3) Produce organic fertilizer and bioextract to organic vegetable farms. 4) Reduce food waste to the environment by about 0.3-0.5 kg/person/day. To conclude, The Health Literacy Organization (HLO) tools give high knowledge and create new Innovation is “ Black Soldier fly larvae Eco Box ” for decomposing organic waste which low-cost product, saves money, and has good value for organic waste effective Management. Moreover, the representatives from 7 villages will be the leader to drive the project in their areas. They can change people’s ideas and behavior regarding the method of food waste disposal. The collaborative learning process of network partners, the Public sector, Caregivers, Health Center, and Sub-district Administrative Organizations that are ready to support and drive to establish the Organic Waste Management Learning Center in the community and announcement to the Public policy.

Keywords: The Health Literacy Organization, Black Soldier fly larvae (BSFL), Organic waste, Participatory Action Research (PAR)

Factors related to the knowledge and skill of health education of health staff at Hanoi obstetrics and gynecology hospital in 2022

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Background: Health counseling is one of the primary and important tasks of nurses and midwives. Nurses and midwives need to be provided both knowledge and skills for giving good health education counseling to patients, especially those who are hospitalized during their stay. There are many factors that affect this issue.

Objectives: To identify these factors in order to improve it, we have conducted this study in Hanoi Obstetrics Hospital in 2022.

Methods: A cross-sectional descriptive study was conducted with 136 nurses and midwives who provided health education counseling to inpatients from January 2022 to March 2022 enrolled. A questionnaire was used to collect general information and assess the knowledge and skills of health education counseling among nurses and midwives. The data was processed by SPSS 20.0

Results: Among 136 nurses and midwives in spite of different level but their knowledge and skill about the health counseling were quite good, with an average of 80% mastery of the knowledge when performing health counseling to patients. Feedback from the patients with good satisfaction was accounted for more than 90%. However, there were still some skills that were limited and did not achieve high rates, such as the skills of using non-verbal communication and the skills of encouragement and motivation for patients.

Conclusions: The study showed that the knowledge and skills of nurses and midwives in health education counseling were quite similar to each other. However, some skills were still limited in terms of confidence in performing health education counseling should be improved to meet with the patient's satisfaction.

Keywords: Knowledge, skills, health education counseling, related factors.

Development of Health Literate Nursing Organization for Breastfeeding Promotion at Queen Sirikit National Institute of Child Health

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Background: The breastfeeding rate in Thailand is in a critical state. The utilization of the health literacy concept in breastfeeding promotion is possible to be a new strategy.

Objectives: To develop a health literate nursing organization for breastfeeding promotion at Queen Sirikit National Institute of Child Health and to evaluate the effectiveness of a model.

Methods: This research and development design consisted of 3 phases of data collection, including Phase I situation analysis, Phase II model preparation and development, and Phase III model implementation and evaluation. A purposive sample of 250 nurses and 37 stakeholders participated in this study. The quantitative data were analyzed by descriptive statistics and paired t-test, and the qualitative data were analyzed by content analysis.

Results: The components of a model consisted of 4 elements: 1) policy establishment, 2) capacity building, 3) communication and management of the environment conducive to becoming a health literate organization, and 4) encouraging the participation of all nurses. The effectiveness of a model was measured and found a statistically significant increase in 1) perception of the support from nursing organizations that promote health literacy in breastfeeding, 2) health literacy in breastfeeding scores, 3) knowledge of breastfeeding and health literacy scores, and 4) self-efficacy of nurses to provide breastfeeding support scores (p-value < .001).

Conclusion: This model is effective to achieve positive perceptions about the support of nursing organizations, promoting health literacy in breastfeeding, and increasing nurses' self-efficacy. This model is possibly the guideline to develop a high-efficiency digital platform. It can be utilized as an important new policy to promote breastfeeding in Thailand.

Keywords: breastfeeding, health literacy, health literate organization

Identifying the gaps in obesity literacy in Thailand: A socio-ecological model approach

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Background: High obesity prevalence in Thailand is a significant public health issue affecting both adults (42.2%) and children (12.4%, 6 – 14 years old). Inadequate health literacy (HL) levels are associated with obesity-linked health conditions, and HL has been recognized as a key factor in its prevention and management. Despite efforts to promote obesity literacy, studies have shown gaps in HL among Thai population, particularly in media literacy and self-management skills.

Objectives: This study aimed to identify the existing gaps in obesity literacy in Thailand and address these issues across three levels of the Socio-Ecological Model (SEM).

