



Chang Bing Show Chwan Memorial Hospital

8TH AHLA INTERNATIONAL CONFERENCE PROGRAM

Oct. 27-29, 2022

Chang Bing Show Chwan Memorial Hospital
6, Lukong Road, Lukang, Chang Hua, Taiwan
<https://ahla-conference.com/2022/>



1 The 8th AHLA International Conference Program, Oct 27-29, 2022, Lukang, Changhua, Taiwan

AGENDA

Page

Welcome remarks and forewards	3
Conference schedule by day	6
Conference key themes	13
AHLA leaders and secretariats	14
AHLA Country offices and contacts	15
Conference scientific committee	21
Organization committees	22
Conferences advisors and sponsors	23
Conference keynote speeches	23
Special interest session [SIS]	30
General sessions [GS]	52
2022 Yufong International Health Literacy Awards	59
Best presentation awards	61
AHLA chronology	63
Tours and cultures	88

Note on the program: The information on this program will be updated when more confirmation will be made. The Conference organizers will revise accordingly. All questions shall address to the organizers. Posters will be provided in a separate book.

Welcome remarks on the 8th AHLA International Conference

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



You are warmly invited to join the 8th AHLA International Conference, which will be jointly organized by the Show Chwan Medical Group and held at Oct 27-29, in Chang Hua, Taiwan. The 8th AHLA has been postponed by the unpredicted Covid-19 pandemic in 2020 and 2021, which provides the global community a renewed lesson that the health literacy is essential for healthcare in its quality and effectiveness.

During the pandemic, the benefits of adequate health literacy serve to help the public in active and timely preventive measures, like vaccination or wearing masks. Health literacy also facilitates effective implementation of social distance and contact tracing. The later have been demonstrated as the effective public health measures against the transmission of the coronaviruses. During the past 2 years, the global community and the human civilization have been impacted with the novel viruses, as well as the unpreparedness in meeting the challenges of the emerging global public health issues. The covid-19 pandemic is not the only concern. There are other challenges in climate changes and the goals set in the MDGs, which needs better management, consensus, and communications between the global health communities.

The 8thAHLA, as we are overcoming the pandemic, will serve the interest of the public health and healthcare sectors across the region. The 8th AHLA will relink the members and the communities on the following themes,

1. Health literacy and quality of healthcare services
2. Health literacy beyond pandemics
3. Health literacy and social resilience
4. Health literacy by the people and the public
5. Creation of health literacy for the patients

I wish to meet you in person in the 8thAHLA Conference, and please join us to create a healthier era in the future.

Prof. Peter Chang
President,
Asian Health Literacy Association

A handwritten signature in black ink that reads "Peter Chang". The signature is written in a cursive style with a long horizontal stroke at the end.

Welcome remarks



On behalf of Chang Bing Show Chwan Memorial Hospital, I want to welcome all of you to join the 8th AHLA International Conference in late Oct., 2022, in Changhua, Taiwan.

The Chang Bing Show Chwan Memorial Hospital is part of the Show Chwan Health Systems(SCHS) which includes 8 hospitals across Taiwan, with 3700 admission beds, and with over 6000 well-trained healthcare professionals. The

Chang Bing

Show Chwan Memorial Hospital is strategically located in underserved rural communities along the west coast of Taiwan. We are particularly excited to have the honor of hosting the event in Taiwan to promote health literacy, which is especially important in our continuous health services in these communities. Another unique achievement of us is the success of our minimally invasive surgery training center, Ircad Taiwan, with the technique demonstrated to be most useful in serving the patients of difficult access. The Ircad Taiwan has trained more than 15,000 professionals in our center over the past 14 years, with over half from different Asian countries, such as Philippines, Singapore, Malaysia, Indonesia, Vietnam, and so on. We truly value and welcome international collaborations and exchanges, which are vital for the advancements of healthcare in the coming future.

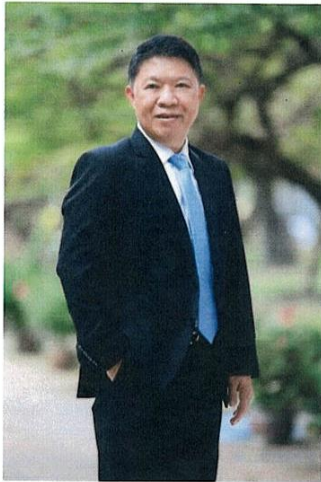
The Chang Bing Show Chwan Memorial Hospital is also next to the oldest and most charming towns in Taiwan, Lugang, with over 400 years of rich culture and heritage. We believe you will enjoy your stay.

I add my best wishes for a successful and fruitful conference.

Wayne Huang
Superintendent

A handwritten signature in black ink, appearing to read 'Wayne Huang' in a cursive style.

Chang Bing Show Chwan Memorial Hospital



Foreword

Health literacy has been gaining more attention globally. The impact of limited health literacy was obvious during the pandemic in the past three years. Limited health literacy has been a silent problem that needs to be addressed in all areas of development. In Thailand, health literacy improvement is among our priorities towards a better quality of life and health care. We would like to improve not only individual health literacy but also organizational health literacy. We see the importance and potential of organizational health literacy that can improve both individual health literacy and the quality of health care services. In 2023, the Ministry of Public Health sets health literacy as one of the urgent policies. We will focus on effective communications and easy access to reliable and up-to-date health information. It is the responsibility of health care organizations to provide easy-to-access, understandable, and reliable information for the people they serve. It is well-known that people can make better health-related decisions and better utilize health care services when they trust their health care providers, and can find sufficient information they need when they need it. We hope to improve the citizens' health status by increasing the effectiveness of the available health care services. We know that health literacy can take us to our goal.

The 8th AHILA International Conference 2022 is one of the valuable opportunities for all of us to learn and share experiences, lessons, techniques, tools, and technologies for health literacy improvements in various areas of interest. We hope that you will benefit from the experiences of the guest speakers and presenters during the conference. Let's go for a better world, a health-literate society, where we all share happiness.

A handwritten signature in blue ink, reading "Suwan Wattanayingcharoenchai". The signature is fluid and cursive, with a long horizontal stroke at the end.

Dr. Suwannachai Wattanayingcharoenchai
Director-General Department of Health
Ministry of Public Health, Thailand


Date	Time	Events Taiwan GMT+8 CST+13 UTC+8 [Moderators]	Venue
Oct 26th 	9h-18h00	Registration Chang Bing Show Chwan Memorial Hospital 6, Lukong Road, Lukang, Chang Hua, Taiwan Google map https://goo.gl/maps/Kj3n1bXLRGoBp35D8	
	12h-17h30	Field trip and tour 	
Oct 27th	7h-09h00	Shuttle services 	
	9h-10h00	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Opening ceremony</p>  <p>Opening performance</p>  <p>Awards ceremony</p>  <p>Group photo</p>  </div> <div style="width: 45%;"> <p>[Minh Thu Pham, Charles Tsai]</p>  </div> </div>	Int Conf Hall 

<p>10h-10h30</p> <p>* Keynote speech is within 30 min with 5 min Q&A.</p>	<p style="text-align: right;">[Duong Van Tuyen]</p> <p>Keynote A “Every Cloud has a Silver Lining” – The legacy of COVID-19 for promoting and maintaining investment in general and digital health literacy research, practice and policy in the global context Diane Levin-Zamir</p>  	<p>Int Conf Hall</p>
<p>10h30-12h</p> <p>*Each session with its coffee breaks</p>	<p>SIS-1 ASEAN+AHLA health literacy strategies Suwannachai Wattanayingcharoenchai, Anh Thu, Margaretha Sih Setija Utami, Fernando Garcia Jr., Laohasiriwong Wongsa, Peter Chang</p>        	<p>Int Conf Hall</p>
<p>10h30-12h</p>	<p>SIS-2 IHLA Forum on international health literacy</p> <p>Kristien Sørensen; Sabrina Kurtz-Rossi</p>         	<p>Aesthetic Gallery</p> 
<p>10h30-12h</p>	<p>SIS-3 Health literacy during and beyond pandemics Angela Leung</p> 	<p>Oval room/Library</p> 
<p>12h-13h30</p>	<p>Lunch break</p> 	<p>Gallery</p> 
<p>12h-13h30</p>	<p>Poster session [1]</p> 	<p>Int Conf Hall</p>
<p>13h-13h30</p>	<p style="text-align: right;">[Peter Chang]</p> <p>Keynote B Reflections on health literacy in Canada during COVID-19 Pandemic Lyren Chiu</p>  	<p>Int Conf Hall</p>

<p>13h30-14h</p>	<p style="text-align: right;">[Jung-Ju Huang]</p> <p> Keynote C Fear of COVID-19 and its association with health literacy in women and vulnerable populations Padmini Murthy</p> <div style="display: flex; justify-content: flex-end; gap: 10px;">   </div>	<p>Int Conf Hall</p>
<p>14h-15h</p>	<p>SIS-4 Health Literacy interventions and impacts Usha RANI, Duong Van Tuyen, Yunita Dyah</p> <div style="display: flex; justify-content: flex-end; gap: 10px;">    </div>	<p>Int Conf Hall</p>
<p>15h-17h30</p>	<p>GS-1 Health literacy and intervention Usha RANI, Duong Van Tuyen (6 abstracts)</p> <ul style="list-style-type: none"> ● Each GS has 2 moderators. 	<p>Int Conf Hall</p>
<p>14h-17h30</p>	<p>SIS-5 WHO's HL M-POL & HLS19 Jurgen Pelikan</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><small>Action Network on Measuring Population and Organizational Health Literacy of EHR - WHO-Europe</small></p> </div> <div style="text-align: center;">  <p><small>Health Literacy Survey 2019 a project of M-POHL</small></p> </div> <div style="text-align: center;">  <p>World Health Organization</p> </div> <div style="text-align: center;">  </div> </div>	<p>Oval room-library</p> 
<p>14h-15h20</p>	<p>GS-2 Health literacy & pandemic Angela Leung, Anh Thu (5 abstracts)</p> <div style="display: flex; justify-content: flex-end; gap: 10px;">   </div>	<p>Aesthetic Gallery</p>
<p>15h20-17h30</p>	<p>GS-3 Health literacy and modern technology Fernando Garcia Jr., Wongsu (6 abstracts)</p> <div style="display: flex; justify-content: flex-end; gap: 10px;">   </div>	
<p>17h30-18h</p>	<p>Shuttle services to restaurant </p>	
<p>18h-21h</p>	<p>Gala dinner (All invited) [Host: M Huang; J Huang, SC Chen; HC Yen, P Chang]</p> <div style="display: flex; justify-content: center; gap: 20px; margin-bottom: 20px;">     </div> <div style="display: flex; justify-content: space-around;">   </div>	<p>Lukang Hunglo (Red House)</p>

<p>10h30-12h</p>	<p>Visit to IRCAD</p> <p>Asian Institution of Telesurgery</p>	 <p>Asian Institute of Telesurgery The largest and most advanced training center in Asia.</p> <p>A new age of Asian Tele-healthcare.</p> <p>https://www.ircadtaiwan.com/en-us/</p>	<p>IRCAD</p> 
<p>12h-13h30</p> <p>12h-13h30</p> <p>12h30-13h30</p> <p>12h30-13h30</p>	<p>Lunch break</p> <p>Poster session [2]</p> <p>SIS-8 Patient engagement and health literacy Arshiya Zaheer, Ratna Devi</p> <p>AHLA General Assembly All AHLA members are invited</p>	 	<p>Aesthetic Gallery</p>  <p>Oval room - library</p> 
<p>13h30-14h</p>	<p> Keynote E Health literacy for the jobs Peter Chang</p>	<p>[Sarawut Boonsuk]</p> 	<p>Int Conf Hall</p>

<p>14h-15h30</p>	<p>SIS-9 Digital health literacy, interventions & social resilience Diane Levin-Zamir & Wen-hsuan Hou</p>	 	<p>Int Conf Hall</p>
<p>15h30-17h30</p>	<p>GS-6 Health Literacy in schools & education (7 abstracts) Orkan Okan, Nongnuch Pataraanuntanop</p>	 	<p>Int Conf Hall</p>
<p>14h-17h30</p>	<p>GS-7 Health literacy, organizations & practices (9 abstracts) Ruyi Huang, Hung Cao Dinh</p>	 	<p>Oval room/library</p> 
<p>17h30-18h</p>	<p>Awards ceremony [Kristine Sørensen; Peter Chang; Tuyen Van Duong]</p>  <p>Closing ceremony [Hung-Tsang Yen, Peter Chang]</p>  <p>The 9th AHLA 2023 Invitation Suwannachai Wattanayingcharoenchai, Laohasiriwong Wongsu</p>	   	<p>Int Conf Hall</p>
<p>18h-18h30</p>	<p>Shuttle services</p>		
<p>18h30-20h30</p>	<p>AHLA Conference dinner (All invited)</p>		<p>Musheng</p> 

<p>Oct 29th Sat.</p> 	<p>09h- 12h00</p>	<p>Field trips (optional)</p>	
--	------------------------------	--------------------------------------	--

2022 8th AHLA International Conference Program

Keynote (A) “Every Cloud has a Silver Lining” – The legacy of COVID-19 for promoting and maintaining investment in general and digital health literacy research, practice and policy in the global context, Levin-Zamir, D., Professor of Public Health, School of Public Health, University of Haifa & National Director of Department of Health Education and Promotion, Clalit Health Services, Israel; IUHPE Global Working Group on Health Literacy Leadership

Keynote (B) Reflections on Health Literacy in Canada during COVID-19 Pandemic, Lyren Chiu, PhD, RN, President of the GTMA Canada Global Health, Langara College, Canada

Keynote (C) Fear of COVID-19 and Its Association with Health Literacy in Women and Vulnerable Populations, Padmini Murthy MD, MPH, MS, FAMWA, FRSPH, Professor Global Health Director New York Medical College, SDG3 Hub Focal point United Nations Academic Impact, AMWA Global Health Lead/ NGO rep to the United Nations

Keynote (D) Importance and Application of Health Literacy to Healthcare Quality, Mark Chii-Jeng Lin MD, EMBA, PhD, President of Joint Commission of Taiwan

Keynote (E) Health literacy for jobs, Prof. Peter Chang, International, Show Chwan Medical Group, Taiwan; President, Asian Health Literacy Association

Special interest session (coordinators)

- SIS-1 ASEAN + AHLA health literacy strategies (Wongsa, et al)
- SIS-2 IHLA Forum (Sabrina & Kristine)
- SIS-3 Health literacy during and beyond pandemics (Angela)
- SIS-4 Health Literacy interventions and impacts (Usha & Duong)
- SIS-5 WHO’s M-POHL HLS19 measuring and improving general health Literacies (Pelikan)
- SIS-6 Health literacy accreditation (Peter & Kristine)
- SIS-7 Health literacy in ageing society (Tai & Chen)
- SIS-8 Patient engagement and health literacy (Arshiya Zaheer, Ratna Devi)
- SIS-9 Digital health literacy, interventions and social resilience – how can we strive for a systems approach based on research, practice and policy from a global perspective? (Diane)

General Session (chairpersons)

- GS-1 Health literacy and intervention (Usha, Duong) 6 abstracts
- GS-2 Health literacy and pandemic (Angela, Anh Thu) 5 abstracts
- GS-3 Health literacy and modern technology (Wongsa, Nhi) 6 abstracts
- GS-4 Health literacy and ageing society (Wang & Tai) 6 abstracts
- GS-5 Health literacy, NCDs, social resilience (Boonsuk, Thur) 7 abstracts
- GS-6 Health literacy in schools and education (Orkan, Nongnuch) 7 abstracts
- GS-7 Health literacy, organizations, and practices (Rui & Hai) 9 abstracts

AHLA Leaders



Honorary President	Prof. Yaw-Tang Shih
President	Prof. Peter Chang
Vice President	Prof. Carmen Tolabing, Prof. Angela Leung, Dr. Duong Van Tuyen
Secretary general	Julien Lin
Assistant secretary general	Rui Huang, Wen-hsuan Hou, Alex Chen, Ru-Yi Huang, Sri Handayani, Adwoa Owusuaa Koduah, Nguyen Thi Phuong Thao, Angel Yu-An Yang
Secretary	Le Duc Huy
Past presidents	Prof. Yaw-Tang Shih (2014-2016) Prof. Terence Min Che Tsai (2016-2018)
Past vice president	Prof. Wongsu Laohasiriwong (2016-2018) Prof. Minh Khuê Pham (2016-2018) Prof. Tin Tin Su ((2014-2016))

AHLA country offices and contacts (update Oct. 20, 2022)

Bangladesh

Dr. Natasha K, MBBS, MPH, PhD
Associate Professor of Public Health
Institute of Epidemiology Disease Control and Research
Adjunct, State University of Bangladesh
Managing Editor, National Bulletin of Public Health, MoHFW. Govt. PRB
Country Director in Bangladesh, Asian Health Literacy Association (hosted by
Somadder Welfare Foundation)
Prime News Presenter Maasranga TV
drnatasha1976@gmail.com



Hong Kong, China

Professor Angela Y. M. LEUNG, PhD, MHA, BN, FHKAN (Gerontology)
Professor and Associate Head
Director, WHO Collaborating Centre for Community Health Services
School of Nursing, The Hong Kong Polytechnic University
IUHPE Global Executive Board; Global Working Group on Health Literacy
angela.y.m.leung@polyu.edu.hk



India

Helmut Brand
Manipal Academy of Higher Education (MAHE) | Manipal
helmut.brand@manipal.edu



Dr. Usha Rani MHA, PhD
Coordinator-Manipal Health Literacy Unit
Department of Health Information
Assistant Professor - Senior Scale
Department of Health Innovation
Coordinator Cultural
Prasanna School of Public Health (PSPH)
Manipal Academy of Higher Education (MAHE) | Manipal
Udupi | Karnataka-576104 | India
(: +91-820-2923157 | Å: +91-9480980246 |
@: usha_rani@manipal.edu
usharani.research@gmail.com



Indonesia

Eddy Rachmani, BPH, M.Cs. Ph.D

Dean of Faculty of Health Sciences, Universitas Dian Nuswontoro
Semarang, Indonesia

Infodemic Manager-WHO Information Network for Epidemics (EPI-WIN)

Health Emergencies Programme, World Health Organization

enny.rachmani@dsn.dinus.ac.id

(+62 817-249-490)



Sri Handayani, BPH, MPH

Assistant Secretary General AHLA Asia

Director of AHLA Indonesia UDINUS Office

Center of excellence Universitas Dian Nuswontoro

sri.handayani@dsn.dinus.ac.id

(+62 811-2680-990)



Dr. Nurjanah, BPH, MPH

Deputy Director of AHLA Indonesia UDINUS Office

Department of Public Health Faculty of Health Sciences

Universitas Dian Nuswontoro

nurjanah@dsn.dinus.ac.id

(+62 815-6577-170)



Israel

Prof. Diane Levin-Zamir, PhD, MPH, MCHES

National Director, Department of Health Education and Promotion

Clalit Health Services, Israel

Associate Professor, University of Haifa School of Public Health

Chair, National Health Promotion Council, Israel Ministry of Health

Associate Editor, Global Health Promotion

IUHPE Global Working Group on Health Literacy

diane@clalit.org.il



Japan

Hiroshi FUKUDA, M.D. Ph.D.

Project Professor

Department of Advanced Preventive Medicine and Health Literacy

Graduate School of Medicine, Juntendo University

2-1-1 Hongo, Bunkyo-ku, Tokyo 113-8421, Japan

fax: +81-3-5802-1190

hiro----@kt.rim.or.jp



Kazakhstan

Altyn Aringazina Sc.D., Ph.D., M.D.

Academic Professor

Caspian International School of Medicine

Caspian University, Almaty, Kazakhstan

Member of the WHO European Advisory Group on Health Literacy

Member of the IUHPE European Regional Committee

Member of the WHO Expert Advisory Panel on Health Promotion (2009-2013)

Fulbright Scholar at Columbia University, New York (2010-2011)

Fogarty Scholar at State University of New York, Albany (2014)

Member of the Editorial Board of "Health Promotion International" Oxford Journal (2010-2017)

Mob/Whatsapp: + 77772774607

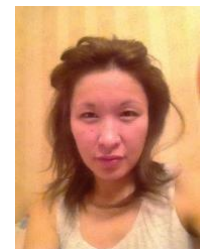
altyn.aringazina@gmail.com



Dr. Gaujhar Kayupova

Medical University of Karaganda

<kayupova@list.ru>



Malaysia

Prof. Tin Tin Su

Monash University Malaysia

TinTin.Su@monash.edu



Mongolia

Dulamsuren Samdan

NPHA, Mongolia

<sdulamsuren46@gmail.com>

Bolor Munkhbayarlakh

<mbolorr@gmail.com>



Nepal

Professor Paras K Pokharel, BA,(TU)MD Gen Med.(ZSMU)MD Com.Med (AIIMS)

Chief, School of Public Health & Community Medicine

BP Koirala Institute of Health Sciences

Dharan, Nepal

Chair, Oxford Clinical Research Unit,

Jhamsikhel, Lalitpur, Nepal

paras.pokharel@bпкиhs.edu



Pakistan

Prof. Dr. Shahzad Ali Khan

MBBS, MBA, MPH, PhD, FRSPH, FFPH (UK)

Vice Chancellor

Health Services Academy, Islamabad

[<drshahzadhsa@gmail.com>](mailto:drshahzadhsa@gmail.com)



Palau

Dame Wally Palau

Ministry of Health

Palau



Philippines

Fernando B. Garcia, PhD

Director, AHLA Country Office in the Philippines

Dean and Centre Director

College of Public Health, University of the Philippines Manila

SEAMEO TROPMED Regional Center for Public Health,

Hospital Administration, Environmental and Occupational Health

fbgarcia2@up.edu.ph



Ma. Carmen C. Tolabing, MPH, DrPH(Epidemiology)

Deputy Director, AHLA Country Office in the Philippines

Professor

Department of Epidemiology and Biostatistics,

College of Public Health, University of the Philippines Manila

[*mctolabing@up.edu.ph*](mailto:mctolabing@up.edu.ph)



Taiwan

Director

Prof. Peter Chang, MD, MPH, ScD, FRCP

Show Chwan Medical Group

peter.chang3@gmail.com



Dr. Duong Van Tuyen, PhD

Taipei Medical University

duongtuyenvna@gmail.com



Ruyi Huang, MD, MS

EDA Hospital and I-Shou University

<ruyi.star@gmail.com>



Prof. Wen-hsuan Hou, MD, PhD

National Cheng Kung University

11108040@gs.ncku.edu.tw



Prof. Terence Tsai

President, Taiwan Association for

Health Literacy and Communications

Chung Shan Medical University Hospital

terence39@yahoo.com



Dr. Chen Meei-Maan

Center for Innovative Research on Aging Society (CIRAS)

National Chung Chen University

<laicmm@ccu.edu.tw>



USA

Sabrina Kurtz-Rossi, M.Ed.
Director, Health Literacy Leadership Institute
Assistant Professor, Department of Public Health and Community Medicine
Tufts University School of Medicine
sabrina.kurtz_rossi@tufts.edu



Vietnam

Pham Minh Khue, MD. PhD.
Professor at Faculty of Public Health
Chairman of University Council,
Haiphong University of Medicine and Pharmacy, Vietnam
Tel: +84 (0) 943 080 138
khuepm@gmail.com
pmkhue@hpmu.edu.vn



Mekong University, Vietnam
Director
Dr. Vuong Bao Thy, Faculty of Health Sciences vuongbaothy@mku.edu.vn



Deputy Director
Dr. Tran Thi Hanh
hanhmku@gmail.com



Deputy Director
Dr. Tran Quoc Cuong, MD, MBA, MPH, Ph.D
Vice Director of Thu Duc City Health Center
Lecturer, Mekong University
quoccuong.mph@gmail.com



Conference Scientific Committee

Asst. Prof. Tuyen Van Duong, PhD, Taipei Medical University, Taiwan (Chair)
Prof. Stephan Van den Broucke, PhD, Université catholique de Louvain, Belgium
Prof. Diane Levin-Zamir, PhD, Clalit Health Services, University of Haifa School of Public Health, Israel
Prof. Jürgen M. Pelikan, PhD, WHO-CC Health Promotion in Hospitals and Health Care, at Austrian Public Health Institute, Austria
Prof. Guglielmo Bonaccorsi, PhD, University of Florence, Department of Health Science, Italy
Prof. Orkan Okan, PhD, Technical University Munich, Germany
Dr. Kristine Sørensen, PhD, Global Health Literacy Academy, Denmark
Prof. Mariusz Duplaga, MD, PhD, Jagiellonian University Medical College, Kraków, Poland
Prof. Helmut Brand, PhD, Prasanna School of Public Health, Manipal Academy of Higher Education, India
Prof. Carmen C. Tolabing, PhD, University of the Philippines College of Public Health, Philippines
Prof. Angela Y. M. Leung, PhD, The Hong Kong Polytechnic University, Hong Kong
Prof. Wen-shien Ho, PhD, National Cheng Kung University, Taiwan
Prof. Vo Van Thang, PhD, University of Medicine and Pharmacy, Hue University, Vietnam
Assoc. Prof. Pham Minh Khue, PhD, Haiphong University of Medicine and Pharmacy, Vietnam
Prof. Hazreen Abdul Majid, PhD, University of Malaya, Malaysia
Prof. Tin Tin Su, PhD, Monash University (Malaysia Campus), Malaysia
Prof. Paras K Pokharel, MD, PhD, BP Koirala Institute of Health Sciences, Dharan, Nepal
Prof. Don Nutbeam, MD, PhD, The University of Sydney, Australia
Assoc. Prof. Mathuros Tipayamongkhogul, PhD, Mahidol University, Thailand
Assoc. Prof. Margaretha Sih Setija Utami, MPH, Soegijapranata Catholic University, Semarang, Indonesia
Dr. Enny Rachmani, Universitas Dian Nuswantoro (UDINUS), Semarang, Indonesia

Program committee

Connie Chang	Rebecca Sun
Padmore Amoah	Angela Leung
Nurjanah	Enny Rachmani
Sri Handayani	Chen Meei-Maan
Peter Chang	Duong van Tuyen
Wen-shien Ho	Carmen Tolabing
Teresa Tsai	Sabrina Kurtz-Rossi
Wongsa Laohasiriwong	Usha Rani
Nguyen Thi Phuong Thao	Le Duc Huy

Awards Committee

Duong Van Tuyen	Angel Leung
Carmen Tolabing	Peter Chang
Padmini Murthy	Kristine Sorensen

Local Organization Committee

Minho Huang	Janet Huang
Wayne Huang	Shou Chu Chen
Hung-Tsang Yen	Jin-tang Chen
Kuan-wei Hung	Peter Chang
Amy Huang	Rebecca Sun
Teresa Tsai	Chi Hseuh Lee
Connie Chang	Shou Chu Chen
Yi-chin Huang	Charles Tsai
Pham Thi Minh Thu	Hai Duong
Nguyen Thi Hong Nhi	

Keynote speeches

- **Keynote (A) “Every Cloud has a Silver Lining” – The legacy of COVID-19 for promoting and maintaining investment in general and digital health literacy research, practice and policy in the global context**

Levin-Zamir, D.

Professor of Public Health, School of Public Health, University of Haifa &

National Director of Department of Health Education and Promotion, Clalit Health Services, Israel;

IUHPE Global Working Group on Health Literacy Leadership

BACKGROUND

The recent COVID-19 pandemic took many countries and their respective public health and health care agencies by surprise. The need for public engagement in gaining the trust and the participation of the public in preventing the pandemics before and after vaccine roll-out, in addition to the change in which healthcare was offered, created opportunities and challenges that brought health literacy into a central position in research, action and policies. Never before was health such a central issue in the daily news media, informing the public of what needed to be done. In parallel, public health and healthcare institutions sought innovative and sustainable ways in which to carry out their responsibilities for sharing health information and the subsequent care given, while developing diverse avenues of communication. Digital resources were the solution for many of the challenges described above.

PRESENTATION OUTLINE

This presentation will include the following topics:

1. The challenges encountered from the start of the pandemic that catalyzed the need for investing in health literacy in healthcare and in the traditional and digital media.
2. The rise of the digital solutions for both disseminating health information and for the transition from in-person interventions to digital and for maintaining healthcare and health promotion programs, creating the need for investing in digital health literacy
3. Defining digital health literacy and an overview of its measures locally, nationally and internationally
4. Disparities that have emerged in special populations with regard to the transition to digital health and examples of evidence-based intervention
5. The “Silver Lining”: a selection of positive outcomes that have been sustained regarding innovative ways for engaging the public through appropriate digital interventions embedded in organizational health literacy in 2022
6. Recommendations for policy makers, researchers and practitioners for the coming decade.

■ **Keynote [B] Reflections on Health Literacy in Canada during COVID-19 Pandemic**

Lyren Chiu, PhD, RN

President of the GTMA Canada Global Health

Langara College, Canada

Canada has included health literacy as a key priority in its policies and practice. However, the medical community has not been very active in health literacy (Rootman, 2006). A few initiatives were planned. In one of the initiatives, the Health and Learning Knowledge Centre of the Canadian Council on Learning collectively defined health literacy “as the ability to access, understand, evaluate and communicate information as a way to promote, maintain and improve health in a variety of settings across the life course” (2008).

In recent COVID-19 pandemic, health literacy was more salient than ever, for both the public and the government. The most frequently used sources by the post-secondary students to obtain information about COVID-19 were search engines and websites of public sector agencies (Purewal et al., 2022). To preclude COVID-19-related online misinformation, the universities provided updated information, policies, and links for their students in their websites, aligning with Canadian government public health recommendations (Mahmood et al., 2022).

Research suggested that low digital health literacy affects healthcare outcomes and is a “direct contributor to the spread of COVID-19-related online misinformation” (Naeem & Boulos, 2021). The infodemic of social media sharing, accompanied by an explosion of inaccurate information about the disease, complicates the situation and makes it difficult for the public to make informed decisions for their health. One key preventative strategy used in Canada was to continuously develop and maintain accurate digital health literacy to educate the public and eventually reduce the burden on its healthcare system.

Mykhalovskiy and French (2020) considered the notion of “politics of prevention” a helpful concept to frame reflections on key dimensions of the global public health response to the COVID-19 pandemic: “the possibility of scientific prediction and the capacity for controlled government intervention in social life” (Freeman, 1992). For Canadian instance in relation to health literacy and numeracy, the reflection on the scientific prediction is the extent of “knowing” that early warning outbreak detection was improperly delayed and did not successfully contain COVID-19 and that the declarations of emergency by the public health governance underestimated the durability of sovereign control over epidemiological knowledge of infectious disease. The use of mathematical modeling drives decisions about the use of containment measures based on a limited range of indicators, such as COVID-19 cases, COVID-19-related deaths and hospital intensive care utilization, which contributed “unintended consequences” for the economic and social marginality (2020).

Canadian officials and experts have been advocating “stay home”, “flatten the curve”, “physical distancing,” and presently, “learn to live with COVID-19” that provided clear messages for intended action. They used graph, figures, statistics, and stories to build health literacy for ongoing conversations (Sentell, Vamos, & Okan, 2022). The messaging and stories may work during the crisis but the transition of support and communication need continue and require further intervention which takes into account the social determinants of health.

References:

- Canadian Council on Learning. (2008). *Health literacy in Canada: A healthy understanding*. Ottawa, ON: Author.
- Freeman, R. (1992). The idea of prevention: A critical review. In Scott, S. J., Williams, G. H., Platt, S. D., and Thomas, H. A. (Eds). *Private risks and public dangers* (pp. 34-5). Avebury: Aldershot.
- Mahmood, S., Flores, J. V., Di Ruggiero, E., Ardiles, P., Elhagehassan, H., & Purewal, S. (2022). A comparative systematic scan of COVID-19 health literacy information sources for Canadian university students. *Health Promotion and Chronic Disease Prevention in Canada*, 42(5). <https://doi.org/10.24095/hpcdp.425.02>
- Mykhalovskiy, E., & French, Ma. (2020). COVID-19, public health, and the politics of prevention. *Sociology of Health & Illness*, 42(8), 4-15. Doi: 10.1111/1467-9566.13192
- Purewal, S., Ardiles, P., Di Ruggiero, E., Elhagehassan, Hl, Flores, J. V., & Mahmood, S. (2022). A cross-sectional study to assess health literacy levels among Canadian post-secondary students during the COVID-19 pandemic. *International Journal of Health Promotion and Education*. <https://doi.org/10.1080/14635240.2020.2059543>
- Rootman, I. (2006). Health literacy: Where are the Canadian doctors? *CMAJ*, 175(6), 606-607.
- Sentell, T., Vamos, S., & Okan, O. (2022). Editorial: Interdisciplinary perspectives on health literacy research around the world: More important than ever in a time of COVID-19. *International Journal of Environmental Research and Public Health*, 17, 3010.

■ **Keynote (C) Fear of COVID-19 and Its Association with Health Literacy in Women and Vulnerable Populations**

Padmini Murthy MD, MPH, MS, FAMWA, FRSPH

Professor Global Health Director New York Medical College

SDG3 Hub Focal point United Nations Academic Impact

AMWA Global Health Lead/ NGO rep to the United Nations

Presentation Objectives

1. Discuss why Health Literacy is crucial in building healthy communities
2. Highlight the challenges faced by women and special populations during COVID-19 pandemic attributable to low health literacy levels
3. List examples of global purposeful partnerships during the pandemic

Key words

Health literacy, Sustainable Development Goals, Shadow Pandemic

Introduction:

The emergence and consequences of COVID-19 have sparked considerable fear and anxiety among people around the world, especially among women and vulnerable populations (elderly, and populations with special needs). Unfortunately, due to low levels of health literacy among individuals especially those with high levels of anxiety may not be able to think clearly and rationally while reacting to COVID-19. According to research conducted by Hao et al in 2020 the fear resulting from the pandemic contributes to other health problems (psychosomatic). In summary Health literacy is defined as the ability to read, understand and act on health care information and is a crucial tool in enabling countries in their quest to achieve the Sustainable Development Goals by 2030.

Gender Equity, Health Literacy and Human Rights

It is important to understand that the ongoing COVID pandemic is not just a health issue but has placed a tremendous global burden and disproportionately on women. According to a report released by UN Women in 2020 the ongoing COVID – 19 pandemic has exacerbated the public health problem of gender-based violence. In the past year an astounding number of 243 million women and girls have been subjected to violence and GBV is referred to as the shadow pandemic during COVID. To illustrate further the pandemic has introduced new challenges and impacted human rights for women namely due to lack of access to information and health care services which include regular health checkups, non-availability of COVID vaccines, lack of testing and treatment for women. The lack of access to information compounded with the low health literacy rates among women has put women among greater risk during

the past 30 months since the start of the pandemic. As the COVID-19 pandemic continues, there is a risk of increasing multiple impacts on women's wellbeing, their sexual and reproductive health, their mental health, and their ability to participate and lead in the recovery of our societies and economy.

Purposeful Partnerships

Since 2019 there have been partnerships between United Nations agencies, Public and, Private sectors, foundations, Governments, foundations and think tanks to reduce the catastrophic effects of COVID by working to reduce the spread of misinformation and promote health literacy and the targets of

SDG # 3- Ensure healthy lives and promote well-being for all at all ages.

SDG#5 - Achieve gender equality and empower all women and girls.

SDG#17- Strengthen the means of implementation and revitalize the global partnership for sustainable development

■ **Keynote (D) Importance and Application of Health Literacy to Healthcare Quality**

Mark Chii-Jeng Lin MD, EMBA, PhD

Prof. Mark Chii-Jeng Lin is currently the president of Joint Commission of Taiwan (JCT), also a distinguished professor of National Cheng Kung University (NCKU) Medical school in Taiwan. Prof. Lin specialized in orthopedics with subspecialty in pediatric orthopedics. He is an active member of Pediatric Orthopedic Society of North America (POSNA), International Federation of Pediatric Orthopedic Societies (IFPOS) and Asia Pacific Orthopedic Association (APOA). A board member, past Secretariat General and past President of Asia Pacific Pediatric Orthopedic Society (APPOS).

Abstract

The advancement of medical technology and the public's emphasis on health issue have made the average life expectancy of human beings and the proportion of the elderly population continue to increase. Population aging has become a global issue. With the aging of the population, the proportion of patients with chronic disease has increasing, and more patients suffer from multiple chronic diseases. The needs of patients have expanded from the acute treatment to the prevention of chronic diseases, and to the support of disability.

However, the care process for patients with chronic diseases is an endless journey. To maintain a quality of life and physical functions of patients, not only the medical care team, the cooperation of patients and their families is also a major key to improve their self-management of care. In fact, health literacy is an important concept for patients and their families to obtain, understand, evaluate and apply health information. Health literacy could promote communication between doctor-patient, and it could improve relationship of doctor-patient and the effectiveness of medical care.

The Joint Commission of Taiwan (JCT) has launched the “Disease Specific Care” (DSC) certification program since 2009 to strengthen the operation and quality of disease care. The DSC proposes a patient-centered integrated care, and emphasizes on patient participation and satisfaction. The concept of Sharing Decision Making (SDM) and Choosing Wisely leads the medical care team promote health education and reduce costs. The DSC is the best strategy of application of health literacy. This speech will share how the JCT promotes integrated care by a medical care team, improve patients’ health literacy through DSC, and build a paradigm care.

■ **Keynote (E) Health literacy for jobs**

Peter Chang, International, Show Chwan Medical Group, Taiwan;
President, Asian Health Literacy Association

The International Labor Organization estimates that some 2.3 million women and men around the world succumb to work-related accidents or diseases every year. This corresponds to over 6,000 deaths every single day around the globe. Worldwide, there are around 340 million accidents occurred at work and 160 million victims of work-related illnesses annually. In many parts of Asia, occupational injuries and illnesses continue to grow and prevail in the communities and societies. However, little was studied on the outcomes of these occupation related illnesses and injuries. Not-to-mention, the approaches to practice prevention and strive to secure job-related wellness in most of the healthcare settings and healthcare practices.

More than a thousand occupational injuries were reported monthly in the emergency department in one of the general hospitals in Taiwan. These included traffic accidents occurred during, or to or from the job locations. The prevalent illnesses from daily working environment were usually not explained adequately, while the employees were not instructed to prevent potential injuries or illnesses before and during the employments. The financial and physical losses from these job-related illnesses and accidents were tremendous, while most of the corporations have not taken effective measures to prevent the losses. Many of the job-related diseases and injuries happened when the employees were not aware of the health risks at all.

The “occupational or work-related health literacy” is the knowledge and skills to prevent occupational illnesses and injuries, and is essential for all the employees before they start their employments. On the other hands, it is also an integrated parts of job and labor to be offered by the employers, to make sure the employees are well instructed and prepared to take on the job-related activities, including the transportations they will take each day. Job-related health literacy is essentially important for ageing employees, or those start or shift to new jobs at middle-ages. There are tremendously diversified job-related health risks, particularly when the working populations age, it demands new talents to tackle and to prevent the risks. On the other hands, a continuous life-course to improve occupational health literacy will be beneficial to the health literacy of the individuals, either through continuous education, or on-job related health literacy training and alertness.

Many countries in Asia start taking actions on job-related health literacy, which will facilitate practical health literacy associated education and training. This study will review these efforts and provide effective recommendations to activate the occupational health literacy research and practices that can promote healthy working environments for the individuals, the families, and the societies.

Special Interest Sessions (*coordinators)

■ [SIS-1]

ASEAN + AHLA health literacy strategies

Thailand,***Wongsa Laohasiriwong**, Zara-Wut Sarawut, Washira Pengchantr,
Philippines, Carmen Tolabing

Vietnam, **Dang Thi Anh Thu**, Dean of Faculty of Public Health, HueUMP, Nguyen The Dung,
Loc Ngo Viet, Tran Quoc Cuong, Vuong Bao Thy, Nguyen Cong Cuu,

Indonesia, Enny Rachmani, Noor, Nurjanah

Malaysia, Tin Tin, Hazreen Majid

Bangladesh, Natasha

AHLA, Peter Chang, Wen-shien Ho, Duong Van Tuyen

Thailand

Professor Dr. Wongsa Laohasiriwong

Dean, Faculty of Public Health, Khon Kaen University

Prof. Wachira Pengchantr, President, Thailand Health Literacy Association

Dr. Sarawut Boonsuk, Deputy Director-General, Department of Health, Ministry of Public Health

Abstract

Thailand has been facing the situations of urbanization, aging society, climate change, technology advance as well as threats from both natural and manmade disasters. Therefore, to achieve the SDGs goals 3 - Good health and well-being, it is essential to ensure that all other 16 components of SDGs which are determinants of health will be well managed. The country has applied the Ottawa Charter principle to promote health and well-being. We are not only developing personal skills but also improving roles of the community, building healthy public policy to create supportive and healthy environment by cooperative efforts of academic, health sectors, community and other sectors. Health literacy has been identified as one of the most important factors for promoting healthy behaviors which is essential in achieving health and wellbeing.

The targets of Thailand with regards to health literacy are 1) people equipped with skills to improve access, understand, appraise and apply the health information into practices in order to promote and maintain their health 2) create health literacy society 3) develop partnerships of inter-sectoral collaboration of academics, practitioners, government and local administration to create supportive environment for health literacy in their communities and societies.

The driving forces for promoting health literacy in Thailand are sectors that work collaborative with AHLA. These sectors are; public health faculties, the Ministry of Public Health, health literacy

associations, civil organization as well as communities. These sectors work collaboratively on 1) Influencing policy makers to push and develop **'health literacy as the country's national policy'**. 2) create awareness of all sectors including individual, organization, community and society through training courses, research as well as organizing/joining national and international conferences on healthy literacy 3) developing networks and partnerships both vertically and horizontally to disseminate and supporting health literacy promoting activities 4) create mechanisms and implement them to help achieving the goals of improving health literacy, healthy behaviors as well as environment for health and wellbeing of the population with self-reliance.

■ [SIS-2]

IHLA Forum on international health literacy



Join IHLA Forum on international health literacy, Wednesday, 27 October

Tentative time: 10-12 am local time

IHLA members and AHLA conference participants are welcome to join. Please register here:

The International Health Literacy Association (IHLA) and the Asian Health Literacy Association (AHLA) are member organizations supporting health literacy research and practice – locally, regionally and globally. Common goals include health literacy for all people and societies and supporting interdisciplinary and multi-sector initiatives. The IHLA@AHLA Open Forum will highlight how IHLA and ALHA have worked to raise awareness and take action over the years and how continued collaboration will move health literacy research, policy, and practice forward. The forum will bridge AHLA and IHLA efforts and activities to provide an inclusive a global health literacy perspective.

The first part of the forum will feature a panel with IHLA and AHLA leaders talking about how the two organizations can work together to support health literacy efforts in Asia and around the world. The second part of the forum will highlight the work of IHLA interest groups for global networking and professional development. The best way to get actively involved in global health literacy efforts is join an IHLA interest group and participant in the 2023 Global Health Literacy Summit. Teresa Wager, Ph.D. (America) and Kelvin Ling (Hong Kong) will talk about IHLA interest groups and their role in the 2023 Summit. For more information visit www.I-hla.org

Invited Speakers

- Peter Chang, M.D., AHLA President (Taiwan)
- Kristine Sorensen*, Ph.D., IHLA President (Denmark)
- Orkan Okan, Ph.D., IHLA President Elect (Germany)
- Sabrina Kurtz-Rossi*, M.Ed., IHLA Secretary General (America)
- Teresa Wagner, Dr. P.H., Chair, IHLA Divisions and Interest Groups (America)
- Kelvin Ling, Ph.D., Co-chair, IHLA Divisions and Interest Groups (Hong Kong)
- Hazreen Abdul Majid, Ph.D., Adolescent Health Literacy Interest Group (Malaysia)
- Paras K Pokharel, M.D., Ph.D., Environmental Health Literacy Interest Group (Nepal)

■ [SIS-3]

Health Literacy during and beyond pandemics

Presented by Prof. Angela Y.M Leung^{1*}, Dr Padmore A Amoah², Dr Adwoa O. Koduah¹, Dr Dauda Salihu¹

¹ School of Nursing, The Hong Kong Polytechnic University, Hong Kong

² School of Graduate Studies; Department of Applied Psychology, Lingnam University, Hong Kong

This symposium aims to present various activities that promote health literacy and maintain people's health during and after the COVID-19 pandemic. The pandemic season is a stressful moment that affects all aspects of life, including young children (who are advised to stay home and not go to school), working adults (such as teachers or nursing home staff), and ethnic minorities living in the community, and older adults. It becomes even more difficult when society is compartmentalized and all businesses are forced to slow down or shut down. Infection control measures, mental health issues, financial stress, and lack of social support for those in need are society's main problems during and after the pandemic. These problems should be responded to in a timely manner.

Research has been conducted to determine what people need during the pandemic and what interventions are appropriate to support people to meet the challenges and use their skills to combat the pandemic. Many ideas come from professionals, practitioners, and policymakers when we develop interventions or services for COVID-19. Yet, the comments and suggestions of stakeholders (e.g., nursing home staff, schoolteachers, etc.) should always be heard and greatly appreciated. These comments would be helpful in developing acceptable interventions/services. Beyond the pandemic, acute situations are under control to some degree. It is time to think about normal life where health literacy plays a role in our behaviour. Our culture is linked to our practices in daily life. It is worth exploring how health literacy, acculturation, and help-seeking behaviour are linked.

SIS-3-1: Blended gaming COVID-19 training system (BGCTS) in infection control for residential care homes

Presenter: Angela Y.M Leung

This study showed the characteristics and content of the blended gaming COVID-19 training system (BGCTS) in infection control for staff in residential care homes. Cognitive interviews were conducted to assess content appropriateness, game features, and usability. An initial evaluation of the system's effectiveness was conducted with a pilot project RCT. Infection control knowledge and practices improved after using the training system.

SIS-3-2: Health literacy and well-being of School Workers during COVID-19 in Hong Kong

Presenter: Padmore Adusei Amoah

This study examined the relationship between health literacy and the well-being of school workers. It also explored the mediating roles of work-related stress, attitudes about vaccination and a sense of coherence in how health literacy affected their well-being. Implications were drawn for health literacy enhancement in a bid to improve the well-being of school workers.

SIS-3-3: the COVID-19 digital health needs of ethnic minorities

Presenter: Dauda Salihu

This study reported the learning needs of ethnic minorities in COVID-19 information. A qualitative study was conducted using an interview guide. We explored how COVID-19 information can be presented in a culturally appropriate manner and examined how ethnic minorities verified the reliability of the information they received through social networks and how the information influenced their actions.

SIS-3-4: Relationships among Intention-to-seek-help in Dementia, Dementia Literacy, Acculturation and Social Network: A Cross-sectional Survey

Presenter: Adwoa O. Koduah

Talk 4 highlighted the relationship between dementia literacy, acculturation, social network, and intention-to-seek-help for dementia among Africans in Hong Kong. The findings demonstrated that possessing sufficient dementia literacy did not manifest high intention to seek help for dementia among Africans in Hong Kong. However, enhancing social networks and assimilation into society was imperative to improve dementia help-seeking.

■ [SIS-4]

Health Literacy Interventions and Their Impacts

*Usha Rani usha.rani@manipal.edu

* Duong Van Tuyen tvduong@tmu.edu.tw

With a rising burden of diseases worldwide and increasing awareness in the general public, there is a need for reliable sources of health information. Researchers aim the health literacy interventions towards the development of knowledge, critical thinking & behavioural modification of the targeted group for health and health seeking behaviour. This process to develop individual health literacy is very complex and there have been many interventions reported to develop health literacy, but there are queries that need to be addressed by researchers to assess the impact of health literacy interventions, and these are:

1. What is an effective health literacy intervention?
2. How to assess the impact of health literacy interventions?
3. Which health literacy intervention is capable to achieve the aim of the study?
4. What are the strategies or framework to evaluate the best health literacy interventions?
5. Which interventions are best suited for varied resource settings?
6. What are the types of health literacy interventions for next generation population?
7. What are the other names for the health literacy interventions? Does it vary depending upon settings e.g., health literacy interventions in educational sector?

Answer to these questions is resource intensive, and to address selection of effective health literacy interventions that can bring impact in the targeted group, we need to work in consortium. What if, we have a health literacy assessment database repository at all group levels for different locations and a pool of effective interventions that can be mapped with the identified gap in groups health literacy along with the type of implementation setting. In order to achieve this what a researcher needs are to have a digital health literacy database and intervention repository. So, one side we would have the e-platform where repository on health literacy assessment is available, and any past participant from the group can go back and assess its current health literacy levels and the updated data of the participant is deposited in the repository. We would get a real-time database accessible to all the researchers contributing to the health literacy assessment. On the other hand, we have the health literacy interventions that are been tried and have been proved to be effective in the targeted group and in type of implementation setting. This type of framework with evidence would facilitate a researcher to opt for effective health literacy interventions. The framework on health literacy database mapping with optimum health literacy intervention would save many resources and would provide ease in decision making by the funding agency or investors. This type of database repository and framework on effective interventions has been under development at “Manipal Health Literacy Unit”, PSPH, MAHE, Manipal, India.

There are many ways to look towards health literacy interventions and its impacts. What is the durability of the impacts? When a population again need interventions to sustain the impacts? Are we

classifying impacts as per the durability? What should be our target group to get a sustainable impacts of health literacy interventions? At policy level does analogy to “Health in all policies” = health literacy in all policies and health literacy for all policies? Do we have policy health literacy interventions? Do we have health literacy interventions for policy makers to assess proposed policy impact on health? How do we measure impact? What is the definition of health literacy impacts? Is there a framework to assess the level of impact?

As we are trying to encourage preventive care, health literacy could act as a boon empowering people to recognize early health symptoms and thus approaching healthcare institutes for screening and intervention before it's too late to control the consequences of the disease.

Potential interventions for health literacy can take place through various channels like

1. Written form using information brochures, books or health magazines
2. Educational workshops involving ground level or community healthcare workers for better reach and acceptance in a local population
3. Technology-driven HL interventions, like videos, audiotapes, mobile health, wearable devices, digital health, critical thinking games
4. Targeted mass-media campaigns
5. Community outreach interventions on health literacy development

For every health literacy intervention depending on the targeted group and sample variabilities' the outcome varies. Digital health literacy database framework to choose the appropriate effective intervention for a target group could help the researchers to overcome variabilities and unexpected outcomes post interventions, making its impactful.

■ SIS-4-1

Roles of Healthy lifestyles and Health literacy in Managing the COVID-19 Pandemic and Beyond **Duong Van Tuyen**, Assistant Professor, School of Nutrition and Health Sciences, Taipei Medical University, TW; Vice-President, Asian Health Literacy Association, UK; Chair, International Health Literacy Association, USA.

Abstract

Lifestyle has been changed significantly amidst the COVID-19 pandemic which further affect the health outcomes. Beyond the pandemic, lifestyle should be recognized and acknowledged as an essential prevention strategy for health promotion, as a foundational and efficacious therapy for a renovated healthcare system for lowering costs, improving health outcomes, and improving patient satisfaction and quality of life.

There are six core healthy lifestyles to improve health including (1) Nutrition - An Evidence-Based, Practical Approach to Chronic Disease Prevention and Treatment, (2) Physical Activity, (3) Stress Management, (4) Sleep and Health, (5) Avoidance of Risky Substances: Steps to Help Patients Reduce Anxiety, Overeating and Smoking, (6) Positive Social Connection: A Key Pillar of Lifestyle Medicine.

The challenges and strategies for getting stakeholders come together to amplify healthy lifestyle promotion, education, and interventions are presented. The roles of health literacy to maximize the healthy lifestyle efforts are also illustrated.

Roles of health literacy and healthy lifestyle in controlling the COVID-19 pandemic and chronic conditions are elaborated using the evidence from our studies.

- **SIS-4-2**
Implementation and Assessment of Community Empowerment Education Intensification Through “Jogo Tonggo” in Improving Community Behavior to Prevent and Overcome Covid-19 in Central Java YUNITA DYAH SUMINAR, SKM,M.Sc,M.Si, Head of Central Java Health Office, Indonesia

Background: The Covid-19 pandemic has spread to all districts/cities in Central Java. The main problem that actually must be addressed immediately in the prevention and control of the Covid-19 pandemic is to break the chain of transmission by minimizing contact between individuals. The implementation of very strict policies is sometimes needed, such as the implementation of regional quarantine with various legal instruments and forcing the public to comply. However, this policy may become ineffective if it is not followed by maximum compensation which is closely related to the socio-economic conditions of the community. Therefore, an approach that involves the direct involvement of the community as the main actors is needed, because it will not work properly if it is only carried out by health workers. The people of Central Java highly uphold Javanese customs which are thick with a culture of helping each other or working together. This “gotong royong” culture is often referred to as "sambatan". The “sambatan” tradition can train and shape the character of citizens to care about their environment. This is certainly a strong enough opportunity to involve the community in dealing with Covid-19. The combination of interventions between the implementation of top-down policies by the government and interventions that involve the community as the main actors will be more effective to implement. The community is not only "forced" to comply with regulations, but they are made as subjects by maximizing their involvement by forming a community-based outbreak handling model or community-based Covid-19 intervention. The “jogo tonggo” empowerment model is an appropriate form of collaborative intervention by involving the community directly, to maintain and implement health protocols from exposure to Covid-19, which is carried out through the provision of intensive education and assistance to community members.