Method: A literature search was conducted with the inclusion criteria of 'obesity health literacy in Thailand during 2013-2023'. Qualitative content analysis was used to identify the gaps in obesity literacy and address them at the SEM levels.

Results: Only 12 articles met the inclusion criteria. Nine papers studied on school students and three papers studied on adults. In general, all studies demonstrated high obesity literacy regarding access skills, but less literacy in other HL. The exploration of obesity literacy utilizing the SEM reveals that the level of HL varies across the three SEM categories. The analysis suggests that large gaps of HL are in societal level, community level, and individual level, respectively. Focusing on societal level, adults have low literacy level in self-management skills and children have low media literacy in addition to self-management skills.

Conclusion: Addressing the gaps in HL is crucial for improving public health and reducing the prevalence of obesity in Thailand. By implementing SEM approaches, especially at the societal level, the gaps in HL in the Thai population can be addressed and improved, enabling individuals to make informed decisions and adopt healthy behaviors, ultimately contributing to the prevention and management of obesity.

Keywords: health literacy, obesity, socio-ecological model

Automatic web application for ageing individual wellness plan report, health promotion center 3

Nakhon Sawan

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Development of this innovation It's research and development. Use a quasi-experimental research methodology. The objectives are 1) to develop a web application for processing reports of individual elderly health promotion plans automatically, at the 3rd Health Center, Nakhon Sawan, 2) to test the quality of web applications for processing reports of promotion plans. Automated Individual Elderly Health Center 3, Nakhon Sawan Operational methods 1) Collecting information on needs and problems in reporting the results of individual health promotion plans for the elderly by in-depth interviews from responsible persons at the provincial level. 2) Bringing the data analyze Write a Web Application computer program for automatically processing individual elderly health promotion plans. using Yii2 Frameworks, High Charts, MySQL, and Apache web server 3) Connecting data processing and automatic interpretation/reporting with SQL Server Agent 4) Testing the Web Application by automatically processing individual elderly health promotion plan reports Health District 3 5) Test the performance of web applications with analytical statistics, including the mean (Mean) and the standard deviation (Standard Deviation). Scores were assigned into 5 levels according to the Likert rating scale. Development results showed that 1) processing and interpretation of “Web application for automatic reporting processing of Individual Elderly Health Promotion Plan” written program Able to compute reports to compare the already prepared elderly health promotion plan with targets set in each area, province, district, in health zone 3 and process reports in each aspect that The elderly in the jurisdiction were at risk and at no risk, both in terms of number and percentage in all 6 aspects, namely movement, nutrition, mental health. Oral and dental health, brain, and environment. 2) Display and report results. Consists of selected devices such as Smart phone, Tablet or Personal computer (pc), the developed program will process and report results through the screen of the specified device. 3) Quality test results. “Web application for automatic processing of individual elderly health promotion plans” from the results of the test, it was found that Web applications that have been developed can solve work problems efficiently that meet the needs of users. It also greatly reduces the time for processing reports from the old method.

As a result of this development resulting in innovations that can be extended to officials in charge of the provincial level Have used web applications to follow up, supervise and evaluate performance. And prepare to expand the use of officers responsible for district level work. in the 3rd health zone

Keywords: health promotion, the elderly, web applications

Web application to promote Health Literacy Nutrition status in early childhood Health Promotion Center 3 Nakhon Sawan

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Background: Assessment of nutritional status by weight and height measurement. The data were interpreted and compared with growth curves divided by sex. and age of early childhood the staff gives advice according to nutritional status. Interpret nutritional status Recorded in the Department of Health Growth Criteria Guidelines. It was found that such parents lacked the skills to interpret nutritional results compared to growth curves and risk criteria. The health Center 3, Nakhon Sawan has therefore developed a "web application to promote health Literacy of nutrition status in early childhood". to support the use of staff and parents of early childhood and used in the process of creating knowledge on health and nutritional status in early childhood for relevant parties in the future.

Objectives: To 1) develop a web application to interpret the nutritional status of children aged 2-5 years and 2) use the application in the process of creating knowledge on the health and nutritional status of children aged 2-5 years.

Method: It is a Research & Development starting from 1) writing a web application program for automatic interpretation of nutritional results using Yii2 Frameworks, Rabbit MQ and Apache web server 2) connecting Internet of Things (IOT) processing, automatically interpreting results with Node-red. 3) Test the quality of the software by analyzing the consistency of interpretation of nutritional results among 2,362 children aged 2-5 years with Intraclass Correlation Coefficient (ICC) statistics; early childhood nutrition

Results: It was found that 1) this developed web application has a very good level of accuracy in interpreting nutritional status results for children aged 2-5 years. It was completely consistent with the standard method, with the Intraclass Correlation Coefficient (ICC) of the results interpretation = 1.000 compared to the manual interpretation method, and 2) the staff used the Web Application in the health literacy building process. By helping parents to access methods and principles of assessment via Web Application, understand how to interpret results in growth graphs via Web Application, respond to staff questions about various risks, decide on early childhood care methods based on nutritional status. And parents can follow the method of taking care of early childhood.

Conclusions: The developed web application interprets nutritional status of children aged 2-5 years. The accuracy of interpreting nutritional status results is at a very good level. Fully compliant with standard methods Meet the growth standards of the Department of Health. and can be used in the process of building knowledge on health and nutritional status in early childhood.

Keywords: Early childhood nutritional status, Nutrition assessment application

Mental health literacy from Psychiatric hospitals to drugstores

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Background: Psychiatric disorders need long term treatment. Patients have to be monitored their symptoms and received medicines continuously. These processes take time and expenses of patients. Therefore, 5 psychiatric hospitals have together developed the system for psychiatric patients to receive their medicines from drugstores in community.

Objective: To provide pharmaceutical care for psychiatric patients via drugstore network.

Methods: The project was started in the fiscal year 2020 by analyzing the system, creating a guideline for psychiatric drug dispensing in drugstores, developing competency of community pharmacists by training them with a course of pharmaceutical care for psychiatric patients, creating systems for medicine transportation and monitoring, system for linking the information between drugstores and hospitals via pharmacare transition programs, systems for monitoring and evaluating drug treatment, including pharmacists compensation.

Results: There were 93 drugstores which voluntarily joined the network, and 1280 patients who received medicines from the drugstores located in 9 provinces which are Chiangmai, Lampang, Phayao, Ubon Ratchathani, Nakhon Ratchasima, Surat Thani, Satun, Phatthalung, and Songkhla. Up to 96% of the patients were monitored for safety and efficacy of the psychiatric medications while they received their medicines from community pharmacists at the network drugstores continuously. As a result, 98.48% of the patients could control their symptoms, 96.40 % had good adherence, and 98.00% had higher level of satisfaction. They also could save traveling expenses for 575 baht per trip. In addition, the traveling time could be decreased for 195 minutes.

Conclusion: The developed system for psychiatric patients to receive their medicines from community drugstores can give them much convenience and they were satisfied with drugstores services.

Keywords: community pharmacist, drug distribution system, pharmaceutical care, psychiatric patients

Association between Health Literacy and Diet in Women of Reproductive Age

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Background: The number of newborn mortalities in Indonesia is 72.400 in a year-the eight highest number of neonatal deaths globally, caused by abnormalities in pregnancy, preterm birth, and low birth weight that are preventable if health coverage gets along with good quality service. The anemia cases increased in pregnant women from 37.1% to 48.9% and more than a quarter of children under five have anemia (28%) because the intervention coverage is still based on quantity. Although the government has set the quality of specific intervention indicators by measuring target adherence to the given intervention in 2021, increased compliance is carried out through strengthening education and community empowerment.

Objective: Our study aimed to analyze the role of health literacy and diet in reproductive-age women.

Methods: This research used analytics review research method using English full-text articles using Google Scholar, PubMed, Scopus, and Science Direct later than March 31st, 2023.

Results: A few women of reproductive age acknowledged that overeating (18.2%) and drastically diet (61.2%) may affect fertility. They did not know the essentials of micronutrients (15.5%), such as vitamins and iron-related foods can be affected during pregnancy. Pregnant women were less capable of selecting the daily-recommended nutritional food groups (70.8%). Seventy percent of the newly-delivered mothers had inadequate HL to prepare a balanced diet. Higher HL scores consumed significantly more vegetables ($\beta = 0.17$, $p < 0.05$) and fish and shellfish ($\beta = 0.24$, $p < 0.001$), and HL was able to predict 57% of the dispersion of pregnancy outcomes scores.

Conclusion: Health literacy is associated with dietary of reproductive-age women that may affect fertility and pregnancy outcomes. The government needs to develop policies and programs to improve HL for preconception women to prevent the occurrence of negative-pregnancy outcomes.

Keywords: Health Literacy, Reproductive-Age Women, Diet

CODE 193

Relationship between Health Literacy and Dietary Adherence among People who are Diagnosed with Type 2 Diabetes Mellitus

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Background: Ninety percent of all types of people with diabetes globally are diagnosed with type 2 diabetes mellitus (T2DM). Diabetes is a nutrition-related disease that causes disability and even death. People with diabetes need diet therapy to control their blood sugar because the pancreas gland does not secrete enough insulin. This situation encourages people with diabetes to look for easy and reliable sources of information related to their condition. Health literacy is necessary for people with diabetes to improve their quality of life.