Purpose: Knowing the description of the increase in knowledge, attitudes, and behavior, as well as assessing the magnitude of the influence of the “jogo tonggo” empowerment education intervention before and after the intervention was carried out..

Materials and Methods: The assessment was carried out on a sample of 2,100 respondents who were spread out in community associations in 34 districts/cities in Central Java, both before the intervention and after the intervention was given. Interventions with mentoring were provided through education on empowerment of “jogo tonggo” for 6 weeks, three times a week, and a duration of 60 minutes for each intervention. Data collection by enumerators who previously received training and were assisted by local neighborhood association administrators. The treatment of the intervention group was carried out by the “jogo tonggo” task force who was accompanied by a facilitator or companion team, through providing education about the components of facilities, logistics, and services. The independent variable is the “jogo tonggo” empowerment program which includes activities in the facilities component (decree “jogo tonggo”, formation of command posts, provision of isolation places, entertainment facilities). Logistics component (logistics supply/food barns, availability/use of masks, availability of hand washing places with soap or hand sanitizer, management of citizen funds). Service components (“jogo tonggo” education and health protocols in preventing Covid-19, health monitoring, regional restrictions, rules for migrants, restrictions on social activities). The dependent variable includes knowledge, attitude, and behavior. The inclusion criteria are community groups with respondents aged 18-60 years, who are at the level of the community unit with the “jogo tonggo” Covid-19 post which has received written approval from the local leadership. While the exclusion criteria include pregnant women, people with disabilities who interfere with activities, are not willing to cooperate as the subject of the assessment. Statistical analysis with paired simple t-test.

Results: There was an increase in the mean after intervention was carried out including knowledge of "jogo tonggo" ($\delta = 1.69$; $p = 0.031$), knowledge of symptoms and modes of transmission of Covid-19 ($\delta = 2.45$; $p = 0.001$), knowledge of how to prevent Covid-19 ($\delta = 1.55$; $p = 0.006$), attitudes towards "jogo tonggo" ($\delta = 1.61$; $p = 0.013$), health protocol implementation statement ($\delta = 3.72$; $p = 0.039$), and health protocol behavior ($\delta = 1.66$; $p = 0.043$). The results of the different test analysis of the “jogo tonggo” empowerment intervention on each behavioral variable included the behavior of using masks ($\delta = 1.52$; $p = 0.001$), social distancing behavior ($\delta = 0.03$; $p = 0.041$), hand washing behavior using soap ($\delta = 0.10$; $p = 0.011$), restrictions on social activities ($\delta = 0.27$; $p = 0.037$), Health protocols in public places ($\delta = 0.70$; $p = 0.046$). Meanwhile, cough behavior was not significantly different between before and after the intervention.

Conclusions: Educational interventions for the empowerment of “jogo tonggo” with assistance can increase knowledge about “jogo tonggo”, knowledge of the symptoms and modes of transmission of Covid-19, knowledge of how to prevent Covid-19, attitudes towards “jogo tonggo”, attitudes towards Covid-19, and behavior to prevent Covid-19. It is recommended that the “jogo tonggo” model can be used as a superior model, not only for the prevention and control of Covid-19, but this

model approach can be used for the prevention and overcoming of other health problems. Assistance at a certain time is very much needed as initial facilitation, until awareness and independence of citizens are formed in carrying out their empowerment activities.

Keywords: "jogo tonggo", community engagement, community empowerment, Covid-19.

■ [SIS-5]

What have we learned from WHO's M-POHL HLS19 study and results on measuring and improving general adult population health literacies?

Pelikan, JM, Dietscher, C, Link, T, Straßmayr, C, Griebler, R, Van den Broucke, S, Levin-Zamir, D, Schaeffer, D, Griese, L, Nowak, P, Finbraten, H

Short description of authors: Jürgen M. Pelikan, PhD, em. Professor of sociology, Christina Dietscher, PhD,

INTRODUCTION: Based on results of HLS-EU, WHO's Solid Facts – Health Literacy (2013) recommended standardized, regular, international comparative measurement, monitoring, and benchmarking of general adult population health literacy (HL). For that an Action Network on Measuring Population and Organizational Health Literacy (M-POHL) was established by WHO-Europe in 2018 with 24 countries participating. As a first project the Health Literacy Survey 2019-2021 (HLS19) was started in 2018, with finally 17 countries participating.

OBJECTIVES: To measure comprehensive HL by a standardized measure in all participating countries, to develop similar measures for selected relevant aspects of HL in sub-sets of participating countries, and to draft first recommendations for improving HL on an international and national level based on results.

METHODS: Working groups of participating countries developed a study protocol and instruments to measure HL in national probability samples of at least 1000 in the time frame between November 2019 to June 2021. Data were collected in 17 participating countries. Data were analyzed for all countries in a standardized way and presented in a comparative International Report, with first recommendations for improving population HL, besides national reports. Furthermore, fact sheets on all new measures were provided and scientific articles on these measures are in preparation.

RESULTS: Five new measures were developed, psychometrically evaluated, validated, and applied: a shortform HLS19-Q12 of a comprehensive measure of general HL, and specific measures for digital HL, navigational HL, communicative HL with physicians, and vaccination HL. All measures showed good results for psychometric characteristics, e.g. by CFA and Rasch analyses, and acceptable results for content and face validity, discriminant validity, and concurrent predictive validity. Concerning the results, there were overarching international trends for all participating countries but considerable

variation by country as well.

Generally, not all member countries of M-POHL found the means to participate in HLS19, and standardization of study protocols of participating countries were only possible to a certain degree, due to different obstacles, like Corona, financial resources, available national procedures of data collection, and specific national interests concerning prioritized aspects of HL.

CONCLUSION: In principle, WHO's recommendation to measure general adult population HL regularly in a standardized form in as many member states as possible could be realized by HLS19 to a certain degree. New relevant measurement instruments were developed, validated, and applied and worked well. Results confirmed general international trends with considerable variation between participating countries. Based on results, first recommendation for improving adult population HLs were offered. Therefore, M-POHL planning and preparation for a next wave of improved measuring of adult population HLs in 2024-2025 is already under way.



What have we learned from WHO's M-POHL HLS₁₉ study and results on measuring and improving general adult population comprehensive and specific health literacies?



Draft Program of the Symposium SIS 6

- (1) Measuring population health literacy – from HLS-EU to M-POHL and HLS₁₉ (20' + 5') (8:00 – 8:25 CET)
 - 1.1 HLS-EU – Jürgen M. Pelikan
 - 1.2 M-POHL – Jürgen M. Pelikan
 - 1.3 Study design of HLS₁₉ – Christa Straßmayr
- (2) Measuring general population health literacy – the HLS₁₉-Q12 (20'+5') (8:25 – 8:50 CET) – Jürgen M. Pelikan –
thereafter 15 min break
- (3) Measuring specific health literacies
 - 3.1 Vaccination health literacy (10' + 5') (9:05 – 9:20 CET) – Stephan Van den Broucke (Robert Griebler)
 - 3.2 Digital health literacy (10' + 5') (9:20 – 9:35 CET) – Diane Levin-Zamir (Stephan Van den Broucke)
 - 3.3 Navigational health literacy (10' + 5') (9:35 – 9:50 CET) – Lennert Griese (Doris Schaeffer)
 - 3.4 Communicative health literacy (10' + 5') (9:50 – 10:05 CET) – Hanne Søbørg Finbråten (Peter Nowak)
 - 3.5 General discussion (10') (10:05 – 10:15 CET) – *thereafter 15 min break*
- (4) Recommendations and initiatives for improving health literacy in countries (20'+10') (10:15 – 10:45 CET)
 - 4.1 Recommendations of HLS₁₉ – Christina Dietscher
 - 4.2 Improving HL based on results of HLS₁₉ – Christa Straßmayr
- (5) Planning of HLS_{24/25} (5'+5') (10:45 – 10:55 CET) – Jürgen M. Pelikan
- (6) Summing up and general discussion (15') (10:55 – 11:05 CET) – Jürgen M. Pelikan

■ [SIS-6]

Development of health literacy accreditation

*Peter Chang, AHLA

Kristine Sorensen

There have been several attempts by various agencies on the establishment of accreditation mechanisms for health literacy education and training, or health promotion programs in countries around the world. Most of these programs have been limited to a single administrative body or one country or on regional approaches. However, no consistent and fully developed international accreditation program for health literacy has been established. The purpose of the Session in the 8th AHLA is to provide a review and thorough discussion with the aim to provide an initiative that will help foster future development of an international accreditation institution that can provide quality guidelines for the global health literacy community.

In **Australia**, the Australian Commission on Safety and Quality in Health Care, established in 2006, was a national, government-funded body that coordinated safety and quality nationally for both the public and the private sector, and for acute and primary care. The ACSQHC had attempted to develop accreditation schemes and brought the accreditation and accreditation reform as a core part of the commission's work since its inception.

The central components of the commission's work in this area had included developing safety and quality standards and coordinating accreditation nationally. While accreditation has existed for a long time in Australia, until the commission became involved there was no consistent set of mandatory safety and quality standards for all hospitals and data procedure services.

In **Ireland**, accreditation for people with relatively weak literacy skills was available following training and, particularly, incorporating health literacy into health care accreditation was desirable. Moreover, there had observed discussion regarding having health literacy measurement as part of accreditation (ref. <https://www.ncbi.nlm.nih.gov/books/NBK202437/>)

There was a “New Innovations, Accreditation and Partnerships” work of NALA in Ireland, in particular the clear innovatory methods, it suggested to improve health literacy in health care settings. New partnerships emerged and there was a greater emphasis on “building health literacy techniques in to the accreditation of medical personnel”.

In **Canada**, “Accreditation Canada”, a not-for-profit organization that has accredited more than 1,100 organizations across Canada, mapped the requirements in the Accreditation Canada Primary Care Standards and Medicine Services Standards with corresponding tools from the AHRQ Health Literacy Universal Precautions Toolkit. [Efforts were also added](#) by the Canadian Public Health Organization.

In the **US**, efforts had been taken by the Institute of Medicine, the American Medical Association and the Joint Commission, separately. [In the AMA, the](#) new partnerships had emerged and there was a greater emphasis on building health literacy techniques in to the accreditation of medical personnel.

The **Joint Commission** and the **National Committee for Quality Assurance** both adopted guidelines specifying the need for patient education information and consent documents to be written in a way that patients can understand. Accordingly, failure to provide understandable information to patients may be a negative factor in the accreditation status of a health care organization. The Joint Commission recently published a “white paper” on health literacy. This was also reflected in the legal system in the US which recognized the patient-physician relationship as a fiduciary relationship, which was the highest standard of duty implied by law. The **National Academy Medicine** addressed “Health Literacy’s Role in Patient Care: A Systems View”, that High-quality care is the product of interactions among various levels of the health care system. Established policies, health care organizations, and delivery systems create an influential context which plays a prominent role in determining patients’ health outcomes. Effective health literacy performance measures should, as stated, be based on a systems approach to assess the implementation of health literacy interventions at all levels of patient care. There were follow-ups from these efforts, including the **America Nursing Association (ANA)** set standards that mandated nurse to practices in a manner that is congruent with cultural diversity and inclusion principles. To promote this goal and enhance the cultural competence of nurses, the joint commission accreditation agency of hospitals set standards, which supported effective communication, cultural competence, patient and family-centred care. Moreover, the **National Accreditation Board of Hospital**, provided new guidelines proposed, the [“Prescriptions Written in Capital Letters in Compliance with National Accreditation Board of Hospital”](#), and the [“New Hospital Standards Will Improve Communication: Accreditation Guidelines Address Language, Culture, Vulnerability, Health Literacy](#)

- The debates and arguments of these efforts and elsewhere will be reviewed and provided as a platform for further exploration to enhance the future international accreditation mechanism for the advancement of health literacy.

■ [SIS-7]

Health literacy in ageing society

* Meei-Maan Chen, CIRAS, CCU laicmm@ccu.edu.tw

Health literacy (HL) is a skill, knowledge, and resources of an individual to search for, understand, and critically evaluate the information for one's own health. HL is also recognized as a key factor with respect to personal "assets," which contributing to one's health behavior. Many systematic reviews suggested that the consequences of inadequate health literacy may result in poorer health status, lack of knowledge about medical care and medical conditions, decreased comprehension of medical information, lack of understanding and use of preventive services, poorer self-reported health, poorer compliance rates, increased hospitalizations, and increased health care costs. Moreover, there are many subsets of population that are at greater risk for lower levels of HL, including older adults. Currently, there is a great need to strengthen the promotion program in society to increase HL of aging and their health. This session provides an overview on HL in aging society, showing the opportunities to develop strategies in overcoming the barriers that limit HL in super-aged society.

Presented by Prof. Ai-Tzu Li^{1,2}, Prof. Stephanie Yu-ching Chen^{1,2}, MD Jou-Wei Lin^{1,3}, MD Hsing-Jung Li^{1,4}, Yingwei Wang⁵

¹ Center for Innovative Research on Aging Society (CIRAS), National Chung Cheng University, Taiwan

² Department of Adult and Continuing Education, National Chung Cheng University, Taiwan

³ Department of Medicine, National Taiwan University Hospital Yunlin Branch,

⁴ Pediatrics, St. Martin De Porres Hospital, Chiayi City, Taiwan.

⁵ Department of Medical Humanities, Tzu-chi University

SIS-7-1

Designing and Developing a Board Game to Facilitate Medication Literacy for the Senior Citizens

Presenter: Ai-Tzu Li

The purpose of the study was to develop game-based learning materials in order to facilitate effective medication literacy for the senior citizens. It's found that people over 65 years old usually have no adequate level of literacy to correctly perform the complex tasks associated with the medication use process. Besides, in rural area, the senior citizens usually obtain the information from pirate radio which easily results in adverse drug events. It's urgent to develop a suitable learning mode for the senior citizens to obtain correct medication knowledge and skills.

The study based on educational board-game design theory and the cognitive learning principles to develop a board game and learning content for the senior citizens. Delphi method were utilized to develop the validity of the board game. The prototype was also tested by senior citizens. It's expected to further use the revised board-game to provide systematic medication learning modules for the senior citizens and test its effectiveness.

SIS-7-2

Development of health literacy community empowerment program for the elderly in rural areas

Presenter: Stephanie Yu-ching Chen

Many studies have shown that age is negatively correlated with health literacy, while education level is positively correlated. The older and fewer education levels have the worse health literacy. Currently, Taiwan's rural areas have a higher proportion of the elderly population, and the proportion of elderly people with low levels of education. In 2018, there were more than 1.866 million elderly people in Taiwan with education level of elementary school or below, and their health literacy and health issues are cause for concern. In Chiayi County, this has the highest proportion of the elderly population, 78.1% of the elderly people those who are in elementary school or below. Elderly people in rural areas also have a relatively high proportion of low health literacy. Coupled with the inconvenience of transportation and medical resources, various conditions are not conducive to the health outcomes of elderly people with low education levels in rural areas.

Elderly people with low education level are more difficult to obtain, interpret and understand health information. It is easy to have many wrong concepts about the disease, so that they choose inappropriate coping methods, and then affect their healthy self-care. Moreover, they need the assistance of their family members to meet their preventive health care and medical needs. At present, the education intervention research on health literacy is seldom specially designed for the elderly with low education level. The purpose of this study is to develop a community empowerment program to promote healthy literacy, aiming at the living characteristics of the elderly with low literacy in rural Taiwan. Using the method of literature analysis, it firstly explores how low literacy affects the healthy self-care and medical behaviour of the elderly, and then analyses the strategies and effects of health education programs for the elderly in rural communities. Finally, from the perspective of community empowerment, it proposes to promote a health literacy program for the elderly with low literacy in the rural areas.

SIS-7-3

Using gerontechnology in maintaining and improving health literacy among senior citizens

Presenter: Jou-Wei Lin

Health literacy refers to the capacity to obtain, understand and use basic health information and services to make health-related decision and take actions for health promotion. Many senior citizens have low levels of health literacy, which would lead to an inability to manage diseases, increased frailty, and higher hospitalization. A variety of physiological, psychological and social factors associated with ageing might affect health literacy. *Gerontechnology*, which concerns matching technological environments to health, housing, mobility, communication, leisure and work of older people, might be used to improve health literacy and provide better health care to senior citizens. This talk will briefly introduce the concepts, scope, and application of computer and information technology in gerontological care, and focus on the maintenance and improvement in health literacy in this age group.

SIS-7-4

The Happiness of Accompanying the Senior Citizens with Picture Books: A Case Study of A Grocery Store of Care Service in Chiayi City in Taiwan

Presenter: Hsing-Jung Li

With the advancement of medical technology, the global population has entered an era of rapid aging. After entering old age, they will face changes in physiological functions, cognitive degradation, poor language expression, lower limb mobility, less going out, and decreased social interaction with others, which will cause physical and psychological problems to the senior citizens, including emotional problems such as depression. According to previous studies, reading is a multifaceted cognitive process that allows us to derive meaning from print. In addition, reading has been shown to improve the development of empathy, social perception and emotional intelligence.

Because the eyesight of the senior citizens deteriorates, reading word-based books will cause a considerable burden on the eyesight. The characteristics of picture books are that there are fewer words and mainly pictures, which can reduce the burden on the eyes of the senior citizens. Even the illiterate senior citizens can still understand the content from the pictures.

Our study uses picture books as the main reading books, and accompanies the senior citizens to read picture books by reading stories and question-and-answer methods. We use the happiness scale to evaluate the degree of influence on the well-being of the senior citizens of a Grocery Store of Care Service in Chiayi City in Taiwan. From the pre- and post-tests of the happiness scale, the mean in the pre-test is 1.43, and the average in the post-test is 1.77. The difference between the pre- and post-test averages was <0.01 (the $p < 0.05$). The senior citizens have a significant improvement in happiness scores when they are accompanied by reading picture books together. We found that the picture books co-learning course had a certain degree of positive effect on the mental health of the senior citizens of a Grocery Store of Care Service in Chiayi City.

SIS-7-5

Healthy literacy for older adults

Presenter: Yingwei Wang

Older adults and their caregivers need reliable health information to prevent and manage disease, promote their health and follow public health recommendations and warnings. However, many older adults have limited health literacy that can be associated with poor health outcomes and increased hospitalizations, emergency room visits, and medication errors. In US, it is estimated that 71% of adults older than age 60 had difficulty in using print materials, 80% had difficulty using documents such as forms or charts and 68% had difficulty with interpreting numbers and doing calculations

Public health professionals can make a difference by eliminating jargon and technical language, presenting critical information in engaging and compelling ways, and being clearer about the actions older adults can take to promote their health. Social determinants of health (SDH) is a major concern in caring of old person. Digital transformation and technological change have the potential to create new opportunities for connection, health literacy, knowledge-sharing, and more effective and efficient service provision. Some digital features as well as digital exclusion can create isolation and exacerbate inequities. This is another major

impact on the health of elderly.

The Shanghai Charta in 2016 emphasize that health literacy being one of the three pillars of health promotion. The Geneva Charter for Well-being in 2021 expresses the urgency of creating sustainable well-being societies, committed to achieving equitable health now and for future generations without breaching ecological limits. Health literacy is a way to achieve the goal of the Charta.

With the increasing number of ageing population, chronic disease become the major impact on elderly's health. The famous chronic care model (CCM) emphasize the good communication between capable individual and capable health care provider. Individual health literacy of the patient and health provider is essential for a good communication.

There are two categories of health literacy: into individual health literacy and organization health literacy. Taiwan started health promoting hospital program (HPH) since 2006 and became the largest member in the international health promotion hospital network. In 2017, HPH incorporated the health literate organization (ILO) and aged friendly organization as healthy hospital (HH) program. The criteria for HH included a health literate environment for the old adult when providing health service.

CDC point out the key things to consider for health literacy in older adults: empowering, from a trusted source, self-directed and solution-oriented. The health literate services should also be culturally and linguistically appropriate and response to the unique values, beliefs, traditions, and customs of individuals.

■ [SIS-8]

Digital Health literacy as a tool to empower patients to navigate the new health system

*Dr Ratna Devi, IAPO ratna.devi@dakshamahealth.org

Arshiya Zaheer, Patient Engagement Lead, JCAP, MSD

WHO’s Global Strategy on Digital Health 2020-2025 has indicated that the digital transformation of health systems is critical. The APEC Conference on Digital Healthcare Innovation has said that Information and Communications Technology (ICTs) currently linked to the fields of health and medical care can provide healthcare professionals with more extensive and efficient tools for healthcare delivery by applying digital health data, wearable & sensors devices and smartphones apps to disease management, telehealth, and careful monitoring.

The use of data-based digital technology to share real-time information between healthcare workers has demonstrated how effective digital health is. However, there is a concern that increased digitalisation can exacerbate the health inequities by bringing n new challenges. Investing in digital health literacy for empowering patients, caregivers and families would be imperative to reap the benefits of digitalisation.

Session- Digital Health literacy as a tool to empower patients to navigate the new health system

Duration- 45mins

Session Chair & Moderator- Dr Ratna Devi

Opening remarks and setting the context	Dr Ratna Devi	Director, Patient Academy for Innovation and Research
Rapidly growing in both supply and demand, patient-oriented health tools are the latest craze to sweep the tech industry. Health apps, wearables, appointment booking, imaging tools, patient portals (via telemedicine) and accessible patient records are only the first items on a growing list of available resources designed to empower patients with the ability to monitor or take initiative with their own care. Are patients and patient groups ready?	Einstein Rojas	Board Member PAPO- (Philippines Alliance of Patient Organization)

<p>Benefits of digital health technology depend partly on users' digital health literacy, that is, 'capabilities and resources required for individuals to use and benefit from digital health resources', which combines health and digital literacy. Makers of this technology need to come up with innovative mechanisms to equip the users with the rights skills. How can large MedTech companies contribute to this?</p>	<p>JEYASEELAN JEYARAJ</p>	<p>Senior Director, Health Sciences, Oracle, President, HIMSS India Chapter</p>
<p>Role of industry as a stakeholder focused on health literacy. Why is it so important for an ethical patient focus company to prioritise health literacy? Leveraging global resources repurposing it for use in different countries through digital- share a best practice, how industry can add value to digital health literacy</p>	<p>Arshiya Zaheer</p>	<p>Regional Patient Engagement Lead, Japan China & Asia Pacific</p>
<p>Closing remarks and next steps</p>	<p>Ratna Devi</p>	

[SIS-9]

Digital health literacy, interventions and social resilience – how can we strive for a systems approach based on research, practice and policy from a global perspective?

Abstract - Digital health literacy, interventions and social resilience

Central question that the workshops seek to address: How can we strive for a systems approach based on research, practice and policy from a global perspective?

Learning objectives:

- To explore the significance of digital health literacy with regard to health disparities and social resilience
- To learn of interventions that may positively influence digital health literacy and health outcomes throughout the life course
- To discuss what the role of community health and education organizations and systems can be with regard to digital health needs of populations.

In recent years, physical distancing demands have led to digital immersion, and as a result, new opportunities and challenges for health literacy. Thus, attention needs to be dedicated to digital health literacy. Practitioners, researchers and policy makers all need to be aware of population and specific group digital literacy needs as a vehicle for health promotion.

In order to meet the needs of populations and special groups, we acknowledge the need for:

1. improving digital health literacy skills and access to appropriate digital technology;
2. capacity building of organizations and whole systems to provide trustworthy and appropriate digital resources, to accommodate people with a range of digital health skills.

To achieve these goals, a systems approach needs to be adopted, that includes effective interventions, specifically designated research evaluation, and supported and enabled through overarching policy.

In this workshop:

- A.** Experts from Europe, the Mideast and Asia will share and interactively discuss with the workshop participants:
1. Results of international surveys measuring digital health literacy
 2. A selection of innovative practice of intervention in school settings, primary healthcare, NGOs, cultural specific populations, and in the social and mass media, taking into consideration DHL needs, including the consequences of transitioning from in-person programs to digital

interventions regarding lifestyle, selfcare and empowerment and challenges encountered during COVID-19 pandemic

3. The role of health literacy national action plans in promoting digital health literacy

B. Participants in the workshop will be invited to openly discuss and explore:

- how can digital health literacy be promoted, while also acknowledging the need for a system's approach in their countries
- how can investing in digital health literacy provide opportunities for reducing communication barriers and promoting appropriate interventions, engaging public at all levels?

In summary, in this workshop we will discuss to what extent health and other systems are dealing with digital divide and working towards or digital development, based on digital health literacy research for achieving equity.

Digital health literacy, interventions and social resilience

90 minutes

Speakers /Moderators: Diane Levin-Zamir, Angela Leung, Orkan Okan, Jürgen Pelikan Kristine Sørensen, Stephan Van Den Broucke

Introduction: Welcoming the participants in-person and connecting virtually, introducing the speakers, the central question and learning objectives of the workshop, the structure of the session and how will be managed in a hybrid format - **Diane Levin-Zamir (5 minutes)**

Digital Health Literacy orientation – defining digital health, defining digital health literacy (MPOH-L definition), the importance DHL has played in recent years, the concern and importance of acknowledging social / demographic disparities and the need for appropriate intervention (**7 minutes**) – **Diane Levin-Zamir and Stephan Van den Broucke**

Interventions for improving DHL or adjusting organizations action/policy to address DHL disparities (12 minutes each)

- Digital Health Literacy in schools and education systems – **Orkan Okan**
- Digital Health Literacy programme for people with diabetes -**Stephan Van den Broucke**
- The Digital Health Literacy Study using multi-media in Hong Kong – **Angela Leung**
- The role of Digital health Literacy in settings policies and National Action Plans for Health Literacy – **Jürgen Pelikan**

Discussion with the session participants (in-person and virtual) – moderator: Kristine

Sørensen (20 minutes)

Participants in the workshop will be invited to openly discuss and explore:

- what are the participants' experience regarding DHL countries?
- how can Digital Health Literacy be promoted to opportunities for reducing communication barriers and promoting appropriate interventions, engaging public at all levels?
- Can there be a system's approach to promoting/acknowledging DHL in their countries?

Session Summary, next steps, and wrap-up: Diane (~5 minutes)

■ GS-1

Health literacy and intervention (6 abstracts)

A012	Theerawasttanasiri N.	Improving Environmental Health Literacy: Haze Crisis and Air Pollution in the North Thailand
A024	Wanling Lu	Research of Correlation among Parenting Effectiveness, Parenting Stress, and Health Literacy in Parents of Children with Developmental Delay
A047	Mansuang Wongsapai	Development of Oral Cancer Screening and Risk Factor Assessment Training Model for Health Literacy in Village Health Volunteers
A063	Thatsana Ritthikul	The Social Stories' Handbook to Enhance Health literacy Among Autistic Children Before Receiving Dental Care Services
A118	Tessa Schulkorf	Toolbox - Intervention to promote health literacy in German schools (<i>online</i>)
A124	Nichanun Praivicharn	The development of patient centered communication model for promoting health literacy among hypertension patients in general practice clinic, metropolitan health and wellness institution

GS1
8AHLA012

Improving Environmental Health Literacy: Haze Crisis and Air Pollution in the North Thailand

Theerawasttanasiri N, BPH, MPS, DrPH, Senior Public Health Professional, Health Promotion Center Region1 Chiangmai, Department of Health, Thailand;

Pattara-anantanop N, MD, Director of Health Promotion Center Region1 Chiangmai, Department of Health, Thailand;

Chamnankong K, BNS, MA, Public health expert (health promotion), Department of Health, Ministry of Public Health, Thailand;

Chanthawiboon A, BPH, MPA, DrM, Public health Advisory (sanitation), Department of Health, Ministry of Public Health, Thailand;

Krisanuruks W, BPH, Senior Public health professional, Health Promotion Center Region1 Chiangmai, Department of Health, Thailand;

Winun A, BPH, Public health Practitioner, Health Promotion Center Region1 Chiangmai, Department of Health, Thailand.

INTRODUCTION: Air pollution is a major global environmental issue, impact to human health and security. Exposure to high levels of air pollutants can cause a variety of adverse health. Since 2012, Northern Thailand has suffered from haze crisis, and increasing severity. Effective solving and solution needs health literacy and collaboration of all involved agencies. **OBJECTIVES:** this study aims to 1) increasing collaborate and learning exchange on Haze crisis and solutions of network community 2) develop surveillance and risk communication model for increasing accessibility, accurately and quickly PM2.5 information for public health literacy.

METHODS: Participation action research (PAR) was conducted in November 2020 – July 2021, at twenty-one subdistricts where daily PM2.5 average >51 µg/m³ and high hot-spots. This study was approved by the Department of Health Human Research Ethics Committee (No.404/2563).

1) Network Collaboration: integrated PM2.5 plan and platform of health and non-health sectors to reducing redundant, enabling stakeholders and public to access information correctly and quickly.

2) PM2.5 Data Center; link and share PM2.5 API of air-sensor network, ChiangMai University, Maefahluang University, Chulalongkorn University, and others

3) Develop surveillance and risk communication model for personal, school or community, response teams and public communication.

4) Building capacity of subdistrict response teams following Public Health Emergency Operations Centre (PHEOC) guideline.

RESULTS:

1. MOU signing of network community for learning exchange, planning, and driving mechanism for haze crisis solving following authorities, roles and responsibilities of institutions concerned.

2. Surveillance and risk communication model consist of

2.1 “SmokeAlert”; notify 2 times daily for personal with PM2.5 selfcare guidelines and clean air room nearby 10, 20 kilometers.

2.2 “Schools Alert”; notify 3 times daily for teacher and caregiver of schools and child development centers to concern and refrain activities outside classroom following measures of the Ministry of Education.

2.3 “Subdistrict and PHEOC Alert”; notify 4 times daily for PHEOC team to response and problems solving. In case of severity Level 3 or 4, system will be notified to District, Provincial and Regional Public Health Office respectively.

CONCLUSION: This study increases health literacy of network community and ownership of community in problem solving, and response by themselves continuous and sustainable. The model has applied to 69 subdistricts in 2022.

KEYWORDS: Haze Crisis, Surveillance and Risk Communication, Health Literacy

GS1

8AHLA024

Research of Correlation among Parenting Effectiveness, Parenting Stress, and Health Literacy in Parents of Children with Developmental Delay

Wan-Ling Lu, M.Ed. is a physical therapist, Rehabilitation Department, Chia-Yi Hospital, Ministry of Health and Welfare

INTRODUCTION: According to the statistics of the WHO, the incidence of children with developmental delay (DD) is about 6- 8%, and the number of DD preschool-aged children (birth to 6 years) in Taiwan is estimated to be about 100,000. Parents of children with DD experience more parenting stress than parents of typically developing children. The parenting effectiveness and health literacy had an interactive effect. In recent years, higher parenting efficacy can be used to relieve stress. Literature also indicated that improving health literacy can promote parenting effectiveness.

OBJECTIVE: The aim of this study is to investigate the relation among parenting effectiveness, parenting stress, and health literacy of the parents of children with DD in Taiwan.

METHODS: In this study, the Parenting Stress Index-Short Form (PSI/SF) was used to evaluate parenting stress; the relationship between the parenting effectiveness form and the DD children's health literacy scale was explored.

RESULTS: The results of this study have been analyzed through data analysis and discussion. First, PSI-SF shows high levels of parenting stress are associated with negative factor, which is highly correlated with nuclear family support and parenting knowledge. Second, parenting effectiveness were a positive correlation between social support and family support. Third, high health literacy was associated with positive parenting effectiveness in children including child behavior, parenting self-efficacy and parenting stress. Forth, a positive parenting attitude, extended family, and parent-child attachment played an important role in promoting the children's health literacy

CONCLUSION: This study can provide advice on strategies and methods for parents of children with DD. Improve the health literacy of children about parenting effectiveness. Establish a healthy and positive environment for the children with DD. At the end, expect that the concept of health literacy of children will keep promote.

KEYWORDS: health literacy, PSI-SF, parenting effectiveness, parenting stress

GS1

8AHLA047

Development of Oral Cancer Screening and Risk Factor Assessment Training Model for Health Literacy in Village Health Volunteers

Mansuang Wongsapai, DDS, MPH, PhD, is a Director of Intercountry Centre for Oral Health, Department of Health, Ministry of Public Health, Thailand;

Kornwipa Wudtjureepun, BSc, is a public health officer, Intercountry Centre for Oral Health, Department of Health, Ministry of Public Health, Thailand;

Decha Tamdee, BNS, MSc, PhD, is an Associate Professor, Faculty of Nursing, Chiang Mai University Thailand;

INTRODUCTION: The Pre-Malignant Disorders and Oral Cancer are the major problem in Thailand. Village health volunteers (VHVs) who were trained for health care and health literacy (HL) can help and support dental healthcare teams for oral cancer screening. The risk factor assessment by RiskOCA application used by VHVs should be prepared.

OBJECTIVE: This study aims to develop and evaluate HL training program for risk factor assessment and oral cancer screening by RiskOCA application among VHVs.

METHODS: The study was conducted in 2020-2021 with 216 Village Health volunteers in Phukamyao district, Phayao province, Thailand. The training program included; 1) Pre-Malignant Disorders lesion and oral cancer knowledge 2) Simulation system training by Sim PMDs (instructional media) 3) Position and posture for Oral cancer screening 4) RiskOCA application Installation, then, the VHVs tried to collected the risk factor of oral cancer data after trained. The data was collected by HL questionnaire, user satisfaction with Sim PMDs, In-depth interview and focus group. The HL level in oral cancer screening and risk factor assessment were analyzed by descriptive statistics.

RESULTS: The HL level of VHVs from training program was high in 4 components

1) Information understanding 56.20% (\bar{X} =32.91, S.D.=4.80)

2) Decision making 55.65% (\bar{X} =29.43, S.D.=3.91)

3) communication skill 55.28% (\bar{X} =16.79, S.D.=2.50)

4) decision skill 50.00% (\bar{X} =22.58, S.D.=2.74), respectively. The moderate level in health information and services access 47.96% (\bar{X} =21.96, S.D.=2.76) and response to questions 46.39% (\bar{X} =11.89, S.D.=2.22). The user satisfaction with Sim PMDs showed 60.31% of very satisfied, 30.57% satisfied, 8.58% neutral, and 0.54% dissatisfied. Overall level of HL and satisfaction with Sim PMDs were positive response to the training program.

CONCLUSION: The hand on techniques and oral cancer screening practices from Sim PMDs and using RiskOCA application in training program increased a positive effect to HL level in VHVs. Therefore, the public health policy should build capacity and support HL for oral cancer screening and risk factor assessment in VHVs by using this training program.

KEYWORDS: application, oral cancer screening, risk assessment, village health volunteers

GS1

8AHLA063

The Social Stories' Handbook to Enhance Health literacy Among Autistic Children Before Receiving Dental Care Services

Thatsana Ritthikul, DDS, is a dentist, Intercountry Centre for Oral Health, Department of Health, Ministry of Public Health, Thailand;

Mansuang Wongsapai, DDS, MPH, PhD, is a Director of Intercountry Centre for Oral Health, Department of Health, Ministry of Public Health, Thailand;

Numpueng Rattanapiboon, BSc, is a dental nurse, Intercountry Centre for Oral Health, Department of Health, Ministry of Public Health, Thailand;

Wisapen Kittaned, Kornwipa Wudtijureepun, BSc, are public health officers, Intercountry Centre for Oral Health, Department of Health, Ministry of Public Health, Thailand.

INTRODUCTION: Autistic children have difficulty accessing appropriated dental services. Due to the impairment of communication and interaction with society. Especially, in the new environment such as receiving dental care that can cause a major barrier to cooperation with dental treatment. Therefore, the preparation autistic children who undergoing to receive dental care services was very important. The Social Stories' Handbook which is popular way to teach the autistic children could promote and enhance the knowledge and health literacy for those who undergoing to receive dental care services.

OBJECTIVES: This study aimed to develop the Social Stories' Handbook to give an information of dental care situation and enhance the health literacy level for those autistic children.

METHODS: The operational study design was used. The samples were 59 autistic children' parents and multidisciplinary experts involved in teaching and promoting oral health of autistic children including special education teachers, occupational therapists, public health officers, nurses, pediatric and general dentists. The instrumentals were the Social Stories' Handbook which composed of the information of oral health examination, tooth x-ray, tooth filling, tooth scaling and tooth extraction. The Social Stories were applied to 59 of autistic children' parents, special education teachers and dental personnels to read with children under their care in age range between 5-25 years old in different provinces in Thailand. Data was analyzed by using descriptive statistic.

RESULTS: The results showed that 97.4 % of users were very satisfied in terms of contents, illustration and found that social stories were valuable, useful and practical to familiarize autistic children to dental treatment before the actual situation. Moreover, 93.1 % of users found that children interacted to the book in positive ways such as giving good attention to book contents and illustrations and 60.4 % of them interacted in active ways such as asking questions, repeating after book texts and doing role plays. In addition, parents have extended the use of books as other forms of activities on dental issues, such as drawing, painting and creating stories about going to the dentist all by the children themselves. Meanwhile, some dental faculties in Thailand were interested and introduced the Social Stories' Handbook to their dental students as well.

CONCLUSION: The results revealed that the Social Stories' Handbook can be used as a model for developing visual media to practice other daily life skills, knowledge and health literacy for both the autistic children and their parents in dental clinics.

KEYWORDS: Autistic children, Social story, Dental service

GS1

8AHLA118

Toolbox - Intervention to promote health literacy in German schools

Tessa Schlenker, MA, researcher at Technical University of Munich and PhD student at Bielefeld University;

Orkan Okan, Dr. phil., Professor, Technical University of Munich;

INTRODUCTION: School-aged children are often exposed to health-related information from digital sources. Learning how to deal with health information in a health-competent way, is a matter of health literacy and should be addressed while they are at school. Above all, it is relevant that they learn how to distinguish good health information from false. However, there are no health literacy interventions in schools to help them deal with these appropriately. Installing health literacy in schools succeeds more easily if it can be linked to existing curricular requirements.

OBJECTIVE: This study aims to implement a toolbox to address (digital) health literacy of school-aged children (grades 7 to 10) in German secondary schools by combining existing media frameworks with health literacy.

METHODS: Based on analyzing a mandatory curriculum on media literacy in the state of North-Rhine-Westphalia in Germany and elaborating its commonalities with health literacy we developed the toolbox for enhancing (digital) health literacy in school-aged children. The Toolbox was piloted in three school classes in Germany. The feedback provided by teachers and students was implemented in a new version of the intervention.

RESULTS: The basic understanding of health literacy in the Toolbox is finding, understanding, evaluating and using (digital) health information. These steps are followed through using quality criteria for good health information. By using media frameworks and integrating health as a topic, this health literacy toolbox fits to the German core curriculum and will ensure that the toolbox is familiar and can be used with low thresholds by school-teachers and other educational professionals. It provides topic-specific tasks (e.g. coronavirus, vaccination, nutrition) and evaluation criteria for identifying mis- and disinformation. Students learn that they need to find out the type of information, analyze the author, investigate the media provider, and also the sources given.

CONCLUSION: In the long term this curriculum analysis serves as a methodological blueprint for educationalists to integrate health literacy into schools in many ways. The intervention should make it easier for students to recognize good health information. For teachers it should be made easier to address health literacy in school without additional effort.

GS1

8AHLA124

The Development of Patient Centered Communication Model For Promoting Health Literacy among Hypertension Patients In General Practice Clinic, Metropolitan Health and Wellness Institution

Mrs. Nichanun Praivicharn , Registered Nurse, Metropolitan Health and Wellness Institution, Department of Health, Thailand.

INTRODUCTION: In 2025, There will be up to 1.56 billion hypertension patients. Each year, there are around 8 million people die from hypertension (WHO, 2011). Health literacy positively correlates with knowledge of hypertension control and self-care behavior among hypertension patients (Kareesun et al.,2019).The patient-centered communication that complies with the requirements of patients is a significant tool to reinforce health literacy in a health facility (Division of Health Education, Ministry of Public Health,2019).

OBJECTIVES: There are three objectives of this research. First,to study the situation problems and needs in health communication between medical personnel and hypertension patients at general medical examination clinics. Second, to develop a patient-centered communication model for promoting health literacy among hypertension patients. Lastly, to investigate the result from the developed model in a general clinic at metropolitan health and wellness institution

METHODS: This action research has three processes: pre-action stage, 2 cycled of action stage and synthesis stage. This research was conducted from June 2021 to March 2022 for a total period of 10 months. The participants are 9 health staffs, and the target group is 24 hypertension patients.

RESULTS: The results from this research according to the first objective found that problems and demands of health communication are including medical staff using medical terms and showing displeased expressions while chatting with a patient, the place is not private enough, there are one-way communication and two-way communication, The patient wants staff to use words that easier to understand, The patient wants effectual information from reliable sources, The patient does not want to be blamed for making mistakes, and the patient only wants self-appropriate advice. In the communication area, patients had limited access to services. According to the second objective found that the synthesis results of the model are including the development of patient-centered communication attitudes and skills of service staff, motivation by using past and present patient health data to compare with normal values, patient self-care exchange group activities while waiting for examination, ask me 3 activities, health questions reflecting the patient's self-care in conjunction with the physical examination results, and a wide range of video materials tailored to the needs of patients from reliable sources, According to the third objective found that blood pressure control of the target groups increased from 41.7% to 66.7% after participating in the activity. Moreover, the value of health literacy of the target groups is statistically increased ($t = -4.01, p = 0.001$).

CONCLUSION: Providing services for hypertensive patients should have patient-centered communication activities based on the context of that service facility. The focus is on reflecting the patient's factual information to encourage self-reflection and motivate communication by using easy-to-understand language in a private atmosphere and creating media that meets the needs of the patients.

KEYWORDS: hypertention, patient centered communication, health literacy

■ GS-2

Health literacy and pandemic (5 abstracts)

A085	Tri Sutanti Puji Hartati	The Association Between Health Literacy and Quality of Life During The COVID-19 Pandemic (<i>online</i>)
A103	Suwitchcha Sangthong	Health Literacy and COVID-19 Preventive Behavior Among a High School's Students in Kalasin Province, Thailand
A129	Tri Sutanti Puji Hartati	Association Between Health Literacy and Resilience on COVID-19 Survivor (<i>online</i>)
A147	Thao T P Nguyen	Predictors of eHealth Literacy and Its Associations with Preventive Behaviors, Fear of COVID-19, Anxiety, and Depression among Undergraduate Nursing Students: A Cross-Sectional Survey (<i>online</i>)
A161	Nguyen Thi Hong Nhi	Fear of COVID-19 as mediators in the association between Digital Health Literacy and Well-Being among Taiwanese university students

GS2

8AHLA085

The Association Between Health Literacy and Quality of Life During The COVID-19 Pandemic

Tri Sutanti Puji Hartati, S.Gz, a graduated-student of the Department of Nutrition, Faculty of Public Health, Airlangga University, Indonesia;

Emyr Reisha Isaura, MPH., Ph.D, a Lecturer, Department of Nutrition, Airlangga University, Surabaya, Indonesia;

INTRODUCTION: During the COVID-19 pandemic, the importance of health literacy (HL) was addressed by public health researchers. Health literacy is one of the predictive indicators of quality of life. Health literacy (HL) defined as the capacity to access, understand, evaluate, and apply basic health information to promote, maintain, and improve quality of life throughout the life course. Low health literacy often has an association with poor health outcomes such as low levels of self-efficacy, increased mortality, poor health status and reduced quality of life (QOL). Higher HL was associated with exercise during the COVID-19 state of emergency, a lower likelihood of depression and higher HRQOL which moderated the negative impact of fear of COVID-19 on HRQOL.

OBJECTIVE: The aim of this study was to analyze the association between health literacy and quality of life.

METHODS: This research used cross sectional design with sample size of 64 COVID-19 survivors, aged 18 and above. Data collection includes social demographic factors (age, gender, education, occupation, social status), HL (using HLS-SF12), and health-related quality of life (using RAND SF-36). Bivariate and multivariate regressions will be used to examine the associations.

RESULTS: Most of the respondents are women with an average age of 27.66 ± 9.82 year. Most of the respondents are bachelor, work in government or private organizations, and have a middle social level. General health perceptions ($\beta = 3.92$, 95%CI 344.24 - 378.42, $p = 0.03$) and mental health ($\beta = -3.49$, 95%CI 203.02 - 231.98, $p = 0.02$) was associated with health literacy. Physical functioning ($\beta = 4.57$, 95%CI 776.88 - 874.69, $p = 0.39$), physical role functioning ($\beta = 3.66$, 95%CI 251.79 - 320.09, $p = 0.32$), bodily pain ($\beta = -1.12$, 95%CI 41.30 - 59.32, $p = 0.25$), vitality ($\beta = -1.44$, 95%CI 173.91 - 197.97, $p = 0.27$), social role functioning ($\beta = 0.01$, 95%CI 73.79 - 88.71, $p = 0.98$), and emotional role functioning ($\beta = 2.4$, 95%CI 174.36 - 235.01, $p = 0.47$) wasn't associated with health literacy.

CONCLUSION: Low health literacy can lead to low quality of life such as general health and mental health. To improve the quality of life, appropriate programs must be designed and implemented to improve health literacy. Therefore, health providers should pay more attention on improving health literacy by holding educational promotional programs to enhance quality of life.

Keywords: Health Literacy, Quality of Life, Covid-19

GS2

8AHLA103

Health Literacy and COVID-19 Preventive Behavior Among a High School's Students in Kalasin Province, Thailand

Matatrutip Chatree, M.D., is a director of Health Promotion Center in 7 regional, Thailand;

Klamsuwan Bangorn, M.P.H, is a Chief of health promotion for studying age cluster in Health Promotion Center in 7 regional, Thailand;

Pakphoom Kornwipa, B.N.S., is a nurse in studying age cluster of Health Promotion Center in 7 regional, Thailand;

Sangthong Suwittha, M.P.H, is a public health officer in studying age cluster of Health Promotion Center in 7 regional, Thailand;

Chanaboon Sutin, Ph.D., is a statistician, Sirindhorn College of Public Health Khon kaen, Thailand

INTRODUCTION: Health literacy involved everyone to concern in health promotion and protection, disease prevention and early screening, health care and maintenance, and policy making. Therefore, health knowledge is necessary to effectively prevent the spread of COVID-19. Presently, Thailand has relieved more prevent COVID-19 measures, including permission to study on-site under the measures in which students should appropriately protect themselves. However, Thailand still found infection in children the rate of COVID-19 Omicron infection was 12.05% compared to all infections. Kalasin, a province in the northeastern region of Thailand, has 1,133 schools with 186,136 students, there have not been investigated of health literacy and COVID-19 prevention behavior before, and the results of the study will be applied to related agencies in Kalasin province as guidelines for the COVID-19 prevention of epidemics in schools.

OBJECTIVES: This study aimed to investigate the level of health literacy and behavior of COVID-19 prevention along with associations between them.

METHODS: The samples were 295 of Mathayom 1-6 students in a High School in Kalasin province, Thailand. Data were collected in June 2022 by using 3 parts of questionnaire: personal data, health literacy and COVID-19 prevention behavior. The data were analyzed by using descriptive statistics (frequency, percentage, mean and standard deviation) and inferential statistics (Pearson correlation Coefficient).

RESULTS: 1) The samples were females 60.3%, received 2 doses of COVID-19 vaccine 80.3% and more than 2 doses 11.4%. 2 samples were not permitted to get COVID-19 vaccine from Parents. 2) Health literacy in COVID-19 prevention were at a moderate level with averages of 3.52 (S.D.= 0.53). The comprehensive and right decision skills in COVID-19 prevention was at high level with averages of 4.35 (S.D.= 0.86) and 4.38 (S.D.= 0.70), respectively. The access and communication skills were at a low level with averages of 2.87 (S.D.= 0.86) and 2.57 (S.D.= 1.32), respectively. The most accessible source of information was social media 54.9%. The following advice from parents 32.2%, public health officials 23.1%, and websites 19.7%. Prevention behaviors of COVID-19 were at a moderate level with averages of 3.09 (S.D.= 0.89). The behaviors in moderate level are wearing a mask, hand washing, temperature monitoring, observing risk symptoms for covid-19, and use a personal spoon. The behaviors in low level are distancing, self-risk assessment before coming to school, group activities and cleaning common contact areas such as handrails, tables, and chairs. 3) The relation of health literacy and COVID-19 prevention behaviors was positive with statistically significant ($r=0.34$, p value <0.001).

CONCLUSION: Health literacy has positive relationship with COVID-19 prevention behaviors with statistically significant and health literacy and COVID-19 prevention behaviors were in moderate level. It recommends that the authorities of schools leader should creative

students' skills in accessing health information by using social media and engage students to have group school activities, such as cleaning the contact areas underlining COVID-19 preventive behaviors by the participation of student leaders.

GS2

8AHLA129

Association Between Health Literacy and Resilience on COVID-19 Survivor

Syafa Anindita Qamara as a student in Department of Nutrition, Faculty of Public Health, Airlangga University, Indonesia;

Tri Sutanti Puji Hartati, S.Gz as a graduated-student from Department of Nutrition, Faculty of Public Health, Airlangga University, Indonesia;

Emyr Reisha Isaura, S.Gz., M.PH., Ph.D as a Lecturer in Department of Nutrition, Faculty of Public Health, Airlangga University, Surabaya, Indonesia

INTRODUCTION: COVID-19 became a new pandemic since 2020. This pandemic causes many cases of death. According to WHO, globally, as August 10th 2022, there have been 584,065,952 cases of COVID-19 around the world, including 6,418,958 deaths. In Indonesia, there have been 6,261,605 cases of COVID-19, including 157,149 deaths. Literacy skills are needed for helping people to understand various information and hoaxes that circulating. Health literacy could affect COVID-19 survivor on how to deal with the pandemic before they got infected, when they got infected, and after. People who got infected by COVID-19 also experienced with many psychological problems such as anxiety, stress, etc. They face their problem with different methods and solution and that could have the impact on their resilience. Resilience is a psychobiological trait that affects how people react to traumatic situations in their lives. There are many factors that could influence individuals' resilience, one of them is health literacy. Those with good health literacy will likely experienced less psychological problems. This study explored about the relationship between health literacy and resilience on COVID-19 survivor.

OBJECTIVE: We aimed to analyze the relationship between health literacy and resilience on COVID-19 survivor

METHODS: The present study used a cross-sectional study online survey that conducted between July 1st 2022 until July 30th 2022 on 64 participants in East Java, Indonesia.

RESULTS: The mean age of the respondents was 27.66 ± 9.82 years. Most of the respondents were women and have a middle social level. Most of the respondents are bachelor and work in government or private organizations. Resilience ($\beta = 0.09$, 95%CI 19.19 – 20.62, $p = 0.25$) was not associated with health literacy.

CONCLUSION: Health literacy have no association with resilience on COVID-19 survivor. There might be other factors that could increase individuals' resilience other than health literacy, such as in psychosocial factors or neurobiological factors. Therefore, to increase resilience in COVID-19 survivors, health care providers should conduct educational promotion programs related to health literacy and psychosocial or neurobiological factors to increase resilience in COVID-19 survivors.

KEYWORDS: Health literacy, Resilience, COVID-19 Survivor.

GS2

8AHLA147

Predictors of eHealth Literacy and Its Associations with Preventive Behaviors, Fear of COVID-19, Anxiety, and Depression among Undergraduate Nursing Students: A Cross-Sectional Survey

Ha TTT¹, Minh HN², Thu TMP¹, Giang BK³, Hiep TN⁴, Ngoc-Minh N⁴, Hoa TBD⁵, Thai HD⁵, Yen HN⁶, Thao TD⁶, Thao TPN⁷, Thuy TL⁸, Hien TTD⁹, Tham TN¹, Khue MP¹, Tuyen VD¹⁰

¹ Hai Phong University of Medicine and Pharmacy; ² Taipei Medical University; ³ Hanoi Medical University; ⁴ Pham Ngoc Thach University of Medicine; ⁵ Thai Nguyen University of Medicine and Pharmacy; ⁶ Can Tho University of Medicine and Pharmacy; ⁷ Hue University of Medicine and Pharmacy; ⁸ Da Nang University of Medical Technology and Pharmacy; ⁹ Hai Duong Medical Technical University; ¹⁰ Taipei Medical University

BACKGROUND: The infodemic has been co-existing with the COVID-19 pandemic with an influx of misinformation and conspiracy theories. These affect people's psychological health and adherence to preventive measures. eHealth literacy (eHEALS) may help with alleviating the negative effects of the infodemic. As nursing students are future healthcare professionals, having adequate eHEALS skills is critically important in their clinical practice, safety, and health. This study aimed to (1) explore the eHEALS level and its associated factors, and (2) examine the associations of eHEALS with preventive behaviors, fear of COVID-19 (FCV-19S), anxiety, and depression among nursing students.

METHODS: We surveyed 1851 nursing students from 7 April to 31 May 2020 from eight universities across Vietnam. Data were collected, including demographic characteristics, eHEALS, adherence to preventive behaviors (handwashing, mask-wearing, physical distancing), FCV-19S, anxiety, and depression. Linear and logistic regression analyses were performed appropriately to examine associations.