Objectives: The current study was analytics review that analyzed the relationship between health literacy and dietary adherence among type 2 diabetes mellitus patients.

Method: We used analytics review on the literature by searching English full-text articles using PubMed, Scopus, ScienceDirect, Web of Sciences, and Google Scholar before March 31st, 2023. We focused on the diet recommendation adherence among people with diabetes.

Results: Of the six reviewed articles, two out of thirteen association and correlation tests for health literacy were significantly related to dietary adherence. Self-reported frequency of following diet recommendations was statistically significantly associated with functional health literacy, with $\beta=0.58$ (95%CI: 0.18 to 0.98). Self-reported frequency of following diet recommendations was statistically significantly associated with communicative health literacy, with $\beta=0.67$ (95%CI: 0.17 to 1.17). Meanwhile, six out of thirteen showed an indirect relationship between health literacy and dietary adherence through self-efficacy.

Conclusion: Health literacy was related to dietary adherence that can affect the outcomes of type 2 diabetes mellitus. Therefore, the government and other stakeholders must improve people's health literacy, especially those focusing on type 2 diabetes mellitus.

Keywords: Dietary adherence, health literacy, type 2 diabetes mellitus

Improving Parents' Knowledge and Skills in Using the SNAP-IV to Reduce the Children's Learning and Behavior Problems

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Background: SNAP-IV Rating Scale is a tool used to screen children for attention deficit hyperactivity disorder (ADHD) prior to medical diagnosis. The health literacy enhancement program may increase parents' understanding and assist parents in detecting problems in school-age children. Early detection of ADHD allows children to receive treatment as soon as possible, improving their learning ability and quality of life.

Objectives: 1) To assess the prevalence of learning and behavioural issues in children aged 6 - 15 years old who are screened by their parents.

2) To develop a health literacy enhancement program to improve parents' understanding of the SNAP-IV rating scale.

Methods: The study included 91,971 children aged 6 - 15 years old from Nakhon Sawan who were screened for learning and behavioral issues using the parental SNAP-IV. Following the screening, children with learning and behavioral issues were diagnosed by a medical doctor. Parents' health literacy was also assessed for program development. The data was collected between October 2022 and March 2023.

Results: 4,604 children (5.01%) were at risk of having learning and behavioral difficulties as assessed by their parents. However, when assessed by a medical doctor, there were only 253 children (0.28%) with learning and behavioral issues, 0.09% diagnosed with ADHD, 0.08% diagnosed with intellectual disabilities, 0.11% diagnosed with disability overlap. The 94.5% discrepancy rate indicated that the majority of the parents lacked knowledge and skill in using the SNAP-IV. Parents did not understand the purpose of the assessment, did not understand children's behavior, and were unable to detect changes in children's behavior.

Conclusion: Parental assessments of learning and behavioral issues using the SNAP-IV revealed a very high prevalence of discrepancy. The improvement of health literacy improves parents' skill, and knowledge in detecting learning and behavioral problems in their children using the SNAP-IV precisely need to be implemented.

Keywords: Health Literacy, Learning and Behavioral issues, School-age children, SNAP-IV

The improvement of child care center to Health Literate Organization: A case study in Bangkean and Bangsue district, Bangkok, Thailand

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Background: Health literate organization is the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and actions for themselves and others. The health literacy improvement process and effective public health practice are very necessary and importance for the organizations. Because these are the basic self-health care that should be cultivate in all people. Child care centers are the part of organizations that want to be improvement to health literate organization to makes advancing health status of the children, personal and parents. They will take care of themselves in good environment and concurrent to happiness in early childhood and school readiness.

Objectives: This research aims to study the key success factors of improvements children centers (2-5 years.) in Bangkean and Bandsue districs, Bangkok, Thailand. for development to health literate organization.

Method: This qualitative research were 14 samples for interviews. The research instruments were in-depth structured interview and participatory observation.

Results: The research finding identified 6 key success factors of development to health literate organization. (Child care center) The 6 key success factors consist of 1. Mindset 2.Policy and goals. 3.Process and Resource 4. Community participation 5. Practical Tools and 6. Practices. These factors will make a standard and sustainable health literate organization. (Child care center) **Conclusion:** Health Literate Organization should be complete with 6 success factors for the improvement the quality of care.

Keywords: Health literate organization, Child care center

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