RESULTS: The mean score of eHEALS was 31.4 ± 4.4 . The eHEALS score was significantly higher in males (unstandardized regression coefficient, B, 0.94; 95% confidence interval, 95% CI, 0.15 to 1.73; $p = 0.019$), and students with a better ability to pay for medication (B, 0.79; 95% CI, 0.39 to 1.19; $p < 0.001$), as compared to their counterparts. Nursing students with a higher eHEALS score had a higher likelihood of adhering to hand-washing (odds ratio, OR, 1.18; 95% CI, 1.15 to 1.22; $p < 0.001$), mask-wearing (OR, 1.15; 95% CI, 1.12 to 1.19; $p < 0.001$), keeping a safe physical distance (OR, 1.20; 95% CI, 1.15 to 1.25; $p < 0.001$), and had a lower anxiety likelihood (OR, 0.95; 95% CI, 0.92 to 0.99; $p = 0.011$).

CONCLUSIONS: Nursing students who were men and with better ability to pay for medication had higher eHEALS scores. Those with higher eHEALS scores had better adherence to preventive measures, and better psychological health. The development of strategies to improve eHEALS of nursing students may contribute to COVID-19 containment and improve their psychological health.

Keywords: health literacy; preventive behaviors; fear; COVID-19; anxiety; depression; nursing students; handwashing; mask-wearing; physical distancing; Vietnam.

GS2

8AHLA161

Fear of COVID-19 as mediators in the association between Digital Health Literacy and Well-Being among Taiwanese university students

Nhi, NTH, MD, University of Medicine and Pharmacy, Hue University; Taipei Medical University, Vietnam;

Huy, LD, MD, University of Medicine and Pharmacy, Hue University, Vietnam;

Thao, NTP, MD, MSc, University of Medicine and Pharmacy, Hue University, Vietnam;

Loan, DT, MSc, Faculty of Nursing and Midwifery, Ha Noi Medical University, Vietnam;

Tan, NP, MD, Department of Tropical Diseases, Cho Ray Hospital, Vietnam;

Nhi, HY, Taipei Medical University, Taiwan;

Nguyen, NLT, MSc, Vietnam National University, Vietnam;

Tuyen, DV, Assistant Prof., PhD, Taipei Medical University, Taiwan;

INTRODUCTION: Amid the coronavirus disease (COVID-19) pandemic, digital health literacy (DHL) not only plays a vital role in promoting health and well-being, but also enabling healthy decisions for precaution measures and adherence policies.

OBJECTIVES: The aim of this study was to examine the association between DHL and well-being, and investigate factor played as mediator in this association among Taiwanese university students.

METHODS: A web-based cross-sectional survey was conducted among 1631 Taiwanese university students aged 18 years and above from June 2021 to March 2022. Data collected were socio-demographic characteristics (sex, age, social status, study course, study program), information satisfaction, the importance of searching information related to COVID-19, fear of COVID-19, DHL, and well-being. A multivariable linear regression model was utilized to investigate the associations with well-being. The pathway analysis was employed to evaluate the direct and indirect relationship between DHL and well-being.

RESULTS:

The result revealed that a higher score of DHL ($\beta=0.299$, 95%CI: 0.1-0.497, $p<0.001$), and information satisfaction ($\beta=3.592$, 95%CI: 2.238-4.946, $p<0.001$) were found to be associated with a higher well-being score. In addition, the finding indicated the significant association between DHL and well-being which was mediated by fear of COVID-19. The standardized regression coefficients for the indirect association of DHL well-being mediated by fear of COVID-19 was 0.033 ((95%CI = 0.016, 0.04), $p<0.001$). The standardized regression coefficient for the direct and total effects between DHL and well-being were 0.138 ((95%CI =0.07, 0.2), $p<0.001$) and 0.248 (95%CI =0.2, 0.3, $p<0.001$), respectively.

CONCLUSION: A higher score of DHL showed direct and indirect associations with a higher well-being score. Remedies should be provided to promote DHL and lower fear of COVID-19 to enhance well-being among students.

■ GS-3

Health literacy and modern technology (6 abstracts)

A046	Yen Chi Chen	Using deep learning algorithm for the detection and diagnosis of middle ear diseases in handheld digital otoscope to improve health literacy: a retrospective interim study
A088	Zih-Ping	Image extraction and calculation of health literacy illustrations at postnatal care home (<i>online</i>)
A108	Wen-Chieh Yang	Developing a Smart Resistance Band Device for Exergaming and Hybrid Exercise Training (<i>online</i>)
A120	Chuchat Visaiprom	Enhancing Health Literacy in communities through Digital & Technology
A148	Hai Duong	A Mapping Of Health Literacy Studies In Asia Through Systematic Review
A171	Enny Rachmani	Digital Health Literacy and the usability of Peduli Lindungi Application to control Covid-19 in Indonesia

GS3

8AHLA046

Using deep learning algorithm for the detection and diagnosis of middle ear diseases in handheld digital otoscope to improve health literacy: a retrospective interim study

Yen Chi, Chen M.D., Department of Otolaryngology-Head and Neck Surgery, Kaohsiung Municipal Gangshan Hospital

Introduction: Middle ear diseases are often delayed or misdiagnosed in the general public. Myringitis and cerumen impaction are the most common issues faced by clinicians providing primary care to children and adolescents. Artificial intelligence (AI) has the potential to assist clinicians and patients in the detection and diagnosis of middle ear diseases through imaging.

Objective: The aim is to develop an AI program that is equal to or better than the doctors in the detection of middle ear disease.

Methods: Handheld digital otoscope images (Horus Scope) obtained by one otolaryngologist from Kaohsiung Municipal Gangshan Hospital were collected from April 2022 to Aug, 2022. To differentiate the middle ear diseases, three state-of-the-art convolutional neural networks (CNNs)-based models (GoogLeNet, MobileNet-V2, and Inception-V3) were constructed by MATLAB 2021a to recognize middle ear diseases. A class activation map (CAM) was also used to identify key features for CNN classification. The performance of each classifier was determined by its accuracy, precision, recall, and F1-score.

Results: A total of 255 clinical eardrum images were collected, and 117 images were selected for model training. The best performing model (GoogLeNet) achieved the detection accuracy of 90.0% and the F1 score of 0.917 for three different disease categories. The CAMs also revealed similar key features in clinical practice.

Conclusions: We developed a deep learning model in a handheld device that can detect and further classify middle ear diseases. The use of the concept can provide real-world smart medical solutions for telemedicine and improve the health literacy of the general public.

GS3

8AHLA088

Image extraction and calculation of health literacy illustrations at postnatal care home
Ho, Zih-Ping, Department of Medical Research, Chang Bing Show Chwan Memorial Hospital; Department of Nursing, Central Taiwan University of Science and Technology;
Liao, Min-Fei, Nurse, Department of President Office, Show Chwan Health System;
Lin, Ching-Ju, Postnatal Care Home, Show Chwan Memorial Hospital; Department of Nursing, Chang Bing Show Chwan Memorial Hospital.*

** Corresponding author*

INTRODUCTION:

In the past, text mining of linguistics, literacy could be taught and even used for machine learning in artificial intelligence.

OBJECTIVES:

The concept map of constructing health literacy in this study is obtained by computer-captured image features.

METHODS:

Some pictograms don't actually require complicated lines to outline the idea of health literacy, just as vegetable patterns represent vegetarianism. However, it is not easy to come up with these diagrams. If a computer-assisted extraction mechanism can be used to automatically condense complex diagrams into schematic diagrams, it will help people understand health literacy.

RESULTS:

In the research, a representative photo was read first, and then a new icon was generated after computer black and white processing and backbone. Such technology aids artificial intelligence to automatically gather the true meaning of communication messages from graphic recognition.

CONCLUSION:

This study focused on pictures of postpartum home scenes or postpartum women enjoy food and drink. The computer-generated results are also interesting and entertaining.

Keywords: Postnatal care home, concept map, health literacy icon, figure extraction, machine figure reading.

GS3

8AHLA108

Developing a Smart Resistance Band Device for Exergaming and Hybrid Exercise Training

Wen-Chieh Yang, PT, PhD, an Assistant Professor, Department of Physical Therapy, Hungkuang University

INTRODUCTION: Resistance bands are tools for strengthening exercise. They are popular among trainers for athlete training, or therapists for rehabilitating people with stroke, frailty, and sarcopenia. However, conventional resistance bands could not provide objective feedback such as movement force, speed, and smoothness. The lack of object feedback makes the training less interactive and engaging.

OBJECTIVE: This study aims to develop a smart band device to provide instant feedback about movement force and speed.

METHODS: The smart band device comprises a stretch sensor, a processor, a battery, and a Bluetooth module. The device attaches to a conventional resistance band to measure the stretch of the band and convert it to movement force and speed. The data of movement force and speed could send to other devices (e.g., computers or smartphones) via Bluetooth to provide instant feedback or gamified interactions. We compared the accuracy of this smart band device with the standard Vicon motion capture system. One healthy young adult was recruited to conduct several band exercises (squatting, lateral fly, biceps curl) using a resistance band attached with both the smart bend device and Vicon reflexive markers.

RESULTS: The root mean squared error obtained with the smart bend device was 8mm for static trials and 16mm for dynamic trials when compared against Vicon. The correlation coefficient between the smart bend device and Vicon was 0.89 ($p < 0.01$).

CONCLUSION: Our smart resistance band device demonstrated a low-cost solution with acceptable accuracy in measuring movement force and speed during resistance band exercise. These movement data could be presented on mobile devices as instant feedback, or could be used to control the avatar in an exergame. In addition, our device could bring novel approaches to in-person, remote, and hybrid (in-person and remote) exercise sessions.

GS3

8AHLA120

Enhancing Health Literacy in communities through Digital & Technology

Visaiprom C, Pattara-anantanop N, Nakkongkham P, Health promotion center Region 1 Chiangmai, Department of Health, Thailand;

Pengjuntr W, Foundation for Quality of life (S.Sithigarn), Nonthaburi, Thailand;

INTRODUCTION: Health literacy (HL) can improve behaviors and health status. In the era of digital and technology advancement, It will enhance HL and also solve important health problems.

OBJECTIVES:

1. To develop systems and mechanisms for enhance HL through use of proper technology, suitable social medias for the community.
2. To strengthen the capacity for design and develop technology, motivate HL for the target group.

METHODS: Participatory Action Research (PAR) by interested volunteer communities in the northern region of Thailand has started since March 2019 - 2021, this project was getting support from Saeng Sitthikan Foundation (for Quality of Life) and Health promotion center region 1, Chiang Mai, Department of Health.

We used the nine-steps building of health literate organization; There are 4 important steps: 1) analysis and assess problems on community context 2) design developments by emphasis on participation and appropriate technology 3) model implementation 4) assessing of development outcomes.

RESULTS: The nine-steps building health literacy organization and strengthening the capacity can be applied for enhancing health literacy of people in the four communities as follows:

Community 1: HL enhancement of families and kidney disease patients for decrease progression rate of chronic kidney disease (CKD). Jointly developed Care Kidney application to assess the risk of CKD and track daily sodium intake. Make them improve about decrease consumption of high-salt diet.

Community 2: Enhance HL in pregnant women for healthy pregnancy, birth safely, breastfeeding for 6 months, raising healthy children aged 0-5 years, focusing on community participation by using Line OA, Line group and 1,000 days of miracles application to create a reciprocal channel and enhance HL in mothers and children. Make them have better outcomes.

Community 3: This community are aging society (23.86% elderly). We create re-unite of elderly club for develop a quality of life, health promotion, Emphasize target group using appropriate technology to enhance the HL of the elderly's desirable behavior such as Pill reminder Pro app for helps remind when taking medicine, Magnifying Glass With Light helps expand the text on screen can make better reading, Pocket Physio collects exercises steps, OLDSTER: social network application for retirees, etc. Make them improve desirable behavior.

Community 4: A problem of agricultural chemical side effect. Establishing Community Pest Management Center by integrate with District Health Promoting Hospital, Sub district Administrative Organization, Online VHV applications, LINE GROUP app for communication, surveillance, protective equipment while using pesticides, use biological, cleaning vegetables/fruits.

CONCLUSION: The nine-step building of health literate organization, creating and choosing proper digital-technology by strengthening community capacity are enhancing HL and improving health status.

GS3

8AHLA148

A Mapping Of Health Literacy Studies In Asia Through Systematic Review

Hai Duong, MD, is a Lecturer, Department of Epidemiology and Community Health, School of Medicine, Vietnam National University, Ho Chi Minh City, is a Student, Department of International Master/Ph.D. Program in Medicine, College of Medicine, Taipei Medical University;

Peter W.S. Chang, MD, MPH, ScD, FRCP is an Adjunct Professor, Tufts University School of Medicine; a Senior Advisor, National Chung Cheng University; and the Director, Show Chwan Memorial Hospital.

INTRODUCTION: Health literacy (HL) is the degree to which people can search, understand and use health information to perform health decisions and activities for themselves and others. Studies on HL are needed to evaluate and improve health through suitable interventions in Asia. **OBJECTIVE:** The study aimed to map the HL studies on populations in different countries in Asia. The results could provide a better understanding of HL developments and its association with health care quality and challenges in Asia in the future.

METHODS: To collect the relevant published studies, we selected designated keywords and Medical Subject Headings (MeSH), then screened titles and abstracts, and finally screened full texts to extract and summarize the data. Studies published in English with quantitative measurements of HL were collected through four databases, PubMed, Cochrane Library, Embase, and Web of Science. The date of publication was not limited. 99 relevant publications fitted the selection. Researchers reviewed these works independently. If there was any conflict between the researchers, a third researcher was invited to join the review followed by a discussion and agreement.

RESULTS: 85 articles were identified on HL, and 14 on electronic HL (e-HL). These included oral HL, HL in vaccination, or HL related to diseases such as diabetes, high blood pressure, and dementia. The most common topic of HL was general HL.

Studies on oral HL indicated that improving the oral HL of parents might have a positive impact on children's oral health. Good oral HL was associated with education and employment status. Males generally had lower dementia and diabetes HL than females. 75% of Japanese participants obtained dementia-related information from television and 52% from newspapers/magazines. 52.9% of Chinese diabetes patients had adequate diabetes HL which was lower than those of developed countries (90%). The lower disease-related HL is associated with poorer health-related quality of life among elderly individuals.

The factors influencing the HL level included age, education, health status, income, and area of living. Those with lower HL were related to poorer health outcomes and lower quality of life.

For e-HL, levels of e-HL were significantly different between ages, gender, education, social status, health status, smoking, and exercise. Participants with higher e-HL were shown with better health outcomes.

CONCLUSION: Most of the HL was addressed in general HL or disease-specific HL, such as diabetes HL, oral HL, dementia HL, etc. The HL researches were different from country to country and could be affected multi-factorially, also related to the quality of life and health outcomes.

KEYWORDS: Health Literacy, eHealth Literacy, Asia, Surveys, Questionnaires.

GS3

8AHLA171

Digital Health Literacy and the usability of Peduli Lindungi Application to control Covid-19 in Indonesia

Enny Rachmani, Faculty of Health Science, Universitas Dian Nuswantoro; AHLA Country Office UDINUS, Indonesia;

Nabila NA, Herlina A, Ghina Nisrina, Alfi Amalia1, Aulia Khlada, Arifna Kurnia, Irene Wilde, Sitia Amanah, Raditya Anggoro, Faculty of Health Science, Universitas Dian Nuswantoro, Indonesia;

Pandemic Coronavirus Disease (COVID-19) has been speeding up digital transformation in every sector because digital technologies have become a problem solving and a significant route for accessing remote services. Technologies routinely change human beings differently, including in the health sector. The government of Indonesia is developing Peduli Lindungi Apps to control Covid-19 and recently transformed become super apps in a health area. The deployment of digital technology in health is affected by the community's readiness, such as digital health literacy, to achieve the goals, optimize health service performance, and block infodemics and missing information. This study aims to describe the factors that correlate with the community's usability of Peduli Lindungi Apps.

The study distributed some questionnaires such as HLS-IND-SQ10, Digital health Literacy Competency for Citizens (DHLC), and Health IT usability to 900 respondents in two primary health care centers, five hospitals, and a community from two villages. HLS-IND-SQ10 is a short questionnaire of HLS-47Q that consists of ten questions; DHLC consists of 26 questions that measure four indicators in digital competencies such as information and data literacy, communication and collaboration, digital content creator, safety, problem-solving, and health information literacy.

This study reveals that factors correlates with usability of Peduli Lindungi application are digital health literacy (sig=0.000, r=0.36), education (sig=0.000, r=0.17), age (sig=0.000, r=-0.16), health literacy (sig=0.000, r=0.47). Health Literacy has a higher correlation index compared to other factors. The highest usability of Peduli Lindungi Apps is in respondents from hospitals, followed by community and PHC.

Keywords: digital competencies, health literacy, usability, Covid-19, Indonesia

GS-4**Health literacy and ageing society (6 abstracts)**

A010	Shanshan Wang	Dementia literacy and psychological well-being among informal caregivers of people with dementia: An analysis of the influencing mechanism (<i>online</i>)
A076	Hsinyi Hsiao	An Intergenerational Program Using Design Thinking Approach to Improve Intergenerational Relationship and Well-Being for Young and Old Generations: A Mixed-Methods Study
A089	Kai-Ting Yang	Recall for the Journey of love, create the dementia friendly communities (<i>online</i>)
A112	Pei-Yin Chen	The Health Intervention and Literacy for the Hot Springs Recreation for the Seniors at Home
A145	Chin Chia Yu	The role of Active Aging Learning Center in community health literacy
A146	Padmore Adusei Amoah	Social capital and health literacy among community-dwelling older persons in Hong Kong (<i>online</i>)

GS4

8AHLA010

Dementia literacy and psychological well-being among informal caregivers of people with dementia: An analysis of the influencing mechanism

Shanshan Wang, PhD, Research assistant professor, School of Nursing, The Hong Kong Polytechnic University;

Shan Qiuju, Associate professor, Second Affiliated Hospital of Zhengzhou University;

Daphne Cheung, Associate professor, School of Nursing, The Hong Kong Polytechnic University;

Isaac Leung, Lecturer, Department of Statistics, The Chinese University of Hong Kong;

Xinyi Xu, Lecturer, School of Nursing, Hebei Medical University;

Angela Leung, Professor, School of Nursing, The Hong Kong Polytechnic University

INTRODUCTION:

Dementia informal caregiving is a global phenomenon. It is well documented that caregivers' psychological well-being is often affected by busy caregiving schedules. Lawton's two-factor model indicates that caregivers' psychological well-being is influenced by caregiving appraisal and other caregiver factors. Dementia literacy, an essential caregiver factor that may affect the caregiving experience, is an important caregiver factor worth exploring. However, less is known about how dementia literacy influences psychological well-being. No study has been conducted among Chinese caregivers. Hence, it is imperative for a clear understanding of the influencing mechanism of dementia literacy, caregiving appraisal, and psychological well-being among Chinese dementia caregivers.

OBJECTIVES:

To explore the association between dementia literacy, caregiving appraisal, and psychological well-being and their influencing mechanisms.

METHODS:

Two hundred and twenty-three informal caregivers of people with dementia were involved in this analysis. Dementia literacy was measured by the Alzheimer's Disease Knowledge Scale and Dementia Attitude Scale. Caregiving appraisal was measured with Caregiving Appraisal Scale, and psychological well-being was measured with Ryff's Psychological Well-being Scale. Descriptive statistics were used to describe the characteristics of participants and key outcome variables. Pearson's correlation analysis was used to analyze the correlation among the variables. Structural equation modeling was used to examine the influencing mechanism among dementia literacy (i.e., knowledge of dementia and attitude toward dementia), caregiving appraisal, and caregivers' psychological well-being.

RESULTS:

Attitude toward dementia was significantly associated with caregiving appraisal ($r=.312, p<.01$) and psychological well-being ($r=.311, p<.01$). However, knowledge of dementia was only significantly associated with psychological well-being ($r=.136, p<.05$). The structural equation modeling fitted well ($p=.078, CFI=0.987, RMSEA=0.078$). In the fitted model, caregiving appraisal partially mediated the association between attitude toward dementia and psychological well-being. In contrast, attitude toward dementia and caregiving appraisal fully mediated the association between knowledge of dementia and psychological well-being.

CONCLUSION:

The influencing pathways indicate that efforts can be exerted to improve caregiving appraisal and attitude toward dementia to improve caregivers' psychological well-being.

KEY WORDS: Health literacy, dementia, caregiver, psychological well-being

An Intergenerational Program Using Design Thinking Approach to Improve Intergenerational Relationship and Well-Being for Young and Old Generations: A Mixed-Methods Study

Dr. Hsinyi Hsiao, PhD, MBA, MSc, is an associate professor, Department of Social Work, Tzu Chi University;

Dr. Tsu Ann Kuo, PhD, MSG, MHS, MSW, is an associate professor, Department of Medical Sociology and Social Work, Chung Shan Medical University;

Dr. Yu-Jung Hsu, PhD, Department of Social Work, Mei Ho University;

Ms. Tara Chen, MPH, Tzu Chi University;

Mr. Chao-Chun Wu, MD, Health Promotion Administration, Ministry of Health and Welfare;

Dr. Ying-Wei Wang, PhD, MD, Center for Palliative Care, Hualien Tzu Chi Hospital.

INTRODUCTION: Taiwan's population is designated to become a super-aged society by 2025. Intergenerational support has been a primary source of caregiving for older adults. However, young people from Taiwan reported more ageist responses toward intergenerational behaviors than those from the United Kingdom. Both implicit and explicit ageism produced among young generation negatively affect older adults' physical and mental health. Currently the learning infrastructure at universities falls behind in addressing ageism and promoting health awareness among students. It is critical to provide university curriculum integrating design thinking and service learning frameworks to prepare college students for developing programs that helps promote well-beings for youth and old generations in aging societies.

Objective: The objectives of this study were to examine effects of Design Thinking Intergenerational Service Learning Model(DTISLM) on: 1) empathy, intergenerational relationship, health promotion behaviors among college students, and 2) well-being among older adults.

METHODS: A cross-university research team developed DTISLM with structured ageing-related trainings to prepare university students for program implementation. From three universities partnered with 13 community-based centers for older adults in three regions across Taiwan 142 college students across departments (i.e., medicine, nursing, social work, psychology) developed intergenerational programs through a design-thinking approach for local older adults and completed pre-post surveys (e.g., empathy towards older adults, ageism, health promotion behaviors) and reflection notes before and after the program. Seventy-eight older adults also completed pre-post surveys and participated in focus group discussions when the program concluded. The pre- and post-test surveys of two generations were analyzed by using paired sample t-test using SAS. Thematic analysis was used for qualitative data.

RESULTS: Quantitative results showed that DTISLM significantly improved college students' level of empathy towards older adults, ageism, intergenerational relationship, exercise, emotional competence, and altruism behaviour. After participating in the intergenerational activities led by the students older adults' happiness, mental health, social engagement and social support increased as well. Their focus group discussions indicated their improvements in: 1) health awareness of re-examining their own diet, health habits, and bodies through; 2) physical health, memory and social engagement; 3) stereotype against young generation; 4) mental health; 5) intergenerational relationship with their grandchildren; and 6) their life

experience inheritance. Similarly, students' improved their :1) understanding about challenges of physical deterioration in various functions experienced by older adults and their psychological feelings (i.e., frustration) coming with the decline of physical functions; 2) negative attitudes towards their own parents which hurt their parental feelings; 3) confidence in interaction with older adults; and 4) job interests in aging industry.

CONCLUSION: Our mixed methods' results show that DTISLM program improved stereotype and intergenerational relationship for two generations and social well-being among older adults. The program might help to promote health awareness and behavior among college students and older adults. Moreover, with structured 18-week curriculum and guidebook for faculty members to build partnership with community centers for older adults DTISLM is easily to be promoted to any units at long-term care institutions with intergenerational service needs to create aging-friendly societies in the world.

Recall for the Journey of love, create the dementia friendly communities

Kai-Ting Youn, Pei-Chen Wang, Tzu-Chun Lin, Ting-Chia Hsu, Sui-Hing Yan, Jia-Kang Wang

INTRODUCTION:

In face of an aging society, the number of patients with dementia is increasing year by year. We construct a series of activity to promote the public's awareness of "dementia-friendly", understanding the symptoms of dementia as well as learning and handling the problems that patients may encounter in daily lives, especially for the personnel in the service industry. Through "dementia friendly guardian angel" health education video, prized-quiz activities, and workshop with situational exercise discussion for enterprises employees, enterprises and the public could enhance the recognition and management of dementia symptoms. Furthermore, "Friendly Store of New Taipei city" can be built to create "dementia friendly" environment for dementia patients and their family to live comfortably as well as feel at ease.

OBJECTIVES:

The purpose of the project is to improve enterprise employees and the public's concept and knowledge to "dementia friendly" by having lessons through "dementia friendly" website and certain workshops in these service enterprises. They will obtain the certification mark issued by New Taipei City Health Bureau and become one of the members of "dementia-friendly guard station" by completing the lessons. Together create dementia-friendly surrounding for dementia patient to live easily.

METHOD:

The project targeted four enterprises as participants which are Far Eastern A Mart, Far Eastern Department Stores, Far East Commercial Bank, and Far East Tone Telecommunications Company. All are subsidiary of Far Eastern Group in the Banqiao District of New Taipei City.

Research data was collected by questionnaires, and the participants were tested before and after the workshop and website activities.

- (1) Website activity (before and after watching health education video)
- (2) Gathering the questionnaire and then used for descriptive statistics, workshops T-test analysis, website activities and overall project cost benefit analysis before and after the workshop.

Content of questionnaires includes 4 concepts of Knowledge, Attitude and Practices (KAP) survey: knowledge, attitude, skill and self-efficacy. Four concepts were applied on the cost benefit analysis of participants' concept learning.

Results:

For part of the cost benefit analysis of the Dementia Friendly website activity, the result showed that it had significant difference in the knowledge, attitude and self-efficacy part of the Questionnaire before and after watching health education video ($P < 0.05$).

In addition, for the cost benefit analysis of the Dementia Friendly workshop, the outcome demonstrated that it had significant difference in knowledge, attitude and self-efficacy part of the Questionnaire before and after the workshop ($P < 0.05$).

Last but not least, the Project results showed significant difference in knowledge, attitude and self-efficacy part of the Questionnaire ($P < 0.05$) as well.

CONCLUSION:

The research showed that both website workshop activities brought positive influence on promoting dementia. We recommended future dementia project could not only consist of website activities but also workshop as an auxiliary method for the quality of dementia concept promotion and participants' effectiveness.

**The Health Intervention and Literacy for the Hot Springs Recreation
for the Seniors at Home**

Chia-Ching Lin, PhD, is a Professor, Department of Senior Citizen Welfare and Long-term Care Business, HungKuang University, Taiwan;

Pei-Yin Chen, PhD, is an Assistant Professor, Department of Senior Citizen Welfare and Long-term Care Business, HungKuang University, Taiwan;

INTRODUCTION: Hot spring recreation isn't a high-spending luxury enjoyment, but a highly professional healing recreational activity in Taiwan. This study is to explore the health literacy of the elderly through program design, and the impact on the society of the elderly. Based on the relevance of community resilience, as well as the effectiveness of the elderly people's participation in hot spring recreation programs at home and the impact of active aging.

OBJECTIVES: (i) Investigating the needs of the elderly to use hot springs for recreation in the elderly; (ii) Discuss the content of the hot spring recreation programs preferred by the elderly; (iii) Propose the health literacy effect of participating in the home hot spring program.

METHODS: This research adopted qualitative and quantitative research methods, including systematic literature review, in-depth interviews, quasi-experimental design, and market evaluation methods, to analyze the health literacy and effectiveness of in-house hot spring recreation programs.

RESULTS: About 58.3% of the participants were unfamiliar with hot spring recreation, and more than 83.3% of the participants said they had never thought of taking a hot spring at home. Seventy-five percent of the seniors expected that the cost of the program should not exceed NT\$500 each time, but the participants were all said that if the content of the program is worthwhile, the cost is a secondary consideration; the participants in the experimental group had significantly better cognition of health promotion than the control group (p -value $<.05$). 89.17 points (percentage level), the control group also had 87.83 points of preference for the hot spring recreation in the house, indicating that regardless of whether they participated in the actual design of the hot spring recreation content, the degree of preference was high and the difference did not reach a statistically significant level (p -value $>.05$).

CONCLUSION: We believe that the elderly should properly introduce health promotion in the process of participating the hot spring recreation for the elderly, which will help the elderly indirectly reduce the rejection of learning health knowledge. It can effectively attract the elderly to put forward their motivation to participate, and enhance their sense of achievement; sorting out and analyzing the hot spring recreation programs preferred by the elderly can effectively promote communication with the elderly, and realize their value and sense of existence. The content of the program for the elderly to participate in includes understanding, recognition, asking questions, gaining attention, and co-constructing an individualized in-house hot spring recreation program. Also the ingredients of the hot springs can be adjusted by themselves; finally, through a questionnaire survey with validity, the participants in the experimental group had significantly better health literacy than the control group in Taiwan.

GS4

8AHLA145

The role of Active Aging Learning Center in Community Health Literacy

Chin Chia. Yu, a Assistant Professor, Department of Senior Citizen Welfare and Long-term Care Business, College of Medical and Health Care, Hungkuang University, Taiwan

Many people are familiar with community colleges, know about senior citizens happy academy, and may have heard of long-term care 2.0's long-term care stations. But today, I would like to introduce to you the senior citizens learning resource centers set up by the Ministry of Education in various townships and cities.

Active Aging Learning Center

Senior education is a part of education for the elderly of the Ministry of Education. expecting to build a lifelong learning system for the elderly and to add places for education and learning for the elderly. Encourage middle-aged and senior citizens over 55 to learn lifelong and enjoy the joy of learning through establishing community learning bases. As of this year, there are 370 senior learning centers across the country, located in 21 counties and cities across Taiwan. Taichung Shalu Active Aging Learning Center Hungkuang University has hosted Taichung Shalu Senior Citizens Learning Center for many years. Shalu, in the coastline area, the average age is high, and the education level is low for the elders of the AALC students. The age group of volunteers is also relatively high, and there are even many people whose average age is over 70 years old, exactly achieving "the elderly serve the elderly."

Active Aging Learning Center is the promoter of community health literacy.

According to the definition by the Health Promotion Administration of the Ministry of Health and Welfare, health literacy refers to the ability of people to obtain, process, and understand essential health information and make health decisions based on it (the Health Promotion Administration, 2019). Health literacy should be general and necessary knowledge and a discrimination ability for the elderly in the community. The elders should be able to obtain, understand, judge and apply the received health information, which will help them to make judgments and decisions on disease prevention and health promotion in their daily lives to improve their quality of life

Taking the Taichung Shalu Active Aging Learning Center as an example, we have planned a course on "drug safety." Professors with a doctor's degree in pharmacy from the university entered the community to teach the elders the principles of drug use, how to preserve drugs, and avoid repeated drug use to strengthen the elders' knowledge of drug use. We have arranged a "physical fitness course" to introduce the concept of regular exercise among the elders by the teachers with sports expertise to strengthen the elders' muscular endurance and prevent falls.

CONCLUSION

From a lifelong learning perspective, 370 Active Aging Learning Center across Taiwan serve as community health literacy advocates and educators for the elderly. However, the AALCs may need to strengthen their marketing and publicity to more local elders know about this learning method. Therefore, there will be more opportunities to increase elders' health literacy in the community.

GS4

8AHLA146

Social capital and health literacy among community-dwelling older persons in Hong Kong

Padmore Adusei Amoah, School of Graduate Studies, Institute of Policy Studies, Department of Applied Psychology, Lingnan University, Hong Kong.

INTRODUCTION: Health literacy is critical to the health and well-being of older persons. In societies with rapidly ageing populations such as Hong Kong, the role of health literacy is even more essential in efforts to promote healthy ageing and ageing in place. One factor recently considered fundamental to health literacy development is social capital—the resources embedded in social relationships and norms that facilitate them. In contributing to this emerging debate, this paper explores how cognitive and structural aspects of social capital influence different aspects of health literacy of community-dwelling 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.

RESULTS: Preliminary analysis shows the older persons had challenges accessing, understanding and applying health information from clinical and non-clinical settings. It was apparent that structural and cognitive aspects of social capital informed access and application of needed health information by serving as the first source of health information, aiding them to navigate infodemic, and enhancing their quality of engagement with health practitioners. To some older persons, without social capital, one could become ignorant about health issues and suffer deteriorating health.

CONCLUSION: While public health and social service agencies fervently design interventions to promote healthy ageing and ageing in place, such efforts should consider the social capital of older persons to increase their chances of success.

KEYWORDS: ageing, health literacy, social capital, active ageing, Hong Kong

■ GS-5

Health literacy, NCDs and Social Resilience (7 abstracts)

A014	Te-Chun Shen	Current Status of Idiopathic Pulmonary Fibrosis in Taiwan: Results from a Nationwide Cohort (2000-2016)
A062	Chia-Ching Chen	Health Literacy as an Essential Component to Creating Sustainable Impacts in Short-term Medical Missions
A105	Yun-Hsuan Chang	A moderated mediation model of resilience in the association between Daily hassles, perceived stress, and depression (<i>online</i>)
A127	Trong Nguyen	Health literacy and mental health: review of mental health literacy on mental health outcome
A160	Pham Thi Minh Thu	Health literacy in patients with stroke: associated factors and its impact on depression among those with low and high disability levels
A162	Carmel Bouclaous	Functional Cervical Cancer Literacy among Lebanese women: A possible source of protection (<i>online</i>)
A163	Prateek Srivastav	Development of Educational Booklet for health promotion among obese and overweight adolescents (<i>online</i>)

GS5

8AHLA014

Current Status of Idiopathic Pulmonary Fibrosis in Taiwan: Results from a Nationwide Cohort (2000-2016)

Ya-Chun Chuang, MD, School of Medicine, China Medical University, Taichung, Taiwan;

Cheng-Li Lin, MS, Management Office for Health Data, China Medical University Hospital, Taichung, Taiwan;

Te-Chun Shen, MD, PhD †, School of Medicine, China Medical University, Taichung, Taiwan; Department of Internal Medicine, China Medical University Hospital, Taichung, Taiwan; Department of Internal Medicine, Chu Shang Show Chwan Hospital, Nantou, Taiwan

INTRODUCTION:

Idiopathic pulmonary fibrosis (IPF) is a rare but serious chronic disease that affects the tissue surrounding the alveoli in the lungs. The lung tissue becomes thick, stiff, and scars with unknown causes. The prognosis of IPF is much poorer than other types of pulmonary fibrosis.

OBJECTIVES:

We aimed to investigate the comorbidities and progression of IPF to promote health literacy.

METHODS:

Patients with newly diagnosed IPF were identified among 2,000,000 persons in the National Health Insurance database between 2000 and 2016 in Taiwan. We recorded demographic characteristics and detailed baseline comorbidities from 1995 to the date of diagnosis. Furthermore, we evaluated the numbers and the time duration of the first episode of pneumonia, acute respiratory failure, chronic respiratory failure, and death in patients with IPF. The endpoint of the study was set for December 31, 2016.

RESULTS:

The study included 921 patients with newly diagnosed IPF. The mean age was 69.7 ± 14.2 years, and 58.4% of patients were men. The baseline comorbidities included [pulmonary] chronic obstructive pulmonary disease (66.9%), asthma (34.7%), pulmonary hypertension (4.02%), sleep apnea (1.63%), pulmonary embolism (0.76%), [non-pulmonary] hypertension (61.1%), ischemic heart disease (38.9%), heart failure (22.8%), atrial fibrillation (6.73%), diabetes mellitus (28.2%), hyperlipidemia (37.8%), gastroesophageal reflux disease (24.2%), chronic liver disease and cirrhosis (23.1%), and chronic kidney disease (7.27%). The numbers of pneumonia, acute respiratory failure, chronic respiratory failure, and death were 438 (47.6%), 164 (17.8%), 39 (4.23%), and 334 (36.3%), respectively. The time duration to the first episode of pneumonia, acute respiratory failure, chronic respiratory failure, and death were 2.09 ± 2.98 , 3.12 ± 3.62 , 3.20 ± 4.03 , 3.27 ± 3.03 years, respectively.

CONCLUSIONS:

Patients with IPF had considerable comorbidities, particularly pulmonary and cardiovascular comorbidities. The duration from diagnosis to disability and mortality was short. It is necessary to provide more medical sources to slow down IPF disease progression.

KEYWORDS: Idiopathic pulmonary fibrosis; comorbidity; prognosis; health literacy.

GS5

8AHLA062

Health Literacy as an Essential Component to Creating Sustainable Impacts in Short-term Medical Missions

Chen, CC., Hsu, WC., Hu, CC., Chen, T.

Department of International Medical Affairs, E-DA Hospital, Kaohsiung, Taiwan

INTRODUCTION: Traditional short-term medical missions (STMM) supplement healthcare delivery and education in areas of need, and require a shift for interdisciplinary interaction with local medical staff to achieve long-term sustainable impacts. Through partnership with Operation Smile Vietnam (OSV) and its alliances, E-DA Hospital (E-DA) has enhanced local surgeons' microsurgery skills and has reduced cleft lip/palate (CL/P) patients in Vietnam over 9 years. During the pandemic, a tailored approach to building local partners' health literacy (HL) was developed with the concepts of speech-and-language therapy (SALT) through a pilot online education platform. The SALT curriculum has been found to increase the capacity of local partners to better utilize the limited resources, allowing continuous improvement of healthcare quality for CL/P patients.

OBJECTIVE: The aim of this study is to increase local partners' knowledge and skills related to SALT through customized and local context online courses.

METHODS: The courses were developed by speech-language pathologists and E-DA staff which were translated into Vietnamese. The course development focused on adult learning principles and was piloted for quality improvement. Course topics centered on real-life scenarios of an STMM, covering feeding skills and SALT interventions. The cultural competence of the local context, combined with step-by-step explanations, and assisted with supplementary education videos with Vietnamese dubbing and subtitles was included in the course development.

RESULTS: 16 participants participated in the pilot curriculum. 13 evaluations were completed to evaluate the course objectives and contents and improved HL with a response rate of 81.3%. The mean score of overall satisfaction was 4.5 out of a maximum of 5 points. The highest satisfaction was for "lecturer performance" (4.69 mean points) and the lowest was for "interpreter performance" (4.27 mean points) among 4 dimensions. In "enhance more awareness of SALT for CL/P", 38% of respondents were strongly agreed and 62% was agreed. 69% was strongly agreed and agreed with "feel able to apply the knowledge learned in the course to the job". As for "be able to answer the majority of questions about SALT for CL/P from patient/family confidently", 39% was neutral and 8% was disagreed. When asked about "re-attend intention", 69% had strong willingness, and 23% had willingness.

CONCLUSION: The feedback has allocated future plans to build a hybrid curriculum to improve local partners' HL levels. Strengths included video and subtitle interpretation, with the cultural competence of the local context for case scenarios. The curriculum will be used for pre-mission education and can be accessed whenever for local partners. E-DA staff will host a live Q&A for further clarity, and integrate the curriculum competencies during STMMs when they resume in the post-pandemic. Further evaluations will monitor the impact of the curriculum for local partners' capacity to deliver healthcare and guidelines for CL/P patients/families.

KEYWORDS: health literacy, short-term medical mission, sustainable impact.

GS5

8AHLA105

A moderated mediation model of resilience in the association between Daily hassles, perceived stress, and depression

Yun-Huan Chang, PhD, an Associate Professor, Licensed clinical psychologist, Institute of Gerontology, Institute of Behavioral Medicine, College of Medicine, National Cheng Kung University; and an Adjunct associate professor at Institute of Genomics and Bioinformatics, College of Life Sciences, National Chung Hsing University;

Cheng-Ta Yang, the Dean of College of Humanities and Social Sciences, Taipei Medical University, and a Professor of Department of Psychology, National Cheng Kung University;

Juan-Pin Su, MD, PhD, the Associate Dean of An-Nan Hospital, China Medical University, as a Professor of Department of Psychiatry, Mind-Body Interface Laboratory at China-Medical University & Hospital;

Joshua Goh, PhD, an associate Professor, Graduate Institute of Brain and Mind Sciences, National Taiwan University College of Medicine;

Sheng-Hsian Lin, PhD, an Associate Professor, Institute of Clinical Medicine, College of Medicine, National Cheng Kung University;

Meng-Che Tsai, MD, PhD, an associate professor of Department of pediatrics, College of Medicine, National Cheng Kung University;

Shulan Hsieh, PhD, a distinguished professor of Department of Psychology, National Cheng Kung University.

INTRODUCTION: Life events have been reported as a trigger for a depressed mood; however, not all individuals become mood disordered. How individuals perceive stress events and the level of resilience (health literacy) have been suggested as possible factors. Thus, a moderated mediation model was proposed to investigate the association among life events, perceived stress, and resilience with depression. In addition, patients with mood disorders, including depression and bipolar disorders, were compared to the healthy controls with their resilience, perceived stress, and daily hassles.

OBJECTIVE: The aim of this study was to explore the role of resilience on the association among daily hassles, perceived stress and depression.

METHODS: A total of 100 patients with mood disorders and 354 healthy individuals (HC) were recruited. All participants were required to complete the following questionnaires, Connor- Davidson Resilience Scale (CD-RISC), Chinese 14-item Perceived Stress Scale (CPSS), Beck Depression Inventory-II (BDI-II,) and Chinese version of Daily Hassles Scale (CDHS).

RESULTS: Overall, the MD had lower scores in the CD-RISC, and higher scores in CPSS and CDHS than the HC. The results showed that MD patients are vulnerable to perceiving daily hassles as a stressful and have a lower level of resilience. In addition, perception of stress significantly mediates the association between daily hassles and depression, and CD-RISC significantly moderates the association between perception of stress and depression.

CONCLUSION: How people perceive stress mediates the effect of daily hassles on depressive symptoms, and the relationship between perceived stress and depression was moderated by their level of resilience.

GS5

8AHLA127

Health literacy and mental health: review of mental health literacy on mental health outcome

Trong Nguyen

INTRODUCTION: Health literacy (HL) is defined as the cognitive and social skills that motivate and enable an individual to access, understand, and use information to maintain and promote good health. It has been shown that individuals with higher levels of HL are more able to make decisions to address health concerns appropriately. On the other hand, those with inadequate levels of HL were found to lack knowledge around positive health behaviours and struggle to access healthcare or make successful health decisions, thus often result in poorer health outcomes. However, similar attention has not been given regarding HL in the context of mental health, or mental health literacy (MHL). People suffering from mental illnesses are an especially vulnerable population. Depression has been identified by the World Health Organization (WHO) as a leading cause of disability worldwide and a major contributor to the overall global burden of disease. Further, mental illness has been associated with functional impairments across different domains, increased development in various chronic diseases (e.g., cardiovascular disease, obesity, diabetes), as well as increased rate of mortality. MHL may play an important role in preventing, managing, and treating psychological problems

OBJECTIVE: the aim of the current study was to examine the benefits of MHL by reviewing studies on the topic.

METHODS: Articles were collected from two electronic databases (Scopus and Google Scholar). The current review only included quantitative studies examining the effect of MHL on the mental health outcomes.

RESULTS: There is a lack of studies on the effect of MHL on the mental health outcomes, with mixed findings among existed studies. However, higher levels of MHL have been associated with increased help-seeking behaviours, reduced stigmatization towards psychological problems, perceived need for treatment, and treatment adherence. With the most robust and consistent support found for the relationship between MHL and help-seeking behaviours, as well as stigmatization regarding mental problems.

CONCLUSION: MHL plays a significant role in aiding individuals manage their mental health and increase the likelihood for seeking help and support for their psychological issues. Increasing MHL may reduce the stigmatization of mental health-related issues and improve the attitude towards help-seeking, all of which would facilitate the utilisation of mental/physical health services. Yet, there is still much needed research into the benefits of MHL. The current study emphasizes the importance of MHL in promoting mental health among the population, as well as the need for further research into the potential benefits of MHL.

GS5

8AHLA160

Health literacy in patients with stroke: associated factors and its impact on depression among those with low and high disability levels

Thu T. M. Pham, MD, MSc, Taipei Medical University, Taiwan;

Chyi-Huey Bai, PhD, Professor, Taipei Medical University, Taiwan;

Tuyen Van Duong, PhD, Associate Professor, Taipei Medical University, Taiwan;

INTRODUCTION: Stroke has generated an increasing burden worldwide because of high incidence, prevalence, mortality rate, and frequent poor stroke outcomes (such as depression and disability). Health literacy (HL) is a crucial element in public health strategies, which helps to appraise health-related information for preventing diseases.

OBJECTIVES: We aimed to explore the determinants of HL among patients with stroke and the impact of HL on depression among those with low and high disability levels.

METHODS: A cross-sectional survey was conducted on 951 patients with stroke from December 2019 to December 2020 across Vietnam. Health literacy was assessed using a 12-item short-form survey, with higher scores indicating a better HL. Depression was evaluated using a two-item patient health questionnaire (PHQ-2), and a score of ≥ 2 was used for a diagnosis. Disability level was assessed using WHODAS 2.0 questionnaire, with higher scores representing a higher level of disability. Besides, socio-demographics, health-related behaviors (e.g., physical activity, smoking, and drinking), stroke occurrence, stroke classification, comorbidity, diet quality, and health-related quality of life were also assessed. Simple and multiple linear regression analyses were used to explore the determinants of HL. Logistic regression models were utilized to analyze the association between HL and depression stratified by disability levels (below vs. above the mean).

RESULTS: The HL scores were 23.4 ± 10.0 , and the proportion of depression was 51.5% (490/951). The determinants of HL were age, occupation, education attainment, ability to pay for medication, and marital status. Among stroke patients with high levels of disability, HL was associated with a lower likelihood of depression (Odds ratio, OR = 0.97; 95% confidence interval, 95%CI = 0.95 – 0.99, $p = 0.008$). However, HL had no impact on depression among participants with low levels of disability (OR = 0.99, 95%CI = 0.97 – 1.02, $p = 0.769$).

CONCLUSION: Health literacy had a potential role in improving depression among patients with stroke combining high levels of disability. The strategic intervention of HL should be promoted among stroke patients, especially in aging, retired, and single people, to mitigate the burden on psychological health.

Keywords: health literacy, depression, disability, stroke, Vietnam.

GS5

8AHLA162

Functional Cervical Cancer Literacy among Lebanese women: A possible source of protection

Carmel Bouclaous, PhD, MPH, MSc, LD, Assistant Professor, Gilbert and Rose-Marie Chagoury School of Medicine, Lebanese American University

INTRODUCTION: Cervical cancer is preventable with vaccination against HPV and routine screening through HPV DNA testing or Pap smear.

OBJECTIVES: This cross-sectional study aimed to assess functional cervical cancer literacy (FCCL) levels and correlates in Lebanese women of reproductive age.

METHODS: Women visiting the outpatient clinics of four major health facilities were invited to take a self-administered questionnaire. It consisted of the Arabic Cervical Cancer Literacy Assessment Tool as well as socio-demographic and health-related factors.

RESULTS: Of 619 women, 33.9 years (± 12.0), 51.69% had insufficient FCCL. Monthly income (OR: 1.74 [95% CI: 1.12 – 2.72]), ability to pay for medical expenses (OR: 1.81 [1.05 – 3.14]), and visits to the doctor in the last three months (OR: 1.51 [1.07 – 2.12]) were predictive of FCCL level.

CONCLUSION: For optimal cervical cancer prevention, attention should be given to women with limited FCCL, no health coverage, and low socio-economic status. Education on cervical cancer can be given in local dispensaries, primary healthcare centers, and within sexuality education in schools. Social and mass media can be used to raise awareness of the disease and the services available to prevent or treat.

GS5

8AHLA163

Development of Educational Booklet for health promotion among obese and overweight adolescents

Prateek Srivastav, Vaishali K, Manipal Academy of Higher Education;

H Vinod Bhat, Kasturba Medical College;

Suzanne Broadbent, University of Sunshine Coast;

INTRODUCTION: Prevalence of obesity and overweight is high among Indian adolescent. Decreased physical activity and unhealthy eating habits are two major modifiable risk factor to decrease obesity. Culturally and geographically developed educational material are effective in behavioral changes required to be physically active and healthy eating.

OBJECTIVE: To describe the construction and validation of an educational booklet for healthy eating and physical activity promotion among obese and overweight adolescent

METHODS: This is a cross-sectional study conducted in three steps: bibliographical search, construction and validation of the educational material. The validation was made by ten healthcare professionals and twenty-two adolescent along with their parents. A minimum Content Validity Index of 0.80 was considered for content validation in each item of the evaluation instrument and a minimum agreement of 75% between positive responses was adopted to validate the presentation and readability of the booklet.

RESULTS: The educational booklet presented an overall Content Validity Index of 0.90 among healthcare professionals and an agreement level of 95.4% among the target audience. Only one item presented a value below the one adopted in the content validation analysis. For the final version, changes were made according to the comments and suggestions proposed by the judges for the improvement of the educational booklet.

CONCLUSION: The booklet “Manipal Manual of Adolescent Health Eating and Exercise (MMAHEE)” was constructed and validated for obese and overweight adolescent as for the layout and content. Thus, the educational booklet will support the health promotion among adolescent.

■ GS-6

Health literacy in schools and education (7 abstracts)

A110	Fu-Li Chen	The association between school teachers' health literacy and the related factors of health promoting school (<i>online</i>)
A128	Torsten Michael Bollweg	Subjective Health Literacy of Fourth Grade Student in Germany (<i>online</i>)
A131	Ting-Fang Yiu	The Effect of Developing patient educational materials in nursing from the Perspective of Health Literacy in a Medical Center
A138	Melanie Messer	Digital Health Literacy among Nursing School Principals in Germany (<i>online</i>)
A167	Sam S.S. Lau	Level of Health Literacy and Associated Factors amongst Hong Kong School Leaders (<i>online</i>)
A170	Margaretha Sih Setija Utami	The Correlations between Each Step of Health Literacy and Wellbeing dan Physical Health Complaints of School Principals in Indonesia, with Gender as the Moderator
A172	Orkan Okan	Health literacy in schools: a much needed approach to improving health and well-being in the 21 st century (<i>online</i>)

GS6

8AHLA110

The association between school teachers' health literacy and the related factors of health promoting school

Fu-Li Chen, PhD, is a Distinguished Professor, Department of the Public Health, Fu Jen Catholic University, Taiwan.

INTRODUCTION: Health literacy (HL) is one of the key indicators of the effectiveness on Health Promoting School (HPS). In the past, most studies of health literacy in school settings focused on students. School teachers are the core figures in promoting HPS. However, school teachers' health literacy has been less comprehensively explored and understood.

OBJECTIVES: The main purpose of this study is to explore the association between school teachers' HL and the related factors of health promoting school.

METHODS: A cross-sectional secondary data analysis was used to study teachers from 121 schools attending Health Promoting Schools International Accreditation Program, supported by Taiwan Health Promotion Administration (HPA) in 2019. Overall, a total of 2006 teachers completed the self-questionnaire. The study measurement variables included teachers' health literacy, sociodemographic information, participation in HPS training, training hours, health education teachers, teachers' ownership in HPS, principal leadership in HPS, workplace physical environment, organizational health support, and cross-sector cooperation for HPS. Statistical methods include descriptive statistics, independent t-test, one-way ANOVA, Pearson's correlation, and hierarchical regression analysis.

RESULTS: After controlling for sociodemographic variables, the hierarchical regression results showed that teachers' HL was found to be a significant determinant of participation in HPS-related training hours ($\beta=0.077$), physical workplace environment ($\beta=0.22$), and teachers' ownership in HPS ($\beta=0.22$) ($R^2=0.158$).

CONCLUSIONS: The study demonstrated the main factors influencing teachers' health literacy. Findings suggest that the HPS program should strengthen HPS-related training of all teachers, improve the workplace working environment in school, and build a healthy climate to increase teachers' ownership for promoting teachers' health literacy.

KEYWORDS : Health literacy, Teachers, health promoting school, ownership, workplace physical environment

GS6

8AHLA128

Subjective Health Literacy of Fourth Grade Student in Germany

Torsten M. Bollweg, M.A., researcher, Department of Sport and Health Science, Technical University of Munich, Germany;

Orkan Okan, PhD, Professor, Department of Sport and Health Science, Technical University of Munich, Germany

INTRODUCTION: Children constitute a key target group for the promotion of health literacy (HL). However, little data is available on how easy or difficult it is for them to deal with health-related information (i.e., data on their subjective HL). However, this data is needed to identify HL-related needs of the target group and to inform interventions.

OBJECTIVE: The aim of this study was to describe the distribution of subjective HL of fourth-grade students in Germany.

METHODS: A cross-sectional study was conducted among fourth-graders in the federal state of North-Rhine Westphalia, Germany. The study started in 12/2020 as a representative survey. However, due to Coronavirus-related constraints, only a convenience sample could be achieved. Data collected between 07/21 and 11/21 is included here. The HLS-Child-Q15 questionnaire was used to assess subjective HL, while a number of sociodemographic indicators were recorded, including family affluence, measured with the Family Affluence Scale (FAS).

RESULTS: In total, $n=364$ students are included, half of which are female (49.5%). The mean age is 9.5 years ($SD=.69$). On average, the sample achieved a mean score of 3.15 ($SD=0.45$) on the HLS-Child-Q15, whereby answers correspond to 1=very difficult, 2=rather difficult, 3=rather easy, 4=very easy (to deal with health-related information). Thus, it is “rather easy” for the surveyed children to deal with health-related information. HLS-Child-Q15 scores range from 2.80 in the lowest to 3.53 in the highest quintile. No significant differences in subjective HL scores could be observed regarding sex, age, chronic disease, home language, or country of birth (Germany, not Germany). However, subjective HL scores are higher for children with higher material affluence (Pearson $r=.123$, $p=.017$) as well as better subjective health status (Spearman $\rho=.246$, $p<.001$). Specifically, those children who consider themselves to be “very healthy” have a HLS-Child-Q15 mean score of 3.24 ($SD=.42$), compared to a score of 3.03 ($SD=.41$) for all others.

CONCLUSION: This study provides insights into the distribution of young people’s subjective HL in North-Rhine Westphalia, Germany. While the overall level of subjective HL is high, we were able to observe differences in subjective HL related to material affluence. This indicates that not all children have the same opportunities to develop high HL and points to the emergence of socioeconomic disparities in HL early in the life course. While this finding needs to be corroborated through further research in representative samples, it highlights the need for interventions to enable all children to develop good HL. Regarding the relationship between health status and HL, further research is necessary to confirm whether children with worse health status actually face more challenges in dealing with health-related information, or if they, based on their experience, give a more negative but realistic assessment of the difficulty of dealing with health information.

GS6

8AHLA131

The Effect of Developing patient educational materials in nursing from the Perspective of Health Literacy in a Medical Center

Yiu, TF, Sheng, CC, Chiu, HH, Liang, Y, Liao, CH, Hsu, HC, Lien, RY

Ting-Fang, Yiu, RN, M.S.N, is a Professional Nurse, Department of Nursing, Taipei Veterans General Hospital, and a PhD student, School of Nursing, National Yang Ming Chiao Tung University, Taipei, Taiwan;

Ching-Ching, Sheng, RN, M.S.N, is a Deputy Director, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan;

Hsiao-Hui, Chiu, RN, DrPH, is a Nurse Supervisor, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan;

Ying, Liang, RN, M.S.N, is a Nurse Supervisor, Department of Nursing, Taipei Veterans General Hospital; and a PhD student, School of Nursing, National Yang Ming Chiao Tung University, Taipei, Taiwan;

Chia-Hui Liao, RN, M.S.N, is an Assistant Head Nurse, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan;

Hsiu-Chuan, Hsu, RN, BN, is a Head Nurse, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan;

Ru-Yu Lien, RN, M.S.N, is an Assistant Head Nurse, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan

INTRODUCTION: The provision of clear, understandable, and easy-to-use patient educational materials by healthcare professionals is a critical step while creating a health-literate friendly environment.

OBJECTIVES: Investigating the effectiveness of education training on nursing staff to develop patient educational materials with health literacy and the user's evaluation.

METHODS: This study is divided into two stages. The first stage is to transform the 36 existing patient educational materials in nursing into health literacy and communication materials through education training and sample provision. Using the "Health Literacy and Communication Check List for Dummies" to compare the score difference of the before and after revision materials. The second stage is a one-group pretest-posttest design. Arranging materials to health examinees or their families who come from healthcare and services center by block randomization. Using the "Health Literacy and Nursing Instruction Material Content Evaluation Questionnaire" to compare the differences of the before and after revision materials.

RESULTS: After the intervention, the "Health Literacy and Communication Check List for Dummies" score of 36 patient educational materials in nursing increased from 72 to 87.3 points ($t=-7.562, p=0.002$). Above 70 points materials had increased from 61% to 100%. From March to July 2022, 123 participants completed the evaluation of the revision materials. The average score for the evaluation of the before and after revision materials increased from 61.7 to 74.4 points ($z=6.18, p<0.001$), and the average satisfaction score increased from 4.2 to 4.6 points ($z=5.87, p<0.001$) by Wilcoxon sign rank test.

CONCLUSION: After receiving education training, nursing staff can develop health literacy and communication materials to meet the needs of people with different levels of health literacy and improve the health of the entire population.

GS6

8AHLA138

Digital Health Literacy among Nursing School Principals in Germany

Melanie Messer, Tatjana Murau, Trier University

Kevin Dadaczynski, Fulda University of Applied Science

Orkan Okan, Technical University of Munich

INTRODUCTION: Digital Health Literacy means the ability to access, understand, appraise and apply digitally distributed health information. It is necessary to ensure an effective health management in health care in times of increasing digitalization and distancing throughout the Covid-19 pandemic. In addition, health literacy has gained increased relevance in nursing education curricula and health care practice in Germany. Therefore, nursing school leaders in Germany are increasingly responsible for implementing a high level of digital health literacy.

OBJECTIVE: The aim of this study was to assess the digital health literacy levels of German nursing school principals and members of the nursing school management team. This study is part of the global COVID-HL-Network.

METHODS: An online survey was conducted from March to April 2022 among members of the management team of German nursing schools. The questionnaires of 347 respondents could be included in the analysis. Digital health literacy was assessed by an adapted version of the Digital Health Literacy Instrument including three subscales with eight items in total that could be rated on a 4-point Likert scale. These shed light on the self-reported ability of the participants in the subscales (i) searching and finding of digital health information, (ii) evaluating the quality and (iii) judgement about the quality of health information on the Internet. Information on sociodemographics, technology commitment, self-concept related to information and communication technology (ICT) and health status was also obtained.

RESULTS: Nursing school principals generally rated their own digital health literacy as quite high, with a general mean score of 3.1 across all subscales. Thereby, most difficulties were reported to find the exact information a person is looking for while least problems could be observed for use proper words or search query. Significant sex, age or regional differences could not be found. The mean sum score of technology commitment of 43.31 with a maximum of 60 reflects a relatively high acceptance, conviction of technology competence and control among the participants. The self-concept to the use of information and communication technology is with the mean of 4.3 also positively indicated.

CONCLUSION: The majority of German nursing school principals reported high levels of digital health literacy. Despite the high demands regarding educational practices related to Covid-19 regulations and curriculum changes, these results nevertheless indicate high self-reported digital health literacy among nursing school principals which in turn could help them to implement digital health literacy in their school setting. The extent to which this also influences instructional design needs, would need to be examined in future research.

GS6

8AHLA167

Level of Health Literacy and Associated Factors amongst Hong Kong School Leaders

Sam S.S. Lau, E.N.Y. Shum, J.O.T. Man, E.T.H. Cheung, Hong Kong Baptist University;

P.A. Amoah, Lingnan University;

A.Y.M. Leung, Hong Kong Polytechnic University;

K. Dadaczynski, Fulda University of Applied Sciences; Leuphana University Lueneburg;

O. Okan, Technical University Munich;

INTRODUCTION: Despite mounting evidence of health literacy research in the face of COVID-19 pandemic, little is known about COVID-19 related health literacy among school leaders in Asia as school leaders' health literacy is an essential part of school health promotion efforts.

OBJECTIVE: The aim of this study was to assess the level of COVID-19 related health literacy of school leaders in Hong Kong and the three select factors (including vaccine hesitancy, self-endangering behaviour, and work satisfaction) associated with it.

METHODS: A cross-sectional study was conducted in April 2021 and Feb 2022 with 259 school leaders using a self-report questionnaire. COVID-19-related health literacy, extensification of work, intensification of work, quality reduction, psychosomatic complaints and exhaustion were measured. The study employed independent sample t-test, ANOVA and multilinear regression models.

RESULTS: Overall, over half (53.7%) of Hong Kong school leaders had insufficient health literacy. School leaders with insufficient health literacy had significantly higher levels of "exhaustion related to work situation" ($p=0.029$), "psychosomatic complaints" ($p<0.001$), attitude about vaccination (i.e. less agree with vaccination) ($p<.001$), level of informing on COVID-19 related information (i.e. felt less informed) ($p<.001$), and level of confusion on COVID-19 related information (i.e. felt more confused) ($p<.001$). In a linear regression model adjusted for sex and age, COVID-19 health literacy age (β , $-.188$, 95% CI, $-.024$, $-.005$, $p=.002$); and level in COVID-19 related health literacy (β , $-.395$, 95% CI, $-.716$, $-.361$, $p<.001$) were negative predictors of attitude about coronavirus vaccination, $F(5, 214) = 11.859$, $p<.001$.

CONCLUSION: A high proportion of insufficient health literacy among school leaders in Hong Kong warrant attention of education and health authorities. The findings call for an urgent effort of offering health education programmes to promote school leaders' health literacy.

The Correlations between Each Step of Health Literacy and Wellbeing dan Physical Health Complaints of School Principals in Indonesia, with Gender as the Moderator

Margaretha Sih Setija Utami, Psychology Faculty of Soegijapranata Catholic University, Semarang, Indonesia

INTRODUCTION: From various health literacy studies, it is known that health literacy is positively correlated with health status. However, there are not many studies that reveal the relationship between each stage of health literacy (accessing, understanding, judging, and applying information) with wellbeing and physical health complaints of male and female school principals.

OBJECTIVE: The aims of this study were: 1) to know the correlations between each stage of Health Literacy and wellbeing and physical health complaints; 2) to compare the correlation results between male and female school principals in Indonesia.

METHODS: A cross-sectional survey was conducted in 2021 of 234 school principals in Indonesia. The measuring instrument used was adapted from the measuring instrument used by Dadaczynski et al. (2021). The data were analysed by split data and simple correlations.

RESULTS: 1. There were no significant correlation between accessing health information nor understanding the information with wellbeing, neither physical health complaints of school principals. But there were significant correlations between judging the information with wellbeing ($r= 0.167$, $p<0.05$). There was no significant correlation between judging information and physical health complaints. There were significant correlations between applying the information and wellbeing ($r=0.209$, $p<0.05$), and physical health complaints ($r=-0.276$, $p< 0.05$).

2. There were different results when we split the participants based on their gender. The results of male participants, there were significant correlations between accessing information and wellbeing ($r= 0.197$, $p< 0.05$). There were significant correlations between understanding information and wellbeing ($r=0.206$, $p< 0.05$), also with physical health complaints ($r=-0.193$, $p<0.05$). There was no significant correlation between judging health information and wellbeing, neither with physical complaints. There was no significant correlation between applying the information with wellbeing but there was significant correlation with physical complaints ($r=-0.286$, $p< 0.00$).

There were results of female participants. there was no significant correlation between of each accessing and understanding information and wellbeing neither the physical complaints. There was significant correlation between judging information and wellbeing ($r=0.219$, $p< 0.05$). There was significant correlation between applying the information and wellbeing ($r=0.234$, $p< 0.05$), and physical health complaints ($r = -0.251$, $p< 0.05$)

CONCLUSION: The research results showed that there were different results of female and male school principals in Indonesia. The first two steps of health literacy: Ability to access health information and understanding the information were more important than the last two steps of health literacy for male school principals to improve wellbeing and to reduce physical complaints. On the contrary, female participants showed that the last two steps of health literacy: judging and applying information were more important for female school principals to improve wellbeing and to reduce physical health complaints. It is interesting to discuss the reasons why male and female are different in the relationship between health literacy and wellbeing and physical health complaints.

GS6

8AHLA172

Health literacy in schools: a much needed approach to improving health and well-being in the 21 st century

Orkan Okan

Technical University Munich

Accelerated by digitalization, the internet and social media, children and adolescent's engagement with health information has been elevated, posing risks and opportunities to health and well-being. Another challenge related to health information in the 21st century is related to global crises, adversities, and critical life situations, such as climate change and environmental destruction, pandemics, poverty and inequities, and conflicts, impacting health, well-being and healthy development of children and adolescents. Altogether these developments require children and adolescent to become and act health literate to protect and foster their health. Health literacy is a critical competence to manage health information and empower children and adolescents to make informed health choices. Therefore, targeting health literacy of school-aged children has become a major public health and education topic in many countries in recent years. Addressing health literacy as early as in school-age ensures the development of health knowledge and skills, healthy behaviours and attitudes, and supports children and adolescents to master every day health challenges. Health literacy is linked to education and schools worldwide are given the mandate to promote education in all school-aged children. Interventions delivered in schools can not only reach all children and adolescents regardless of their social, cultural or development background, but they can also address all adults working with them professionally, such as teachers, principals, health and education staff, and even the whole school setting. Health literacy interventions in schools can target both agency (behavioural model) and structure (social model). Agency is best addressed by promoting personal health literacy of school-aged children, whereas structure can be best addressed by organizational health literacy of schools. Organizational health literacy includes considering the social determinants of health in order to sustain child- and adolescent-friendly environments and conditions. The aim of this presentation is to present and discuss the case of health literacy as an important schools topic and thereby introduce latest research findings, interventions, concepts and policy insights from around the world.

Main take away messages:

1. Health literacy contributes to improved personal health and development of children and adolescents
2. Health literacy is an important school topic and should be addressed to behavioural and social approaches
3. Children and adolescent will benefit from early interventions to develop healthy behaviours and lifestyles in their life-course

■ GS-7

Health literacy, organizations, and practices (9 abstracts)

A036	Wan-Ling Chiu	Health Literacy Friendly Care Practices in Medical Laboratory
A038	Arianna Maeve Amit	Measuring health literacy of health professionals in the Philippines: A step towards better clinical practice (<i>online</i>)
A057	Shu Chuan Wang	Impact of clinical incidents and complaints at a Taiwan Teaching Hospital during the COVID-19 pandemic (<i>online</i>)
A135	Saichon Kloyiam	The Effect of a Health Literate Organization Registry on Organizational Health Literacy Practices at Governmental Health Care organizations: A Quasi-Experimental Study Design
A139	Sandra Kirchhoff	HeLit-Schools – A Concept of Organizational Health Literacy of Schools (<i>online</i>)
A143	Melanie Messer	Preconditions for organizational health literacy: A qualitative study from the perspective of nurses in Germany (<i>online</i>)
A156	Wimon Roma	Health Literate Organization (Factory) during the Covid 19 pandemic situation, THAILAND
A174	Le Duc Huy	How health literacy research has evolved in Taiwan: A bibliometric analysis (<i>online</i>)
A179	Wen-Hsuan Hou	Differences of Demographic Characteristics in Health Literacy for COVID-19 (<i>online</i>)

GS7

8AHLA036

Health Literacy Friendly Care Practices in Medical Laboratory

Wan-Ling Chiu, Department of Medical Laboratory, Yang-Ming Branch, Taipei City Hospital of Taiwan Taipei & Professional Specialist, Lecturer Level, University of Taiwan Taipei

INTRODUCTION: Health Literacy is about an individual's ability to interact with health information. The four main steps to improve Health Literacy are acquisition, understanding, evaluation and application. After improving Health Literacy, people will learn more about health promotion, disease prevention, and medical care.

OBJECTIVE: To enable professional medical staff to combine health literacy skills in the field of work, give full play to caring and friendliness, and allow the public to enhance health literacy awareness and apply it to medical care.

METHODS: Follow the steps below to build health literacy and a caring medical laboratory:

1. Help the public obtain information, post publicity posters and health education, such as blood tests, why blood stasis occurs.
2. Before each blood draw, do an excellent job of communication between health care and nursing and explain the items that need to have fasted.
3. Handle explicit or covert requests from the public, such as fainting, alcohol and latex allergies.
4. Provide helpful information such as a Chinese-English comparison table of inspection items.
5. Optimise health information and services and implement them in different situations. Provide English, Taiwanese, and Hakka communication, and have text translation for Southeast Asian countries.
6. Questionnaires with satisfaction and timely information for health awareness and friendly environment feedback.

GS7

8AHLA038

Measuring health literacy of health professionals in the Philippines: A step towards better clinical practice

Amit, Arianna Maever L.^{1,2}, Tolabing, Ma. Carmen C.¹

¹ College of Public Health, University of the Philippines Manila; ² Center for Research and Innovation, School of Medicine and Public Health, Ateneo de Manila University

INTRODUCTION: Health professionals play a crucial role in strengthening patient health literacy and improving health outcomes. However, there is an assumption that health literacy is high among health professionals, despite qualitative evidence that they lack the needed skills to address patient health literacy effectively. As a result, their health literacy is still viewed as a low priority compared to the advances made in patient health literacy. At present, there is only one validated instrument to measure their health literacy levels – the Instrument on Health Literacy Competencies or the IOHLC for health professionals in Taiwan.

OBJECTIVES: This study aimed to develop a local version of the IOHLC and determine its reliability and validity.

METHODS: This study adapted and validated the 49-item IOHLC for selected hospital-based health professionals in the Philippines using a mixed methods design consisting of a consensus-building workshop (n=8), pilot testing (n=20), and survey (n=416). To determine the content validity of the instrument, content validity index at the item level (I-CVI) and at the scale level using averaging calculation (S-CVI/Ave) with a 0.90 index of congruity were computed. Item response theory (IRT) analysis was done to determine the construct validity of the knowledge domain. In addition, infit and outfit indices were computed with an acceptable range between 0.5 to 1.5. To evaluate the construct validity of the practice domain, exploratory factor analysis (EFA) was done on the calibration sample while confirmatory factor analysis (CFA) was done on the validation sample. The following indices were computed: standardized root mean square residual (SRMR), root mean square error of approximation (RMSEA), and comparative fit index (CFI). SRMR and RMSEA values less than 0.08, and CFI values above 0.90 indicated a good model fit. To evaluate reliability of the instrument, Cronbach's alpha at 0.80 and the corrected item-total correlation at 0.40 were used.

RESULTS: The adaptation and validation of the instrument resulted to the Philippine version of the instrument (PHIL-IOHLC), which is a shorter instrument with 25 items that is both valid (CFI = 0.91, RMSEA = 0.08; SRMR = 0.07) and reliable (Cronbach's alpha: 0.91 corrected item-total correlation >0.40 on 16 of 20 items).

CONCLUSION: The 25-item PHIL-IOHLC is a shorter version of the original 49-item IOHLC, and has been found to be both valid and reliable. This can be further tested in other settings and health professional groups, and evaluated using other types of validity and reliability measures. A valid and reliable instrument will allow the health literacy of health professionals to be quantitatively assessed in order to implement appropriate interventions to improve health literacy of health professionals. Consequently, improved clinical practice through strengthened health literacy and better patient education can lead to better health outcomes.

Comment to the Editor:

We confirm that the abstract has not been previously published nor is it currently under consideration in any journal. However, the authors plan to publish the findings of the study as an Original Article including, but not limited to, information written on this Abstract.

GS7

8AHLA057

Impact of clinical incidents and complaints at a Taiwan Teaching Hospital during the COVID-19 pandemic

Shu-Chuan Wang MPH, is a specialist, Department of Medical Affair Administration, Kaohsiung Veterans General Hospital;

Pei-Ling Tang PhD, RN, is an Associate Professor, Research Center of Medical Informatics, Kaohsiung Veterans General Hospital, Department of Health-Business Administration, Fooyin University;

Tzu-Cheng Pan BS, is a research assistant, Research Center of Medical Informatics, Kaohsiung Veterans General Hospital;

Li-Fei Pan PhD, is a director, General Affairs Administration, Kaohsiung Veterans General Hospital.

Nain-Feng Chu PhD, is a Professor, Division of Occupational Medicine, Kaohsiung Veterans General Hospital

INTRODUCTION: Affected by the COVID-19 epidemic, patients feel quite troubled in the process of seeking medical treatment, and the number of patient complaints has gradually increased. The level of patient health literacy affects trust in physicians and the healthcare system. Importantly, as medical services improve, patient complaints have been shown to reflect the quality of medical care and the importance of patient safety and can be used as a monitoring tool when patients are satisfied. If the patient lacks trust in the hospital and lacks communication barriers, it is easy to have poor information comprehension, resulting in poor health literacy, which has a considerable impact on their health outcomes.

OBJECTIVE: This study aims to explore the main factors of patient complaints during the COVID-19 pandemic. Understand the feelings of patients in the clinical, management, and related areas of the hospital and use them as a basis for improvement, establish a good medical environment, and provide patients with correct health information and literacy.

METHODS: This was a retrospective study. Data was collected in 2021, from 584 patient complaints at Taiwan Southern Medical Center. Using the Healthcare Complaints Analysis Tool (HCAT), the patient complaints are classified and coded according to 3 major fields, 7 problem categories, and 27 details.

RESULTS: The results of the study showed that 14.0% of the complaints were about nursing staff, 27.1% of the complaints were during the severe epidemic period (October-December), and 30.5% of the complaints were related to the epidemic. Of the complaints related to the epidemic, 114 cases (36.89%) were in the management field, 49 cases (22.27%) were in the relationship field, and 15 cases (27.27%) were in the clinical field. Among the three fields summarized by HCAT, the management field is the highest (52.9%); among the seven categories of problems, environmental factors are the highest (32.5%), followed by communication (29.6%) and institutional process (20.4%); in the details of complaints, the physical environment (including policies) (21.1%), poor oral language (21.1%) and waiting time (13.4%) were the most common complaint factors.

CONCLUSION: The implementation of the epidemic prevention policy during the epidemic has made it less convenient for patients to seek medical treatment than in the past. Failure to meet patient expectations and requirements has resulted in a psychological burden on patients and tension in the doctor-patient relationship. It is recommended that the information on epidemic prevention announcements be more timely (such as the moving line process and the accompanying policy for vaccine administration), and the training of communication skills should be included in the on-the-job education and training of employees. In the longer term, understand the needs of each patient through complaints, provide friendly medical and health

services, avoid unequal information transmission, build trust and quality in the doctor-patient relationship, and then improve patients' health literacy.

Keywords: patient complaints; healthcare complaints analysis tool (HCAT); COVID-19; pandemic period

GS7

8AHLA135

The Effect of a Health Literate Organization Registry on Organizational Health Literacy Practices at Governmental Health Care organizations: A Quasi-Experimental Study Design

Saichon Kloyiam, Health Technical Officer, Professional level, Division of Health Literacy and Health Communication Promotion, Department of Health, Ministry of Public Health, Thailand

INTRODUCTION:

Organizational health literacy [OHL] practices help health care organizations achieve high-quality, efficient, and meaningful care to service users. OHL is defined by the Institute of Medicine as “the degree to which an organization implements policies, practices, and systems that make it easier for people to navigate, understand, and use information and its services to take care of their health.” As OHL is a new term in Thailand, there are needs to raise awareness and promote OHL practices at governmental health care organizations.

OBJECTIVES:

This study evaluated the effect of a health literate organization registry (HLR) on OHL practices at governmental health care organizations under the Ministry of Public Health. The registry was initiated by the division of Health Literacy and Health Communication, Department of Health.

METHODS:

A quasi-experimental study design was employed to investigate the effects of the HLR on OHL practices between governmental health care organizations that had registered to participate in interactive online monthly meetings [group 1] and that chose to self-study the OHL practices [group 2]. The OHL practices were reflected by the staff and service users before and after each health care organization developed and submitted their development plans. The percentages of staff and service users who perceived the OHL practices were compared between the pre-test and post-test using the Wilcoxon Signed Rank Test, and between the two groups using the Mann-Whitney U Test. The significance level is .05. Cohen's d was calculated to indicate the effect size.

RESULTS:

5,124 health care organizations have registered in the HLR [50% of the total governmental health care organizations in Thailand]. 455 organizations assessed their OHL practices at least twice with a minimum time interval of one month and their OHL practices were used for the evaluation. 248 chose to participate in the interactive online monthly meetings and 207 chose to self-study. There were statistically significant improvements in the OHL practices of both groups with a small effect size [group 1; pre-test, 95.47%, SD=5.99, post-test, 96.95%, SD=5.51, $p=0.000$, group 2; 96.61%, SD=6.77, post-test, 97.83%, SD=4.01, $p=0.002$). At the pre-test, group 1 had a significantly lower percentage of the OHL practices, but at the post-test, this percentage was not statistically different from that of group 2 [$p=0.139$].

CONCLUSION:

The HLR had a small effect size on the OHL practices. However, health care organizations could improve their HLO practices by registering in the HLR, and either participate in the online monthly meetings or self-study the OHL practices.

KEYWORDS:

Organizational Health Literacy, Health Literate Organization Registry, Health Care Organizations

GS7

8AHLA139

HeLit-Schools – A Concept of Organizational Health Literacy of Schools

Sandra Kirchhoff, MA, researcher (Technical University of Munich, Germany) and a PhD student (Bielefeld University, Germany);

Cara Krudewig, researcher and PhD student (Technical University of Munich, Germany);

Orkan Okan, Dr. phil., Professor; Department of Sport and Health Sciences, Technical University of Munich, Germany;

INTRODUCTION: Assisting the development of health literacy (HL) can be seen as an important goal of health promoting strategies in the education and school sector. There are many school-based HL interventions that solely focus on strengthening personal HL related competencies and skills of students and/or teachers and educational staff, neglecting the potential of changing environmental conditions and institutional factors in a health-literate manner. To effectively foster HL in and through schools, the approach of organizational health literacy (OHL) can be adapted and applied to the school setting. The OHL approach already proved to be useful in other settings (e.g., health care, social work, youth work) to guide the development and adjustment of structures and processes within institutions to enhance their HL-friendliness as well as the ability to strengthen personal HL of the respective clientele.

OBJECTIVE: The main aim of the HeLit-Schools project is to develop a school-based concept of OHL and an assessment tool to measure schools' OHL.

METHODS: Based on analyzing and adapting existing concepts of OHL applied to other settings, the study team developed the health-literate school concept (HeLit-Schools concept), describing schools' OHL. Several stakeholders of e.g., the school and education sector, HL research as well as the health sector, contributed to developing the concept by sharing their expertise and thoughts by commenting and revising various concept drafts at different time points during the development process. In addition, a questionnaire was developed, that is based on the concept and can be used to measure schools' OHL capacities. In order to validate the concept and collect first-time data on the current state of schools' OHL, a survey of schools' OHL in Germany is being prepared at the moment.

RESULTS: The HeLit-Schools concept comprises eight standards, and within every standard six indicators further specifying the potential area of action. The standards each describe a particular dimension within the school that has potential to foster HL (e.g., personal HL literacy of students, teachers, principals; HL in the school environment; HL in context of networking and communication). By making sure these standards are addressed appropriately, HL can be strengthened systematically and more effectively in the whole setting. The usefulness of this concept is well reflected by the fact that both personal HL (agency) and OHL (structure) are addressed at the same time, combining social and behavioral approaches to promote HL. To assess OHL of schools, a questionnaire was developed based on the concept. It is available in German and English language. The German version will be used in a survey in Germany in fall 2022.

CONCLUSION: The HeLit-Schools concept focusses on how the schools' structures, processes and framework features can be developed and adjusted in a health-literate matter in order to contribute to the effective and sustainable promotion of HL of everyone related to the school.

GS7

8AHLA143

Preconditions for organizational health literacy: A qualitative study from the perspective of nurses in Germany

Melanie Messer, Tatjana Murau, Trier University

INTRODUCTION: Healthcare facilities are expected to support patients in their health literacy and to empower them to use health-related information. Nurses are the largest professional group in healthcare and have particularly close contact with patients. Therefore, they have a significant role to play in the realization of organizational health literacy. However, little is known to date about the extent to which nurses are prepared for this task.

OBJECTIVE: The aim of the study is to describe the information and counselling practices in nursing, to which efforts to promote organizational health literacy should link.

METHODS: Twenty-one guided interviews were conducted with nurses. The analysis was performed according to thematically coding.

RESULTS: The first results show that nurses see themselves as information providers and mediators. In doing so, they have specialized in providing ad hoc information with a strong focus on knowledge transfer. The situations in which information is provided to patients mostly occur spontaneously, unplanned, and during other nursing activities. Counselling of patients hardly takes place. Characteristic topics of information are, for example, health promotion and prevention, how to deal with medication and side effects, background knowledge and concrete guidance on self-management and lifestyle in chronic diseases, pain management and postoperative behaviour. From their own point of view, nursing professionals lack structured tools they need in order to provide tailored information. The nurses also criticize inadequate training and education opportunities.

CONCLUSION: The study provides initial insights into the status quo of health literacy promotion in nursing practice in Germany. Thus, it offers approaches for health care institutions where nurses have a structured need for qualification in order to be able to fulfil the role to facilitate health literacy of patients.

GS7

8AHLA156

**Health Literate Organization (Factory) during the Covid 19 pandemic situation,
THAILAND**

*Wimon Roma, MPH, Public Health Technical Officer, Advisory level, Department of Health,
Ministry of Public Health, Thailand*

Since the spread of the coronavirus disease (COVID-19) occurring in Thailand on January 2020, the strictly monitor was needed. The Covid-19 pandemic situation, the 3rd wave, had become more intense, with the number of infected people increasing. The clusters found were also about crowded community, factories, markets, penitentiaries and worker camps/construction sites, both in Bangkok and its vicinities. As a result of both the Covid -19 lockdown measures on June 2021 and possible health risks, thousands of individuals in construction camps and factories, found themselves facing renewed hardship lives. It was essential that both the social and intellectual skills of the individual were required as well as the health literate organization where enabled people to have the health literate skills in order to stay safe from the coronavirus outbreak.

The knowledge to action (KTA) proposed by Graham et al (2006) was applied as a framework to facilitate the development and application of research evidence into practice during July 2020-February 2022. The KTA framework consisted of the knowledge creation cycle and the action cycle. The study aimed to improve the uptake of knowledge (Health literate Organization(factory) Accrediting criteria)-to-action in the factory and worker camps/construction sites to promote Health Literate Organization (Factory) development during the Covid 19 pandemic.

The systematic review and best practice study, as the integration of tacit and explicit knowledges in Health Literate Organization (Factory) were the foundational parts of the knowledge creation cycle and had helped guide the development of Health literate Organization (factory) Accrediting Criteria (HLOAC), the 5 components of leadership, communication, manpower, the measurement and knowledge management and health literacy process, the Institute of Medicine's Ten attributes of HLHCOs and Thailand Quality Award: Criteria for performance excellence framework modified.

As new knowledge was discovered, the usability testing was done to be tailored to meet the needs of stakeholders in the factory setting. Then a useful knowledge product or tool (HLOAC factory) was implemented, the action cycle, a narrative approach applied through the online and onsite group meetings of 10-12 participants at each site in order to understand the role of tacit knowledge in decision-making and practice along with HLOAC (factory). The action cycle involved assessing barriers to using the knowledge, adapting the knowledge to a local context, implementing the intervention, monitoring its use, evaluating outcomes, and sustaining knowledge use.

Through this process, the participants in a single factory and 3 construction camps were able to use the HLOAC (factory) promoting a culture that supports the development of Health literate Organization(factory) with the lower rate of infected workers and higher anti Covid 19 vaccinated.

KEYWORDS: Health literate Organization (factory) Accrediting Criteria (HLOAC), the knowledge to action (KTA) framework, Covid-19 pandemic.

GS7

8AHLA174

How health literacy research has evolved in Taiwan: A bibliometric analysis

Le Duc Huy, MD, MBA, University of Medicine and Pharmacy, Hue University, Vietnam;
Nhi, NTH, MD, University of Medicine and Pharmacy, Hue University, Vietnam; Taipei
Medical University, Taiwan;
Tuyen, DV, Assistant Prof., PhD, Taipei Medical University, Taiwan;

INTRODUCTION: Health literacy (HL) has shown an important role in encouraging self-management, decision-making, and many determinants of health. However, no study has provided a comprehensive view of health literacy in a specific country. This study was conducted to explore the intellectual structure and research trends in Health literacy in Taiwan. **METHODS:** Studies on health literacy in Taiwan were extracted from the Web of Science and Scopus. After conducting a keyword search using the terms "Health Literacy" OR "Health competency" from 2003 to 2021, all publications published between those dates were included and then filtered to the research conducted in Taiwan. Bibliometric analyses were conducted using the Bibliometrix R package and VOSviewer 1.6.14.

RESULTS: A total of 251 articles were included in our study. The number of studies observed a significant growth after 2012. International journal of environmental research and public health published the highest number of studies. The most prevalent topic of study on health literacy in Taiwan was "Health education and health information" (18% of studies). The topic of "Health literacy in the elderly" and "Health literacy in young people" have gained more and more attention from researchers in recent years.

CONCLUSIONS: Health literacy research has witnessed strong development in recent years; however, there is much room for further research in this domain. In addition, based on the findings of bibliometric analysis, the researchers could keep updating the latest study trends.

KEYWORDS: Bibliometric, Health literacy, Taiwan.

GS7

8AHLA179

Differences of Demographic Characteristics in Health Literacy for COVID-19

Wen-Hsuan Hou, MD, PhD, MPH, Professor, College of Medicine, National Cheng Kung University, Tainan, Taiwan;

Jeng-Cheng Wu, Attending Physician, Department of Urology, Taipei Medical University Hospital, Taipei, Taiwan;

Wen-Hsin Huang, DNP, Humboldt Park Health, Chicago, IL, USA;

Hsin-Yen Yen, Associate Professor, School of Gerontology and Long-Term Care, College of Nursing, Taipei Medical University, Taipei, Taiwan

INTRODUCTION: The outbreak of coronavirus disease 2019 (COVID-19) has become a global health concern. A lot of misinformation needs to be distinguished by health literacy. The purposes of this study were to explore the differences in demographic characteristics in competencies (accessing, understanding, appraising, and applying) of health literacy for COVID-19.

METHOD: This was a cross-sectional study design. A self-reported, self-developed anonymous questionnaire was used for data collection. The internet survey was conducted between July and November 2020. Participants were adults who lived in the United States. Descriptive analyses, independent *t*-tests, and one-way analysis of variance were performed for statistical analyses. A total of 467 valid responses were received.

RESULTS: Results revealed that health literacy had differences in sex, age, and between participants who did and who did not work in a health profession. Participants who living in the urban area, full-time employment, and married had significant lower competency of applying health literacy, while participants with higher income exceed NTD 70,001 had higher competency of applying health literacy.

CONCLUSION: Improving health literacy might be an efficient strategy for successfully preventing and controlling COVID-19. Local government and health care practitioners should pay attention to individuals with insufficient health literacy.

List of the poster presentations

A001	Yu-Li Lin	An analysis on the Regulations of Occupational Health Service of Physicians in Taiwan (<i>online</i>)
A003	Sheng-Hui Tuan	Using Progressive Resistance Training with Elastic Band to Prevent and Postpone the Loss of Muscle and Functional Performance Older Adults in a Daycare Center of Southern Rural Taiwan- A Pilot Study
A005	Shu-Fen Kuo	Self-efficacy mediates marriage immigrants' access medical service barriers and Health literacy: a structural equation modeling analysis
A006	I Hsiu Liou	The effects of vocational rehabilitation for occupational accidents labor on health literacy (<i>online</i>)
A007	I Hsiu Liou	The effects of integrated outpatient services for people with disabilities on health literacy (<i>online</i>)
A008	I Hsiu Liou	Distribution of etiology and dysfunction of children with developmental delay in Taiwan on health literacy (<i>online</i>)
A011	Yen-Ming Huang	Evaluation of impacts of a structured communication approach on pharmacy students' self-efficacy in over-the-counter medication counseling
A013	Te-Chun Shen	Cancer Risk in People with Oral Leukoplakia: A Nationwide Retrospective Cohort Study
A015	Karina Leksy	Assessment of the coronavirus and Covid-19 information in the digital media by Polish school principals (<i>online</i>)
A016	Yi-Hui,Chou	Combination of NCD Risk Prevention Strategies in Promoting Health consciousness (<i>online</i>)
A017	Meng-Lun,Liang	The effect of using Tobacco-free Healthy Tree and trans-theoretical model to intervene in teenagers (<i>online</i>)
A019	Hui-Chun Hsieh	Awareness process of health literacy of a patient with peptic ulcer
A020	Hui-Fan Hsieh	Good Death at Home Home-Based Hospice Care is always by your side. (<i>online</i>)
A022	Yi-Jing Huang	Interventional oral stimulation for newborns having sucking difficulties improves the rate of breastfeeding
A023	Wanling Lu	Application of The International Classification of Functioning, Disability and Health (ICF) to Improve Health Literacy for Older Adults In Home-Based Reablement
A026	Hui-Ju Yang	A Comparison Study of Physical/Psychological Symptoms, Social Support and Quality of Life Among Family Caregivers in Different Departments of ICU

A028	Li-Yang Chiang	Using information technology to reduce the rate of missed bills of self-funded medical materials in the operating room (<i>online</i>)
A029	Li-Yang Chiang	Reduce the incidence of surgical pressure injuries (<i>online</i>)
A030	Li-Yang Chiang	A project to improve the accuracy rate of skeleton and tissue bank access operations in the operating room (<i>online</i>)
A031	Li-Yang Chiang	The effectiveness of the preoperative visit improvement project for operating room nurses (<i>online</i>)
A032	Li-Yang Chiang	Improve the effectiveness of operating room nurses in the management of laparoscopic surgical instruments (<i>online</i>)
A033	Mei Hui Huang	Factors affecting health awareness of endometrial curettage (<i>online</i>)
A034	ChiaChang Hsu	Taiwan Psychiatric Specialized Hospital Patient Self-administered Satisfaction Questionnaires Analysis
A039	Chanya Anukhro	Prevalence of health literacy of Thai people aged over 15 years in Health region 1
A040	Yuan-Tsung Tseng	Comparison of the long-term risks of individual cancer between hormone replacement therapy and Traditional Chinese Medicine in postmenopausal women: A retrospective cohort study
A041	Yuan-Tsung Tseng	Long-term risk of congenital and related diseases in children and premature infants: a retrospective cohort study
A042	Yuan-Tsung Tseng	Long-term risk of gastrointestinal disease among healthy children and premature infants: a retrospective cohort study
A043	Yuan-Tsung Tseng	Comparison of long-term cardiovascular disease risks between hormone replacement therapy and Traditional Chinese Medicine in postmenopausal women: A retrospective cohort study
A048	Yung-Hsuan Chen	Use Quality Control Circle to improve central-line bloodstream infection patients in ICU
A049	Su Chen Li Li	Outcomes of Team Resource Management for COVID-19 Prevention: An Example of a District Hospital (<i>online</i>)
A050	Pei-Jung Tsai	Reduce Fall Rate in Orthopedic Patients During Hospitalization
A051	Shiou-Jen Wang	Lower Extremity Muscle Endurance in Psychiatric Day-Care Patients
A052	Ying-Hua Tsai	Efficacy of Adopting Lean Work to Simplify Central Venous Catheter Package
A053	Li, Tzu-Ying	A study of the factors affecting elderly people fracture danger
A054	Yuan-Tsung Tseng	Association between Successful Cessation and Risk of Cancer among Patients with Diabetes Mellitus: A Retrospective Cohort Study

A056	Xihn Xuh Chen	N-Acetylcysteine use in relation to reducing COVID-19 mortality rate (<i>online</i>)
A059	Kai Ling Su	Experience of Total Parenteral Nutrition Care in a Pneumonia Case Complicated with Underweight and Moisture Skin Damage Caused by Gastrostomy Leakage
A060	Shu-Chen Liu	A Study on the Effectiveness of Using Information-based Operation to Improve the Efficiency of Preoperative Visit
A061	Chih-Wei Hsiao	Improve environmental awareness and practice green hospital-Take Chiayi Christian Hospital as an example
A064	Ya-Yu Chu	The Application of Lean Methodology to Improve the process of Outpatient Chemotherapy
A065	Tao An Chen	A Narrative Systematic Review of Burnout Among Respiratory Therapists During COVID-19 Pandemic
A066	ChiFang Chen	Nursing Experience of Duodenal Obstruction, Superior Mesenteric Artery Syndrome Following Rectal Cancer Surgery
A067	Shu Pin Sun	Decreasing Incidence Rates of Incontinence Associated Dermatitis in the Intensive Care Unit patients by teamwork
A068	Yi-Ching Liao	The study of the correlation between the news received about COVID-19 and preventive behaviors of the elderly people
A069	Zih-Ping	A Japanese Medical Affair Text Labels as a Tourist May Encounter – Computational Linguistics Aid
A070	Zih-Ping	Orthopedic medical literacy of patients operating at smart phone-An interface and classification choice design (<i>online</i>)
A071	Chuan Man Chu	Physical Work Demands Predict Return-to-work after Occupational Injury -- A Pilot Machine Learning Study
A072	Shu Chin Huang	The Study to Improve the Emergency Registered Professional Nurse's Ability to Recognize and Determine Symptoms of STEMI Patients
A073	Yi-Ling Chung	Discussion on the Effectiveness and Satisfaction of Introducing Multi-Intelligent Assistive Care System for COVID-19
A074	Ssu-Han Wang	Nursing Experience of a Case of Degenerative Arthritis of Right Knee Undergoing Total Knee Replacement
A075	Huei-Ying Kuo	The Investigation of the Implementation Rate of Increased Parent-Child Skin-to-Skin Contact up to 60 Minutes after Natural Childbirth
A077	Chingfang Su	The Application of Diversified Health Education Approach to Improve the Awareness of Home Care for Chemotherapy Patients

A078	Yu-Ting Wang	Effect of Shared Decisuon-Making on patient treatment Choice of chronic kidney disease
A079	Yu-Ting Wang	Community Simulation Teaching to Promote the Effectiveness of Resident's Willingness to Participate in Shared Decision Making
A080	Yu-Ting Wang	Introduction to the impact of promoting SDM on medical decision-making for early-stage prostate cancer patients
A081	Tai Yi Ling	The Efficacy of Aspirin Use in Preventing Colon Cancer Risks
A082	Yu-Ting Wang	The Effect of Treatment Decision Making of Patient using shared decision making In The Pluralistic Method
A083	Yu-Ting Wang	The effect of promoting SDM in families and anxious patients suffering from severe respiratory failure: before and after decision marking
A084	Yu-Ting Wang	Subsequent options for postoperative treatment of early stage lung cancer
A086	Hsiu-Chun Chen	Effectiveness of 10 weeks cycle muscle strengthening exercise for the body composition and quality of life in hospital staff
A087	Li-Hsueh Chen	Early Warning Information System Could Improve Incidence of Unexpected In-hospital Cardiac Arrest
A091	Yi-Qi Lin	Discussion on work pressure response of home-based long-term caregivers in Taichung City
A092	Yi-Qi Lin	Discussion on Work Stress and Participation in Stress Relief Activities of Long-Term Care Service Workers under the COVID-19
A096	Xihn Xuh Chen	Evaluation of One-Step and Two-Step Oral Glucose Tolerance Test in Screening Gestational Diabetes Mellitus (<i>online</i>)
A097	Shu-Chen Liu	Using the health belief model to explore nurses' behavioral intentions of surgical smoke hazards prevention and its related factors
A098	Nai-Chen Hou	The Effectiveness of E-Learning System on Performance and Satisfaction of New Nurses
A099	Yu Yang	Feasibility of Instant Messaging application for distance employment support groups for people with mental disorders in the community: A pilot study
A100	Yi-Ching Liao	The study of the correlation between medication safety and health literacy of the elderly in the region of central Taiwan
A102	Bao-Kuan Wu	Apply the Scenario Simulation Video to Promote Learning of Leopold's Maneuvers and Fetal Heart Rate Monitoring

A106	Chiao Yin Chang	Discussion on the relationship between health literacy and healthy behavior of caregivers
A107	Chiao Yin Chang	Analysis work fatigue and state of health of Long-term professional service personnel
A109	Su-Hui Tsai	Using innovative thinking to improve puncture site care after cardiac catheterization
A111	Fu-Li Chen	The association between health promoting school awards level and health literacy of elementary schools' students in Taiwan <i>(online)</i>
A113	Pei-Yin Chen	Upregulation of Nrf2/HO-1 Pathway by Gamma Linolenic Acid Alleviates LPS-Induced Muscle atrophy in vitro and in vivo
A116	Ju Hsia Huang	Effectiveness of Interventional Horticultural Therapy for High-Stress Hospital Workers: a Pilot Study <i>(online)</i>
A117	I San Chen	Improve the integrity of wearing and taking off protective equipment for ward nurses
A119	Pei-Yu Yang	Effect of fecal occult blood immunoassay screening for colorectal cancer <i>(online)</i>
A121	Hsing-Chan Chiu	Reducing overuse of prophylactic antibiotic in post-operative care through quality control circle approach for patients with surgical conditions
A122	Mei-ching Chen	Risks of Musculoskeletal Disorders among Nurses in Intensive Care Units
A123	Pei-Fang Li	Reduce the Length of Inpatient Stay for Early recovery of intestinal motility patients after bowel surgery by Using Task-Oriented QC Story
A125	Chien-Yun Hsu	Using innovative thinking to improve the incidence of bruising at the puncture site of transradial cardiac catheterization
A126	Ya-Lien Chang	Improve the timeliness of inspection reports using the ePORTER delivery system that intelligently delivers specimens
A132	Chi Chieh Chen	Using Health Failure Mode and Effect Analysis to Improve the Safety of Electricity in Wards
A133	Ru-Yu Lien	Chinese Text Readability of Patient Educational Materials in Nursing <i>(online)</i>
A134	I-Ching Lin	Bone Strengthening Gymnastics Program Improving Sarcopenia in the Elderly in the Community
A137	Fang Tsu Lai	Use Root Cause Analysis to Improve Hemodialysis Machine Power Failure

A140	Cheng Wei Wang	A health literacy course to explore trail walking and calorie consumption from a cultural perspective: Take a Chiayi County Alishan Township Charshan Primary School as an example
A142	Kai Pei Huang	Using the Technology of Capillary Electrophoresis to Diagnose Lymphoplasmacytic Lymphoma with Waldenström Macroglobulinemia
A144	Kai Ling Su	Experience of Total Parenteral Nutrition Care in a Pneumonia Case Complicated with Underweight and Moisture Skin Damage Caused by Gastrostomy Leakage
A155	Loc Ngo Viet	Study on outpatient satisfaction and associated factors among outpatients at Phu Vang District Health Center, Thua Thien Hue Province, Vietnam
A153	Nurjanah	The Media Literacy Intervention to Reduce Intention to Smoke in Preadolescent

A001

An analysis on the Regulations of Occupational Health Service of Physicians in Taiwan

Yu-Li Lin, MD, a doctor of Division of Occupational Medicine, Taichung Veterans General Hospital, Taichung, Taiwan.

Yu-tse Tsan, MD, PHD, a doctor of Division of Occupational Medicine, Taichung Veterans General Hospital, Taichung, Taiwan.

The International Labour Organization (ILO) proposed the concept of "Occupational Health Service" (OHS) in the C161 Occupational Health Services Convention, which is provided by medical staff entering the workplace to promote workplace hazard prevention and personnel health promotion. The "Regulations of the Labor Health Protection" in Taiwan specifically regulates the details of the on-site service system for physicians and nurses. It revised on December 22, 2021 to change the basis for calculating the number of people in the enterprise, and set special regulations for decentralized enterprises. Considering that there was no relevant literature in the past, this study focuses on the OHS of physicians in Taiwan, and compares with the OHS system in Japan.

This paper proposes issues related to the OHS system in Taiwan. First, the basis for calculating the number of people in the enterprise is not clearly stipulated in the articles. Second, the coverage rate of OHS for physicians in Taiwan is still significantly insufficient. Third, the rights and responsibilities for the health management of dispatched labor in Taiwan are still unclear. Forth, the regulations of decentralized enterprises forms legal loopholes. Finally, this study provides suggestions on future amendments.

A003

Resistance Training with Elastic Band to Prevent and Postpone the Loss of Muscle and Functional Performance Older Adults in a Daycare Center of Southern Rural Taiwan- A Pilot Study

Tuan, Sheng-Hui, MD, is a PhD student, Institute of Allied Health Sciences, College of Medicine, National Cheng Kung University, Tainan City, Taiwan (R.O.C) and an attending physician, Department of Rehabilitation Medicine, Cishan Hospital, Ministry of Health and Welfare, Kaohsiung, Taiwan (R.O.C.);

Chen, Ssu-Yu, MS, is a physical therapist, Department of Rehabilitation Medicine, Cishan Hospital, Ministry of Health and Welfare, Kaohsiung, Taiwan (R.O.C.); Li, Chien-Hui, MS, is a physical therapist, Department of Rehabilitation Medicine, Cishan Hospital, Ministry of Health and Welfare, Kaohsiung, Taiwan (R.O.C.);

Tsai, Yi-Ju, PhD, is a Professor, Institute of Allied Health Sciences, College of Medicine, National Cheng Kung University, Tainan City, Taiwan (R.O.C) and Department of Physical therapy, College of Medicine, National Cheng Kung University, Tainan City, Taiwan (R.O.C.)

INTRODUCTION:

Frailty and sarcopenia cause functional decline and loss of independence in older adults. Progressive resistance exercise is the gold standard to improve muscle strength and function in older adults with frailty and sarcopenia. However, due to shortage in healthcare providers, rehabilitation program is difficult to provide in senior caring facilities in rural Taiwan.

OBJECTIVES:

This is a prospective non-randomized study assessing the clinical effectiveness of progressive resistance training by using the elastic band (ERT) in the treatment of frailty and sarcopenia.

METHODS:

Older adults aged more than 60 years old with the diagnosis of frailty or sarcopenia, regularly participating in the daycare center in rural Kaohsiung city, were recruited. The ERT lasted for 12 weeks, two times per week, and thirty-minutes per time, with the aim at strengthening the main muscle groups in the trunk and upper extremities and lower extremities that are crucial for physical mobility. Study of Osteoporotic Fractures Index (SOFI) for frailty and criteria of sarcopenia including (1) handgrip strength of dominant hand (HGS), (2) walking speed, and (3) appendicular skeletal muscle mass index (ASMMI), were primary outcomes. (1) Range of motions in dominant upper extremity (ROM), (2) maximal voluntary isometric contraction of biceps/triceps brachial muscles of dominant side (MVC of biceps/triceps), (3) box and block test (BBT), and (4) circumference of mid-arm and mid-calf, were secondary outcomes.

RESULTS:

Data from 25 elders were analyzed at the end with the mean age 78.32 ± 8.40 years old. Three of 20 participants were not frail by the SOFI and one of 12 participants was not sarcopenic after the ERT. There were significant improvements in (1) MVC of biceps ($p=0.025$), (2) BBT score ($p<0.001$), (3) circumference of mid-arm ($p=0.001$) and mid-calf ($p=0.004$), (4) ROM of shoulder flexion ($p<0.001$), external rotation ($p=0.011$) and abduction ($p=0.009$). Though there was a trend of increased in the other outcomes, no significance reached. No major adverse events like fall or fracture were occurred during the whole course of ERT.

CONCLUSION:

ERT is manpower-saving and might be helpful in treatment of frailty and sarcopenia in older adults in daycare center. Studies with longer intervention and larger number of participants are warranted to show the effectiveness of ERT in the change of body composition.

A005

Self-efficacy mediates marriage immigrants' access medical service barriers and Health literacy: a structural equation modeling analysis

Chia-Hui Wang¹, Gong-Hong Lin², Shu-Yi Wang³, Yu-Fang Lin⁴, Shu-Fen Kuo⁵

1.4.5 School of Nursing, College of Nursing, Taipei Medical University;

2. Master program in long-term care, College of Nursing, Taipei Medical University

3. Loretto Heights School of Nursing, Rueckert-Hartman College for Health Professions, Regis University

INTRODUCTION:

Existing literature suggests that self-efficacy is positively associated with health literacy. Despite an increasing immigrant population that faces significant health needs, the role of self-efficacy on health literacy is not known among Vietnam and Indonesia immigrants. This study aimed to identify relationships among access medical service barriers (AMSB), self-efficacy, and health literacy among Vietnam and Indonesia immigrants, and to determine the mediating effects of self-efficacy on the relationship between access medical service barriers and health literacy.

DESIGN:

A cross-sectional design was adapted.

METHODS:

There were 771 Vietnam and Indonesia immigrants who immigrated and married with Taiwanese in six Taiwan counties. We used structural equation modeling (SEM) to examine whether self-efficacy mediated the relationship between AMSB and health literacy.

RESULTS:

The findings showed that The model fit index of the SEM fits very well ($\chi^2=619.814$, $df=256$, $p < 0.001$, $\chi^2/df = 2.339$, $CFI = 0.944$, $RMSEA = 0.043$ (95% CI= 0.039–0.048)). After controlling for confounding factors in the optimal path model, self-efficacy mediated the relationships between AMSB and health literacy. AMSB was directly related to self-efficacy (path coefficient=-0.232), self-efficacy was directly related to health literacy (path coefficient=0.110), while AMSB had indirect associations with health literacy via self-efficacy (path coefficient=-0.030). Therefore, AMSB predicted immigrant' health literacy partially through self-efficacy (see table 1).

CONCLUSIONS:

This study showed that the association between AMSB and health literacy was partially mediated by immigrant caregivers' self-efficacy. As a result, it was proposed that boosting self-efficacy could increase and drive immigrant' caregivers' health literacy. To assist this population in obtaining enough resources, targeted educational programs to promote immigrants' self-efficacy should be designed and implemented. Furthermore, health care practitioners should be aware of the relevance of immigrants' AMSB.

A006

The effects of vocational rehabilitation for occupational accidents labor on health literacy
I-Hsiu Liou¹, Wan-Yun Huang¹, Chan-Man Chu^{1,2}, Chia-Lin Yang^{1,2}, Sheng-Hui Tuan³, Shu-Fen Sun¹, Shin-Tsu Chang¹

1. Department of Physical Medicine and Rehabilitation, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan;

2. Occupational-rehabilitation center, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan;

3. Department of Rehabilitation Medicine, Cishan Hospital, Ministry of Health and Welfare, Kaohsiung, Taiwan

Background According to the Ministry of Labor statistics in 2016, there were 52198 cases with work-related injuries and illness in Taiwan. We established a vocational rehabilitation center in our hospital to help occupational accidents labor.

Aims The purpose of the program was to provide individuals with occupational injuries instant information and to assist workers to return to their workplace.

Methods The center mainly recruited patients suspected with workplace-related injury via other medical departments referral. After referral, we ensured the diagnosis and established personal archives. For those whose recovery time was over one month, we provided health education, information of social services and referral to the Kaohsiung City Government Labor Affairs Bureau. When workers' condition improved, we provided interventions included evaluation and facilitation of ability to work, social adjustment counseling, and occupational accommodation. This study summarized the characteristics of labor we provided interventions as aforementioned from September 2016 to August 2017.

Results Sixty workers completed screening from September 2016 to August 2017 and was introduced to our services. Forty employees received evaluation and facilitation of ability to work. During our follow up at one, three and six months after intervention, 33 returned to their job. Seven cases remained unemployed for reasons as listed in table 1.

Conclusion With the support of Occupational safety and health administration, ministry of labor, Taiwan, we established a more integrated and more comprehensive service delivery system for patients with occupational injury.

Key words: vocational rehabilitation, labor ,occupational therapy.

A007

The effects of integrated outpatient services for people with disabilities on health literacy

I-Hsiu Liou¹, Wan-Yun Huang¹, Shu-Qi Chen², Sheng-Hui Tuan³, Shu-Fen Sun¹, Shin-Tsu Chang¹

1 Department of Physical Medicine and Rehabilitation, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan

2 Department of Medical Affairs Administration, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan

3 Department of Rehabilitation Medicine, Cishan Hospital, Ministry of Health and Welfare, Kaohsiung, Taiwan

Background: According to the questionnaire of ministry of interior, Taiwan, 68.8% of people with disabilities had regular visits for doctors. However, 57% of the population had difficulties to visit the hospital independently. They encountered problems such as registration in the hospital counter or traffic issues. In 2014, We established integrated outpatient services for people with disabilities in our hospital.

Aims: In this service program, a case manager assessed patients with disabilities and arranged appointment to medical specialties, including internal medicine, physical medicine and rehabilitation, psychiatry and more, according to patients' needs. During the same visit, patients with disabilities could see all specialists they need in one visit session, in one clinic room. The aim of the service program was to improve the medical quality, to overcome the obstacles during medical visits for patients with disabilities, and to save patients' money.

Methods: From 2014 to November 2020, there were 7487 people received service counselling and 6526 people applied for the integrated system annually. For age distribution, most patients were between 61 and 70 years of age. For disability classification, most of the patients were diagnosed with neuromuscular deficits and related disabilities.

Results: In 2020, there were 1425 doctor visits annually. For health-related behavior analysis in the people with disabilities, smoking accounts for 5.42%, alcohol drinking 1.5% and betel nuts 1%. For disease analysis, metabolic syndrome accounts for 61% . For patients' feedback, satisfaction rate was over 90% in the questionnaire of integrated system.

Conclusion: The effects of integrated outpatient services for people with disabilities in Taiwan showed high satisfaction and save time and medical expenditure of patients. This service can enhance health service quality of people with disabilities. **Key word**
Integrated outpatient services, Disability , Healthy service quality

A008

Distribution of etiology and dysfunction of children with developmental delay in Taiwan on health literacy

I-Hsiu Liou¹, Wan-Yun Huang¹, Sheng-Hui Tuan², Chu-Chin Chen³, Shu-Fen Sun¹, Shin-Tsu Chang¹

1) Department of Physical Medicine and Rehabilitation, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan;

2) Department of Rehabilitation Medicine, Cishan Hospital, Ministry of Health and Welfare, Kaohsiung, Taiwan ;

3) Department of Pediatrics, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan, Taiwan

Background: Developmental delay is a non-specific neuropsychiatric symptom. It is necessary to first clarify whether the diagnosis is correct and the pathological manifestations and nature.

Aims: To investigate the etiology and distribution of developmental delay is important for hospital to arrange appropriate specialist.

Methods: In the Child Development Multidisciplinary Assessment Center of our hospital, 3,167 children from 2010 to 2018 were evaluated for development. The data were analyzed according to the relevant diseases, underlying etiologies, cause classification, and development retardation categories.

Results: Children with developmental delay also have quite proportion of problems with other nervous systems (such as epilepsy) or non-neural organs (such as visual abnormalities, growth retardation, etc.). These diseases can lead to deprivation of hospitalization, perception or learning opportunities, which may be the cause of developmental delay. The causes were divided into three categories: (1) 1193 (37.67%) of neurological causes, (2) 451 (14.24%) of familial causes, and (3) 1465 (46.26%) of those without specific causes.

Among the neurological causes, the further classification including: 422 (13.32%) of labor brain injuries, 79 (2.49%) of congenital brain malformations, 318 (10.04%) of chromosome or genetic abnormalities, 23 (0.73%) patients with neurocutaneous syndrome, 26 (0.82%) patients with neurodegenerative disease, 200 (6.32%) patients with high-risk familial history, and 125 (3.95%) of other causes.

Conclusion: This study showed that the distribution of children with developmental delay was mostly without specific causes; the prevalence of brain injury from prenatal to postnatal was the highest in neurological causes, and most of them were referred from the outpatient clinic of premature infants in our hospital, gave early intervention to these children. In addition to the nervous system, other problems like visual perception, growth retardation, etc., team physicians should be able to detect individual underlying diseases and developmental delays, and intervene in a timely manner.

Key word: Developmental delay, children, rehabilitation

A011

Evaluation of impacts of a structured communication approach on pharmacy students' self-efficacy in over-the-counter medication counseling

Yen-Ming Huang, PhD, Assistant Professor, National Taiwan University;

Hsun-Yu Chan, PhD, National Taiwan Normal University;

Yao-Hsing Wang, MS, National Taiwan University;

Yunn-Fang Ho, PhD, National Taiwan University

INTRODUCTION: Pharmacists with better counseling skills can provide patients with pertinent information to appropriate medication use and disease management. Addressing communication skills in pharmacy curricula is one of the tactics to foster future pharmacists with better skillsets for medication counseling. However, current pharmacy education has no standard pedagogy to equip students with full skillsets of medication counseling before they go to experiential learning or pharmacy practice. We used a structured counseling approach to teach pharmacy students how to provide counseling on over-the-counter (OTC) medications and to prepare them with better self-efficacy in medication counseling.

OBJECTIVE: This study examined whether pharmacy students' self-efficacy in OTC medication counseling improved after receiving a structured counseling approach to OTC medication counseling.

METHODS: This cross-sectional study used a pre-post study design at a pharmacy school in Taiwan from February to June 2022. Participants included were the students who took Introduction to Community Pharmacy and were at least 20 years old. Each student received a 3-week lecture on communication skills and a structured counseling approach to OTC medications. The structured counseling was developed primarily based on essential components (assess, advise, agree, assist, and arrange) of the Five A's Model of Self-Management Support. It consists of 5 steps (SAIDS): (1) Surfacing Symptoms and OTC needs, (2) inquiring about Allergy and medication histories, (3) reaffirming medication Indication, (4) Directing correct medication use, and (5) reiterating Strategies to empower Self-care and to cope with common Side effects. A 14-item pre-to-post self-administrated survey was administered to evaluate students' self-efficacy in OTC counseling. Each item was measured with a five-point rating scale (1 = not confident at all, 5 = strongly confident), and a total score ranged from 14-70. A higher total score indicated a student has stronger self-efficacy in OTC counseling. Paired t-test was conducted to examine the difference in the pre-to-post scores of students' self-reported self-efficacy. Statistical analysis was carried out by using the SPSS version 28, with a statistical significance level at a two-sided $p < 0.05$. In addition, we used semi-structured interviews and thematic analyses to explore how the SAIDS approach impacted students' provision of OTC counseling.

RESULTS: Fifty of the 54 students providing both pre- and post- surveys were included in the analyses. The majority were female ($n = 33, 61.1\%$) with a mean age of 20.9 ± 0.8 years. Students reported a higher self-efficacy score (49.1 ± 6.9) in OTC counseling after the course than before (39.0 ± 11.1). A significant improvement ($p < 0.001$) in self-efficacy in OTC counseling was evident at the end of the course. Five students participated in the interviews and pointed out the SAIDS approach guided a clear direction to structure the way they evaluated consumers' needs and then provided medication information in a befitting manner. In addition, the SAIDS could be completed within 3-5 minutes and be applied to pharmacy practice, where time constraint is a common barrier to communication.

CONCLUSION: The structured medication counseling approach could be integrated into pharmacy education to improve students' self-efficacy in OTC counseling.

Keywords: communication, education, pharmacy, self-efficacy

A013

Cancer Risk in People with Oral Leukoplakia: A Nationwide Retrospective Cohort Study

Kai-Ching Hou, MD¹; Ya-Chun Chuang, MD¹; Cheng-Li Lin, MS²; Te-Chun Shen, MD^{1,3,4}

†

1 School of Medicine, China Medical University, Taichung, Taiwan;

2 Management Office for Health Data, China Medical University Hospital, Taichung, Taiwan;

3 Department of Internal Medicine, China Medical University Hospital, Taichung, Taiwan;

4 Department of Internal Medicine, Chu Shang Show Chwan Hospital, Nantou, Taiwan

BACKGROUND:

Studies that have investigated the epidemiological relationship between oral leukoplakia and cancer are mostly focused on the oral cavity. We aimed to determinate whether people with oral leukoplakia are at an increased risk of all types of cancer.

METHODS:

We conducted a retrospective cohort study in Taiwan. The oral leukoplakia group consisted of 5,004 people diagnosed between 2000 and 2012. The comparison group consisted of individuals without oral leukoplakia selected at a 1:4 ratio matched with age, gender, occupation, income, urbanization level, annual medical visit, and comorbidity by propensity score. The incidence of cancer was monitored until the end of 2013. The hazard ratios (HRs) of cancer were estimated using the Cox proportional hazards model.

RESULTS:

The incidence of cancer was 2.99-fold higher in the oral leukoplakia group than in the comparison group (21.8 vs. 7.29/1000 person-years, $p < 0.001$), with an adjusted HR (aHR) of 3.23 [95% confidence interval (CI) = 2.90–3.60]. Specifically, people with oral leukoplakia had a significantly higher risk of oropharyngeal cancer (aHR = 21.7, 95% CI = 6.03–77.8), oral cancer (aHR = 21.3, 95% CI = 16.9–26.9), laryngeal cancer (aHR = 11.4, 95% CI = 4.22–30.7), hypopharyngeal cancer (aHR = 5.47, 95% CI = 2.13–14.0), esophageal cancer (aHR = 2.99, 95% CI = 1.44–6.19) and lung cancer (aHR = 1.60, 95% CI = 1.04–2.47) than those without oral leukoplakia.

CONCLUSION:

People with oral leukoplakia exhibited increased risk of oropharyngeal cancer, oral cancer, laryngeal cancer, hypopharyngeal cancer, esophageal cancer and lung cancer compared with those without oral leukoplakia. Such people may request frequent cancer screen and check-up.

A015

Assessment of the coronavirus and Covid-19 information in the digital media by Polish school principals

Karina Leksy, PhD., Assistant Professor, University of Silesia, Katowice, Poland

INTRODUCTION: Over two years ago, an unknown coronavirus touched people worldwide and soon was declared a pandemic by the World Health Organization. In response, many governments introduced different prohibitions and solutions for coronavirus prevention, detection, containment, and treatment. Much information about the new virus has surfaced within traditional and digital media. Today, it is emphasized that along with the COVID-19 pandemic, the "infodemic" spread, causing excessive reliable and unreliable information. At that time, in an extreme position were school principals who had to make many crucial decisions and were responsible for the whole school community. If so, it was desirable that they make their decisions based on valid information and medical knowledge. Considering that also school managers encountered different coronavirus information, it is interesting how they assessed the COVID-19 information and its reliability in mass media, especially in digital media.

OBJECTIVE: This study aims to present the assessment of the coronavirus information available in the digital media made by Polish school principals.

METHOD: The results come from an online survey among school principals in Poland, which is part of the international COVID-19 Health Literacy School Principals Survey. The survey was conducted in 8 out of 16 provinces in Poland between June 2021 and December 2021. 1899 school principals participated in the survey, of which 928 completed the questionnaire. The main research questions are:

How did Polish school principals assess the digital media information connecting with the coronavirus pandemic?

What are school principals' satisfaction and confusion concerning media information on coronavirus?

RESULTS: The study revealed Polish school principals' assessment of the coronavirus pandemic information available in the digital media as easy and very easy to find (99,3%). The vast majority of respondents (92,7%) indicated that information on the Internet concerning the risk of coronavirus is easy to understand. Simultaneously, in the opinion of 38,7% of surveyed principals, the reliability of COVID-19 information in the digital media is difficult and very difficult to assess. Most of the respondents felt satisfied with the level of being informed about coronavirus. At the time, almost 55% were confused concerning the COVID-19 media information.

CONCLUSION: The survey results showed that Polish school principals declared easy access to the coronavirus pandemic digital media information. The gained outcomes also suggest that they need professional knowledge on recognizing false and unreliable media information regarding their and others' health. It probably would help them feel more comfortable making decisions regarding school and the whole school community and less confused in the world of widespread infodemic.

A016

Combination of NCD Risk Prevention Strategies in Promoting Health consciousness

Chou, YH, Wang, MH

Department of Nursing, Hsinchu Cathay General Hospital

INTRODUCTION:According to WHO statistics, in 2008, 36 million deaths were caused by non-contagious diseases (NCD), taking over 60% in worldwide deaths and making NCD one of the major public hygiene issues.

OBJECTIVE: We have combined campus, community, healthy bureaus and nearby clinics etc. and offered timely as well as adequate prevention strategies in the hope of raising health consciousness.

METHODS:Three case managers held chronic-disease-related seminars in three communities from April to October 2021. We initiated by giving out pilot questionnaires, followed by forms of slide presentation, Q&A session and post-test questionnaire as a wrap-up. All the used questionnaires were officially authorized ones in association with Health-Related Diet and Exercise.

RESULTS:A total of 67 participants in this study in three communities. The average score of pilot questionnaire was 119, while the score has gone up to 134 in post-test. The average improvement rate reached 86.5% before and after the use of NCD risk prevention strategies.

CONCLUSION:As we know, chronic disease control requires proper medication and healthy lifestyle. Personal health care and well-rounded health control are equally vital to delaying the aging process. Hopefully, more on healthy diet and its relevance to chronic disease could be elaborated for future studies. **Keyword:** non-contagious disease (NCD) / health consciousness / prevention strategies

A017

The effect of using Tobacco-free Healthy Tree and trans-theoretical model to intervene in teenagers

Liang, ML, Wang, MH, Hsu, YC, Tien, Y

Department of Nursing, Hsinchu Cathay General Hospital

INTRODUCTION:The Global Tobacco Epidemic Report pointed out that about 6 million people worldwide die from tobacco-related diseases every year, and about 80% of adult smoking originates from adolescence. The intervention of traditional group therapy programs for smoking cessation cannot meet the individual problems. Smoking cessation programs such as narration, film education, group activities, etc., have no obvious effect on smoking cessation for young people. Therefore, this study focuses on the young and aimed to through educational model and material which combining group-based and individual counseling for smoking cessation by using tobacco-free healthy tree and transtheoretical model(TTM) to improve teenager s' of smoking cessation education achievement and to increase success rates in smoking cessation.

Objectives:79 teenagers participated in smoking cessation program. At the beginning of the class, the concept of a tobacco-free healthy tree was introduced, and the participants were asked to think about what are the current stages they belong in the TTM.The program was designed by interprofessional members, including nutritionist, psychologist and diabetes mellitus case manager, and was proceeded by multimodel, such as tabletop games,videos,DIY and playing cards,which were thought to arouse participants' interest. In addition to smoking cessation programs, instant messaging is also used. We invited non-smoking peers as smoking cessation angels to provide care. The smoking cessation manager also provides instant advice after understanding the case's problems through mobile phones. They taught participants how to deal with the circumstance they meet,such as how to refuse invitation form peers or feeling depressed after quitting smoking,etc.They also help the participants to relieve stress in many ways and increase self-abilities. We would follow-up the change of stage under TTM and the average smoking cessation rate would conduct at 3-month and 6-month.

METHODS: In 2021, a total of 79 young people participated in smoking cessation programs and they used the concept of smoke-free health tree.There were 24 adolescent participant moving from precontemplation stage to contemplation stage. There were 45 participsted moving from precontemplation stage to action stage; There were 10 participsted moving from action stage to maintenance stage. and the after-school smoking reduction rate was 69.62%. The smoking quit rate was 56.96% at 3-month follow-up and 44.3% at 6-month follow-up.

RESULTS: Teenagers undergo physical and mental changes during adolescence to help them to quit smoking should not be the same as adults. Therefore, smoking cessation managers incorporate the concept of a tobacco-free healthy tree into smoking cessation program, and use instant messaging for continuous care, which can shorten the gap and increase enrichment. It is interesting and learner-centered activities, reduce feelings of loneliness and depression, enhance their confidence in quitting smoking, and achieve the purpose of effectively improving the completion rate of adolescents.

CONCLUSION: It hoped that model can be extended to every case receiving smoking cessation services in the future, thereby reducing the number of smokers, and medical costs, so that the seeds of smoking cessation can be deeply rooted in the heart.

Keywords: teenagers, smoking cessation, tobacco-free healthy tree, transtheoretical model

A019

Awareness process of health literacy of a patient with peptic ulcer

Hui-Chun Hsieh¹, Ching-Mei Chang², Ching-Liu Ko³

1.Students, Nurse Supervisor , Hungkuang University,ShowChwan Memorial Hospital

2.RN, PhD, Assistant Professor, Department of Nursing, Hungkuang University.

3.Head Nurse,ShowChwan Memorial Hospital

Introduction: Health literacy is extremely important for the self-care of chronic disease cases. This study aims to explore the experience of a peptic ulcer patient's awareness of health literacy, hoping to improve self-management of chronic diseases.

Objective: To understand the experience of health literacy awareness experience in peptic ulcer cases.

Methods:This study adopted field research method. In the surgical ward of a hospital in a certain central region, one-to-one in-depth interviews were conducted under the guidance of semi-structured interviews. Each interview was about 30-50 minutes. Through participatory observation to understand the verbal and non-verbal behaviors expressed of patient, and the collected data are recorded as nursing process records. Content analysis was used for this study data analysis.

Results:A total of three themes are summarized, include: Awareness of bad health habits (medication dependence; work stress; partial eclipse), deep health troubles and needs (being troubled by multiple diseases; gap between health education needs; searching for health information), health literacy awareness and realization (self-awareness of health, self-correction of work attitude, medication reconciliation and Integrated Care)

Conclusion:The intervention of health education and sharing decision-making of medical staff can affect the patient's self-health awareness. Therefore, health education is very important to inspire patients' health awareness and perception.

Key Words: Awareness, health literacy, peptic ulcer.

Good Death at Home Home-Based Hospice Care is always by your side.

Hui-Fan Hsieh¹, Jheng-Ling Li², Nien-Chiu Liao³

INTRODUCTION:Patients with a Terminal Illness look forward to returning home and their roots. Due to lack of nursing and unfamiliar skills, lack of immediate support, family members are easily trigger the anxiety, and in turn to feel discouraged from returning home to take care of them. This article was applied multiple methods to promote terminally ill patients and their families to accept hospice home care, so as to smoothly connect to home care, lead family members to care and accompany terminally ill patients, so that they can get good death at home without regrets.

Objective:Enhance the Completeness of Hospice Care Patients for Good Death at Home

Methods:1. Formulate and actively promote the "Medical Shared Decision on the Choice of Death Site", clarify the expectations of patients and their families for hospice through discussion, and choose a hospice place that the patient desires.

2. Regular home visits, use the PPI and combine clinical symptoms to estimate the patient's survival period, and start end-of-life care in a timely manner.

3. Combine sensory perceptions to improve awareness of death for the caregivers.

➤ Provide bedside guidance through each home visit, and guide family members to accompany the patients and recognize terminal symptoms through sensory perceptions including sight, hearing, touch, and smell, and understand and experience the process of natural death.

4. Cooperate with the ward team and apply the communication software including phone call, video, audio-video and so on to provide 24hrs constant consultation services to respond to the needs of patients and families in time.

Results:1. The good death at home rate increased from 47% to 79% from 2020 to June 2022.2.

Qualitative feedback:Terminally ill patients indicated that "The home is comfortable and safe, and the family can accompany you around ", "Do not go back to the hospital, I want to pass away in my bed (die)".

Bereaved family: "Accompanying has become a daily routine, and the care has been integrated into life, and conforms to the end of life. This is the life, and it can only be understood after walking through it."

"To see the appearance of my future hospice from the care, and began to think about planning pre-established medical care."

Conclusion:An Home-Based Hospice Care can become a secure and strong backup force for terminally illness patients and their families to return home and take care of them at home through the intervention of the various measures, and can accompany patients and families to have a good death at home.

A022

Interventional oral stimulation for newborns having sucking difficulties improves the rate of breastfeeding

Huang, Yi-Jing¹ Lai, Yi-Ping² Hsing, Hung-Chun³

1Department of Nursing, Hsinchu Cathay General Hospital;

2Department of Nursing, Hsinchu Cathay General Hospital;

3Department of Nursing, Hsinchu Cathay General Hospital

【Objective】

Establishing successful breastfeeding is one of the important tasks for postpartum mothers. Newborns with clinically sucking difficulties often make mothers feel overwhelmed and frustrated, which often blows the mothers' breastfeeding confidence, and this is also the key factor for mothers to stop breastfeeding early. The "BREAST feed Breastfeeding Assessment Form" was used for clinical breastfeeding observation. For newborns having difficulty in sucking, oral stimulation conducted by nursing staffs improves their sucking ability, which helps mothers wanting breastfeed and simultaneously increases the rate of exclusive breastfeeding.

【Methods】

Intensified evaluation: The "BREAST feed breastfeeding assessment form" was implemented to check the breastfeeding problems of the newborns and mothers. Appropriate nursing intervention and health education improve nursing staffs' ability to assess individual breastfeeding problems through individual discussions with the breastfeeding instructors in the hospital.

Intervention measures: Summarizing the literature and recommendations from rehabilitation practitioners for premature infants, the "Newborn Oral Stimulation" operation technique and the health education leaflet with graphic steps were established.

Education and training: Training courses were held to enhance the nursing staffs' awareness of newborn oral stimulation. Practical demonstrations were performed using the "Newborn Oral Stimulation Evaluation Form" with a breastfeeding instructor.

Clinical implementation: For newborns having difficulty sucking, the health education leaflet "Newborn Oral Stimulation" is used as a tool to teach their families in practice. During hospitalization, oral stimulation for newborns is provided twice in the morning and in the evening. The implementation and improvement status were recorded in the nursing record and handed over. Before discharge, the evaluation is conducted by the breastfeeding instructor to confirm that the primary caregiver can perform it completely and correctly.

【Results】

The completion rate for nursing staffs using the "BREAST feed Breastfeeding Assessment Form" in clinical breastfeeding observation was 100%.

Evaluation results of "Newborn Oral Stimulation": The average completeness rate for nursing staffs completing the health education and evaluation based on their cognition, affection and skills was 95%.

The breastfeeding rate during hospitalization was 53.7% in average in the first quarter of 2020 (before intervention). After the intervention of oral stimulation during April to September 2020, the breastfeeding rates in the fourth quarter averaged 56.84% (the improvement rate was 3.14%).

【Conclusion】

Using "BREAST feed Breastfeeding Assessment Form" to identify cases with sucking difficulties, and oral stimulation health education was implemented accordingly to help newborns coordinate sucking and swallowing action. Through practical exercises and

appropriate assistance, the mothers with breastfeeding problems breastfeed successfully. This also increases the exclusive breastfeeding rate in the hospital.

Keywords: Newborn Oral Stimulation, sucking difficulties of newborn, BREAST assessment

A023

Application of The International Classification of Functioning, Disability and Health (ICF) to Improve Health Literacy for Older Adults In Home-Based Reablement

Wan-Ling Lu, M.Ed. is a physical therapist, Rehabilitation Department, Chia-Yi Hospital, Ministry of Health and Welfare

INTRODUCTION: The WHO Disability Assessment Schedule (WHODAS 2.0) directly linked at the level of the concepts to the International Classification of Functioning, Disability and Health (ICF). WHODAS 2.0 was a single generic instrument for assessing health status and disability across different cultures and settings. Reablement is one form of rehabilitative intervention, which aims to restore ADL functions performed in the community. Home-based reablement program improves the older adults' physical function, recommends the adjustment of the home environment, provides assistive devices, and enhances caregivers' care skills.

OBJECTIVE: This study developed an assessment of home-based reablement intervention and outcome by ICF model to improve health literacy for older adults.

METHODS: In the community provide home-based reablement programs based on 6 domains of WHODAS 2.0. The ultimate goal of home-based reablement was to help older adults the ability to participate in community activities, and enhance the living ability and quality of the older adults and the caregiver.

RESULTS: The results of this study have been analyzed through data analysis and discussion:

1. Home-based reablement program intervention is based on the ICF evaluation. Evaluating the effectiveness of program involves: delayed nursing home placement and live longer at home while reducing the need for institutionalization.
2. Older adults with high health literacy and participation with health care professionals during the reablement process. Home-based reablement program need to improving capability include joining in community activities, interacting with other people, and staying alone.
3. According to life situation performance, people with disabilities and chronic illnesses were facing moderate to severe level of difficulty in the activity and participation. In the domestic responsibilities and social participation can increase the health literacy of the older adults.

CONCLUSION: Through the application of ICF concept, combined with the WHODAS 2.0 assessment function, to provide family environment participation, health status and quality of life. The main goal of home-based reablement is focuses on a person's strengths to promote and maximise independence and wellbeing. Let older adults aging in place and promoting health literacy

A Comparison Study of Physical/Psychological Symptoms, Social Support and Quality of Life Among Family Caregivers in Different Departments of ICU

Hui-Ju Yang¹, Chin-Ying Dai², Hua-Yu Lin³

1) Department of Nursing, Show Chwan Memorial Hospital, Changhua;

2) Department of Nursing, Central Taiwan University of Science and Technology, Taichung;

3) Department of Nursing, Show Chwan Memorial Hospital, Changhua

PURPOSE: To examine the influencing factors the social support, quality of life and physical and mental status of family caregivers of patients in intensive care unit (ICU).

METHODS: This study was a prospective study design with purposive sampling the personal information of the patients and their family caregivers, collected from three ICUs (Surgical Intensive Care Unit, Neuro Intensive Care Unit and Medical Intensive Care Unit) of a regional hospital located in central Taiwan. Memorial Symptom Assessment Scale (MSAS), Perceived Social Support Scale (PSSS) and European Quality of Life Scale (EuroQoL or EQ-5D) were applied on our study and analyzed with descriptive statistics, one-way analysis of variance (ANOVA), Chi-square test and multiple regression analysis by Statistical Package for the Social Sciences (SPSS) software.

RESULTS: A total of 165 personal information of patients and their family caregivers were collected, with an average age of 67- and 49-year-old respectively. The reason for the physical and mental status affecting family caregivers was that the younger the patient is, the severer the physical and mental status of the family caregivers. The reason for the social support from health care practitioner that affects the family caregivers was that the patient transferred from the emergency department, signed do not resuscitate (DNR) and the level of family education is high school degree or above. The reason for the social support from relatives that affects the family caregivers was that patient was married and family caregiver had better health in the past month. We can predict the quality of life of the family caregiver through the age of the patient and the health of the family caregivers in the past month. The explained sum of squares was 13%, 17%, 10% and 10% respectively.

CONCLUSION: Factors affecting the physical and mental status, social support and quality of life of family caregivers include the age of patient, marital status, source of patients transferred to ICU, DNR status, the education level of family caregivers and health status in the past month. This study results can provide as a reference for medical professionals to provide appropriate medical care according to the characteristics of different patients and family caregivers.

A028

Using information technology to reduce the rate of missed bills of self-funded medical materials in the operating room

Chang,Fang-Tzu, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Chiang,Li-Yang, Deputy Chief Nursing Officer, Operating Room, Taipei Hospital, Ministry of Health and Welfare;

Li,An-Cheng, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Tsai,Chia-Ling, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Yao,Dai-Jun, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Chen,Hsin-Yu ,Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

INTRODUCTION:

Nursing operations in the operating room are busy, and patients need to be carefully cared for while at the same time taking into account the management of high-unit-price self-funded medical products. Improper management requires the responsibility of compensation, which leads to a sudden increase in the psychological burden of nurses, which motivates the author to improve.

OBJECTIVES:

Focusing on operating room nurses, use information technology to improve the management of self-paid medical products, thereby reducing the psychological burden of nursing staff facing high unit price medical products, improving the management efficiency of self-paid medical products, and reducing the rate of missed bills of self-paid medical materials in the operating room. The leakage rate of self-funded medical materials in the operating room was reduced to less than 20%.

METHODS:

Using information technology to properly manage self-paid medical products in the Operating room, through the unified classification of the same type of products, unified management regardless of department, and online electronic registration of self-paid medical products, so that nursing staff can track and update the status of self-paid medical products in a timely manner, Significantly reduce the time spent by nursing staff to find the registration books of self-paid medical products of each department, and at the same time integrate the storage area of self-paid medical products with the electronic self-paid medical product registration books. This reduces the situation that new colleagues misidentify medical products and lead to wrong disassembly. Use the TRM technique to educate colleagues and the secretary during the morning meeting in the operating room, and monitor the usage status while the colleagues and the secretary are operating.

RESULTS:

Operating room nurses - medical product management satisfaction increased from 75% to 90%. The leakage rate of self-funded medical materials in the operating room has been reduced from 45% to 19%

CONCLUSION: Operating room nurses help manage a variety of self-funded medical products according to the needs of physicians in various departments, which is a kind of psychological pressure on nurses and should be properly managed so that nurses can keep abreast of the needs of medical product information, which is helpful for new colleagues Reduce uncertainty about out-of-pocket medical products and ensure good quality of care for patients. The results of this

study can be applied to clinical practice, including clinical care and professional roles. The medical product management method in this study can provide reference for clinical nurses to improve the management efficiency of self-funded medical products.

A029

Reduce the incidence of surgical pressure injuries

Chiang, Li-Yang, Deputy Chief Nursing Officer, Operating Room, Taipei Hospital, Ministry of Health and Welfare;

Huang, Mei-Huei, Director of Operating Room Nursing, Taipei Hospital, Ministry of Health and Welfare;

Chung, Chia-Ling, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Chen, Hsin-Yu, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Gan, Ruei-Jie, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Hsu, Ting-Jung, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

INTRODUCTION:

Operating room nurses are very busy, and they need to take care of patients carefully, and also need to take into account pressure injuries caused by factors such as surgical positioning, long operation time, and prolonged uncompressed pressure areas. Due to the safety of patients in recent years With the rise of consciousness, the pressure injury rate in this operating room has gradually increased, which has led to a sudden increase in the psychological burden on the nurses in clinical care, which has led to the author's motivation to improve.

OBJECTIVES:

Focusing on operating room nurses, root cause analysis is used to improve the problem of surgical pressure injury, thereby reducing the psychological burden on nurses in clinical care and reducing the incidence of surgical pressure injury to less than 0.34%.

METHODS:

Using the TRM method, set up a quality control circle team to jointly formulate pressure injury risk operation standards and set up checklists, regularly hold surgical pressure injury related education and training, purchase pressure injury prevention dressings, and add pressure injury prevention surgery. Use decompression mattresses, establish various surgical positioning standards and use guidelines for fat pad accessories, and monitor the use status while colleagues are operating. When there are unexpected special situations, discuss emerging problems with colleagues and quickly solve problems improve.

RESULTS:

From June to December 2021, the incidence of pressure injury in the operating room ranged from 0.68% to 0.31%.

CONCLUSION:

Operating room nurses play a very important role in the prevention of surgical pressure injuries. During the implementation process, we develop a standard checklist for surgical pressure injury risk operations, so that medical teams can have standards to follow, enhance their vigilance against pressure injuries, and highlight the nursing profession. It can also effectively reduce the uncertainty caused by the unfamiliarity of new colleagues with pressure injury assessment, and ensure that patients receive good quality of care. The results of this study can be parallelized to other disciplines, including clinical nursing and professional roles, and this study can provide clinical nursing staff with a reference to reduce the occurrence of surgical pressure injuries.

o

A030

A project to improve the accuracy rate of skeleton and tissue bank access operations in the operating room

Chiang, Li-Yang, Deputy Chief Nursing Officer, Operating Room, Taipei Hospital, Ministry of Health and Welfare;

Hsu, Ting-Jung, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Lin, Jia-Yi, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Tsai, Chia-Ling, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Li, Yun-Chen, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Yao, Dai-Jun, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

INTRODUCTION: Bone access and transplantation is a special organ transplant operation. Bone and tissue banks are placed in the bone and tissue bank for disease prevention and treatment purposes according to the standard operating procedures. They can be taken out and used when necessary. If access operations or management errors occur, patient safety and medical care will be affected quality, and lead to adverse outcomes such as nosocomial infection and increased waste of medical resources for the donated patient, and the operating room is busy with nursing operations, requiring careful patient care and bone bank management at the same time. Improper management will affect the safety of patients and the quality of medical care. Responsibility and betrayal of the love of donors have led to a sudden increase in the psychological burden of nurses, which motivated the author to improve.

OBJECTIVES: Focusing on operating room nurses, using root cause analysis to improve the accuracy of bone and tissue bank access operations, thereby reducing the psychological burden of nursing staff facing improper management of bone tissue banks, and improving the accuracy of bone and tissue bank access operations rate to below 85%.

METHODS: Using root cause analysis to properly manage bone and tissue banks, unified coding management through the same tissue bank, independent and hierarchical management of bone tissue to be screened, to facilitate personnel identification, and online electronic display of bone tissue use register, so that nursing staff It can track and update the status of bone tissue in time, and then annotate and code all bone tissue that has passed the screening, which greatly reduces the time spent by nursing staff to find the bone tissue required by the surgeon, thereby reducing the misidentification of bone tissue by new colleagues. . Use the TRM technique to educate colleagues and surgeons during the morning meeting in the operating room, and monitor the use status while colleagues are operating and packaging bone tissue improve.

RESULTS: Operating Room Nursing Technician - Bone and Tissue Bank Access operation accuracy rate increased from 65% to 95%.

CONCLUSION: In order to maintain the safety of surgical patients and live up to the love of donors, the nurses in the operating room especially strengthen the correctness of the operation of bone and tissue bank access, so as to improve the correct skills of the nurses in the access operation. It also emphasizes the correct concept of attaching importance to the safety and correctness of bone and tissue bank human organ preservation operations and facility maintenance. To enable patients to obtain good quality of care. The results of this study can be applied to clinical practice, including clinical nursing and professional roles, and can provide clinical nursing staff with a reference to improve the accuracy of bone and tissue bank access operations.

A031

The effectiveness of the preoperative visit improvement project for operating room nurses

Chen, Xing-Jun, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Chiang, Li-Yang, Deputy Chief Nursing Officer, Operating Room, Taipei Hospital, Ministry of Health and Welfare;

Hsu, Ting-Jung, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Huang, Min-Hsuan, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Chang, Fang-Tzu, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Gan, Ruei-Jie, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

INTRODUCTION:

Since the preoperative visit is a very important indicator of the quality of hospital care, when the surgical patient does not understand the surgical information, it is easy to generate resistance and affect the operation. Understand the surgical situation and complete the surgical treatment successfully. The reason for the analysis is that the day shift nurses are unable to complete the pre-surgery visit as scheduled due to unanticipated overtime work, there is no audit system, the patient goes out during the pre-surgery visit, or the visit period is afraid of affecting the patient's rest, etc. Statistics from January to March 2022 The implementation rate of preoperative visits by nurses in the operating room is only 45%, which motivates the author to improve.

OBJECTIVES:

Centered on operating room nurses, using root cause analysis to improve the effectiveness of the preoperative visit execution rate of operating room nurses, thereby reducing the psychological burden of surgical patients facing surgery, and increasing the operating room nurses' preoperative visit execution rate to more than 80%.

METHODS:

Hold preoperative visit education and training courses, senior staff will lead colleagues to preoperative visit, and reply to teaching preoperative visit case experience to share with the instructor, reset manpower allocation and revise preoperative visit period, from middle class The staff assists in the execution of pre-operative visits, and implements the registration and visit registration book. If the patient asks for leave or does not meet the patient during the examination, he must hand over the shift to the small night shift colleagues to continue to complete the pre-operative visit, and arrange the operating room visit team. The team leader monitors the effectiveness of the visits month by month, and introduces the precautions for preoperative visits during the morning meeting in the operating room for colleagues to know. And when colleagues visit, monitor the visit status, when there are unexpected special circumstances, discuss emerging problems with colleagues, and quickly improve the problem.

RESULTS: According to statistics, from April to June 2022, the execution rate of preoperative visits by operating room nurses will increase from 45% to 85%.

CONCLUSION: Pre-operative visit is a two-way interaction between nurses and patients. It is a very important part of the whole-term nursing care of patients. It reduces the anxiety of patients facing surgery and improves the quality of hospital services. A complete pre-operative visit allows patients to correctly understand the relevant aspects of surgery. information, accept surgery with peace of mind, complete the surgery as scheduled, demonstrate the value of nursing professionalism and ensure that patients receive good quality of care. The results of

this study can be applied to clinical practice, including clinical care and professional roles, and this study can provide reference for clinical nurses to improve the effectiveness of preoperative visits.

A032

Improve the effectiveness of operating room nurses in the management of laparoscopic surgical instruments

Chung, Chia-Ling , Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician ;

Chiang, Li-Yang, Deputy Chief Nursing Officer, Operating Room, Taipei Hospital, Ministry of Health and Welfare;

Chen, Hsin-Yu, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Li, An-Cheng ,Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Hsu, Ting-Jung, Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

Huang, Mei-Huei ,Ministry of Health and Welfare Taipei Hospital Operating Room Nursing Physician;

INTRODUCTION:

In the clinical operation of the operating room, it is found that due to the increasing trend of minimally invasive surgery, instruments with high frequency of use may be out of stock, and instruments with low frequency of use may expire, resulting in repeated sterilization, or the instruments are placed in a mess. As a result, nurses often look for laparoscopic surgical instruments, which not only delays the operation process, but also prolongs the operation time and complains of doctors.

OBJECTIVES:

Centered on operating room nurses, use root cause analysis to improve the management of laparoscopic surgical instruments, thereby reducing the psychological burden faced by nursing staff in preparing surgical instruments, improving the accuracy of laparoscopic surgical instrument preparation to more than 90%, and improving the surgeon's understanding of surgical instruments. The satisfaction of equipment preparation is more than 90%.

METHODS:

First, the team leaders of each department will organize the types of surgical instruments and the total number of operations in each department, and then reconfigure the instrument trays according to the total number of operations to maximize the use of instruments, and set up laparoscopic instruments. The leader of the management team, arranges the management of fixed personnel, sets up a special storage cabinet for laparoscopic instruments, so that colleagues can easily obtain them, and promotes the placement and organizes relevant education and training during the morning meeting in the operating room, and formulates an audit system to facilitate well managed. And when colleagues are operating, they monitor the usage status. When there are unexpected special situations, discuss emerging problems with colleagues and quickly improve the problems.

RESULTS:

The correct rate of laparoscopic surgical instrument preparation has been increased from 65% to 95%. Surgeon satisfaction with instrument preparation increased from 70% to 90%.

CONCLUSION: Operating room nurses assist in the management of a variety of surgical instruments according to the needs of physicians in various departments, which is a kind of psychological pressure on nurses and should be properly managed so that nurses can keep track of the placement and use of surgical instruments, which is helpful for newcomers. Colleagues reduce uncertainty caused by unfamiliarity with laparoscopic instruments and ensure good quality of care for patients. The results of this study can be applied to clinical practice, including

clinical care and professional roles. This study can provide clinical nurses with a reference to improve the effectiveness of surgical instrument preparation.

A033

Factors affecting health awareness of endometrial curettage

Mei Hui Huang

INTRODUCTION: Endometrial patients were given a hemostatic gauze inserted in the vagina. After returning home, they forgot to remove the gauze, which caused the patient's vaginal inflammation. Therefore, the factors affecting the health awareness of endometrial curettage were discussed and improved.

OBJECTIVES: Use the information-based health education method and confirm the patient's cognition level, confirm the removal of the vaginal gauze before leaving the hospital, understand the patient's nursing knowledge, and promote the quality of surgical care.

METHODS: A structured questionnaire was used to investigate 25 outpatient surgery patients, and a 5-point scale was used to score 5 points for very satisfied, 4 points for satisfaction, 3 points for normal, 2 points for dissatisfaction, and 1 point for very dissatisfied. Satisfaction with nursing guidance after endometrial curettage, the results showed an average of 3.5 points in postoperative wound care guidance. The investigation found that the reasons were (1) inconsistent nursing guidance for endometrial curettage; (2) endometrial curettage The surgical nursing instruction is a paper leaflet; (3) the nursing after endometrial curettage is oral instruction (4) the nursing wound care instruction is in Chinese, and it is difficult to understand if you have different nationalities. Implementation strategy: hold on-the-job education for endometrial curettage nursing guidance, QR code webpage for endometrial curettage nursing guidance, confirm the removal of vaginal gauze when leaving the hospital, and add foreign language endometrial curettage nursing guidance materials. Using the outpatient surgery patient nursing guidance satisfaction questionnaire, the evaluation was carried out after surgery.

RESULTS: The satisfaction of wound care guidance for outpatient surgery patients increased from 3.5 points to 4.5 points.

CONCLUSION: Through endometrial curettage nursing guidance on-the-job education, nurses can use informationized wound care guidance to achieve consistency in nursing and hygiene education, multilingual wound care guidance materials, so that patients can understand postoperative care and reduce Wound infection, improve the quality of surgical nursing care.

A034

Taiwan Psychiatric Specialized Hospital Patient Self-administered Satisfaction Questionnaires Analysis

Chiachang Hsu, MSc, a Pharmacist, Department of Clinical Pharmacy, Tri-Service General Hospital Beitou Branch;

Ting Luo, BS, a Pharmacist, Department of Clinical Pharmacy, Tri-Service General Hospital Beitou Branch;

Tsung-Han Lin, BS, a Pharmacist, Department of Clinical Pharmacy, Tri-Service General Hospital Beitou Branch;

Kuan-Yu Lin, MSc, a Director, Department of Clinical Pharmacy, Tri-Service General Hospital Beitou Branch;

Kuo-Tung Chiang, MSc, a Associate Dean, Tri-Service General Hospital Beitou Branch;

Szu-Nian Yang, PhD candidate, a Dean, Tri-Service General Hospital Beitou Branch;

INTRODUCTION:

Patient satisfaction is the degree of positive feelings brought about by the medical institutions services, and can be used to understand patients' needs and assess the quality of medical care.

OBJECTIVE:

The purpose of our study is to investigate the satisfaction of psychiatric patients with hospital services, and to understand the influencing factors, and to provide further feedback to the hospital as a reference for improving the quality of care services.

METHOD:

Our study enrolled 100 patients or family members from the Military medicine ward, day-care, rehabilitation center, and outpatient clinics. The questionnaire was designed by the five-point Likert scale. The higher the score, the higher the level of satisfaction with hospital services. Kruskal-Wallis tset and T-test analyses were used to compare the differences in satisfaction of demographic variables. A generalized linear model was used to examine the predictors of patient satisfaction, and to explore the relationship between demographic characteristics and patient satisfaction.

RESULTS:

The distribution of cases was mostly male, aged 26 to 46, university graduates. The satisfaction of inpatients is higher than outpatient (table1). Hospitalization, age, education level, and different medical divisions were important predictors of patient satisfaction. We found that inpatients, older age(>65) and lower education level patients had higher satisfaction, and psychiatric patients had lower satisfaction than Internal medicine patients (table2).

CONCLUSION:

Our research provides non-severe mentally ill patients' autonomous perceptions of service satisfaction as a reference for service providers. More focus should be paid on outpatients, younger patients, and high-educated patients to improve the overall satisfaction. Past studies in Taiwan found that the higher the educational level of the subjects, the higher the level of health literacy, and the degree of health literacy showed a significant negative correlation with overall medical satisfaction. With increasing focus on the patient's satisfaction with medical services, we develop a hospital-dedicated app (figure1) which provides information about the medical environment and patient health education to enhance the health literacy and convenience of patients or their families and use the self-administered questionnaire to collect users' medical satisfaction.

A039

Prevalence of health literacy of Thai people aged over 15 years in Health region 1

Chanya Anukhro, Health Promotion Center Region1 Chiang Mai, Department of Health, Thailand

This cross-sectional household research survey, the objectives were to study about health literacy level and influencing factors concerned health literacy of people aged over 15 years in Health region 1. Data were collected from 1,510 people in Chiang Mai, Phrae and Phayao provinces by stratified sampling. The equipment research was questionnaire consisting of general information, health information and health literacy by used statistics were descriptive statistics and logistic regression analysis.

The results shown that people aged over 15 years in Health region 1 had an adequate health literacy of 68.4%, inadequate 31.6%, health literacy skills : accessing was low level (1.91 ± 1.30), understanding was moderate level (2.76 ± 0.74), questioning was moderate level (2.48 ± 0.72), decision was moderate level (2.84 ± 0.60) and health dimensions system found-: health services support of low level (2.22 ± 0.85), pharmaceutical and health products of low level (2.21 ± 0.84), disease prevention of moderate level (2.64 ± 0.65), enhancing health of moderate level (2.74 ± 0.64).

Factors influencing of inadequate health literacy was factors of personal attributes such as age, inability to read and write, gender were not statistically significant factor in predicting the inadequacy of health literacy.

Socioeconomic factors such as marital status, education levels, occupations and role in the community, however, a sufficient income and living location were not statistically significant factor in predicting the inadequacy of health literacy.

Health factors such as hearing, annual health check and BMI, however, vision and abdominal obesity were not statistically significant factors in predicting the inadequacy of health literacy. Recommendations of Health region 1, evaluated health literacy of people aged over 60 years and working-age groups to develop and enhance knowledges in all dimensions for the elderly and working-age groups both individual and community level, operate health literacy organization covering all age groups. Conducting long-term plans concerned health literacy were resilient to target group and outcomes include supporting individuals to a role of enhance health literacy in community.

Key word: health literacy, related factors, health region1.

A040

Comparison of the long-term risks of individual cancer between hormone replacement therapy and Traditional Chinese Medicine in postmenopausal women: A retrospective cohort study

Tseng, YT¹, Wang, YH², Wang, CH³, Hsu, HY⁴

1) Department of Medical Research, Tainan Municipal Hospital, Tainan, Taiwan;

2) Department of Nursing, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan;

3) Department of Hepatogastroenterology, Tainan Municipal Hospital, Tainan, Taiwan. Department of Optometry, Chung Hwa Medical University, Tainan, Taiwan;

4) Department of Nursing, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan

INTRODUCTION: For decades, women have used hormone therapy, such as estrogen and progesterone, to ease symptoms of menopause. Published data on current cancer risks associated with types of hormone replacement therapy (HRT) were inconsistent, and information on the long-term effects of Traditional Chinese Medicine (TCM) is lacking.

OBJECTIVE: We attempted to evaluate the epidemiological outcomes of cancers between HRT and TCM using real-world evidence.

METHODS: All data were collected from the Taiwan National Health Insurance (NHI) Research Database. We defined the diagnoses using codes of the International Classification of Disease, Ninth and Tenth Revision, Clinical Modification. Patients taking TCM and HRT were sampled from 2,000,000 individuals insured in the NHI program. Between January 01, 2000, and December 31, 2018, we investigate all study participants during the follow-up period from the prescription date to the end of 2018, competing death, or developing outcomes, whichever occurred first. The crude relative risk was used to estimate the relative risk and its confidence interval for two different exposure groups.

RESULTS: During the retrospective follow-up, 95,886 postmenopausal women had used HRT or TCM. Among women with complete information, the mean treatment duration was 8.9 (SD 5.2) years in the HRT group and 9.2 (SD 5.5) years in the TCM group. According to the results of the cumulative incidence analysis, the prevalence of cancers were significantly lower in the TCM group than in the HRT group (breast cancer prevalence = 3.4% vs. 2.9%, respectively; relative risk = 1.01 [95% CI 0.99–1.02]; ovarian cancer prevalence = 0.4% vs. 0.5%, respectively; RR = 0.99 [95% CI 0.97–1.02]; endometrial cancer prevalence = 0.3% vs. 0.8%, respectively; RR = 0.96 [95% CI 0.96–0.98]; cervical cancer prevalence = 0.8% vs. 3.5%, respectively; RR = 0.96 [95% CI 0.95–0.97]; colorectal cancer prevalence = 0.4% vs. 1.0%; RR = 0.97 [95% CI 0.96–0.98]; liver cancer prevalence = 0.3% vs. 0.9%; RR = 0.96 [95% CI 0.95–0.97].

CONCLUSION: The results of this study suggest that compared with HRT, the use of TCM is associated with a decreased risk of some cancers in postmenopausal women. However, HRT should be individualized for each cancer, taking into account the woman's symptoms and development and the uncertainty of evidence for and against HRT. Further studies with adequate number of cancer cases and detailed data on the type of prescription, dose, and duration between HRT and TCM, are needed to confirm the extent these findings.

A041

Long-term risk of congenital and related diseases in children and premature infants: a retrospective cohort study

Huang, JH, Department of Radiology, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation);

Wang, CH, MD, Department of Hepatogastroenterology, Tainan Municipal Hospital, Tainan, Taiwan. Department of Optometry, Chung Hwa Medical University, Tainan, Taiwan;

Tseng, YT, MS, Department of Medical Research, Tainan Municipal Hospital, Tainan, Taiwan

INTRODUCTION:

Studies have reported that moderate and late preterm infants are at a higher risk of congenital disease. However, very few long-term studies that support the influence of preterm birth on eye-related diseases are available.

OBJECTIVE: To investigate the association between the prevalence of congenital disease among children and premature infants.

METHODS: We recruited premature patients with at least three previously recorded International Classification of Diseases codes and healthy, not-premature children from Taiwan's National Health Insurance Research Database. A 1:4 propensity score matching scheme was applied, and healthy matched control children were included in the final analysis. Claims data were used to determine the outcomes of patients who had received eye-related disease diagnoses between 2000 and 2018. The patients included in this study were ≤ 18 years old. Their demographic data, medical history, and paraclinical information were collected. The target outcomes were defined according to the International Classification of Diseases, Ninth and Tenth Revision, Clinical Modification. A crude relative risk (RR) model was used for analysis.

RESULTS: A total of 2,892 children were recorded as premature and 11,568 healthy children were used for comparison. The mean follow-up duration was 9.8 ± 4.2 years. The outcomes were significantly different between the two cohorts. The premature cohort had a higher prevalence of eye-related diseases than the comparison cohort according to the results of the cumulative incidence analysis (cataract: prevalence = 0.7% vs. 0.4%, respectively; RR = 1.18 [95% confidence interval (CI): 0.99–1.40]; glaucoma: prevalence = 1.4% vs. 1.0%, respectively; RR = 1.08 [95% CI: 0.99–1.20]; macular degeneration: prevalence = 0.2% vs. 0.1%, respectively; RR = 1.50 [95% CI: 0.93–2.41]; optic neuritis: prevalence = 0.2% vs. 0.1%, respectively; RR = 1.60 [95% CI: 0.95–2.70]).

CONCLUSION: This study investigated the long-term complications in premature infants and evaluated the risk of eye disease according to the long-term condition. There are concerns regarding the adverse effects of innate prematurity in children. The adverse effects of prematurity have been controlled, but not completely eliminated by the Taiwanese health care system. Thus, the medical care management of this expanding group of young individuals should be considered.

A042

Long-term risk of gastrointestinal disease among healthy children and premature infants: a retrospective cohort study

Huang, JH, Department of Radiology, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation);

Wang, CH, MD, Department of Hepatogastroenterology, Tainan Municipal Hospital, Tainan, Taiwan. Department of Optometry, Chung Hwa Medical University, Tainan, Taiwan;

Tseng, YT, MS, Department of Medical Research, Tainan Municipal Hospital, Tainan, Taiwan

INTRODUCTION: We investigated whether noxious stimulation in preterm infants increases the long-term risk of developing gastric suction or functional disorders later on in life, as long-term evidence to support this evaluation of gastrointestinal diseases in children is insufficiently reported. Previous studies have focused on catastrophic comorbidities.

OBJECTIVE: To examine the association between the prevalence of chronic gastric disease in children and premature infants.

METHODS: We conducted a case-control study using data on extracted from Taiwan's National Health Insurance Research Database on premature infants who had received an International Classification of Diseases (ICD) code at least thrice and healthy children who were not premature. We utilized the 1:4 matching group using the propensity score, and matched healthy children controls were included in the final analysis. The medical service data were used to determine the outcomes of patients who had received a diagnosis of gastrointestinal disease between 2000 and 2018. The patient inclusion criterion was ≤ 18 years old. The demographic data, medical history, and paraclinical information were retrieved from the participants. The target outcomes were defined according to the ICD-9-CM and ICD-10-CM. The risk of the evaluation was assessed using the crude relative risk (RR) model.

RESULTS: A total of 2,892 children were recorded as premature and 11,568 children who were not premature were used for comparison. The mean follow-up duration was 9.2 ± 4.5 years. Remarkably, the outcomes were significantly different between the two cohorts. The cohort of premature children had a higher prevalence of gastrointestinal or other chronic disease than the comparison cohort according to the cumulative incidence results which are as follows: Ulcerative disease: prevalence = 4.3% vs. 3.2%, respectively; RR = 1.07 [95% confidence interval (CI): 1.02–1.29]; stomach ache = 47.5% vs. 38.9%, respectively; RR = 1.07 [95% CI: 1.06–1.09]; irritable bowel disorder: prevalence = 2.2% vs. 1.9%, respectively; RR = 1.03 [95% CI: 0.97–1.10]; mild liver disease = 2.5% vs. 1.5%, respectively; RR = 1.13 [95% CI: 1.05–1.23]; chronic kidney disease = 0.7% vs. 0.4%, respectively; RR = 1.16 [95% CI: 0.98–1.37].

CONCLUSION: The findings suggest further research on neonatal and developmental gastroenterology, that could elucidate several conditions related to the immaturity of the gastrointestinal tract, is warranted. Noxious stimulation in preterm infants led to an increased prevalence of functional intestinal disorders in later life. Therefore, we hope that these findings provide multidisciplinary information and contribute to the health literacy association's understanding of the immature gastrointestinal tract.

A043

Comparison of long-term cardiovascular disease risks between hormone replacement therapy and Traditional Chinese Medicine in postmenopausal women: A retrospective cohort study

Hua-Yin Hsu, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

Yu-Hsia Wang, Director, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

Chun-Hsiang Wang, MD, Department of Hepatogastroenterology, Tainan Municipal Hospital, Tainan, Taiwan. Department of Optometry, Chung Hwa Medical University, Tainan, Taiwan;

Yuan-Tsung Tseng, MS, Department of Medical Research, Tainan Municipal Hospital, Tainan, Taiwan

INTRODUCTION: Menopausal hormone replacement therapy (HRT) increases the risks of some complications; however, no studies have reported from the Taiwan population. Traditional Chinese medicine (TCM) is one of the most common complementary and alternative medicines used in the treatment of menopause.

OBJECTIVE: For evidence on the clinical effect of TCM on cardiovascular diseases, which is a major concern in these individuals, from largescale clinical studies is lacking.

METHODS: In this study, data were retrieved from the Taiwan National Health Insurance (NHI) Research Database. All diagnoses were coded according to the International Classification of Disease, Ninth and Tenth Revision, Clinical Modification. Patients on HRT were sampled from 2,000,000 individuals insured in the NHI program. Between January 01, 2000, and December 31, 2018, we identified all patients on HRT from the index date to the end of 2018, death, or developing outcomes, whichever occurred first. The crude relative risk was used to estimate the relative risk and its confidence interval for two different exposure groups.

RESULTS: A total of 4459 patients with menopause were prescribed TCM without HRT and 91427 were prescribed HRT alone. The mean follow-up duration was 11.0 ± 5.5 years. According to the results of the cumulative incidence analysis, the prevalence of chronic diseases were significantly lower between the HRT and TCM cohorts (myocardial infarction prevalence = 0.5% vs. 2.5%, respectively; relative risk = 0.95 [95% CI 0.95–0.96]; congestive heart failure prevalence = 10.8% vs. 29.9%, respectively; RR = 0.96 [95% CI 0.96–0.97]; cerebrovascular disease prevalence = 3.3% vs. 11.2%, respectively; RR = 0.97 [95% CI 0.96–0.99]; dementia prevalence = 1.0% vs. 6.6%, respectively; RR = 0.94 [95% CI 0.94–0.96]; hospitalized stroke prevalence = 0.4% vs. 0.9%; RR = 0.97 [95% CI 0.96–0.99]).

CONCLUSION: Study data were extracted from a single, large nationwide database with two million representative beneficiaries who were randomly selected. Some differences exist between the results of the current study and those of previous population-based studies. The results of this observational study suggest that adjunctive TCM therapy may lower the risk of complications in menopause. However, potential selection bias still exists. Future adjusted analysis of confounding factors and competing risk or randomized controlled trials are necessary to validate these findings.

A048

Use Quality Control Circle to improve central-line bloodstream infection patients in ICU

Yung-Hsuan Chen, Li-An Chen, Ming-Miao Hsu

Yung-Hsuan Chen RN1, Li-An Chen RN2, Ming-Miao Hsu RN3

Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation) No.670, Chongde Rd., East Dist., Tainan City 701, Taiwan (R.O.C.)

BACKGROUND: In 2020 CLASBI(central-line bloodstream infection)rate was 2.96‰, and more than 50% of peer indicators TCPI(Taiwan Clinical Performance Indicator) higher CLASBI rate impact patient severe physical damage, increased length of stay in the intensive care unit and mortality.

OBJECTIVE: This project aims to reduce the CRBSI rate below 0‰ Use Quality Control Circle to prevent clinical care and improves the quality of care for patients using central venous catheters in intensive care units.

METHOD: The prevention and clinical care intervention focused on educating nurses, CLABSI bundle care, central-line bloodstream infection monitoring checklist implementation and updating CRBSI clinical management standards.

RESULT: Using an implementation approach significantly decreased after intervention among patients at CLABSI rate decreased from 2.96‰ to 0‰, the number of central line days 2.3 days, and at Reduce the length of hospital stay decreased by 0.2 days, and mortality down 1.94%.

CONCLUSION: CRBSI is a serious problem in ICU patients, improved nurses' knowledge of clinical care and assessment skill lead to decreased CRBSI rate. Thus, continuous practice becomes important. Identification of this project supports nurses' education and assessment skills to decrease the CRBSI rate. may help future studies design associated models for CLASBI patients in ICU management.

A049

Outcomes of Team Resource Management for COVID-19 Prevention: An Example of a District Hospital

Su-Chen Li¹, Chia-Chan Kao²

1 Nursing Department, Kaohsiung Municipal Gangshan Hospital, Taiwan;

2 Department of Nursing, I-Shou University, Taiwan

Objectives: The objective of the study was to describe the outcomes of Team Resource Management for COVID-19 prevention.

Method: A survey based upon hospital-data-based information was conducted at a district hospital in southern Taiwan. The 100-bed hospital consisted of 284 manpower and was assigned as a responsible hospital during COVID-19 impacts Taiwan. Team Resource Management including Leadership : Hospital Dean for commander in chief

、 Situation Monitoring, : collect information and communicate

、 Mutual Support : Creative Screening Station、 Vaccination team、 responsible ward、 3-in-1 screen station and Communication : COVID-19 patients Care Team、 Employee Care was applied to proceeding the COVID-19 prevention in Teams of working for COVID-19. Data was collected between January 2019 and July, 2022

Results:

There were 38,783 visits for COVID-19 screen between March, 2020 and July, 2022, positive rate 12% ; as well as 55,422 visits for vaccination between April, 2021 and July, 2022. ; A total of 279 patients with COVID-19 were received hospitalized care at covid-19 responsible ward between May, 2022 and July, 2022. ; A total of 4,608 patients with 3-in-1 screen station between May, 2022 and July, 2022. ; April, 2022 and July, 2022,. A total of 3041 patients with COVID-19 were received telephone calling services and substantial assistance by care team workers and May, 2022 and July 80 employees with COVID-19 were received Psychological support and assistance

Conclusion: For a small-scale district hospital, Team Resource Management is beneficial strategy for COVID-19 prevention so as to reach satisfactory outcomes.

Key words: COVID-19, Screen, Team Resource Management, vaccination

A050

Reduce Fall Rate in Orthopedic Patients During Hospitalization

Pei-Jung Tsai, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan

INTRODUCTION: Falls are common in hospital settings. It causes not only physical injury but also mental health, psychological dependence and feeling of social isolation, which affect patients' quality of life and healthcare service; therefore, nurse staff need to spend more time in caring for patients and tend to suffer from higher stress.

OBJECTIVES: Fall results in different degree of severity of damage. However, the reasons of fall are complex, meaning that the incidence of fall rarely has single cause or risk factor. The use of intervention should be based on the root causes of problem. The aim of this study was to reduce fall rate in orthopedic patients during hospitalization from 0.10% to 0.05%.

METHODS: According to the causes analysis, the strategies were "staff and patients education", "caregiver education", "environment safety", and "equipment inspection" as following: 1. Fall prevention equipment must be routinely inspected and well-maintained, such as hospital bed, bedside chair, commode chair and walker. 2. Patients should use seatbelt properly while toileting or showering. To ensure patient safety, caregivers should stand directly in front of patients who need assistance. 3. Caregivers and patients scan the QR code to watch the Fall Prevention educational video. Then nurses use teach-back method with patients and families and communicate with nurses on the next shift. 4. Nurses should assess key caregiver's knowledge and skills regarding fall prevention and patient's muscle strength every 8-hour shift.

Results: The fall rate was reduced from 0.10% to 0.149%. The education time related to fall prevention, walking aid, and wheelchair increased to 58.43%, 30.5% and 35.55%.

CONCLUSION: Fall prevention rely on multiple interventions. Creating multilingual video QR code, individualized education related to fall prevention, optimized Handover communication and team work can play a positive role in reducing fall rate.

A051

Lower Extremity Muscle Endurance in Psychiatric Day-Care Patients

Wang, SJ¹, Hsu, HY², Wang, YH³

1)Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan; 2) Department of Nursing, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan; 3) RN, Department of Nursing, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan

INTRODUCTION: Age-related muscle loss in the lower extremity, characteristic of chronic illness, and complex medication associate with increased fall risk contribute to low level of physical activity, balance disturbance, and diminished bone density. Muscle endurance training can not only increase muscle mass, bone density but also boost metabolism to improve muscle strength and daily activity function.

OBJECTIVES: The factors including Increasing aging, psychiatric medication and lack of exercise motivation affect low extremity muscle activity, stability and endurance. The aims of this study was to explore the efficacy of improve low-extremity muscular strength and endurance in psychiatric day-care patients.

METHODS: A total of 40 patients were enrolled in psychiatric day-care unit; approximately 74% of them are overweight. The rating of 30-second chair stand test (30CST) was 1 to 5; only 17 patients (41%) were greater than or equal to 3. The causes were lack of knowledge of physical activity and benefit of lower extremity exercise for muscular endurance, lack of educational program and incentives. Thus, the interventions designed to improve muscular endurance were as follows: 1. Make poster and video and hold educational lectures. 2. Hold educational training programs. 3. Implement occupational rehabilitation programs. 4. Set incentive regulation.

RESULTS: Following the intervention, the patient with 30CST score greater than or equal to 3 increased from 41% to 72%.

CONCLUSION: Implementing training program involving lower extremity enable the individuals to improve muscular endurance, activity and stability and further enhance work performance and life of quality.

A052

Efficacy of Adopting Lean Work to Simplify Central Venous Catheter Package

Ying-Hua Tsai, RN, Department of Nursing, Tainan Municipal Hospital

INTRODUCTION: Maximal barrier precautions are used by applying a head-to-toe sterile drape during CVC bundle insertion procedure. When femoral vein is selected for central venous access, the patient is covered with a sterile drape 150x150cm. However, the sterile drapes 150x150cm in the package trays are often unused. The unused drapes which need to be inspected, cleaned, packed manually result in not only power waste but also cost increase related to laundry and sterilization; and further, the size and weight of packages affect sterilization and maintained of sterility after processing.

OBJECTIVE: The aim of this study was to adopt lean standard work to simplify CVC (central venous catheter) package.

METHODS: 1. Conduct the cost-benefit analysis of unused green drapes in medical instrument package. 2. Investigate annual usage rate of CVC packages. 3. Discuss that remove the green drape from package tray and provide staff with single packed and sterilized green drapes. 4. Propose this project at Decontamination and Sterilization conference, confirm feasibility and perform due to resolution of Infection Control Committee. 5. Announce that provide staff with single packed and sterilized green drapes (sterile material code: C0032).

RESULTS: 1. Reduce annual amount of sterile drapes by 1000 pieces and save cost associated with washing and power time by NTD 22661. 2. Lower annual weights of reusable medical textiles including drapes and gowns in supply department and operation department by 634 and 1289 kilogram. As a result, it was found that the approach effectively reduced unnecessary expenses to increase profits.

CONCLUSION: After analyzing the current situation in hospital setting, communication with administrators is imperative to facilitate staff to improve process. Furthermore, the project plan is implemented through the team's constant assessment, meeting and proposed solution. In fact, simplified CVC package benefiting cost reduction can also lower weight of soiled linens laundered as well as staff's time wasting.

A053

A study of the factors affecting elderly people fracture danger

Li, Tzu-Ying, School of Senior Citizen Welfare and Long-term Care Business Master Program, Hungkuang University, Taiwan

INTRODUCTION: Along with medical development. Taiwan has entered an aged society. The problems of elderly people's fractures have become burdens for many families.

OBJECTIVES: By using a questionnaire, this study is to discover the fracture age of elderly people. Where is the fracture place? What's the reason? To answer these questions, the purposes of this study are as follows:

1. Discuss fracture dangerous factors
2. Discuss how to avoid fractures again

METHODS: Using the questionnaire method interview elderly people aged 65 and over having a fracture. Discuss elderly people's fracture age. Where are elderly people's fracture sites? What causes fracture? How many Elderly people without fracture? Who is open to the sun? How long is open the sun each day? Do you have exercise habits?

RESULTS: Use questionnaires, sending 67 paper questionnaires, male 13, female 54. Age distribution 65-91 years old. The average age is 77 years old. The result is as follows: 67 questionnaires, 43 elderly people with fractures (64.18%). Refracture occurred in 8 elderly people (Elderly people with fractures 18.60%). Never fracture 24 elderly people (35.82%).

Among the facts, 2 persons with hip fracture, 7 persons with lumbar fracture, 5 persons with a wrist fracture, 6 persons with arm fracture, 11 persons with a broken leg, 2 persons clavicle fracture, 1 person with fingers and toes fracture, 1 person with a knee fracture. 5 persons occurred fractures twice. 3 persons occurred fractures three times. Causes of fracture, the height fall from the standing posture accounts for 55.38%, car accidents for 33.92%, more serious falls for 8.92%, and caught by the door for 1.78%. Place of fracture, outdoor for 53.6%, bathroom for 17.85%, room for 14.28%, living room for 7.14%, stairs for 5.35%, kitchen for 1.78%.

Among 24 persons were no fractures, get outside in the sun an average of 6 times a week. Average sun exposure time, was more than an hour for 50.07%, more than 20 minutes but not more than an hour for 29.1%, and less than 20 minutes for 20.83%. For exercise habits, 21 seniors average 5 days a week, 1 hour each time. Three seniors have no habit of exercising.

CONCLUSION : Learned from the questionnaire, happened outdoors, mostly caused by car accidents. It is recommended that the elderly can take more public transportation to reduce accidents. The living environment of the elderly can be safer. For example, to add lighting and handrails in the bathroom, stairway. Exposure under the sun helps calcium absorption. Because the ultraviolet rays of the sun can promote the 7-Dehydrocholesterol(7-DHC) converted to vitamin D3 (Bian, Ping-Da, 2013). Proper exercise can promote the blood circulation of the human body, and increase the activity of bone cells. Osteocytes have a close influence on the formation of bone density. Therefore, proper physical exercise can increase bone density, and prevent osteoporosis (Xu Xiao-hui, 2020).

Association between Successful Cessation and Risk of Cancer among Patients with Diabetes Mellitus: A Retrospective Cohort Study

Lin, CC, Wang, YH, Wang, CH, Tseng, YT

Chiao-Chuan Lin, RN, Department of Nursing, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan; Yu-Hsia Wang, Director, Department of Nursing, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan; Chun-Hsiang Wang, MD, Department of Hepatogastroenterology, Tainan Municipal Hospital, Tainan, Taiwan. Department of Optometry, Chung Hwa Medical University, Tainan, Taiwan; Yuan-Tsung Tseng, MS, Department of Medical Research, Tainan Municipal Hospital, Tainan, Taiwan

INTRODUCTION: Smokers are at a higher risk for comorbidity than nonsmokers; however, whether smoking cessation reduces cancer risk in patients with diabetes mellitus (DM) is unknown. Previous studies have reported that smoking cessation reduces systemic inflammation and might reduce overall cancer risk through this mechanism. Cigarette smoking is an established predictor of incident type 2 DM. However, the effects of smoking cessation on cancer risk are unknown.

OBJECTIVE: To investigate whether smoking cessation decreases cancer risks, possibly owing to successful cessation.

METHODS: A retrospective cohort study was conducted using the National Health Insurance Research Database in Taiwan from 2010 to 2018. All diagnoses were coded according to the International Classification of Disease, Ninth and Tenth Revision, and Clinical Modification. Patients on varenicline were sampled from 2,000,000 individuals insured in the National Health Insurance program. We identified all patients on varenicline from the index date to the end of 2018, death, or developing outcomes, whichever occurred first. The study cohorts comprised patients using varenicline (exposed cohort) and non-treated smokers had never used varenicline and had not tried smoking cessation (unexposed cohort). The primary outcome was the incidence of overall and individual cancers. The relative risk ratios (RRs) and 95% confidence intervals (CIs) derived from a crude relative risk model were used to compare the risk of cancers.

RESULTS: During the 8-year follow-up, a total of 4955 patients with type 2 DM were enrolled in this study. The smoking cessation group was composed of 1895 smokers using varenicline, and the non-treatment group was composed of 2560 smokers. The mean follow-up duration was 5.2 ± 4.6 years. During the follow-up, the cumulative incidence, such as the prevalence of chronic diseases, was significantly lower in the treated group than in the non-treated group (overall cancer prevalence = 7.2% vs. 11.6%, respectively; relative risk = 0.82 [95% CI 0.77–0.88]; oral cancer prevalence = 0.9% vs. 2.2%, respectively; relative risk = 0.75 [95% CI 0.66–0.86]; colorectal cancer prevalence = 1.1% vs. 1.6%, respectively; RR = 0.87 [95% CI 0.73–1.05]; prostate cancer prevalence = 0.6% vs. 0.5%, respectively; RR = 1.1 [95% CI 0.74–1.63]; liver cancer prevalence = 0.7% vs. 2.3%, respectively; RR = 0.7 [95% CI 0.63–0.79]; lung cancer prevalence = 0.8% vs. 0.8%; RR = 1.01 [95% CI 0.76–1.34]; stomach cancer prevalence = 0.3% vs. 0.4%; RR = 0.89 [95% CI 0.6–1.32]; and pancreatic cancer prevalence = 0.2% vs. 0.3%; RR = 0.79 [95% CI 0.55–1.13]).

CONCLUSION: This study provides longitudinal evidence that varenicline is associated with a reduced risk of cancer in DM smokers. Despite the relatively small number of epidemiological studies on DM that have assessed smoking cessation and cancer, methodological limitations of these studies and of the present study, and our lack of understanding of how cigarette smoking might cause cancers in DM smokers, our study

provides real-world evidence between cigarette smoking and DM. Further studies are necessary to determine the clinical implications of this study.

A056

N-Acetylcysteine use in relation to reducing COVID-19 mortality rate

Xihh Xuh Chen, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

INTRODUCTION: Studies abroad indicate that N-Acetylcysteine (NAC) can ameliorate blood oxygen saturation level and reduce COVID-19 mortality rate by 40%.

OBJECTIVE: By using evidence-based methods, to investigate whether the use of Acetylcysteine may reduce COVID-19 mortality rate.

METHODS: Based on the steps of evidenced-based practices, the clinical answerable questions using PICO were formed by using both Chinese and English keywords and synonyms searched in the MeSH database. The search techniques utilized were Boolean logic, which allowed for combining free-text term and controlled vocabulary term and connecting with OR; and further, PICO elements were searched and connected with AND, until July, 2022. The published studies that were available in PubMed, Cochrane library, Clinical Key and Airtiti Library were investigated. Two studies were eligible for inclusion. The Critical Appraisal Skills Programme (CASP) was used for literature review.

RESULTS: In both studies, standard treatment was performed and cases were divided into two groups. The first study were cases of mild to moderate COVID-19 patients. Cases in the experimental group were injected NAC 40 mg/kg daily for three consecutive days. After 28 days follow-up, the mortality rate in the experimental and controlled groups were 25.5% and 31.1%, respectively. It showed no significance ($p=0.64$). The second study were severe COVID-19 cases with oxygen saturation of less than 94% or respiratory rate higher than 24 breaths/min. The experimental group was given high doses of NAC (14g NAC + 5% dextrose 500ml in the first 4 hours; 7g NAC + 5% dextrose 500ml in the 5-20th hours). The controlled group was only given 5% dextrose 1000ml. The results in both the experimental and controlled groups were 13.4% and 14.7%, respectively. There was no significance shown in reducing mortality rate OR 1.03 (95% CI 0.38-2.82, $p=0.940$).

CONCLUSION: There was no clinical proof in reducing COVID-19 severity and mortality by applying NAC in mild, moderate, or severe cases of patients. More large-scale studies are expected in order to see the proof of NAC use and its efficacy on COVID-19 patients.

A059

Experience of Total Parenteral Nutrition Care in a Pneumonia Case Complicated with Underweight and Moisture Skin Damage Caused by Gastrostomy Leakage

Kai Ling Su

Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), Taiwan

INTRODUCTION :

A 70-year-old female with a height of 155cm and a weight of 38kg, is underweight, with thymoma, right upper lung tumor, intestinal obstruction and ischemic enteritis with postoperative terminal transverse colostomy, percutaneous endoscopy Gastrostomy (PEG) was performed in May 2020. In July, the PEG was removed and sutured and switched to oral feeding. She was admitted to the hospital due to fever, asthma, and pneumonia. Sputum and blood tests revealed bacterial infection, and the sutured PEG wound continued to leak a lot, leading to a wound of moisture skin damage of around 3*3 cm. Referred to ET nurse and consulted TPN team to Expect to improve skin damage and nutritional status.

OBJECTIVES :

Experienced that total parenteral nutrition (TPN) to hospitalized critically ill and malnourished patients to reduce infection and mortality rate, also shorten the length of hospital stay, save medical costs, and greatly improve the quality of life of patients.

METHODS :

2021.12.6 to 2022.01.19, a nasal cannula was placed to provide oxygen every 2L/min, give systemic antibiotics (Vancomycin), place a peripheral central venous catheter (PICC), and calculate the daily calorie requirement by a nutritionist , the prescription of TPN was SmofKabiven commercial formula, providing 1,000 calories per day, Around the PEG opening skin was sprayed the skin barrier and applied one-piece ostomy bag connected to the collection bottle , guide family to learn PICC pipeline care and home skill of TPN infusion and care understanding.

RESULTS :

There is no need oxygen catheter and no breathing symptoms. The bag she applied is changed every 4-5 days, the skin damage is under 0.5 cm, continuous TPN injection and gained weight of 1.1kg. Family take PICC and TPN care well and independently.

CONCLUSION :

The comprehensive care solves patients' physiological problems, while maintaining the quality of safe TPN infusion, providing the best solution for life continuation.

Keywords: Pneumonia, underweight, End colostomy, Irritable Dermatitis , Percutaneous endoscopic gastrostomy, Total parenteral nutrition

A060

A Study on the Effectiveness of Using Information-based Operation to Improve the Efficiency of Preoperative Visit

Liu, SH, Hsu, HY, Wang, YH

Shu-Chen Liu, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan; Hua-Yin Hsu, RN, Department of Nursing, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan; Yu-Hsia Wang, RN, Department of Nursing, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan

INTRODUCTION: Relevant studies have pointed out that not knowing the detail of an operation may cause resistance by patient to proceed with the procedure. And, how to provide relevant information and guidance within limited time before the operation to achieve the quality of comprehensive care depends on the effective use of clinical information.

OBJECTIVES: This study involved establishing a preoperative visit information system and media based on mobile technology to provide information on preoperative care to reduce patient anxiety and improve the immediacy and quality of care.

METHODS: From November to December of 2021, we produced a health education video on preoperative visit and designed a QR code to link it to Youtube, which was posted on the notice of admission and bedside in the ward to provide a real-time health education for patients. We also established a system to automatically screen cases with qualified visit condition and allow the informatization of these records. Efficacy evaluation would assess both the patients' and the nurses' anxiety index and satisfaction to preoperative visit.

Results: The preoperative anxiety index of patients decreased from 4.1 points to 2.9 points and the preparation time for preoperative visit decreased from 28.3 points to 2.0 points, while nurses' satisfaction has increased from 3.2 points to 4.1 points.

CONCLUSION: Through the development of preoperative visit system and diversified teaching materials for health education, these measures could provide timely and effective information to patients and reduce the occurrence of preoperative anxiety and complications. At the same time, informatization allowed more immediacy of care to improve both the nursing quality and patient safety.

A061

Improve environmental awareness and practice green hospital-Take Chiayi Christian Hospital as an example

Chih-Wei Hsiao, Occupational Safety and Health Office, Ditmanson Medical Foundation Chiayi Christian Hospital, Taiwan

Pei-Hsuan Lee, Department of Community Health, Ditmanson Medical Foundation Chiayi Christian Hospital, Taiwan

INTRODUCTION : According to the Global Risk Report and the 2018 Global Climate Risk Index published by the United Nations International Climate Conference (COP23), climate-related risks are risks that may occur or have significant impacts in recent years. Our country is a subtropical island type, the impact of climate change is even greater. Medical institutions are subject to high power consumption, and our institution is a regional critically ill responsible hospital, which requires 24-hour uninterrupted power to maintain the operation of medical machines. In order to ensure the patient's medical safety, surgical safety and medical quality assurance, etc., the hospital has a power backup system. In this severe climate change situation, how to promote carbon reduction as a greater challenge.

OBJECTIVES : In accordance with the promotion method of recycling, and uses lean management methods to identify some unnecessary consumption of energy resources and waste in the operation process. Use the public broadcasting system to promote environmental knowledge, improve the environmental awareness of employees and patients, in order to echo the United Nations Sustainable Development Goals and Taiwan's Sustainable Development Goals indicators.

METHODS : In order to improve this phenomenon, during the construction process of the new building, two air conditioners were set up to support each other with ice water by means of special pipe racks for underground passages, and the outlet water temperature period of the main air conditioner was adjusted. Different outlet water temperatures were set during peak and off-peak periods to save energy. In this approach we can save 928,800 kWh of electricity every year, the overall carbon emission reduction is 590.7 metric tons.

To monitor the water use of the whole hospital, install water savers in public toilets, adjust water volume, purchase water-saving label products, and implement RO water and sterilizer cooling water recycling and reuse in inpatient areas to effectively save hospital water consumption.

The hospital has been fully devoted to waste management practice for a long time, including: self-propelled waste delivery equipment, high temperature and high pressure sterilizer, kidney dialysis waste liquid separation system and IV BAG clearance project. A total of 12 tons was reduced in the data year.

RESULTS : The overall reduction of carbon dioxide emissions in the hospital has dropped from 12,364 tons in 2018 to 10,803 tons in 2020. The water consumption per person per bed is 0.57, which is far lower than the recommended value of medical centers (0.96) and regional hospitals (0.69).

CONCLUSION : Due to the impact of climate change on the medical environment and the relationship between doctors and patients, the hospital starts the climate change risk management program every year, evaluates potential risks and develops appropriate countermeasures. We incorporate climate change risk management into the overall "risk management policy", and actively promote various environmental protection, energy conservation and carbon reduction measures, reduce greenhouse gas emissions, and promote environmental protection knowledge to mitigate and adjust to the impact of climate change.

A064

The Application of Lean Methodology to Improve the process of Outpatient Chemotherapy

Ya-Yu Chu, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

Wen-Ling Tung, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

Pei-Ju Kao, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

Yu-Hsia Wang, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

INTRODUCTION: Chemotherapy in outpatient unit is one of the cancer treatment method, but clients often complain of long waiting time and inconvenience, which also causes disturbance in working for members. The services provided by medical institutions must be satisfied with the expectations and requirement from clients. We would like to improve the process of chemotherapy in outpatient unit in order to enhance the quality of care.

OBJECTIVE: We attempted to evaluate the outcomes of lean management system in process of outpatient chemotherapy

METHODS: This study was collected data base on random with 40 clients in outpatient chemotherapy unit on a regional hospital of southern Taiwan. The study period is from April 2021 to February 2022. The questionnaire was compiled by semi-structured to aggregate satisfaction, and analyze suggestion with affinity diagram.

We had conducted a hazard analysis on high-risk operations by observing, measuring working time, drawing value stream map in actual, which not only rationalize working process on intervening in elimination, simplification, reorganization, but also improve strategies by using elimination, simplification, visual management, redecoration, cross training, bypass management.

RESULTS: Satisfaction for clients in process have raised from 3 to 4.7, which reach to significant difference($p < 0.01$); waiting time have dropped from 64.1 minutes to 27.9 minutes, which reach to significant difference($p < 0.05$); error rates of chemotherapy administration have decreased from 0.06% to 0%.

CONCLUSION: The results of this study suggest that using of lean management in process of outpatient chemotherapy can enhance working efficiency, reduce unnecessary waste, balance patient safety, which would not only just on the purpose of the value demand of clients, but also lower the burden on staff at the same time.

A Narrative Systematic Review of Burnout Among Respiratory Therapists During COVID-19 Pandemic

Tao An Chen, BS, is a Respiratory therapist, Division of Respiratory Therapy, Department of Chest Medicine, Show Chwan Memorial Hospital, Changhua; Szu Chi Pai, MS, is a Chief of Respiratory therapist, Division of Respiratory Therapy, Department of Chest Medicine, Show Chwan Memorial Hospital, Changhua; Ya Ting Chuang, BS, is a Nurse, Surgical Intensive Care Unit, Show Chwan Memorial Hospital, Changhua; Chang Sheng Lin, PhD, is an assistant professor, Hungkuang University and Department of Chest Medicine, Show Chwan Memorial Hospital, Changhua

INTRODUCTION: The negative effects of stress can lead to mental health problems such as depression and anxiety which in turn may affect work, family and other social relationships. High prevalence of burnout at health care professionals(HCPs) may affect patient safety. COVID-19 is a highly infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Some studies have shown that as high as 42% of patients with COVID-19 pneumonia could develop acute respiratory distress syndrome (ARDS) (Gosangi B et al.,2022). These patients may not be able to avoid being intubated, so ventilator support and its management is an important issue. At this moment, respiratory therapy must intervene. Respiratory therapists (RTs) are trained in all aspects of respiratory health and care for individuals of all ages. Since COVID-19 presents predominantly as respiratory and cardiopulmonary symptoms, it is not surprising that RTs are heavily involved in the care of infected individuals.

OBJECTIVES: The aim of this study was to describe the burnout among respiratory therapists(RTs) during COVID-19 pandemic and the factors about the burnout.

METHODS: On 20 Jul 2022, we searched from the PubMed. The following search terms were used:(COVID-19[All Fields] AND ("respiratory therapists "[All Fields]) AND("2020/01/01"[PDAT]: "2022/07/20"[PDAT]) AND no language restrictions. The current overview for systematic reviews was performed following the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.

RESULTS: A total of 172 articles were found, 3 of them were selected. All of them are survey research at the North American (from American and Canada). In these article, respondents ranged from 221 to 1156.The majority of survey respondents strongly agreed that burnout is a major problem in health care and that RTs have a similar risk of burnout compared to other HCPs. Furthermore, about 72% to 79% RTs had personally experienced burnout at some point in their career during COVID-19 pandemic. Surprisingly, only 10% of respondents stated their department measured burnout. Summarizing these studies that the main factors cause burnout are being reassigned to caring for COVID-19 patients, the experienced communication issues around guidelines, insufficient staffing ,feeling concerned for themselves or their family members becoming infected because of their proximity to COVID-19 positive patients ,poor leadership ,high work load ,lack of recognition ,lack of respect, emotional toll ,high acuity , lack of professional development opportunities , change (especially feeling overwhelmed by new and frequently changing guidelines), and pay.

CONCLUSION: The RTs have a similar risk of burnout compared to other HCPs. We reviewed that at least 70% of RTs have experienced burnout in the clinic since the outbreak of COVID-19. But the rate of concern for RTs is surprisingly low. And these surveys were only conducted in the North America and lack an integrated questionnaire. High prevalence of burnout at healthcare professionals may affect patient safety. Therefore, investigating and caring about RTs in various places is an urgent need and has important implications for the safety of acutely ill patients.

A066

Nursing Experience of Duodenal Obstruction, Superior Mesenteric Artery Syndrome Following Rectal Cancer Surgery

Chen Chi Fang¹, Su Kai Ling²

1. Department of Surgery, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), Tainan, Taiwan

2. Department of Nursing, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), Tainan, Taiwan

INTRODUCTION:

Superior Mesenteric Artery (SMA) syndrome is a rare disease that can go unrecognized and undiagnosed, exacerbating weight loss in an already significantly malnourished patient population. Total parenteral nutrition and conservative treatment can sufficiently improve body weight.

Objective:

We reported a case of superior mesenteric artery (SMA) syndrome after decreased body weight and unstable oral intakes due to Rectal CA with be safely treated by conservative measures although occasionally requires invasih complete obstruction with serosa invasion, pelvic abscess and intra-abdominal para-tumor abscess formation underwent two stage surgery. The SMA syndrome cave intervention in the form of nasogastric intubation and total parenteral nutrition, or surgery.

METHODS: A 74-year-old man underwent two stage surgery with diversion loop sigmoid colostomy, and restorative proctectomy with colorectal anastomosis and Left hemicolectomy with drainage intra-abdominal abscess due to Rectal CA with complete obstruction with serosa invasion, pelvic abscess and intra-abdominal para-tumor abscess formation in December, 2021. His body weight persistently decreased 12 Kg in 2 months. BMI is 17.9. In the postoperative course, he repeatedly vomited bile and food since the day 5 of postoperative. Superior mesenteric artery syndrome was diagnosed. Acute care setting includes fluid resuscitation, electrolyte correction, total parenteral nutrition and nasogastric tube insertion for gastric decompression. His physical condition improved by conservative fasting treatment and total parenteral nutrition and got discharged 24 days after surgery.

RESULT:

This case reports a male patient with severe body weight loss and SMA syndrome detected. Medical therapy for the condition is aimed at nutritional rehabilitation so that weight gain results in relief of the obstruction. We highlight the importance of the combination therapy of nutritional supporting and prokinetic agents. He was discharged 24 days after admission.

CONCLUSION:

Nursing care with fluid resuscitation, electrolyte correction, total parenteral nutrition and nasogastric tube insertion for gastric decompression to the recovery of the patient.

Keyword: Superior Mesenteric Artery syndrome, total parenteral nutrition, loss of body weight.

A067

Decreasing Incidence Rates of Incontinence Associated Dermatitis in the Intensive Care Unit patients by teamwork

Shu-Pin Sun¹, Ju-Hui Chung², Sz- Chun Hsu³, Kai-Ling Su⁴, Fang-Tsu Lai⁵

1,2Medical Intensive Care Unit, Department of nursing, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), Registered Nurse

3 Medical Intensive Care Unit, Department of nursing, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), Head Nurse

4 7F ward, Department of nursing, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), Enterstomal Therapist

5 Quality Center, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), Deputy Director

Background: Incontinence dermatitis is a common skin damage problem for incontinent patients in the intensive care unit. Once the skin is damaged, patients often complained of pain and increased money cost also increased loading of health care. According to domestic and foreign studies, the prevalence of incontinence dermatitis in the intensive care unit was 26.3%, and the incidence was 36%. From January to June 2020, a total of 86 patients in the unit developed incontinence dermatitis with an incidence rate of 15.4% (557 people), which has an upward trend compared with 12.9% in 2019, showing the importance of the problem.

Purpose: The project aims to reduces the incidence of incontinence dermatitis in intensive care unit patients from 15.4% to 8.6%, which reduces patients pain felling caused by incontinence dermatitis, reduces money cost of health care, and improves nursing staff's nursing awareness and nursing skills.

Method: Formulate cross-team visits and adjust appropriate tube irrigation formulas according to patient conditions, establish measures to improve diarrhea, revise care standards and develop assessment forms for high-risk groups, incontinence dermatitis care and diarrhea drug charts, early intervention for skin protection products, formulate a standard procedure for buttock cleaning, set up a "fart cleaning care box", and innovate the fart cleaning care formula - "rinse, pat to dry, protection, and holdventilation ", keep in-service education and develop a monitoring plan.

Result: The incidence of incontinence dermatitis decreased to 6.5% , and the effect remained at 7.2% until 2021. The correct rate of nursing cognition of nursing staff increased to 86.7% , and the correct rate of preventive care skills increased to 94% . The patient's out-of-pocket cost can save NT 84,240 /year, the patient's pain level is reduced to 1 point after improvement, nursing time can be saved by 867 hours and 36 minutes/year, and nursing labor costs can save NT 156,819 /year.

Discussion: By formulating the care process and cooperating with the medical team, the high-risk patients with incontinence dermatitis can be involved in the use of skin protection products early, and the correct nursing knowledge and skills of the nursing staff can be improved, which can effectively reduce the incidence of incontinence dermatitis and improve the overall quality of nursing care. Maintaining the integrity of the patient's skin is an important indicator of the quality of care, so it is more important to unify the care process for the caregivers following.

Keyword : Incontinence Dermatitis,fart cleaning care box,linnovate the fart cleaning care formula

A068

The study of the correlation between the news received about COVID-19 and preventive behaviors of the elderly people

Yi-Ching Liao, is a student in the Master program of Senior Citizen Welfare and Long-term Care Business, HungKuang University; Hou-Sheng Chan, is a Professor in Master program of Senior Citizen Welfare and Long-term Care Business, HungKuang University.

INTRODUCTION: In December 2019, the global outbreak of the new infectious disease, COVID-19, regardless of gender or age, is unavoidable from the virus. Due to the aging of the body, the ability of the elderly to fight the virus tends to be weak. In 2018, Taiwan became an aged society. The first strategy in the viral confrontation is anti-epidemic behavior. It is intended that by learning about the new coronary pneumonia, the old people will be able to determine if they can adopt anti-epidemic behaviors, increase their public health literacy, and improve their understanding of the elderly's health. Therefore, this research aims to explore the correlation between the news received about COVID-19 and preventive behaviors of the elderly people

OBJECTIVE : The goal of this research is to determine if public health literacy can achieve the goal of epidemic prevention by examining the relationship between the method and frequency in which older adults receive news about new coronaviruses and the implementation of epidemic prevention. The objects are as follows:

To analysis the frequency and method of older people's engagement with COVID-19 news

To analysis of the use of epidemic prevention of the elderly people .

To investigate the relationship between how and how often older people receive information about new cases of COVID-19 and the use of epidemic prevention.

METHODS: The elderly over 65 in Taichung City are the research subject for this quantitative approach, which uses the "questionnaire survey" methodology. Descriptive statistics, correlation analysis, and regression analysis are utilized for data analysis.

RESULT: In this investigation, there were 40 participants, including 27 women (67.5%) and 13 men (32.5%). The elderly among them generally watched TV (62.5%) to get news and information. Analysis showed that the approach older people received news on television reached a statistically significant level, and the use of such practices was positively connected with education level.

CONCLUSION: TV news is the primary source of information for older people. As a result, it is crucial to deliver news and information that is reliable with high media literate. The news can be used to share messages about COVID-19 and related knowledge because increasing older people's health literacy and awareness level is also a critical factor.

A069

A Japanese Medical Affair Text Labels as a Tourist May Encounter – Computational Linguistics Aid

Chen, Te-Tsung¹, Ho, Zih-Ping^{2}*

1. Department of Medical Education, Chang Bing Show Chwan Memorial Hospital

2. Department of Medical Research, Chang Bing Show Chwan Memorial Hospital

** Presenter*

INTRODUCTION:

Japanese traveling in Taiwan, they may need medical affair support or nursing service. However, they are embarrassed to ask for help. It's not related to the medical first aid, but they really need to support, such as scratches, nosebleed, stomachache, etc. Due to Japanese languages issues, Japanese tourists often don't know the English words, they prefer the Chinese characters in general.

OBJECTIVES:

If we can set some text labels at our sightseeing scenic area, which could lunch simple languages robot dynamic demonstrating. It would highly solve the medical affair support or nursing service related to body needs.

METHODS:

Computational Linguistics can apply into many fields, one of the use cleverly is for this purpose.

RESULTS:

The study proposed this idea.

CONCLUSION:

Japanese traveler health literacy would also be promoted. Future study suggests that more complicated languages model be addressed in Japanese text and should be proposed.

Keywords: 日語醫務 (日本の医療, Japanese Medical Affair), 觀光緊急醫療 (觀光救急医療, Sightseeing Emergency Medical), 簡易語言機器人(シンプルランゲージロボット, Simple Language Robot)

A070

Orthopedic medical literacy of patients operating at smart phone-An interface and classification choice design

*Tsui, Hsin-Yu¹, Chen, Chih-Hao², Zhuang, You-Ting², Weng, Shao-Jen², Chan, Cheng-Jung³, Ho, Zih-Ping⁴, Tsai, Yao-Te^{*5}*

1 Department of Nursing, Chang Bing Show Chwan Memorial Hospital

2 Department of Industrial Engineering and Enterprise Information, Tunghai University

3 Department of Orthopedic, Chang Bing Show Chwan Memorial Hospital

4+ Presenter, Department of Medical Research, Chang Bing Show Chwan Memorial Hospital; Department of Nursing, Central Taiwan University of Science and Technology

5 Corresponding author, Department of International Business, Feng Chia University*

INTRODUCTION:

Nowadays the patients use smart phone frequently. The designer wants to know how smooth from operating interface and quickly classification choice. It relates to the public orthopedic medical literacy.

OBJECTIVES:

The study chooses outpatient clinic and asks if it convenient for the patients.

METHODS:

Javascript computer language would be included.

RESULTS:

It showed that the more richly background orthopedic medical literacy, the smoothly operations they have.

CONCLUSION:

Future study suggests that included artificial intelligence techniques to allocate the interface layout.

Keywords: Smart phone interface, interface layout design, interface optimization problem, orthopedic outpatient clinic, nursing working flow.

A071

Physical Work Demands Predict Return-to-work after Occupational Injury -- A Pilot Machine Learning Study

Chuan Man Chu, OT, Department of Occupational Medicine, Kaohsiung Veterans General Hospital, 386, Dazhong 1st Rd., Zuoying Dist., Kaohsiung City 81362, Taiwan (ROC) 886-7-3422121-75152 (chujmot@gmail.com).

Pei-Ling Tang, RN, PhD, Research Center of Medical Informatics, Kaohsiung Veterans General Hospital, 386, Dazhong 1st Rd., Zuoying Dist., Kaohsiung City 81362, Taiwan (ROC) 886-7-3422121-71555 (pltang728@gmail.com).

Nain -Feng Chu, MD, Dr.PH, Department of Occupational Medicine, Kaohsiung Veterans General Hospital, 386, Dazhong 1st Rd., Zuoying Dist., Kaohsiung City 81362, Taiwan (ROC) 886-7-3422121-78274 (chuepi@vghks.gov.tw).

INTRODUCTION :

Occupational injury may cause disability and lose of job that will bring big impacts on the well-being and quality of life among labors. Poor health literacy (illiteracy) may be associated with more adverse health behaviors and outcomes. Moreover, health illiteracy may decrease the willing to attend health activity and return-to work which may result poor socio-economic impacts.

Providing comprehensive occupational rehabilitation program, including working ability assessment, work hardening training working ability, psychosocial adaptation and job accommodation, are important information and service to help labor regain working ability and return to work.

OBJECTIVE :

We collect the information of occupation injury cases and use machine learning method to build the model that can predict the factors are associated with return-to-work and to promote health literacy among occupational injury labors.

METHODS :

We totally collect 93 cases from Sep. 2016 to Dec. 2018 at a medical center in the Southern Taiwan. Baseline characteristics (such as age, educational level, and marital status), causes of occupational injury, and physical work demands (such as, weight lifting, weight carrying, climbing, body motion, walking, and sitting-standing transition) are collected. We use six different machine learning methods to build the return-to-work predicting model.

RESULTS :

All these six different machine learning methods provide accuracy rate from 77 to 86%. Among them, the J48 decision-tree method provides the best model to predict return-to-work with accuracy rate 86%.

Disability card provide the biggest contribution of return-to-work with the contribution value 0.0683. Physical work demands, types of injury, sites of injury and pain score all are important factors the contributes return-to work after injury.

CONCLUSION :

Health literacy is one of the important factors that associated with disease prevention and health promotion. It is also important factor and accessory tool to help labors back to work after injury. From this study, we build up a predict tool for occupational rehabilitation professions to identify and assist the occupational injury labors with better outcomes and early return-to-work in the future.

Keywords: Health literacy, Occupational injury, Machine learning, Return-to-work, Physical work demands

A072

The Study to Improve the Emergency Registered Professional Nurse's Ability to Recognize and Determine Symptoms of STEMI Patients

Shuchin, Huang, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation); Yiling Chung, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation); Yuhsia Wang, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

BACKGROUND: Patients with acute myocardial infarction are usually in urgent need of emergency medical care, especially for the condition of acute "ST-elevation myocardial infarction" (STEMI). The emphasis is to quickly perform an ECG examination to get a grasp of the patient's condition and attempt to differentiate the disease in time for treatment. Therefore, emergency registered professional nurse must be able to recognize and determine patient of STEMI based on the symptoms.

OBJECTIVE: To improve the medical personnel's ability to recognize and determine the symptoms and to improve the efficacy of conducting an ECG examination in emergency for STEMI patient.

METHODS: (1) Cases of patients with electrocardiogram performed after 10 minutes from December 1 to December 31 of 2020 were included as data for analysis and 7 out of 77 cases were delayed of ECG examination due to the failure of medical personnel to start the test immediately. (2) The registered nurses were scheduled for the education and training course on "Characterization and Correct Evaluation of STEMI" in January 14 and 15 of 2021, in which they were tested before and after the class. (3) Prompt sign for classification of STEMI symptoms was posted at triage station for personnel to use as reference. (4) Assistive support system for diagnosis was also established. (5) A LINE group was created for peer review and feedback.

RESULTS: (1) All registered nurses have attended the course on "Characterization and Correct Evaluation of STEMI" (13/13). (2) The test on their ability to correctly recognize and determine STEMI has shown an improvement of the average score from 50 points to 86 points and an correct answer rate from 51.54% to 85.23%. (3) The course on "Characterization and Proper Evaluation of STEMI" has received a satisfaction rating of 4.38. (4) The delay rate of performing an ECG after 10 minutes has also improved: from 9% in 2020 (7/77) to 8.4% in 2021 (6/71). Starting from January to July of 2022, the rate has even decreased to 4.6% (2/43).

CONCLUSION: The medical personnel was able to effectively determine and classify patients of STEMI condition, which is crucial for comprehensive diagnosis and immediate treatment, that it may save the life of those critically ill. Plus, this measure would provide good hospital environment and service quality to patients.

Keywords: Emergency examination (Triage); ST-elevation myocardial infarction; Electrocardiogram

A073

Discussion on the Effectiveness and Satisfaction of Introducing Multi-Intelligent Assistive Care System for COVID-19

Chung, Yi-Ling RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

Wang, Yu-Hsia RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

BACKGROUND: The COVID-19 pandemic has affected the world and Taiwan has been on level 3 epidemic alert for more than 10 months since May 2021. Preventing community spread and nosocomial infection were the top priority in Taiwan. The doctors and nurses at the front-line against the pandemic were also suffering from both physical and mental stress. By using a smart system, it could take care of patients' needs and still maintain good health for the medical personnel, which can serve in the direction of increasing the hospital capacity in Taiwan.

Objective: To investigate the effectiveness and satisfaction of introducing the multi-intelligent assistive care system for COVID-19.

METHODS: 1. The first step would be building an "intelligent management system" to improve the effectiveness of management of medical situation through visualization and interaction mode. 2. By using a "visitor record for epidemic prevention" to collect basic information of admitted visitors, it could help to monitor high-risk individuals and the health of medical personnel in real time. 3. Patients diagnosed of COVID-19 would have options of medical treatment. Video consultation platform and one-stop epidemic prevention clinic were available for patients of need. The registration procedure was simplified, as well as other procedures such as diagnosis and treatment, x-ray examination, biopsy, drug administration, etc., separating diagnosed patients from the population to avoid contact and increase the convenience of other patients seeking medical treatment. 4. Through the use of "long-distance home care record" to connect data and devices, the system would simplify the work of individual home care for better efficiency.

RESULTS: (1) The "intelligent management system" was established on May 25, 2021 to monitor high-risk inpatients and the health of medical staff. (2) The "visitor record for epidemic prevention" was used from May 30, 2021 to July 30, 2022, and it showed to have achieved zero contact, zero omitted case and zero nosocomial infection. (3) When randomly inspected 30 outpatients at one-stop epidemic prevention clinic, the average waiting time was reduced from 120 minutes to 30 minutes and the satisfaction has gone up from 3.8 to 4.3 in rating. (4) When randomly asking 30 medical personnel from May 20, 2022 to May 31, 2022, they showed on average a 4.5 in satisfaction rating for the smart assistive care system for COVID-19.

CONCLUSION: The introduction of multi-intelligent assistive care system for COVID-19 could help gathering information on the pandemic in real time, which not only took into account of the needs and the convenience of patients seeking medical treatment, but also effectively reduced the community spread of the disease through people's movement. It also assisted in the process of medical care by simplifying procedures to simultaneously improve patient's and medical user's satisfaction.

KEYWORDS: Multi-intelligent assistive care system for COVID-19; One-stop clinic; Satisfaction

A074

Nursing Experience of a Case of Degenerative Arthritis of Right Knee Undergoing Total Knee Replacement

Wang, Ssu-Han RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

Chung, Yi-Ling RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

Wang, Yu Hsia RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

BACKGROUND: This paper investigated the care of a 73-year-old woman who received total replacement of right knee due to the impairment of daily functions from the increased pain of degenerative arthritis. The patient was afraid of postoperative pain and physiological discomfort from physical restraint to body movements since she did not fully understand the operation procedure, that she increasingly felt concerned about the degree of recovery to functions, which led to negative emotions.

OBJECTIVE: To provide an appropriate nursing treatment with proactive care, which is specifically tailored for the patient, in accordance with the senior-friendly nursing guidance model. To alleviate the negative emotions caused by physical discomfort and the disease. To encourage the individual to early recovery and improvement to the quality of life.

METHOD: (1) From March 29, 2021 to April 9, 2021, the data were collected by means of observation, companionship, listening and conversation based on Gordon's 11 Function Health Patterns and concluded the individual suffering from anxiety, acute pain, impaired physical mobility and other health problems. (2) During the proactive care of the patient, the nurse would establish good relationship with the individual, in which the treatment was properly tailored to specifically fit for the person by following the senior-friendly care guidance model. (3) By diverting attention and encouraging family companionship, the negative emotions caused by the disease were alleviated. (4) Technique to control pain was taught to the patient to help reduce physical discomfort. (5) A progressive rehabilitation exercise plan was drawn by the physical therapist, including a game design based on personal preference to motivate the patient to participate in rehabilitation.

RESULTS: (1) On April 9, 2022, the patient smiled and the mood was stable. The pain score has dropped from 8 points to 2 points on scale, the anxiety index was decreased from 7 to 1. The patient now can walk to the social hall under the accompaniment by family members to socialize for about 15 minutes without discomfort. (2) On April 9, 2022, the family members have completed the preparation of space and items for home care. (3) On April 12, 2022, the patient was reported via telephone follow-up to be able to use a walker to walk in the nearby park and showed stable gait.

CONCLUSION: Physical therapy is a long process and it is recommended to strengthen support and encouragement through customized care to facilitate early recovery of daily life functions and improve the patient's quality of life. Moreover, the author would suggest building a smart cloud-based health management system as part of early intervention with devoted resources in health education and continuous rehabilitation management to help building the patient's confidence and follow up on her progress.

KEYWORDS: Degenerative arthritis; Total knee replacement; Anxiety; Pain; Impaired physical mobility

A075

The Investigation of the Implementation Rate of Increased Parent-Child Skin-to-Skin Contact up to 60 Minutes after Natural Childbirth

Huiying Kuo, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation); Chiaoping Chen, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation); Yiling Chung, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation); Yuhsia Wang, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

BACKGROUND: Skin contact for the newborn means that the baby is immediately placed on the mother's chest after birth, allowing the baby to listen to the mother's heartbeat and feel warm through the body temperature, in order to stabilize the newborn's vital signs and reduce the mother's pain and anxiety. The duration of skin contact is extremely important, as it can effectively promote parent-child attachment, as well as promoting uterine contraction to reduce bleeding through breastfeeding. The act will also help to improve the rate of successful breastfeeding.

Objective: By increasing the contact time between the parent and the child to more than 60 minutes, it can effectively encourage the mother and the baby's will to rooming-in and successful breastfeeding.

METHODS: (1) The care team would first meet, discuss and formulate the direction of the procedure. (2) The team members would be educated and trained. (3) Intelligent computerized health education materials on skin contact for pregnancy would be provided, including informative content and videos. (4) The procedure would be carried out in a warm and appropriate environment with proper temperature control and wrapping by preheated bath towel. (5) A safety protocol would be initiated in place. (6) A support system without family members would be provided.

RESULTS: (1) The participation rate of the course on April 25, 2021 for the members' training was 100% (11/11). (2) The care team's awareness of the procedure has improved from 66% to 100%. (3) The implementation rate of postpartum parent-child skin-to-skin contact for 60 minutes has increased from 0% in 2020 to 100% in 2022. (4) The rate of rooming-in for parent and child after natural childbirth has increased from 42.3% in 2020 to 50% in 2022. (5) The exclusive breastfeeding rate after natural childbirth has also increased from 30.6% in 2020 to 40% in 2022. (6) On average, the mothers showed a satisfaction rating of 4.3 points for the 60 minutes of postpartum parent-child skin-to-skin contact.

CONCLUSION: It is beneficial to carry out parent-child skin-to-skin contact for 60 minutes as soon as possible after the delivery. It will effectively improve the rooming-in rate for the mother and the child, as it increases the parent-child interaction for high success of breastfeeding.

KEYWORDS: Natural childbirth; Skin contact for 60 minutes; Breastfeeding; Rooming-in

A077

The Application of Diversified Health Education Approach to Improve the Awareness of Home Care for Chemotherapy Patients

Chingfang , Su, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

Yiling Chung, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

Yuhsia Wang, RN, Nursing Department of Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

BACKGROUND: The average hospital stay for patients receiving chemotherapy is about 2.5 days. Clinical observation of side effects caused by chemotherapy treatment often occurs after returning home. These may include damage to the mucus membrane in oral cavity, nausea and vomiting, loss of appetite, insomnia, and fatigue, etc., which can all occur repeatedly. Without proper measures and care, these side effects can eat away the quality of life for patient and even affect their will to comply with the subsequent chemotherapy.

OBJECTIVE: This paper would attempt to use diversified health education approach to improve the awareness of home care for chemotherapy patients

METHODS: (1) The chemotherapy group would meet, discuss and formulate the direction of implementation. (2) The group members would be properly educated and trained. (3) An intelligent computerized health education content related to home care for chemotherapy patients would be provided, including QR code and videos. (4) Patient would be taught of home care before discharge to make sure he or she was aware and understood the process, if not already knowing the subject. (5) Patient's condition was followed up in 3 days after returning home.

RESULTS: (1) The rate of participation in the education and training for the group members on April 25, 2022 was 100% (11/11). (2) The chemotherapy group members were tested on the knowledge of home care on April 30, 2022, showing an average improvement from 76 points to 90 points. (3) 30 patients of chemotherapy were randomly interviewed from May to July of 2022. Their awareness of home care has improved from 92.2% to 100% and they rated satisfaction with an average of 4.3.

CONCLUSION: Diversified health education approach adopts lively and interesting content, which has also taken into account of personal needs. The information is also synchronously taught to patients before their discharge to confirm their understanding, which is proven to be flexible to fit to patient's level of cognition. And patient's condition can be tracked afterward at home to further effectively improve the awareness and satisfaction of home care for patients under chemotherapy.

KEYWORDS: Diversified health education; Chemotherapy patient; Home care

A078

Effect of Shared Decisuon-Making on patient treatment Choice of chronic kidney disease

Chen, JS¹, Chen, YC², Wang, YT³, Chen, YW⁴, Lin, PH⁵

1) Department of Quality Medical Center, Tainan Municipal Hospital, Tainan, Taiwan;

2) Department of Quality Medical Center, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

3) Department of Hematology, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

4) Department of Hematology, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

5) Department of Critical Care Medicine, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan.

INTRODUCTION:

When patients with chronic kidney disease enter the late stage of the dis-ease, they need to face a variety of kidney replacement therapy options or palliative care ,and through patient decision aids of shared decision making, encourage patients to ask questions and considerations about disease and treatment, and make the best treatment decision for themselves.

OBJECTIVE:

To explore whether shared decision-making between doctors and patients can improve the influence of patients on chronic kidney disease treatment choices, improve treatment decision-making and shorten decision-making time, assisting patients in early treatment.

METHODS:

A structured questionnaire was used to investigate the patients in a regional teaching hospital in south Taiwan. from 2020 to 2021, a total of 50 patients with chronic kidney disease. Physicians and specialist nurse instructors all participate in the on-the-job training of SDM, they test and modify decision-making aids and implement them clinically every year, then Team establish and promote the SDM process, so that other personnel can understand how to implement it, and ensure the quality of decision-making with patients and their families.

RESULTS:

After analyzing 50 chronic kidney disease patients who participated in SDM, 79.5% of the patients agreed that decision aids can "help you recognize that you have to make a decision", of which 25 patients were unsure of the choice they wanted before implementation. , 21 patients made a decision after the introductory instructions, at the same time the anxiety level was significantly reduced before and after the use of the aids (3.9 ± 1.0 vs. 2.9 ± 1.1). The results showed that SDM improved the certainty of the treatment plan by 84%, and helped to reduce anxiety.

CONCLUSION:

For patients with chronic kidney disease who have not yet chosen a treatment direction at the later stage of the disease course, Participating in SDM increases their willingness to participate in shared decision-making and medical awareness by making them aware that you have to make a decision, they can receive treatment as early as possible and patients and make treatment smoother.

A079

Community Simulation Teaching to Promote the Effectiveness of Resident's Willingness to Participate in Shared Decision Making

Chen, YC¹, Chen, JS², Lee, YC³, Wang, YT⁴, Chen, YW⁵, Lin, PH⁶

- 1) Department of Quality Medical Center, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan;*
- 2) Department of Quality Medical Center, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan;*
- 3) Department of Superintendent Office, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan;*
- 4) Department of Hematology, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan;*
- 5) Department of Hematology, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan;*
- 6) Department of Critical Care Medicine, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation),Tainan, Taiwan.*

INTRODUCTION:

The concept of shared decision-making is often not deeply rooted in community education, as a result, people cannot fully express their opinions when seeking medical treatment, the purpose of shared decision making (SDM) is to promote active patient participation in their own medical, then expected to be able to make decisions that conform to their values and expectations, the aim of this study is to improve the awareness and attitudes of community residents with regard to shared decision-making using simulation teaching and training course.

OBJECTIVES :

Community simulation teaching can help community residents understand the importance of SDM, and followed by participants understand the need to make a decision and preferred to be actively involved in the decision making process.

METHODS :

A structured questionnaire was used to investigate the 43 community residents in 2020, The action strategies to promote shared decision making:1. Design situational simulation cases and teaching aids;2. Arrange time for community education;3. Deepen of community residents to learn through case share and videos;4. Selection of residents with conditions similar to the simulated case;5. Situational reality show and shorten the understanding time for patients and their families;6. Give feedback and exchange in the process, and Confirm the learning effect of SDM.

RESULTS :

A total of 43 community residents participated in this study, the community residents were satisfied with the Community Simulation Teaching overall satisfaction reached 95.1%, with the highest to understand the importance of SDM (96.7%), followed by participants understand the need to make a decision and preferred to be actively involved in the decision making process (95.8%)

CONCLUSION :

Community simulation teaching can be close to the life of the residents in the community, let them understand what is SDM and thus increase their willingness to participate in shared decision-making, and Promote SDM early in the community is can improve community residents' awareness of medical treatment, and thus increase the trust between doctors and patients and make treatment smoother.

A080

Introduction to the impact of promoting SDM on medical decision-making for early-stage prostate cancer patients

Hsu, CK¹, Chen, YW², Chen, YC³, Wang, YT⁴, Lin, PH⁵

1) Department of urology, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

2) Department of Hematology, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

3) Department of Quality Medical Center, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

4) Department of Hematology, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

5) Department of Critical Care Medicine, Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan.

Introduction:

This SDM is designed to assist patients with early-stage prostate cancer in choosing treatment options. Prostate cancer patients are mostly elderly people. Because they are unfamiliar with the disease and treatment, they often ask doctors to make medical decisions on their behalf. SDM is used to help patients achieve the best feasible treatment plan according to their own needs.

Objectives:

Assist early-stage prostate cancer patients to use SDM, select appropriate treatment methods, improve treatment willingness, and increase disease survival rate.

Methods:

Early-stage prostate cancer is defined as T1-T2c, Gleason score < 7, PSA 0-20 ng/ml, the physician initiates SDM, and then the case manager acts as a guide to lead the patient to explain patient decision aids, every aspect of PDA. Steps to help patients understand the advantages and disadvantages of treatment options and improve treatment willingness, and collect questionnaires after SDM to evaluate the effect.

Results:

From 2018 to June 2022, 67 cases were received, 60 patients could not make a decision before SDM, 7 patients chose HIFU; 16 patients chose radiotherapy after SDM, 38 patients were HIFU, 13 patients were Active surveillance, their anxiety level From 3.5 points to 1 point, the satisfaction of helping to think about the advantages and disadvantages of the options is 4 points (out of 5 points).

Conclusion:

It is a great challenge for medical staff to assist patients in making major medical decisions during limited outpatient time. SDM facilitates discussions between doctors and patients to reach consensus on medical decision-making, which not only reduces the time for medical staff to explain, but also improves the quality of medical care and establishes a better doctor-patient relationship. Before the implementation of SDM, patients faced difficulties in medical decision-making. After the implementation of SDM, patients can choose the most suitable method according to their own preferences, reduce anxiety and improve medical satisfaction.

A081

The Efficacy of Aspirin Use in Preventing Colon Cancer Risks

Tai Yi Ling

INTRODUCTION:In 2021, cancer is the leading cause of death in Taiwan. Although colon cancer has been included into the four major cancer screenings, it still ranked third in mortality rate. Investigations indicated that the Prostaglandin E2 (PGE2) level on colorectal cancer cells is higher than its normal surrounding cells. Aspirin can inhibit PGE2, therefore inhibit tumor growth.

OBJECTIVE:Objectives: By using evidence-based methods, to investigate whether aspirin can prevent from colon cancer risks.

METHODS:Based on the steps of evidenced-based practices, the clinical answerable questions using PICO were formed by using both Chinese and English keywords and synonyms searched in the MeSH database. The search techniques utilized were Boolean logic, which allowed for combining free-text term and controlled vocabulary term and connecting with OR; and further, PICO elements were searched and connected with AND, until July, 2022. The published studies that were available in PubMed, Cochrane library, Clinical Key and Airiti Library were investigated. The Oxford CEBM Critical Appraisal Tools were used for literature review.

RESULTS:Fifteen randomized controlled trial studies were included. The experimental group was given aspirin daily for a minimum period of six months, up to a maximum of ten years (divided into low-dose groups and high-dose groups); the control group was given placebo. The results showed significance in the experimental group at its fifth year of aspirin use in reducing colon cancer risks, by comparing to the control group RR 0.68 (95%CI 0.51-0.89, $p < 0.01$), especially in the group of high-dose aspirin use RR 0.64 (95% CI 0.47-0.87). Nevertheless, both groups showed no significance in its third ($p = 0.10$) or tenth ($p = 0.51$) year.

CONCLUSION:Evidence has showed that long-term high-dose aspirin use can decrease the risks of colon cancer in the fifth year. Aspirin can, however, induce gastric bleeding. Thus, further investigations are still needed in single medication dosage, efficacy in prevention, medical effect analysis in long-term medication use, and evaluation of side effects.

A082

The Effect of Treatment Decision Making of Patient using shared decision making In The Pluralistic Method

Yang-Cheng Lee, Jean-Shi Chen, Yi-Ching Chen, Yu-ting Wang

Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation);

INTRODUCTION:

Shared decision making (SDM) is the conversation between patients and the health professionals. It emphasizes the interactive process and the contribution of opinions from both patients (and/or families) and physicians to reach the final decision. This study combine with pluralistic method and Interprofessional collaborative practice, assist paient to make the most suitable medical decision.

OBJECTIVES :

Using pluralistic methods to share decision-making can help patients understand what matters most when facing a variety of medical options and made the best medical choice.

METHODS :

A structured questionnaire was used to investigate the 98 patients in 2021, The action strategies to promote shared decision making in the pluralistic method:1. Establish SDM cross-team action groups;2.Agenda planning;3. Arrange the training programs for health professionals to using patient decision aid;4. Form healthy decision-making alliances with community members to enhance self-decision awareness;5. Design the Question Prompt List(QPL) for people to fill out questions before seeing a doctor;6.Design key picture cards to emphasize the key points and shorten the understanding time for patients and their families;7. QR Code linking medical questionnaire to enable patients to understand treatment options and give feedback on options.

RESULTS :

A total of 98 patients participated in this study, 78.6% of population knew that the decision-making process needed to state their concern, 83.7% of participants understand the need to make a decision and preferred to be actively involved in the decision-making process. The patients had high rating about the decision aids can help understand what matters most when facing a variety of medical options and made the best medical choice.(4.3±0.9 vs. 4.1±0.8, p =< 0.001 by paired test)

CONCLUSION :

Under the inter-professional collaborative practice to promoting SDM, patients can maintain their quality of life while receiving treatment, which can also increase the trust between doctors and patients and make treatment smoother. and The pluralistic Method can shorten treatment options for patients, who are willing to participate in decision and receive treatment as soon as possible to improve treatment effectiveness.

A083

The effect of promoting SDM in families and anxious patients suffering from severe respiratory failure: before and after decision marking

Pei- Hsun Lin, Yi-Ching Chen, Yu-ting Wang, Yi-Wen Chen

Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation)

INTRODUCTION:

Patient in the intensive care unit often developed respiratory failure due to multitude of illnesses. Problems often arise with regards to the timing or choice of: when to extubate a patient, when to suggest or perform tracheostomy, or when is it suitable to withdraw life-sustaining treatments in terminally ill patients. Faced with there important questions and decisions, difficulties and challenge are usually encountered when there's insufficient medical knowledge, social environmental pressures or personal values on the part of the patient and family, causing anxiety, in turn resulting in challenges in marking sound life-changing decisions. The patient decision aids(PADs) are valuable not only in education and informing the patient and family on their decision marking options, but they also allow them to participate, contemplate and plan the next steps, options and decisions in the treatment strategy.

OBJECTIVES:

To determine if SDM is helpful or effective in providing available or measurable options and whether it reduced patient and family anxiety, allowing ease in reaching a consensus in their decision marking.

METHODS:

The medical doctor initiates the SDM process, and is then followed by the nurse practitioner. They introduce the PDAs by explaining the advantages and disadvantages, benefits and risks of available options, that is personally tailored to a specific individual. Then, the competed question is then subjected to analysis.

RESULTS:

Form January 2021 to July 2022, a total of 41 cases were included in the study. A total of 3 PDAs were implemented from the initiation of aggressive management of respiratory failure, down to the end-stage management in these patients. After implementing SDM, the anxiety level in both patients and families dropped from 4 to 2 points (highest: 5point). The question: "DOES THIS HELP YOU DETERMINE WHAT MATTERS MOST TO YOU?" scored a total of 4.2points, the highest and most important question the patient's chose in the questionnaire.

CONCLUSION:

When patient and their families are faced with important life-changing medical decision in life threatening circumstances, they are often unable to make those decisions in a assured manner. This is brought about by fear of marking the wrong choice that they would regret in the future. In this analysis, we found that people exposed to PDAs become better informed, increased their medical understanding of the illness, and communicated better their values, gaining a more accurate risk perception, as they were included or given a more active role in the decision making process. These decision aids reduced patient and family anxiety, controlled fear and stress, and reduced psychological burden, in turn helping them make well informed choices and decisions.

A084

Subsequent options for postoperative treatment of early stage lung cancer

Yu-ting Wang, Yi-Wen Chen, Yi-Ching Chen, Pei- Hsun Lin

Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation)

INTRODUCTION:

For stage IB patients with early stage lung cancer, adjuvant chemotherapy is needed after surgery, but often hesitant or even unwilling to treat. With the aid of this tool, in addition to increasing the patient's willingness to treat and achieve good two-way communication Benefit and purpose.

OBJECTIVES:

Early stage lung cancer Stage IB cases use this tool to provide clinicians with reference through empirical data, which can clearly provide patients with treatment options to prevent relapse and prolong survival.

METHODS:

After operation doctor informs patient can choose oral or injection chemotherapy , then calls coach to use SDM assistive tools, analyzes the advantages and disadvantages two medical options then confirm decisions. Finally, collected questionnaire before and after using the SDM model, about understanding, medical decision.

RESULTS:

In 2018 ~ 2021.June, 30 cases were received, after using SDM model, 86.7% of 26 patients chose oral drug therapy, 3 patients chose injection chemotherapy (10%), and 1 patient chose observation and follow-up (3.3%).

CONCLUSION:

Through this SDM tool, patients can make appropriate medical decisions, so as to achieve a good doctor-patient relationship and therapeutic effect.

A086

Effectiveness of 10 weeks cycle muscle strengthening exercise for the body composition and quality of life in hospital staff

Lee, Sieh-Siang, Physical Therapist, Lo-Hsu Medical Foundation Lotung Poh-Ai Hospital; Chen, Hsiu-Chun, Occupational Therapist, Lo-Hsu Medical Foundation Lotung Poh-Ai Hospital

INTRODUCTION: Health promotion is a process that people can enhance the ability of control to improve their health. How to strengthen governance and policies to improve the accessibility and affordability for health has become a public health issue that has been explored in recent years. Health is determined by multiple factors, including the health literacy, settings and social mobilization. Previous studies have reviewed the burden of disease, economic cost, and long-term loss of human resources due to unhealthy workplaces. It is important to provide a safe and healthy working environment for employees to reduce stress and improve self-esteem. Enterprise and even the country can achieve higher productivity and positive image by this strategy.

OBJECTIVE: The purpose of this study is to investigate the effects of 10 weeks cycle muscle strengthening exercise on staff in Lotung Poh-Ai hospital. We hypothesize that 10 weeks muscle strengthening exercise adopted in this study will improve their body composition and quality of life.

METHODS: A study with pretest-posttest design was conducted in district teaching medical hospital. 19 participants were included in this study. The 20-session muscle strengthening protocol is 50 minutes for one session, twice a week for 10 weeks. The initial weight of training is 30% of 1RM measured by COMPASS 600 for upper limb and 50% for lower limb respectively. The training intensity is adjusted on the basis of muscular coordination ($\geq 80\%$) and Rating of Perceived Exertion ($RPE \leq 12$). There are 10 items in this training program, such as shoulder press, chest press, rowing, trunk extension, trunk flexion, knee extension, knee flexion, hip abduction, hip adduction and leg press. Advices that related to aerobic exercise at home and diet will be given by app after training. Body weight, body fat percentage, muscle weight, BMI and abdominal circumference were measured by ACCUNIQ BC380 at baseline, the fifth week of training and the tenth week of training. Additionally, the quality of life was assessed by SF-12 questionnaire at baseline and the tenth week of training.

RESULTS: The Wilcoxon Signed Ranks Test was used for paired samples to analyze the difference. Body fat weight($p=0.002$), body fat percentage($p=0.002$), and abdominal circumference($p=0.003$) were significant decreased at the tenth week of training compared with baseline. The physical component summary in SF-12 questionnaire was significant improved ($p=0.02$) after training. Significant changes ($p=0.01$) of minor muscle strength in shoulder press and leg press training at 3 time points of assessment were be detected by COMPASS 600.

CONCLUSION: 10 weeks cycle muscle strengthening exercise may cause positive effects on body composition and quality of life. Participants in this study could have the courage to try the other different types of exercises through the process of muscle strength training to achieve the purpose of health promotion in future.

A087

Early Warning Information System Could Improve Incidence of Unexpected In-hospital Cardiac Arrest

Li-Hsueh Chen, Yu-Hsia Wang, Fang-Tsu Lai, Jean-Shi Chen

Tainan Municipal Hospital(Managed By Show Chwan Medical Care Corporation)

INTRODUCTION: Taiwan Patient-safety Reporting system pointed out that 474 (51.9%) deaths out of 913 cases were due to unexpected cardiac arrests, and 895 (98%) were severe cases. 99.2% are patient factors, specifically, research indicates that about 60% to 70% of hospitalized patients who have unintended in-hospital cardiac arrests (IHCA) will present with changes in vital signs such as pulse, respiratory rate, oxygen saturation, and level of consciousness 6 to 8 hours before Cardiac Arrest. The aim of this intervention is to introduce innovative early warning information system for IHCA prevention.

OBJECTIVE: The research purpose is to examine the positive effects of implementing the early warning system, Modified Early Warning Scores (MEWS), on unexpected cardiac arrests in the hospital. MEWS is a simple physiological reference (including heart rate, respiratory rate, systolic blood pressure, body temperature, oxygen saturation, and level of consciousness) that identifies high-risk patient population, which further decreases unexpected emergencies in the hospital. Upgrade return of spontaneous circulation (ROSC).

METHODS: Early Warning Information System in 2017. The critical patient score (MEWS > 5 points) fired off an alert on the medical order screen. Next, the critical care nursing staff paged the specialist nurse and the attending physician, who then responded with appropriate medical treatments. In 2022, digital whiteboards were introduced to present the MEWS score by color, 1-4 showing a green light, 5-7 showing a yellow light, and 8-10 showing a red light. The medical team visually monitored the MEWS score, and ensured more purposeful rounding on high-risk patients. If the condition is irreversible, the medical team is able to communicate with family as soon as possible and begin shared decision making. Moreover, by establishing rapid response teams.

RESULTS: This study collected data on the general ward of the whole hospital. Since 2021 the monthly average number of people who experienced unexpected cardiac arrest in the hospital decreased from a monthly average of 2.2 times. Then monthly average 1.5 times in 2022, return of spontaneous circulation 7 (63.6%) through cardiopulmonary resuscitation, survived and discharged from the hospital 5 (71.4%). Modified Early Warning Scores (MEWS) system response rate is 100%, immediate medical treatment for critically ill patients.

CONCLUSION: This study showed introducing innovative early warning information system reduce incidence, rate, and mortality of IHCA patients.

A091

Discussion on work pressure response of home-based long-term caregivers in Taichung City

Lin Yi-Qi, Student, School of Senior Citizen Welfare and Long-term Care Business Master Program, Hungkuang University, Taiwan

INTRODUCTION: In recent years, Taiwan has gradually entered a super-aged society. The government has provided more long-term care benefits for these elderly population. Also, due to the spread of the epidemic, more and more people are applying for home use, avoiding contact with many people. And these caregivers are in contact with many families, and there are many emotional pressures and management needs to be concerned about.

OBJECTIVE: (i) To analyze the stress caused by caregivers in different environments (ii) To analyze different coping strategies to face work stress (iii) To explore the relationship between caregivers' work stress and stress response.

METHODS: This study took the home-based attendants of Taichung City's home-based long-term care institutions as the research objects, adopted the intentional sampling method and conducted a questionnaire survey by using the researcher's self-designed questionnaire, in order to understand the Taichung City home-based attendants' response to work stress and the effect of different demographic variables. The degree of difference between the samples caused by each other, and further explore the degree of correlation between work pressure and pressure strain ; data analysis methods include descriptive statistics, correlation analysis and mean difference test.

RESULTS: The researcher interviewed 73 Taichung caregivers, and 7 of them were invalid questionnaires. The results of the study showed that the proportion of female caregivers in Taichung City was more than that of boys, with 59 females filling in, while only 7 males filling in; Waiters are unmarried and married, accounting for 81.8%, and most of them live with their families, accounting for 84.8%; while home-based waiters in Taichung are significantly related to work stress and stress response.

CONCLUSION: The pressure received by caregivers in the company and in the workplace will affect the way caregivers respond to pressure. Some people like to digest the way they respond to pressure, and some people like to ask others. These may be related to personality. of researchers can study whether there is a correlation between stress and personality traits.

A092

Discussion on Work Stress and Participation in Stress Relief Activities of Long-Term Care Service Workers under the COVID-19

Yi-Qi Lin

Department of Senior Citizen Welfare, Hungkuang University

Lin Yi-Qi, Student, School of Senior Citizen Welfare and Long-term Care Business Master Program, Hungkuang University, Taiwan

INTRODUCTION: In recent years, long-term care services have become more and more popular. By 2022, there will be long-term care facilities all over Taiwan. Because of this, the number of staff required by various companies has increased, so there are different pressures on staff in the long-term care industry; also because With the current global COVID-19 pandemic, all walks of life in long-term care services have different patterns of work stress and stress relief activities.

OBJECTIVE: (i) Analyze the work stress of long-term care workers in different environments. (ii) Analysis of different reasons for long-term care workers to participate in stress relief activities. (iii) To explore the relationship between work stress and participation in stress relief activities of long-term care workers affected by the COVID-19.

METHODS: This study takes the staff of long-term care institutions as the research object, adopted the intentional sampling method and conducted a questionnaire survey with questionnaires designed by the researchers themselves, so as to understand the staff members of long-term care service institutions. Work pressure during the COVID-19 period conditions, and the degree of difference between samples of different population variables, and further explore the degree of association between work stress and participation in stress relief activities; data analysis methods include descriptive statistics, correlation analysis and mean difference test.

RESULTS: The researchers collected a total of 43 questionnaires, and the proportion of women in the long-term care industry was higher than that of men. There were four nurses, one care specialist, three case managers, four supervisors/living service supervisors, and 31 nurses in the questionnaire. Taking care of waiters/caregivers, each position has pressure from various positions, and 65.1% of them usually participate in stress relief activities. There will be no stress relief activities due to the COVID-19; there is no significant correlation between work stress and participation in stress relief activities during the COVID-19, which may be due to the small number of samples.

CONCLUSION: In future research, we will have a deeper understanding of why there is no correlation. By increasing the number of samples, the occupations interviewed will not only be mostly care workers/caregivers, but will have an even distribution of occupations, perhaps because this makes income The data that comes back is diverse.

A096

Evaluation of One-Step and Two-Step Oral Glucose Tolerance Test in Screening Gestational Diabetes Mellitus

Xihn Xuh Chen, Sun Hui-Ping

Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

INTRODUCTION:Gestational Diabetes Mellitus (GDM) may increase the risks of preeclampsia, gestational hypertension, premature birth and fetal death in pregnant women. Due to very few symptoms observed, GDM screening test is recommended at 24 to 28 weeks' gestation for general pregnant women. Oral Glucose Tolerance Test (OGTT) is an important index in diagnosing GDM. One-step OGTT: After fasting for 8 hours, administer 75g glucose orally. Two-step OGTT: Without fasting, 50g glucose is administered orally. If the blood sugar in one hour is greater or equal to 130mg/dL but less than 140mg/dL, the second step is followed, where 100g glucose is administered orally after 8-hour fasting. Both the American Diabetes Association and World Health Organization recommend One-step screening test, while the American College of Obstetricians and gynecologists support the Two-step screening test. Currently there is no consensus reached.

OBJECTIVE:To explore the efficacy of One-step and Two-step OGTT screening in diagnosing gestational diabetes mellitus.

METHODS:Based on the steps of evidenced-based practices, the clinical answerable questions using PICO were formed by using both Chinese and English keywords and synonyms searched in the MeSH database. The search techniques utilized were Boolean logic, which allowed for combining free-text term and controlled vocabulary term and connecting with OR; and further, PICO elements were searched and connected with AND, until July, 2022. The published studies that were available in PubMed, Cochrane library, Clinical Key and Airtiti Library were investigated. Two studies were eligible for inclusion. The Critical Appraisal Skills Programme (CASP) was used for literature review. These two were with levels of evidence of 2 by the evaluation of Oxford Centre for Evidence-Based Medicine 2011 Levels of Evidence.

RESULTS:Pregnant women in 24-28 weeks' gestation were the criteria of enrollment in these two studies, and were randomly divided for One-step and Two-step screening tests. The first study Hillier (2021) revealed One-step validity of 16.5% and Two-step of 8.5% in screening GDM. One-step screening showed significance in diagnosing GDM comparing to Two-step test RR1.94 (95%CI 1.79-2.11). The second study Khalifeh (2018) revealed One-step validity of 8.1% and Two-step of 5.6%, which showed no significance on both approaches ($p=0.42$). Hence there was no significance on One-step or Two-step screening in relation to the ratio of preeclampsia, gestational hypertension, Caesarian section due to overweight fetus, shoulder dystocia or birth-related injury ($p>0.05$).

CONCLUSION:One-step screening test in diagnosing GDM has higher ratio than Two-step test, but both approaches have the same risks in pregnancy and childbirth. Taiwan Association of Gestational Diabetes Mellitus Care recommend One-step screening test in order to have a loose standard, and suggest aggressive health education in diet control and treatment for reducing complications at late pregnancy. By doing so, however, also increases the emotional burden in pregnant women. Therefore support and care must be provided at a timely manner.

A097

Using the health belief model to explore the behavioral intentions to surgical smoke hazards prevention and its influencing factors among operating room nurses

Shu-Chen Liu, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan; Hua-Yin Hsu, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan; Yu-Hsia Wang, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan

INTRODUCTION: Laser electrosurgery equipment, which is widely used in operating rooms, may pose potential threat and increased risk of respiratory and pulmonary diseases or cancer to nurses by the byproducts of harmful substances. Therefore, preventing injuries from surgical smoke by improving personnel protection is an important issue for medical practitioners.

OBJECTIVES: This study was based on the Health Belief Model (HBM) as the framework, to explore the nurses' behavioral intention and relevant influential factors to prevent surgical smoke, which would hopefully be provided as a reference for setting measures against the harm of smoke in operating room.

METHODS: A total of 150 registered professional nurses in operating rooms of a medical hospital were surveyed by cross-sectional questionnaire in February 2021. The content of the questionnaire was designed according to the HBM and used after being tested as reliable and valid. The data were statistically analyzed by independent sample t-test, one-way analysis of variance, Pearson's product-moment correlation analysis and multiple regression.

RESULTS: Results show that subjects had 83.7 percent experience in using surgical smoke prevention equipments. Perceived susceptibility ($F=3.535$, $p=0.016$), Perceived seriousness ($F=4.975$, $p=0.003$) and "the behavioral intention" of surgical smoke prevention ($F=5.111$, $p=0.002$) have significant differences in the age level, subjects with of 31-40 years old have a higher cognitive level. The male has higher perceived barriers than the female ($t=2.903$, $p=0.004$). The cues to action varies significantly depending on the job position ($F=5.868$, $p=0.004$), with operation professional nurse have significantly higher scores than Registered Nurse and Licensed Practical Nurse. There are significant differences in self-efficacy in gender ($t=-3.092$, $p=0.002$), job position ($F=7.900$, $p=0.000$), length of service in operating room ($F=4.992$, $p=0.001$), and experience of using surgical smoke prevention equipment ($t=2.542$, $p=0.017$). Perceived susceptibility ($\gamma=0.269$), Perceived seriousness ($\gamma=0.255$), self-efficacy ($\gamma=0.433$) and cues to action ($\gamma=0.583$) have significant positive correlations with surgical smoke prevention behavioral intention ($p<0.01$), and perceived barriers ($\gamma=0.266$) and surgical smoke prevention behavior intention has a significantly negative correlation ($p<0.01$). Self-efficacy ($\beta=0.189$, $p<0.05$) and cues to action ($\beta=0.421$, $p<0.001$) are significant influencing factors to predict the intention of surgical smoke prevention behavior, of which cues to action has the greatest influence.

CONCLUSION: This study found that with more cues to action presented and more self-efficacy the personnel was, they were more inclined with the intent to prevent surgical smoke. Therefore, it is suggested that the hospital should hold regular education and training for nurses to improve their awareness and recognition of the danger of surgical smoke for prevention. And by increasing the number of smoke ventilation system and improving the efficiency of surgical smoke protection, these measures would help to reduce the risk of exposure for nurses in operating room.

A098

The Effectiveness of E-Learning System on Performance and Satisfaction of New Nurses

Hua-Yin Hsu, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan; Ya-Yu Chu, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan; Yu-Hsia Wang, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan

INTRODUCTION: Once the nursing students enter the real practice setting, they need accept onboarding courses regarding basic care, communication, critical care, ethics and legal practice, administrative skills, and professional growth to perform clinical tasks. However, traditional paper-based methods of training courses have many problems. New nurses and preceptors are required to complete a lot of paper-based format of training courses according to various goal and stage, leading to inaccessibility, incomplete records, and limited flexibility.

OBJECTIVES: New nurses had access to entire training course, and preceptors and new nurses could complete evaluation forms through the e-learning program. Furthermore, the provision and usage of e-learning system not only built an interactive learning environment for preceptors and new nurses but also effectively increased knowledge, skills and satisfaction via pretest-posttest design.

METHODS: At initial teamwork meeting, the preceptor, educational supervisor and information system staff established e-learning system model, and designed pretest-posttest evaluation forms related to professional knowledge, skills and satisfaction. After reaching consensus among clinical preceptors, operating on-the-job training system, system testing and software improvement based on feedback from hospital staff, e-learning system was launched officially.

RESULTS: Using the e-learning system, the courses had a completion rate of 100%. The new nurses could achieve an average rating of 5.64 from 4.42 out of 6 under DOPS(Directly Observed Procedural Skills) assessment scale, with an increase of 27.6%; the satisfaction rate score was 4.78.

CONCLUSION: With integrating e-learning into training program, preceptors and new nurses could have a profound understanding of goals based on different stages of learning. The prompt function is useful for avoiding missing data and errors. E-learning provide a method of well keeping learning records as well as increasing new nurses' satisfaction compared with traditional paper-based method.

A099

Feasibility of Instant Messaging application for distance employment support groups for people with mental disorders in the community: A pilot study

Yang Yu, MS, Department of Occupational Therapy, Beitou Branch, Tri-Service General Hospital, Taipei, Taiwan. Lin Chia-Hui, BS, Department of Occupational Therapy, Beitou Branch, Tri-Service General Hospital, Taipei, Taiwan. Tseng Yu-Ting, MD, Department of Psychiatry, Beitou Branch, Tri-Service General Hospital, Taipei, Taiwan.

INTRODUCTION:People with mental disorders usually have shorter employment periods, but with appropriate job support, patients' job tenures could be prolonged. With the popularity of smartphones, instant messaging (IM) applications (Apps) can be used as an intervention tool to help people with disabilities overcome barriers regarding employment.

OBJECTIVES:This study will assess its feasibility, and refine a formal research plan based on the results. The objectives of this study include investigating the current status of smartphone and IM APP use among people with mental disorders in the community, exploring the correlation between participant functions and mobile phone usage, and developing the themes of employment support groups in inter-professional teams and client-centered practices.

METHODS:In this study, intentional sampling was used to recruit subjects from a mental hospital in Taipei City. We produced a total of 25 question questionnaires for this study and referenced the Digital Gap Questionnaire and the Nielsen's 2021 LINE Usage Behavior Survey. To understand participants' cognitive function, we used cognitive function tests, including Color Trajectory Test (CTT), Wisconsin Card Sorting Test (WCST) and Allen Cognitive Level Screening Assessment (ACL). Based on literature review on issues related to employment support, the topics and contents were formulated according to the discussions of relevant personnel at the conference.

RESULTS:

Among the 39 participants, 66.7% had experience in using mobile phones. For participants use LINE as their main IM. Only 3 of them (11.5%) had used LINE's telehealth services. Most participants (91.6%) felt that LINE's group function could provide a feeling of being together and supporting each other.

The results of various cognitive tests are positively correlated with experience with IM and ACL scores, and the results of various WCST tests are significantly negatively correlated. In CTT, there was a significant negative correlation only on cues of time fraction and CTT-2.

We designed the group topics related to employment support, and gradually developed the topics through discussions with relevant professionals (psychologists, occupational therapists, case managers, research participants, etc.) at expert meetings.

Based on the research results, we inferred that the intervention model used in this study has advantages for people with mental disorders. On the other hand, when using interventions, we need to consider possible obstacles, adequately help patients learn IM prior to participation, and incorporate cognitive training into rehabilitation activities. The number of participants should be appropriately controlled, and groups can be formed according to the specific needs of patients. To compensate for the lack of digital capabilities, we recommend helping patients understand the government's process for obtaining digital subsidies.

CONCLUSION:The mHealth approach of using mobile devices to support healthcare has been widely used abroad. This practice offers the opportunity to expand health interventions beyond traditional care settings, but participants must be fully assisted and trained in advance for the effectiveness of remote support groups.

The study of the correlation between medication safety and health literacy of the elderly in the region of central Taiwan

Yi-Ching Liao, is a student in the Master program of Senior Citizen Welfare and Long-term Care Business, HungKuang University; Hou-Sheng Chan, is a Professor in Master program of Senior Citizen Welfare and Long-term Care Business, HungKuang University.

INTRODUCTION: The issue of pharmaceutical safety frequently affects the elderly since they are more likely to have many chronic conditions. The elderly's capacity to take their medication as prescribed is crucial. Therefore, enhancing the elderly's medication safety and forming the proper medication habits are the foundations of their health as well as one of literacy's essential competencies.

OBJECTIVE: In order to identify any possible issues with older people's medicine usage, this research aims to examine the "Five Core Competencies" and elderly medication compliance.

METHODS: The elderly people over 65 in the region of central Taiwan are the research subject for this quantitative approach, which uses the "questionnaire survey" methodology. Descriptive statistics, correlation analysis, and regression analysis are utilized for data analysis.

RESULTS: In this investigation, there were 45 participants, including 31 women (68.9%) and 14 men (31.1%). The highest proportion is 65-69 years old with 28.9%, followed by 70-74 years old with 24.4%, and the third is 85-89 years old with 20%; the highest education level is 62.2% for elementary school (inclusive) and below. The Pearson Correlation analysis showed a moderate positive correlation between the educational level and the five medication safety core competencies of drug use.

CONCLUSION: According to the analysis's observations, the majority of seniors have the best capacity for articulating their physical conditions in terms of the five core competencies of appropriate medication. This indicates that the elderly are able to fully communicate their physical conditions to doctors during patient-doctor interactions, enabling them to issue more precise prescriptions and prescribe the appropriate medication. Most elderly choose to stop taking their medications once their symptoms have eased, which is an improper medication behavior and increases the risk of an unrecovered condition. The capacity to take the appropriate medication increases with education level. Therefore, one of the key components of raising safe medication knowledge is enhancing the elderly's proper medication behavior and safe medication concepts.

GS3

8AHLA102

Apply the Scenario Simulation Video to Promote Learning of Leopold's Maneuvers and Fetal Heart Rate Monitoring

Wu, Bao-Kuan, Liu, Li-Chun

Department of Nursing, Chung-Jen Junior College of Nursing, Health Sciences and Management

INTRODUCTION: "Nursing Care of Women and Childbearing Families", "Nursing Care of Women and Childbearing Families Laboratory", and "Practicum in Nursing Care of Women and Childbearing Families" have always been compulsory subjects in the nursing department of Chung-Jen Junior College of Nursing, Health Sciences and Management. In the course of "Nursing Care of Women and Childbearing Families Laboratory ", students need to learn and perform various skills of nursing care of women and childbearing families in the experimental classroom such as Leopold's maneuvers, fetal heart rate monitoring, breast care, etc. However, students can only use simulation model to practice. They do not have chances to actual contact with real cases and real clinical situations, so students do not have confidence in themselves. When they practiced at the clinical setting, they felt that it was difficult to apply what they learned in school to the clinic settings.

OBJECTIVE: The aim of this study was to evaluating the effectiveness of the scenario simulation with video transmission on the learning of Leopold's maneuvers and fetal heart rate monitoring.

METHODS: A cross-sectional questionnaire survey method was conducted in 2022. The fourth-year of junior college nursing students who have completed the Nursing Care of Women and Childbearing Families course were invited to participate in the Microsoft Teams seminar of "Implementation of the Simulation Scenario with Video Transmission to Promote Health Literacy of Leopold's Maneuvers and Fetal Heart Rate Monitoring" and fill in the pre-test, post-test and satisfaction questionnaire.

RESULTS: There are 52 participants in this study (47 females and 5 males). Pair-Sample t Test was used to test the difference between the two test scores of the participants before and after applying the scenario simulation video. The results showed that the average score of the pre-test was 60.73, the average score of the post-test was 83.71, and the average improvement was 22.98 points. The post-test score was significantly higher than the pre-test score ($p < .005$). In the Satisfaction Survey of "Implementation of the Simulation Scenario with Video Transmission to Promote Health Literacy of Leopold's Maneuvers and Fetal Heart Rate Monitoring", 86.5% of the participants indicated that they were strongly agree with the scenario simulation video assisting learners to learn.

CONCLUSION: The scenario simulation video is designed to provide learners with safe, convenient and non-threatening repeated learning tool. The results of the study showed that the scenario simulation video of Leopold's maneuvers and fetal heart rate monitoring effectively helped participants to learn the technical operation steps and procedures, understand the actual clinical situation, and enhance their self-confidence in nursing professional field. Therefore, this study can provide reference for nursing educators to improve nursing teaching.

KEYWORDS: Scenario Simulation, Health Literacy, Leopold's Maneuvers, Fetal Heart Rate Monitoring

Discussion on the relationship between health literacy and healthy behavior of caregivers*Chiao Yin Chang, Hou-Sheng Chan**Department of Senior Citizen Welfare and Long-term Care Business (Master Program).
University of the Hung Kuang*

INTRODUCTION: Since the end of 2019, many unexplained viral pneumonias have been discovered one after another, and the epidemic has rapidly spread around the world. The World Health Organization officially named the virus COVID-19 on February 12, 2020. With the continuous mutation of virus strains, so far, the only way to avoid infection is through vaccination and self-improvement. With the development of the epidemic, more and more people are beginning to pay attention to their own health. Since the outbreak of the epidemic in Taiwan in 2020, all walks of life have been hit a lot in this wave of epidemics, including the long-term care industry. The front-line caregivers in the long-term care industry have also contracted the virus one after another during this wave of epidemics. Due to the lack of caring manpower, all walks of life have begun to pay attention to infection control and health issues for front-line caregivers. The purpose of this study is to investigate the health literacy of caregivers and what kind of health behaviors are used to maintain or improve them.

OBJECTIVE: (1)To explore the relationship between health literacy and health behaviors of caregivers.(2)To analyzing the factors that prevent caregivers from engaging in healthy behaviors.

METHODS: This study adopts random sampling method and questionnaire survey to explore the relationship between health literacy and health behaviors of caregivers, and uses descriptive statistics and Pearson's product-difference correlation analysis.

RESULTS: There were a total of 78 respondents, 72 valid questionnaires, and a return rate of 92.3%. Among the 72 respondents, male accounts for 12.5% and female accounts for 87.5%. The minimum age of the respondents is 23. The maximum age is 67 years old, the average age is 49 years old, the average weight is 65.9 kg, and the average monthly disposable income is 21,000 NT dollar. Among the respondents, 27 had chronic diseases. In addition, 87.5% of the respondents agreed on whether the new coronary pneumonia affected individuals' literacy of personal health. The respondents' average health literacy was 4.13, and the average health behavior was 3.63. In addition, after the correlation analysis of PPMCC, it was found that there was a significant positive correlation between health literacy and health behavior, which means that the stronger the health literacy of caregivers, the more significant their health behavior.

CONCLUSION: This study found that there was a significant positive correlation between health literacy and health behavior. After statistical analysis, it was concluded that there was a significant positive correlation between the health literacy and health behavior of caregivers. Caregivers with higher health literacy would pay more attention to their own health and would Improve your health by eating healthy foodt, exercise etc.

A107

Analysis work fatigue and state of health of Long-term professional service personnel

Chiao Yin Chang, Hou-Sheng Chan

*Department of Senior Citizen Welfare and Long-term Care Business (Master Program).
University of the Hung Kuang*

INTRODUCTION: In Taiwan, due to factors such as an aging society, low birth rate, and changes in family structure, the living care of the elderly is no longer the same as in the past, where family members support each other and help each other. Instead, it has become a family burden. From long-term care 10-year plan" to the current "long-term care 10-year plan 2.0", in the development of long-term care, most of the study is to explore the work fatigue and stress of front-line staff (care attendants), less focusing on the occupational work fatigue status of long-term professional service personnel in long-term care institutions, this study aims to understand the work fatigue status and state of health factors of long-term professional service personnel.

OBJECTIVE: To analysis of work fatigue and health status of long-term care professional service personnel.

METHODS: This study was conducted by random sampling and questionnaire survey, and the respondents were home supervisors, case managers, social workers, and nurses,etc. To understand the work fatigue level and main factors of long-term professional service personnel, and to analyze the correlation between the descriptive statistics and Pearson Correlation difference.

RESULTS: There is a total of 36 questionnaires, 35 valid questionnaires, and the return rate of valid questionnaires is 97.2%. Among the respondents, there are 30 women and 5 men, with women accounting for the largest proportion of 85.7%. The average working experience of the respondents is 3.54 years, and the average age is 36 years old.

Respondents consciously cause fatigue as the main reason for the heavy workload, accounting for 28.6%, followed by the work style is too tight, accounting for 20.0%, and the third is interpersonal relationships in the workplace, accounting for 17.1%.

The average personal physical and mental state of the respondents was 3.61, work fatigue was 3.35, work engagement was 3.52, fatigue caused by work objects was about 3.01, and the total was 13.49. In addition, through the PPMCC, it is found that personal physical and mental state is significantly related to work fatigue, work engagement state and work service objects, and personal physical and mental state is the main influence on work An important indicator of fatigue. In addition, there is a significant positive correlation between those who have no children and work engagement, and a significant negative correlation between those who have children and work engagement.

CONCLUSION: This study found that most of the respondents are in a state of work fatigue, which will affect the index of personal work fatigue, work engagement and work objects because of personal physical and mental state. It is recommended that long-term care institutions should pay attention to and detect in a timely manner the personal physical and mental state of the management staff.

A109

Using innovative thinking to improve puncture site care after cardiac catheterization

Su-Hui Tsai

Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

Su-Hui Tsai, RN, Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan

INTRODUCTION: Heart disease ranks second among the top ten causes of death, and the most common of which is heart coronary disease. (Ministry of Health and Welfare. 2021).Clinically, cardiac catheterization can be divided into 1. cardiac catheterization through the radial artery of the wrist. Its advantages are: superficial blood vessels, easy pressure positioning, wound bleeding and bruising, and low complications. However, if the blood vessel is too thin or curved, it is difficult to place the catheter. Then it needs to be changed to 2. Putting the catheter through the femoral artery for cardiac catheterization. The common comorbidities of this inspection are: puncture site bleeding, hematoma, and bruising. To avoid the risk, the patient must lie down flat and keep a flat (lying) rest, and be pressurized with a sand bag, Because of the restricted movement, the patient can not bear the back pain caused by lying down for a long time, and then there is irritability or getting out of bed on their own. Therefore, symptoms such as hematoma and bruising at the puncture site or shock will endanger the safety of the patient.

OBJECTIVE: To improve the occurrence of hematoma and bruising at the puncture site after cardiac catheterization.

METHODS: By on-the-job training education courses to strengthen nursing and hygiene education while innovating the use of Lumbar Support Belt.

RESULTS: The nursing awareness rate was from 83.6% before the course up to 88% now after the course. And completing the training of innovation 1.2.3 Button girdle, the incidence of hematoma and bruising cases decreased from 2 to 0.

CONCLUSION: After education and training courses, nursing staffs' awareness of postoperative care guide for cardiac catheterization can be strengthened, and with the assistance of the health education leaflet and introducing innovative thinking into clinical care can really effectively reduce the occurrence of hematoma and bruising in patients after cardiac catheterization.

A111

The association between health promoting school awards level and health literacy of elementary schools' students in Taiwan

Fu-Li Chen, PhD, is a Distinguished Professor, Department of the Public Health, Fu Jen Catholic University, Taiwan

INTRODUCTION: Health Promoting School (HPS) is an important health policy in Taiwan. While building a health promoting school program, we expect that students' health lifestyle is to be promoted. Health literacy refers to individuals' knowledge and competencies to take responsibility for their own health. Low health literacy has a negative impact on individual health. Health Promoting School (HPS) is a key intervention strategy to strengthen health resources for promoting school students' health literacy.

OBJECTIVES: From 2012 to the present, Taiwan Health Promotion Administration (HPA) has established HPS accreditation scheme to conduct the process performance from six key areas of HPS standards. The aim of the study is to examine the association between HPS awards level and elementary school students' health literacy.

METHODS: The participants were 46 elementary schools participating in a HPS Accreditation Program, supported by HPA in 2019. A total of 2325 elementary school students, 552 teachers and 46 principals completed self-reported questionnaires, and all responses were anonymous. The measuring variables included socio-demographic variables (gender, education level of parents, socio-economic level of school area), students' health literacy as the dependent variable, and the HPS awards level as the independent variable. We also measured the HPS process performance which included teachers' HPS-related training hours, teacher ownership in HPS, school supported environment, collaboration with parents, community collaboration. Students' health literacy was divided into low score of health literacy (below median) and high score of health literacy (above median). Logistic regression was conducted by socio-demographic variables and HPS awards level. ANOVA and Chi-square analysis were used to test for differences among different awards level.

RESULTS: After controlling for socio-demographic variables, those schools achieving gold award (OR=2.66; 95% CI=1.71-4.12) and silver award levels (OR=1.65; 95% CI=1.31-2.08) had better student' health literacy than bronze award schools. Furthermore, comparing HPS process performance among different awards level, the results found that teachers' HPS-related training hours and teacher ownership in HPS were significantly higher in gold award schools than in silver award schools, and silver award-rated schools were higher than bronze award schools. Collaboration with parents and school supported environment were significantly better in gold award and silver award schools than bronze award schools.

CONCLUSION: The study reveals that there is a significant correlation between HPS award level and students' health literacy. According to the results, it is proposed to encourage schools using HPS key strategies for promoting students' health literacy.

A113

Upregulation of Nrf2/HO-1 Pathway by Gamma Linolenic Acid Alleviates LPS-Induced Muscle atrophy in vitro and in vivo

Pei-Yin Chen^{1, 2}, kai-Li liu³

¹ Department of Nutrition, Chung-Shan Medical University; ² Department of Nutrition, Chung Shan Medical University Hospital; ³ Department of Senior Citizen Welfare and Long-term Care Business, HungKuang University

INTRODUCTION: Sepsis is caused by a series of inflammatory and oxidative-stress reactions have been linked to accelerated rates of proteolysis and muscle fiber atrophy during periods of prolonged skeletal muscle inactivity. Under oxidative-stress conditions, the nuclear factor erythroid 2–related factor 2 (Nrf2) binds to AREs, initiating the transcription of a family of cytoprotective genes that include heme oxygenase-1 (HO-1). HO-1 exhibits a variety of activities, such as anti-inflammatory and anti-oxidative functions. Gamma-linolenic acid (GLA, C18:3, n-6) is present in plant seed oils of evening primrose, borage, black currant, hemp that has potent antioxidant properties and anti-inflammatory activities to prevent inflammation-related diseases.

OBJECTIVE: The objective of this study was to investigate the effects of GLA on oxidative stress in endotoxin lipopolysaccharide (LPS)-induced skeletal muscle atrophy.

METHODS: Mouse sepsis models were induced by injection of LPS-injection-inperitoneum. GLA-rich borage oil was given before sepsis onset. Cultured C2C12 myotubes were incubated with various agents. The muscle atrophy marker and Nrf2/HO-1 activation pathway were detected by Western blot. The pro-inflammatory cytokines (such as tumor necrosis factor- α ; TNF- α and interleukin-6; IL-6) and glutathione (GSH) were detected by real-time quantitative reverse transcription polymerase chain reaction and high performance liquid chromatography, respectively.

RESULTS: GLA improves LPS-impaired pro-inflammatory cytokines (TNF- α and IL-6) secretion and expression; reduces LPS-induced GSH consumption; and alleviates LPS-induced skeletal muscle atrophy through activating Nrf2/HO-1 antioxidant signaling pathway.

CONCLUSION: Our data suggest the potential for GLA to be developed as a health supplement for the alleviation of endotoxemia-induced muscle atrophy.

A116

Effectiveness of Interventional Horticultural Therapy for High-Stress Hospital Workers: a Pilot Study

Ju Hsia, Huang, Yang Ling, Hsiao

Kaohsiung Municipal Gangshan Hospital

INTRODUCTION: This research explored whether the introduction of horticultural therapy can help hospital staff develop a hobby of greening, thereby cultivating temperament and promoting physical and mental health.

METHODS: The subjects of this study are employees of a hospital in Kaohsiung City. The research was conducted by two stages. First, the "Daily Routine Life Scale" and the "HRV Body and Mind Energy Analyzer" were used to assess the daily routine life and stress index of the hospital staff. Then high-stress employees were recruited to participate in another 5-week horticultural therapy courses and to evaluate the effectiveness. This study compared the difference between pre- and post-test by the tool of the "Horticultural Therapy Welfare Scale". The higher the value, the better the condition. Statistical methods included percentage, mean, standard deviation and paired t-test.

RESULTS: At the first stage, 47 employees were tested. The results showed that 66% of the employees have been under abnormal work and rest conditions for a long time, among which administrative staff accounted for the highest proportion (80%). The "HRV Mind-Body Energy Analyzer" evaluated the stress index (PSI) of the subjects, and the results showed that 34% of the employees were in a state of high pressure.

A total of 15 employees participated in the second stage of interventional horticultural therapy. According to the results of the pre- and post-test, the difference in the total score was 5.87 (t value=6.11), showing a significant difference ($P<0.001$) and indicating that hospital staff really benefited a lot from the horticultural therapy courses. Further analysis showed that after the interventional horticultural therapy courses, all seven indicators showed significant difference between pre- and post-test. Among them, the largest difference is the value of 1.13 from the two psychological indicators of "I feel relaxed" and "I have a sense of achievement", indicating that the improvement effect was the strongest ($P<0.001$); the second difference was 1.07 ($P<0.001$) in the technical indicator of "I am good at horticultural cultivation techniques".

CONCLUSION: This study applied horticultural therapy to high-stress hospital staff and found that horticultural therapy sessions did promote the welfare to the employees. Since this study was designed as a single-group by pre- and post-test experiment, further rigorous research is required to verify the relevant effects.

A117

Improve the integrity of wearing and taking off protective equipment for ward nurses

Hsiu Chuan Yang, I San Chen, RN, BSN, Head Nurse Department of Nursing, National Taiwan University Hospital Hsin-Chu Branch

INTRODUCTION: Due to the lack of proficiency of protective measures by nurses during the COVID-19 epidemic, it is easy to cause epidemic prevention breaches and affect the nursing work process. It is recommended to use appropriate personal protective equipment(PPE) according to standard protective measures to fight the epidemic.

OBJECTIVE: In January 2022, according to the "Personal Protective Equipment Wearing and Removing Steps Evaluation Form" (10 steps for wearing and 11 steps for removing), the complete rate of wearing and taking off protective equipment by nursing staff in the hematology and oncology ward will be checked, and the wearing and taking off steps will be checked. The step is 73.1%, the removal step is 73.9%. The top three missing when wearing the outer isolation gown were not tying the knot at the side waist when wearing the outer isolation gown (62.5%), wearing a second layer of gloves did not completely cover the cuffs of the isolation gown (56.3%), the surgical mask did not cover the N95 mask (50%), and the top 3 were missing when taking off the protective equipment. Keep a distance and do not roll it up completely (68.8%), touch the ground or protective clothing when removing the inner protective gown (56.3%), and touch the front when removing the surgical mask (56.3%), if it is not fully worn and used, it is easy to contaminate the staff's work clothes and the environment, increasing the risk of infection.

METHODS: After observation, it is found that personal protective equipment does not know how to use it, lack of experience in putting on and taking off PPE, no audit system, and improvement measures after discussion (1) Discuss the COVID-19 epidemic in the morning meeting (2) Use PPT animation videos to teach and guide each member to put on and take off protective equipment; (3) Draw up a schematic diagram of putting on and take off protective equipment to strengthen personnel's learning ability; (4)) Establish an audit form for wearing protective equipment (5) Real-time feedback of problems and appropriate protective measures and response procedures through communication software.

RESULTS: According to statistics, from May 1, 2022 to July 31, 2022, a total of 31 patients were assisted in transporting patients to the special ward for COVID-19, Check the completeness rate of wearing equipment is 91.3%, and the removal step is 97.7%. Loss of wearing the outer isolation gown without tying the knot at the side waist from 62.5% to 3.2%, taking off the outer isolation gown and including the outer gloves without keeping the distance from the body and not fully rolling it up from 68.8% to 6.5%.

CONCLUSION: The use of PPE by nursing staff is missing, which increases the risk of infection, especially in the process of transporting confirmed patients. Provide self-checking with mirrors or mutual check of completeness with peers, adding posters of removal steps in the removal area, repeated practice of donning and doffing steps has improved the integrity of donning and doffing, reducing the risk of infection.

A119

Effect of fecal occult blood immunoassay screening for colorectal cancer

Yang Pei-Yu, DrPH, is a leader, Department of Laboratory, Show-Chwan Memorial Hospital; Huang Wei-Chou, is a leader, Department of Laboratory, Show-Chwan Memorial Hospital; Yang Yu-Ying, MsPH, is a Chief, Department of Laboratory, Show-Chwan Memorial Hospital;

In 2010, the Health Administration of Taiwan began to promote the hospital-based cancer screening quality improvement subsidy program, which includes cervical cancer, breast cancer, colorectal cancer and oral cancer screening. It is expected that people can achieve the goal of "prevention is better than therapy" through screening. This study would like to evaluate the effectiveness of colorectal cancer screening on patients with a fecal occult blood screening in a regional hospital in central Taiwan.

Method:

This was a retrospective study. We collected data from patients diagnosed with colorectal cancer in the hospital from 2010 to 2018. Patients with colorectal cancer were divided into two groups according to whether fecal occult blood screening was used for colorectal cancer or not. Statistical analysis was performed with SPSS version 22 software.

Result:

There were 58891 people participating in the fecal occult blood immunoassay for colorectal cancer screening, of which 6533 were positive and the positive detection rate was 11.10%. Subsequently, the cancer center tracked fecal occult blood positive patients for colonoscopy, and the detection rate of polyps and colorectal cancer accounted for 54.7% and 2.5% of all colonoscopy confirmed diagnosis (3608).

Among the 80 patients with colorectal cancer, 58 patients had detailed medical records and were able to find the cancer stage in medical records. Of 58 patients, 1 (1.7%) in stage zero, 14 (24.1%) in stage I, 24(41.4%) in stage 2, 11 (19.0%) in stage 3, and 8 (13.8%) in stage 4 cancer were found. The early cancer detection rates of the screening and non-screening groups were 67.2% and 51.7%, respectively, with statistically significant differences ($p=0.039$).

Conclusion:

According to the results of this study, the screening of fecal occult blood immunoassay is significant for the early detection of colorectal cancer. The main advantage of fecal occult blood immunoassay is non-invasive and low-cost. It is hoped that the public can find for colorectal polyps or early cancer through early screening to improve survival, reduce the high cost of subsequent cancer treatment, and reduce the burden on the patient and the burden on the country.

A121

Reducing overuse of prophylactic antibiotic in post-operative care through quality control circle approach for patients with surgical conditions

Hsing Chan Chiu, RN, MSN, is a PhD candidate, International Doctoral Program in Nursing, College of Medicine National Cheng Kung University; a Head nurse, Department of Nursing, Tainan Municipal Hospital (managed by Show Chwan Health Care System); Ching Yi Chen, RN, is a Team Leader of Quality Management Center, Department of Administration, Tainan Municipal Hospital (managed by Show Chwan Health Care System); Chi Fang Chen, NP, is a head of nurse practitioners, Department of Surgery, Tainan Municipal Hospital (managed by Show Chwan Health Care System); Pei Fang Li, RN, is a team leader of nurse staff, Department of Nursing, Tainan Municipal Hospital (managed by Show Chwan Health Care System); Han Lin Yen, MD, is a minister of Department of Surgery, Department of Surgery, Tainan Municipal Hospital (managed by Show Chwan Health Care System); Mei Lin Sung, NP, is a nurse practitioners, Department of Surgery, Tainan Municipal Hospital (managed by Show Chwan Health Care System); Pei Fang Li, RN, is a nurse staff, Department of Nursing, Tainan Municipal Hospital (managed by Show Chwan Health Care System); Hua Yin Hsu, RN, is a supervisor, Department of Nursing, Tainan Municipal Hospital (managed by Show Chwan Health Care System); Yu Hsa Wang, RN, is a director, Department of Nursing, Tainan Municipal Hospital (managed by Show Chwan Health Care System)

INTRODUCTION: Surgical site infection (SSI) is most common complication of operation. SSI is related to higher mortality. Prophylactic antibiotics treats can be the effective strategies to prevent bacterial infection associated with SSI, reduce the length of length of hospitalization and the medication cost. Although the prophylactic antibiotics treat help to reduce SSI rate, however, overuse of the prophylactic antibiotics treat would influence antibiotics resistance. Antibiotics resistance may cause to infection of antibiotic-resistance bacteria, leading to severe complication, longer of hospitalization, and increase mortality. In Taiwan, prophylactic antibiotics treat is considered to most important phase during surgical procedure. Discontinuation of prophylactic antibiotics treats within 24 hours is also an indicator on operative quality of Taiwan Clinical Performance Indicator (TCPI). The rate of discontinued prophylactic antibiotics treats within 24 hours was 21.2% between January 2020 and February 2020, which was lower than other district hospital. We considered the discontinued prophylactic antibiotics treats within 24 hours past years, setting goal to achieve 52% discontinuation prophylactic antibiotics treats within 24 hours.

OBJECTIVES: We considered the discontinued prophylactic antibiotics treats within 24 hours past years, setting goal to achieve 52% discontinuation prophylactic antibiotics treats within 24 hours.

METHODS: A problem-solving technique was carried out in a surgical ward from 1 March 2020 to 28 February 2021. 3 major reasons for prophylactic antibiotics overuse were: 1. Contaminated wound, 2. Misjudgment of prophylactic antibiotics, and 3. Lack of confidence in operations. The strategies for these problems were as below: 1. Redefined the tasks of SSI bundles among the members of the operation care, 2. Classified the factors of additionally prophylactic antibiotics, 3. Scheduling the classroom lecture and E-learning for prophylactic antibiotics among the members of the operation care, 4. Encouraging the members of the operation care to attend training of invasive surgery, 5. Enhancing the informed consent about the proposed surgical between surgeons and the patients.

RESULTS: We achieved the goal and increase to 56% discontinuation prophylactic antibiotics treats within 24 hours. The overall achievement rate was 130% with a progress rate of 48%. 80% of the operation members can be complete their tasks of SSI bundle. The knowledge of prophylactic antibiotics was improved to 47% after education significantly. Attending rate of

training of invasive surgery was nearly 85%. And no complaints of consent for proposed surgical among patients with surgical conditions.

CONCLUSION: Discontinuation prophylactic antibiotics within 24 hours bring many advantages to patients and medical service. In addition to decrease the length of hospitalization and the medication cost, we also save 11% of unnecessary antibiotics waste in postoperative care among patients with surgical conditions.

Risks of Musculoskeletal Disorders among Nurses in Intensive Care Units

Mei-Ching Chen, SICU Unit Nurse, Ming-Miao Hsu, health manager, Chien-Chi Chou, SICU Unit Nurse, Li-Hsueh Chen, Nursing department supervision, Yu-Hsia Wang, Director of Nursing

INTRODUCTION :Occupational musculoskeletal disorders are injuries mainly caused by repeated movements, inappropriate exertion of forces, or overloading. A total of 2204 cases of occupational diseases were reported in 2019. Among these cases, occupational musculoskeletal disorders accounted for the highest proportion, with 725 cases reported (32.9%).

OBJECTIVE: Surveys conducted in 2017, 2018, and 2019 with the Nordic musculoskeletal questionnaire revealed a musculoskeletal disorder rate of 44.4%, 42.1%, and 54.8%, respectively, among nurses. Previous studies have indicated that when helping patients change their body positions, nurses use their body strength to lift, lower, hold, push, and pull the patients. According to the mean scores of a self-reported soreness assessment administered to the case intensive care unit, the five body parts experiencing the greatest soreness were the lower back, left shoulder, neck, right shoulder, and upper back.

METHODS: In 2019, 54.8% of the 31 nurses in the intensive care unit experienced hazards associated with musculoskeletal disorders. The key indicator method for manual handling operations exhibited a risk score of 58 for patient turning. The ratio of nurses maintaining inappropriate postures during patient care was 70.1%. Strategic use of aiming aids was introduced to reduce inappropriate postures during patient care, and the nurses also participated in training to enhance muscular strength. The goal was to increase the execution rate and improve the working environment.

RESULTS: In a follow-up investigation of the intervention measures during 2020 and 2021, the posttest results indicated that 6 nurses were potentially exposed to relevant hazards, yielding a hazard ratio of 23.5%–21.9%. The evaluation items include the following: (1) Time evaluation: Grade 2 was given according to the frequency and time spent on lifting movement during patient turning. (2) Load evaluation: Grade 7 was given according to the actual load experienced by female nurses (between 15 and <25 kg). (3) Posture evaluation: Grade 2 was given according to nurses' postures during patient turning and the areas of body experiencing a load force. (4) The working situation was rated Grade 1; the risk score for patient turning was 20 for the intensive care unit indicating a moderate loading level. Physiological overloads may occur in nurses with weak recovery abilities. Nevertheless, the proposed intervention was effective in reducing the risk associated with exposure to human-factor and ergonomic musculoskeletal disorder hazards.

CONCLUSION: Stretching of core muscles through exercise can mitigate musculoskeletal disorders. In this study, an intervention was designed to achieve the adequate interactions between humans, tools, machines, equipment, and environments, thereby their optimal coordination. Therefore, use of innovative clinical assistive tools and purchase of sufficient equipment to facilitate clinical care for patients with physical immobility can increase the efficiency of clinical workers and reduce their musculoskeletal soreness.

Reduce the Length of Inpatient Stay for Early recovery of intestinal motility patients after bowel surgery by Using Task- Oriented QC Story

Pei Fang Li², Hsing-Chan Chiu^{1 2}, Ching Yi Chen², Chi Fang Chen², Han Lin Yen², Mei Lin Sung², Pei Fang Li², Hua Yin Hsu², Yu Hsa Wang²

¹ College of Medicine National Cheng Kung University; ² Tainan Municipal Hospital (managed by Show Chwan Health Care System);

INTRODUCTION : Occupational musculoskeletal disorders are injuries mainly caused by repeated movements, inappropriate exertion of forces, or overloading. A total of 2204 cases of occupational diseases were reported in 2019. Among these cases, occupational musculoskeletal disorders accounted for the highest proportion, with 725 cases reported (32.9%).

OBJECTIVE: Surveys conducted in 2017, 2018, and 2019 with the Nordic musculoskeletal questionnaire revealed a musculoskeletal disorder rate of 44.4%, 42.1%, and 54.8%, respectively, among nurses. Previous studies have indicated that when helping patients change their body positions, nurses use their body strength to lift, lower, hold, push, and pull the patients. According to the mean scores of a self-reported soreness assessment administered to the case intensive care unit, the five body parts experiencing the greatest soreness were the lower back, left shoulder, neck, right shoulder, and upper back.

METHODS: In 2019, 54.8% of the 31 nurses in the intensive care unit experienced hazards associated with musculoskeletal disorders. The key indicator method for manual handling operations exhibited a risk score of 58 for patient turning. The ratio of nurses maintaining inappropriate postures during patient care was 70.1%. Strategic use of aiming aids was introduced to reduce inappropriate postures during patient care, and the nurses also participated in training to enhance muscular strength. The goal was to increase the execution rate and improve the working environment.

RESULTS: In a follow-up investigation of the intervention measures during 2020 and 2021, the posttest results indicated that 6 nurses were potentially exposed to relevant hazards, yielding a hazard ratio of 23.5%–21.9%. The evaluation items include the following: (1) Time evaluation: Grade 2 was given according to the frequency and time spent on lifting movement during patient turning. (2) Load evaluation: Grade 7 was given according to the actual load experienced by female nurses (between 15 and <25 kg). (3) Posture evaluation: Grade 2 was given according to nurses' postures during patient turning and the areas of body experiencing a load force. (4) The working situation was rated Grade 1; the risk score for patient turning was 20 for the intensive care unit indicating a moderate loading level. Physiological overloads may occur in nurses with weak recovery abilities. Nevertheless, the proposed intervention was effective in reducing the risk associated with exposure to

human-factor and ergonomic musculoskeletal disorder hazards.

CONCLUSION: Stretching of core muscles through exercise can mitigate musculoskeletal disorders. In this study, an intervention was designed to achieve the adequate interactions between humans, tools, machines, equipment, and environments, thereby their optimal coordination. Therefore, use of innovative clinical assistive tools and purchase of sufficient equipment to facilitate clinical care for patients with physical immobility can increase the efficiency of clinical workers and reduce their musculoskeletal soreness.

A125

Using innovative thinking to improve the incidence of bruising at the puncture site of transradial cardiac catheterization

Hsu, Chien-Yunh, Kuo, Ya-Ling, Chen, Li-Hsueh, Wang, Yu-Hsia

Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

BACKGROUND:When the literature indicates that transcatheter arterial catheterization is performed, Place arterial catheter to monitor hemodynamic changes and collect blood samples, Radial artery is often chosen as catheter access. Because of its anatomical location it is easy to perform pressure hemostasis with observation, Improper pressurization, Mild to cause bruising and hematoma at the puncture site, In severe cases, arterial vasospasm may occur, thrombus, and occlusion. Comorbidities such as arteriovenous fistula or pseudoaneurysm, increase patient pain and discomfort, Even caused medical controversy due to vascular necrosis.

OBJECTIVE:Incidence of bruising at the puncture site after cardiac catheterization in 2021 ,number of people 10 of 8.5%,The target value of referring to foreign literature is 6%,Reduced abnormal cardiac catheterization rate to 4%,and shorten the length of hospital stay,Reduce healthcare costs.

METHOD: The main reason for the occurrence of bruises is Physician puncture technique is not uniform, Poor hemostatic equipment, Nursing staff health education is not really caused. Suggested improvement measures are:1. To formulate health education standards for radial artery cardiac catheterization.2. Innovative hemostatic device.3. Formulate technical standards for radial artery catheterization and puncture and health education video. 4. Added screening for high risk groups for bleeding, Develop a screening form for high-risk groups of bruises.

RESULT: The incidence of bruising after cardiac catheterization decreased from 8% to 0% after implementing the method, Hospitalization days decreased by 0.2 days, Each person's health insurance medical consumption saves 743 yuan.

CONCLUSION: Cardiac catheterization before, during and after clinical examination will affect the severity of the disease due to comorbidities, Using innovative thinking to improve the puncture site of transradial cardiac catheterization, Not only reduces the incidence of bruising at the puncture site、 Improve patient satisfaction, Significant improvement in pain and cyanosis, Promote inter-departmental teamwork, Improve patient safety and quality of medical care.

A126

Improve the timeliness of inspection reports using the ePORTER delivery system that intelligently delivers specimens

Ya-Lien Chang, Yu-Hsia Wang, Ya-Yu Chu

Department of Nursing, Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation), Tainan, Taiwan;

INTRODUCTION: Before the chemotherapy doctor's order is issued in the inpatient chemotherapy operation process, the doctor must wait for the blood test report to be presented, and then conduct pre-chemotherapy evaluation and issue the doctor's order. Therefore, the timeliness of the inspection report is an important key task for the timing of issuing chemotherapy orders for cancer patients.

OBJECTIVE: The later the inspection report of the inpatient chemotherapy patients is presented, the time limit for issuing chemotherapy orders will be delayed. This project aims to improve the chemotherapy operation process for cancer inpatients, and uses the ePORTER delivery system for intelligent specimen delivery to improve the timeliness of inspection reports.

METHODS: By distributing structured questionnaires with open-ended questions to collect internal customer opinions and analyzing current value stream maps and affinity diagrams to identify problems, this study found that the reasons for longer waiting times for examination reports were (1) after the nurse draws blood, it takes time to contact the delivery person by phone to send the specimen; (2) delivery staff performing other duties; and (3) the medical examiner does not know the characteristics of the sample, and finds out the key improvement measures:

1. Establish a system to automatically link and transfer the intelligent system. The transfer personnel's mobile phone receives the sample transfer task and automatically starts the transfer task assignment.
2. Create a real-time chemotherapy case inspection report: mark the specimen with "1".
3. Use the color of the information system to display and distinguish the progress of the inspection, so as to provide a reminder for doctors to issue chemotherapy orders.

RESULTS: The number of times the nurses contacted the service to send samples has been reduced to 0 times. The waiting time of doctors for test reports decreased from 49 minutes before improvement (March 2019) to 43 minutes after improvement (March 2021), while patients' waiting time for physician evaluation was reduced from 80 minutes before improvement to 27 minutes after improvement.

CONCLUSION: This project's application of the ePORTER delivery system technology not only shortens the waiting time for inpatient chemotherapy treatment, but also enhances the satisfaction of both patients and the medical team.

Using Health Failure Mode and Effect Analysis to Improve the Safety of Electricity in Wards

Chi-Chieh Chen, PhD, Maintenance Section Senior Specialist, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation); Fang-Tsu Lai, Quality Center Deputy Director, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation)

INTRODUCTION: According to Joint Commission of Taiwan 2020 Patient Safety Annual Report, there were a total of 1,218 public accidents in hospitals, of which fire was the highest at 17.2%, and the place of occurrence was in general wards at 43.3%. In view of the serious incidents of hospital electrical fires resulting in patient casualties, the Ministry of Health and Welfare formulated the management guidelines for the use of self-contained electrical appliances by inpatients in hospitals in 2018, and standardized that hospitals should be aware of possible vulnerabilities. Based on the results of risk analysis, preventive measures could be developed.

OBJECTIVE: Home appliances such as air conditioners, refrigerators, etc., and wiring components such as AC power plugs and sockets, extension cords are mostly used in hospital wards. In order to maintain the safety of electrical equipment in wards, ensure the smoothly use of electrical appliances, this study systematically analyzes to examine the safety and potential failure risks of hospital wards by means of health failure mode and effect analysis (HFMEA).

METHODS: According to the five steps of HFMEA, we find out 40 failure reasons, and prioritize improved catalogues for those with Risk Priority Number, RPN score ≥ 8 or with serious results. Through the decision tree analysis, 32 potential failure reasons must be further taken into action. We have made 27 action plans, which are divided into four strategy groups based on attributes, including: 1. Electricity safety is listed in the annual fire training required course. 2. increases the awareness of patients and their family members about electricity safety, and electricity safety slogans attached. 3. strengthens the daily management and maintenance of equipment. A total of 54 sets of ward sockets and 1 set of specific charging area were installed. 4. formulates electricity management measures and regular audits. The service life of electrical appliances and extension cords could be specified.

RESULTS: The implementation effect of strategies as follows: 1. the RPN scores ≥ 8 has dropped from 32 before improvement to 0 after improvement. 2. the improvement of the reporting rate of electrical appliances, and the implementation rate of education related electricity for admission has increased from 0% to 100%. 3. the number of ward electricity-related maintenance events has decreased from an average of 144 per month to 96, a drop of 33%. 4. zero electrical equipment exceeded the service life after the improvement.

CONCLUSION: Hospital electricity safety is a very important issue in patient safety, which needs to have good relevant criteria and procedures. Through HFMEA, the improvement of the systematic analysis and inspection of potential failure risks can effectively reduce electricity risk and promote patient safety in hospital wards.

Keywords: Safety of electricity, HFMEA, RPN, Proactive risk management

Chinese Text Readability of Patient Educational Materials in Nursing

Ru-Yu Lien, RN, M.S.N, is an Assistant Head Nurse, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan; Ying, Liang, RN, M.S.N, is a Nurse Supervisor, Department of Nursing, Taipei Veterans General Hospital; and a PhD student, School of Nursing, National Yang-Ming Chiao Tung University, Taipei, Taiwan; Ching-Ching, Sheng, RN, M.S.N, is a Deputy Director, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan; Chia-Hui Liao, RN, M.S.N, is an Assistant Head Nurse, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan; Hsiao-Hui, Chiu, RN, DrPH, is a Nurse Supervisor, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan; Hsiu-Chuan, Hsu, RN, BN, is a Head Nurse, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan; Ting-Fang, Yiu, RN, M.S.N, is a Professional Nurse, Department of Nursing, Taipei Veterans General Hospital, Taipei, Taiwan;

INTRODUCTION: The reading level of patient education material composed by health care provider is sometimes beyond readers' reach. As a result, the purposes of patient education material cannot be implanted. US National Institute of Health suggests that keep material reading level between 6th to 8th grade, to meet the needs of readers with different health literacy levels, achieve health goals for entire population.

Patient educational materials of healthcare provider providing is well beyond most readers' understanding. National Institutes of Health suggest that keep the language within the range of a 6th to 8th grade reading level, to meet the needs of user with different health literacy levels, achieve health goals for entire population.

OBJECTIVES: To investigate the readability and understanding of patient education materials in nursing.

Investigating the readability and understanding of patient educational materials in nursing.

METHODS: From January to June 2022, 30 patient educational materials in nursing were selected by the research team, including four categories: "disease care", "health promotion", "examination & therapy", and "surgery". Team up with Higher Education Sprout Project Office of National Taiwan Normal University. Using "Chinese Readability Index Explorer 3.0" automatically grade and judge that patient educational materials in nursing.

RESULTS: In average, Chinese text readability grade of patient educational materials in nursing was 7.7. Nineteen materials were below 9th grade (63.3%). Eleven materials were above 8th grade (36.7%), there were 10 materials of them in 9th grade (33.3%) and 1 material (3.3%) was 10th grade. There were 2 categories, including "disease care" and "examination & therapy", on the recommended readability level (grades 7/7.3). Respectively, the other two categories of "surgery" and "health promotion", were exceeding the recommended reading level (grades 8.3 /8.6).

CONCLUSION: This study conducted a cross-disciplinary collaboration to test the Chinese text readability of patient educational materials in nursing. Although some materials are still suitable for high grades, especially the materials for "surgery" and "health promotion". The content analysis found those materials contained medical terms, proper nouns and a few difficult reading words, such as valves, lymph nodes, embryos, cytoplasm, artificial fibers, judicial or parties, etc. In the future, we must continue to implement the concept of Chinese text readability in patient educational materials to reduce complex words, proper nouns and abbreviations. It can also be converted into easy-to-understand language by consulting patients to comprehensively optimize the patient educational materials content of the medical center to enhance public health literacy.

A134

Bone Strengthening Gymnastics Program Improving Sarcopenia in the Elderly in the Community

Pei-Yu Yang, Tzu-Chieh Lin, I-Ching Lin, Chien-Chih Chen, Chi-Yao Lu, Wei-Xiu Liu, Wei-Chien Hsu**

Pei-Yu Yang, MT, MS, and PhD, is a Group Leader of Laboratory Department, Showchwan Memorial Hospital and Assistant Professor of Department of Kinesiology, Health, and Leisure, Chienkuo Technology;

Tzu-Chieh Lin, MS, is a member of Department of Family Medicine, Asia University Hospital; I-Ching Lin, MD, MS, PhD, is a Director of Department of Family Medicine, Asia University Hospital, Assistant Professor of Department of Healthcare Administration, Asia University, and Assistant Professor of Department of Kinesiology, Health, and Leisure, Chienkuo Technology University;

Chien-Chih Chen, MD, is a Physician of Department of Family Medicine, Asia University Hospital;

Chi-Yao Lu, MS, Nurse, is a Group Leader of Prevention and Community Medicine Department, Asia University Hospital;

Wei-Xiu Liu, is a nurse of Prevention and Community Medicine Department, Asia University Hospital;

Wei-Chien Hsu, MD, is a Physician of Department of Family Medicine, Asia University Hospital;

*Correspondence: I-Ching Lin and Wei-Chien Hsu *These authors contributed equally to correspondence author*

INTRODUCTION: Regular exercise can improve physiological functions and delay aging.

OBJECTIVE: The aim of this study is to investigate the effect of the intervention of Bone Strengthening program on sarcopenia in the elderly in the community.

METHOD: This study is a prospective interventional study. The interventional group introduced a fitness exercise "Bone Strengthening Gymnastics Program". Firstly, there was an instructor leading and asking the elderly to follow the video demonstrating "Bone Strengthening Gymnastics". Then, the elderly in the community was demanded to do the bone strengthening gymnastics at least once a week. At the same time, taking photos is required to record as evidence. Whereas, the control group did not participate in bone strengthening gymnastics. During the intervention period, a lecturer was invited to teach the knowledge about sarcopenia diet in interventional group and control group.

RESULT: A total of 55 elderly participated this study including 29 in interventional group (7/21 for male/female) and 26 in the control group (4/22 for male/female). There were no significant differences in age, sex, BMI, and the number of sarcopenia between the two groups. Before intervention, the distribution of sarcopenia in the interventional group was 1 participant with probable sarcopenia, 4 participants with sarcopenia, and 10 participants with severe sarcopenia. In the control group, 2 participants with probable sarcopenia, 4 participants with sarcopenia, and 3 participants with severe sarcopenia. After the intervention of healthy materials, the number of elderly with sarcopenia (including severe sarcopenia) in the interventional group was reduced from 14 to 10, while the number of elderly with sarcopenia in the control group (including severe sarcopenia) remained unchanged at 7.

CONCLUSION: According to the results of this study, the bone strengthening program has a positive impact on the sarcopenia of the elderly in the community. Therefore, it might be suggested and encouraged to perform the bone strengthening gymnastics in order to improve the prevalence of sarcopenia in the elderly in the community.

A137

Use Root Cause Analysis to Improve Hemodialysis Machine Power Failure

FANG-TSU LAI¹, HSIANG-HUI, CHIU², CHI-CHIEH CHEN³, LI-HSUEH CHEN⁴, JEAN-SHI CHEN⁵

Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation)

Quality Center Deputy Director¹, Nursing Department Head Nurse², Maintenance Section Senior Specialist³, Nursing Department Nursing Supervisor⁴, Quality Center Director⁵

INTRODUCTION: The hemodialysis machine is important for patients with renal failure to maintain their life functions. Power interruption during hemodialysis will lead to insufficient dehydration for too short treatment time, which is extremely vital for patient safety issue. The machine was powered off without warning during the hemodialysis treatment in the case hospital. In order to avoid the recurrence of similar events, the Root Cause Analysis (RCA) method was used for retrospective analysis. The improvement mechanism about no electricity provided was proposed to achieve zero occurred event in recently 16 months during hemodialysis.

OBJECTIVE: Dialysis services for patients were performing on the routine morning shift, and suddenly there was no power supply. After less than one minute, the power was restored. In the afternoon of the same day, the similar situation happened again for middle-duty served patients, and the dialysis treatment could not be performed. After evaluation by the Incident Decision Tree (IDT), the RCA was carried out because the case was a systematic problem.

METHODS: Using the RCA method to investigate, the study explores the proximal causes from the power failure of the dialysis machine and the battery failure, and further the root causes are found by the cause tree analysis as follows: (1) The electricity outsourcers put the general equipment (Such as water heater) shared with the dedicated circuit for medical equipment (such as dialysis machine). While the water heater needs to be powered off for maintenance, it results in synchronous power failure of the dialysis machine. (2) The battery storage function does not be checked in every monthly maintenance of the dialysis machine. In June 2021, the improvement measures were involved, including: (1) Installation of the independent power supply of the water heater. (2) The new standard operation procedure of the NonFuse Breaker(NFB) setup. (3) After the finish of the outsourced manufacturer, the done work needs to be audited. (4) The content of monthly maintenance must be added to the battery storage function and the remaining battery power detection items.

RESULTS: Through the implementation of strategies, the monthly battery storage function test execution rate of dialysis machine from outsourcers has increased from 0% (before the improvement, May 2021) to 100% (after the improvement, June to December 2021.) The qualified rate of the monthly power storage function has increased from 52% (before the improvement) to 100% (after the improvement). From May 2021 to August 2022, the number of abnormal power failures of the dialysis machine in the hemodialysis room was zero occurred.

CONCLUSION: Improper maintenance of medical equipment, interruption of patient examinations or sudden stoppage of life-sustaining equipment will result in patient injury or death. This study uses RCA to find out the systemic problems of hemodialysis power stop. At the same time, the improvement strategy is extended to the whole hospital in parallel. By means of the inventory of the specific circuit for medical equipment by the engineering Section, and testing of the battery storage function of the medical equipment by the biomedical engineering department, the hospitals can ensure to maintain the safety of patients in medical treatment.

KEYWORDS: RCA, IDT, dialysis machine, hemodialysis, patient safety

A health literacy course to explore trail walking and calorie consumption from a cultural perspective: Take a Chiayi County Alishan Township Charshan Primary School as an example

Cheng-Wei Wang, MPH, is a manager, Ditmanson Medical Foundation Chiayi Christian Hospital of Tribe Health Center

Hui-Fei Yang, MPH, is a deputy director, Ditmanson Medical Foundation Chiayi Christian Hospital of Community Health Department

Hsin-Yu An, MPH, DrPH, is a Family physician, Ditmanson Medical Foundation Chiayi Christian Hospital of Family Medicine Department

INTRODUCTION: The World Health Organization (WHO) promoted the concept of a supportive environment in 2005, which emphasize the importance of providing and supporting autonomy and environmental development for the benefit of residents' health. Chiayi Christian Hospital has undertaken the Tribe Health Management Program executing into three south of Tsou tribes, namely Shanmei, Xinmei and Chashan in Chiayi County Alishan Township. We set up a health trail in Chashan tribe in 2021, and continue its function by connecting primary school to conduct health literacy course in 2022.

OBJECTIVE: The purpose of this study is to examine primary school children's knowledge of local culture, exercise and calorie consumption through study sheets.

METHODS: A total of 12 students join this event, which divided into three phases. Phase one, through literature review, visit tribal chief, interview student's parents to investigate students' eating habits, survey local ingredients, and observe the range of living and activities for local people as a walking trail planning. It was named as "Cayamavana Tail" by using Tsou language. It also mixed Tsou culture for the design. According to different age groups, the calorie consumption of walking a circle corresponds to the calorie of the local ingredients and is marked with pictures. Moreover, we invite tribal people to participate in the online collection of health slogans. Finally, the course design was based on the Tsou culture, health literacy as a medium. Discussing the course contents with school teachers, also cooperating with local community development association to plan trail walking event. Phase two, during the process, interpretation was using Chinese & Tsou dialect guided by Chashan Community Development Association profession. On the cultural side, students knew plants (i.e. Shell-flower), crops (i.e. Millet), buildings (i.e. hufu, it is a Tsou language, it stands for pavilion), and its cultural (i.e. share culture), etc. The last, by repeating health slogans to enhance the importance of regular exercise. Phase three, to evaluate students knowledge relating to culture and calorie consumption. There are 3 cultural questions and 2 open-ended answer questions in sequence, 1 question about plants/crops and 1 question about health slogans.

RESULTS: Among the participants, males (58.3%) and middle and senior grades (83.3%) accounted for the highest proportions. The correct rate of cultural questions is 100%. Plant/crop questions "Please write down three plants/crops you know during the trail adventure" are mostly " Shell-flower, pumpkin, millet". The health slogan "Please write down the health slogan you saw in the trail adventure" is dominated by "one step more, health is the coolest" and "health GO, GO health".

CONCLUSION: Creating a supportive environment is important for tribes. From the perspective of Tsou culture, this article designs a health promotion experience course for walking on footpaths and calorie consumption awareness through the principles of health literacy, so that students can deepen their understanding of the environment and culture while receiving health information.

A142

Using the Technology of Capillary Electrophoresis to Diagnose Lymphoplasmacytic Lymphoma with Waldenström Macroglobulinemia

Kai Pei Huang, Yen Chuan, Hsieh

Department of Pathology, Chi-Mei Medical Center

INTRODUCTION: Waldenström macroglobulinemia is a rare blood cell cancer characterized by an excess of abnormal white blood cells called lymphoplasmacytic cells in the bone marrow. In the meantime, Waldenström macroglobulinemia is classified as a lymphoplasmacytic lymphoma. It occurs more frequently among older adults. A diagnosis of Waldenström macroglobulinemia depends on a significant and obvious monoclonal IgM spike in blood tests and malignant cells consistent with the disease in bone marrow biopsy samples.

OBJECTIVE: The aim of this study is to apply Capillary electrophoresis to diagnosis of lymphoplasmacytic lymphoma with Waldenström macroglobulinemia.

METHODS: Capillary electrophoresis has the advantage of high resolution and speed. We use it to replace conventional agarose gel electrophoresis. Serum is prepared and electrophoresis is performed at alkaline PH in a capillary using the Sebia® Capillary 2 . Albumin and globulins are detected by the detector which is located in the cathode of the capillary, and they are transformed into peaks.

RESULTS: We reported a 75-year-old man presenting general weakness, anemia, weight loss, and renal function impairment. Laboratory data showed anemia, hypergammaglobulinemia, high serum IgM and kappa light chain. Capillary electrophoresis showed an obvious monoclonal peak in gamma region and the immunotyping studies showed IgM/κ type. Later, we quantified the monoclonal protein based on the sharp peak in the electrophoresis pattern.

CONCLUSIONS: Early diagnosis and treatments of Waldenström macroglobulinemia can result in survival of more than 10 years. It is our responsibility to take good care of these patients and our main concern to deliver reliable and rapid reports.

A144

Experience of Total Parenteral Nutrition Care in a Pneumonia Case Complicated with Underweight and Moisture Skin Damage Caused by Gastrostomy Leakage

KAILING SU

Tainan Municipal Hospital (Managed By Show Chwan Medical Care Corporation)

INTRODUCTION :

A 70-year-old female with a height of 155cm and a weight of 38kg, is underweight, with thymoma, right upper lung tumor, intestinal obstruction and ischemic enteritis with postoperative terminal transverse colostomy, percutaneous endoscopy Gastrostomy (PEG) was performed in May 2020. In July, the PEG was removed and sutured and switched to oral feeding. She was admitted to the hospital due to fever, asthma, and pneumonia. Sputum and blood tests revealed bacterial infection, and the sutured PEG wound continued to leak a lot, leading to a wound of moisture skin damage of around 3*3 cm. Referred to ET nurse and consulted TPN team to Expect to improve skin damage and nutritional status.

OBJECTIVES :

Experienced that total parenteral nutrition (TPN) to hospitalized critically ill and malnourished patients to reduce infection and mortality rate, also shorten the length of hospital stay, save medical costs, and greatly improve the quality of life of patients.

METHODS :

2021.12.6 to 2022.01.19, a nasal cannula was placed to provide oxygen every 2L/min, give systemic antibiotics (Vancomycin), place a peripheral central venous catheter (PICC), and calculate the daily calorie requirement by a nutritionist , the prescription of TPN was SmofKabiven commercial formula, providing 1,000 calories per day, Around the PEG opening skin was sprayed the skin barrier and applied one-piece ostomy bag connected to the collection bottle , guide family to learn PICC pipeline care and home skill of TPN infusion and care understanding.

RESULTS :

There is no need oxygen catheter and no breathing symptoms. The bag she applied is changed every 4-5 days, the skin damage is under 0.5 cm, continuous TPN injection and gained weight of 1.1kg.Family take PICC and TPN care well and independently.

CONCLUSION :

The comprehensive care solves patients' physiological problems, while maintaining the quality of safe TPN infusion, providing the best solution for life continuation.

Keywords: Pneumonia, underweight, End colostomy,Irritable Dermatitis, Percutaneous endoscopic gastrostomy, Total parenteral nutrition

The Media Literacy Intervention to Reduce Intention to Smoke in Preadolescent

Nurjanah Nurjanah an Assistant Professor in the Department of Public Health, Faculty of Health Sciences, Universitas Dian Nuswantoro, Semarang, Indonesia,

Retno Sutomo an Associate Professor in the Department of Child Health, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia,

Fatwa Sari Tetra Dewi an Associate Professor in the Department of Health Behavior, Environment and Social Medicine, Faculty of Medicine, Public Health and Nursing, Universitas Gadjah Mada, Yogyakarta, Indonesia,

Peter W Chang The President of the Asian Health Literacy Association, an Adjunct Professor at Tufts University School of Medicine; a Senior Advisor at National Chung Cheng University.

INTRODUCTION: The prevalence of smoking in Indonesia (10-18 years old) increased significantly from 7.2% in 2013 to 9.1% in 2018. Male students started smoking for the first time before 13 years old. Children were exposed to tobacco advertising, promotion, and sponsorship from many media. The outdoor tobacco advertisements in Semarang City were 45% higher within 100-meter schools than within 100-300 meters. Students at schools with a medium and high density of outdoor tobacco advertising were up to 2.16 times more likely to smoke. Children who live in high-exposed tobacco influences need media literacy competencies.

OBJECTIVE: This study aimed to evaluate the effectiveness of the media literacy program to reduce smoking intention in preadolescent.

METHODS: This study was quasi experiment, as many as 76 elementary students participated in the intervention group and 68 in the control group. The intervention was Media Literacy for Preventing Young Smokers which consisted of five animation films and a book. Effectiveness of intervention was measured by paired t-test, and independent sample t-test was used to measure the difference between intervention and control groups. The path analysis was employed to know the effect of media literacy on attitudes, normative belief, expectation, self-efficacy, and intention to smoke.

RESULTS: The first path analysis model showed that media literacy negatively affected smoking output expectation (-0.28), then smoking output expectation also negatively affected self-efficacy (-0.25). Furthermore, self-efficacy had a negative effect on intention (-0.36). Media literacy negatively affects attitude (-0.24), but there is no significant effect of attitude on intention. The total effect of media literacy on smoking intention was also significant (-0.01). With self-efficacy removed from the equation, the second path analysis model revealed that media literacy has a negative impact on smoking output expectation (-0.26) and attitude (-0.25).

CONSLUSIONS: The Media literacy program was effective to increase the media literacy competency and reduce the smoking intention of preadolescents and can be considered to include in the school-based smoking prevention program in the future.

Assessment of patient's satisfaction and associated factors among outpatients at Phu Vang District Health Center, Thua Thien Hue Province, Vietnam

Ngo, LV, Nguyen, TT, Truong, SN, Nguyen, HTT

Loc Viet Ngo, MD, PhD, is a senior lecturer, Faculty of Public Health, Hue University of Medicine and Pharmacy; Thuy Thi Nguyen, MSc, is an Expert Phu Vang District Health Center; Son Nhu Truong, Second Degree specialist in Obstetrics and Gynecology, Director at Phu Vang District Health Center; Hang Thuy Thi Nguyen, BSc, is an Expert, Health Personnel Training Institute, Hue University of Medicine and Pharmacy.

INTRODUCTION: Patient's satisfaction has been becoming one of the essential factors to evaluate hospital quality, in which inadequate health literacy might contribute to impaired healthcare decision-making that lead to poor quality of care. Therefore, research related to this topic provide insightful evidence for hospital managers to develop programs that further improve the quality of health services.

OBJECTIVES: We conducted this study to assess satisfaction and its associated factors among outpatients receiving health services at Phu Vang District Health Center, located in the central region of Vietnam.

METHODS: A cross-sectional study was carried out among 500 patients at Outpatient Department of Phu Vang District Health Center. We used the "Outpatient Satisfaction Survey" of the Ministry of Health of Vietnam to evaluate the satisfaction of outpatients. We used multivariate logistic regression to examine the associated factors of satisfaction among outpatients.

RESULTS: The overall satisfaction of the research subjects at Phu Vang District Health Center was 89.4%. There were statistically significant associations between overall satisfaction and sex, ages, occupations, number of times of examination and treatment at health center and number of health facilities patients.

CONCLUSION: Phu Vang District Health Center needs to *continue to promote* in all aspects so that patient satisfaction is further improved.

Yufong International Health Literacy Award Ceremony



Purpose: To promote health literacy researches and practices globally and encourage health literacy championship in less developed or developing countries, an international health literacy award for those with the best researches, practices, and leadership. The Awards are named after the past Madam Yufong Hsu, who had supported health literacy in her life and disseminated health literacy information continuously in the communities. She also had contributed to the AHLA significantly.

In the 8th AHLA Conference, **One each award** will be honored with **1000 USD** to one individual or institution who will participate in the AHLA Conference **physically** from Asia Pacific, and One individual or institution with **500 USD** from countries beyond Asia Pacific Region and those in Taiwan. Both will be accompanied with one Award Certificate. The awards will be presented to the recipients in the 8th AHLA Conference physically. The recipients or one representative of the awardee institutions will be waived for registration fees of the 8th AHLA Conference.

How to apply? One individual or individuals or an institution can nominate or be nominated for this Award by sending the nomination or recommendation by **Aug 31**. The YIHLA Award Committee including key international experts and leaders will be developed and decide the winners of both awards by **Sep. 14**. The documents of application, including (1) basic and professional information and biography, (2) electronic file of passport(s) of the individuals or license(s) or certificate(s) of the institution(s) showing permanent residence or citizenship, (3) one best published manuscript within 2 years of the 8th AHLA Conference, (4) proof(s) of accepted abstract in the coming AHLA Conference, (5) others which will facilitate the decision on the award(s).

Deadline of Application for Aug. 31, 2022.

For Interest in the application and nomination: please send the completed documents to Professor Peter Chang (peter.chang3@gmail.com).

This Award had been granted since 2017 by the AHLA https://www.ahla-asia.org/news_detail/44.htm. The awardee will give the remarks at the ceremony.

2022 Yufong International Health Literacy Awards recipients



How does Vietnam improve health literacy?

Vietnam is a developing country with a population of around 100.000.000 people, so it's difficult to have good health for all. Literacy is the first step to getting knowledge, knowledge is the first step to getting everything so health literacy is the first step to getting health.

President HO CHI MINH on June 11, 1948, appealed:

Aiming:

To eradicate the famine enemy,

To eradicate the illiteracy enemy,

To eradicate the invading enemy.



Making based on:

The people's force,

The people's spirit.

To build

The people's happiness.

He wrote the letter to Health Care Workers Congress in February 1955:

Medicine has to base more on the principle: scientific, ethnic, and popular

His idea is not only fit for Vietnam and fit to build health literacy based on 5 social determinants of health (economic stability, education access and quality, health care access and quality, neighborhood and built environment, social and community context).

Vietnam tries to mobilise all social resources to build 5 social determinants of health (socialisation) from the government to individuals, from the combination of the public sector and the private sector. The government has the biggest power to coordinate them for "Health for All" but "All for Health" is indispensable; health literacy is the cornerstone of "All for Health", is still in development. So how does Vietnam improve it?

Vietnam doesn't have family doctor networks, this is the biggest weakness of its health care system, Vietnam has to resolve this problem in the coordination, the integration of 5 social determinants of health to support health literacy.

Nguyen The Dung, MD

Vice-Chairman of Vietnam Health Economics Association

Head of Infectious Diseases Department and Head of Microbiology-Parasitology

Department of School of Medicine of Vietnam National University-Ho Chi Minh City

Advisor of Pham Ngoc Thach University of Medicine

Former Director of Ho Chi Minh City Health Department

Prof. Mei-Shang Ho, M.D., M.P.H.

Adjunct Professor

Sinica Academic, Taiwan

Outstanding Research Award, Executive Yuan, Taiwan 1994

The Chiron Biocine Award, International Congress for Infectious Diseases 1996

Honorary membership Infectious Disease Society, ROC 1998

Contribution Award in SARS Control, Executive Yuan, Taiwan 2003

Contribution Award in Public Health, Department of Health, Taiwan 2003

Outstanding Contribution Technology Award, Executive Yuan, Taiwan 2011

Outstanding Civil Servant Award, Academia Sinica 2014



Presentation Awards

There are three (3) categories of awards in the 8th AHLA conference:

- I. Best Oral Presentation Awards
- II. Three-minute Pitching Awards
- III. Best Poster Presentation Awards

I. Best Oral Presentation Awards

All papers accepted for oral presentation sections will be automatically considered for the award. Assessment will be made based on the originality and innovation of the study/project, contributions made to the change of practices or future research, innovations in methodology and presentation skills.

Three awardees will be granted with certificates. The best will be given U\$300.



II. Three-minute Pitching Awards

The 3-Minute Pitching is a competition for young researchers. It is a special platform for the young researchers to share their research ideas and findings in a precise and clear approach. Presentations will be in the format of pre-recorded videos NOT exceeding 3 minutes.

Who can participate?

Graduate students and early career researchers (normally within three years post-PhD). Each AHLA country office can submit NOT MORE THAN TWO (2) ENTRIES in this competition.

How to participate

- Submit the abstract and a pre-recorded 3-minute oral presentation to the conference portal: <https://ahla-conference.com/paper/index.php/ahla> on or before **15 Oct 2022 by 2355 (Taiwan time)**
- Clearly indicate on the top of your abstract that you would like to participate in the AHLA 3-Minute Pitching Awards
- Clearly indicate your name, email, country office you represent in the abstract.

Judgement

- The pre-recording video which is MORE THAN 3 minutes will be disqualified.
- Assessment will be made by THREE judges before the AHLA conference. Announcement of the award will be made in the 8th AHLA conference.
- Assessment is based on the originality and innovation of the study/project, the contributions made to the change of practices or future research, innovations in methodology and clarity of presentation skills.

Three awardees will be granted with certificates. The best will be given **U\$200**.



III. Best Poster Presentation Awards

All papers accepted for poster presentation sections will be automatically considered for the award. Assessment will be made based on the originality and innovation of the study/project, contributions made to the change of practices or future research, innovations in methodology and presentation skills.

Three awardees will be granted with certificates. The best will be given **U\$100 each**.



- Decision made by the Panel judge(s) is the final decision and there is NO appeal for the awards.
- The 8th AHLA acknowledges the generous support by the GSBC for these awards in cashes.

AHLA chronology

Nov 20, 2003, Taipei City

Health literacy and better healthcare: EU and Asia

HEALTH LITERACY STUDIES AROUND THE WORLD	
08:30-09:00	Registration
Moderators: Dr. Vallaurie L. CRAWFORD, Dr. Peter CHANG	
09:00-09:20	Welcome and Opening Remarks
<ul style="list-style-type: none"> • Professor Yaw-Tang SHIH, Conference President • Minister Wan-Ta CHIU, Ministry of Health and Welfare • Deputy Minister Hong HOCHENG, National Science Council • Ambassador Rong-Chuan WU, NGO Affairs, Ministry of Foreign Affairs • Director-General Shu-Ti CHIOU, Health Promotion Administration • Mr. Canice NOLAN, Senior Coordinator for Global Health, Directorate General SANCO, European Commission • Mr. Frederic LAPLANCHE, Head of European Economic and Trade Office • President Yun YEN, Taipei Medical University 	
Group Photo Occasion	
Moderator: Dr. Ken N. KUO	
09:20-10:00	<i>Global Health Literacy Development and the IAHPE Global Working Group: Global Action with Local and Cultural Appropriateness</i> Dr. Diane LEVIN-ZAMIR, Clalit Health Services, Israel
10:00-10:40	<i>Building the Capacity to Address Low Health Literacy: The Role of National Policies, Governance, Leadership and Partnerships</i> Dr. Stephan VAN DEN BROUCKE, University Catholic Louvain, Belgium
10:40-11:00	Coffee Break
Moderator: Dr. Jin-Jong CHEN	
11:00-11:40	<i>Building Up the Research Base: The European Health Literacy Survey (HLS-EU) From Concept to Measurement</i> Dr. Kristine SORENSEN, University of Maastricht, Netherlands
11:40-12:20	<i>HLS-EU Sampling, Database, and Analytics: The Health Literate Health Care Organization (HLO) – A Whole-Systems Approach for Health Literacy Interventions</i> Dr. Jürgen PELIKAN, Ludwig Boltzmann Institute of Health Promotion Research (LBHPR), Austria
12:20-14:00	Lunch Break
Moderators: Dr. Shin-Han TSAI, Dr. Ying-Ying TSAI	
14:00-14:30	<i>Development of Health Literacy Research in Taiwan</i> Dr. Tzu-I TSAI, National Yang-Ming University
14:30-15:00	<i>Israel's Health Literacy Survey</i> Dr. Diane LEVIN-ZAMIR, Clalit Health Services
15:00-15:30	<i>Taiwan's Health Literacy Survey</i> Dr. Peter CHANG, Taipei Hospital-MOH & Taipei Medical University
15:30-16:00	<i>Indonesia's Health Literacy Survey</i> Dr. Eti RIMAWATI & Dr. Nurjanah, Dian Nuswantoro University Dr. Adi UTARINI & Dr. Guardian Yoki SANJAYA, Universitas Gadjah Mada Dr. Bambang WISPRIYONO, Universitas Indonesia
16:00-16:30	Coffee Break
Moderators: Dr. Vincent ROLLET, Mr. Canice NOLAN	
16:30-17:30	Panel Discussion
17:30-18:00	Conclusion
18:00-22:00	Reception and Gala Dinner (by invitation) Venue: W Hotel, Taipei





Nov 9-12, 2015, Tainan City

Health literacy and healthcare efficiency

A·H·L·A
Asian Health Literacy Association

2015

3rd

International Conference on Health Literacy and Healthcare Efficiency

College of Medicine, National Cheng Kung University (成杏廳)
12F, Chi Mei Medical Center (第二醫療大樓第一會議室)

NOV. 09-11
Tainan, Taiwan

Sessions

- Health policy and health literacy
- Health literacy and effectiveness of health services
- How to measure health literacy effectively
- Psychological Health and Health Literacy
- Health Literacy in the aging world
- Media campaign and social marketing on HL
- Health literacy and social determinants for health

Special Topics

- Global Diabetes Health Literacy Health Forum
- Mental Health Literacy Symposiums

SPEAKERS INCLUDE

 Helmut BRAND Maastricht University	 Carmen TOLABING University of Philippines	 Yaw-Tang SHIH AHLA	 Tin Tin SU University of Malaya	 Manuel CARBALLO ICMHD
 Hirono ISHIKAWA Tokyo University	 Shahzad Ali KHAN Health Services Academy	 Natasha KHURSHID BUHS	 Yaw-Tang SHIH AHLA	 Lazeeza MUNA-MCQUAY UN Cares
 Hiroki SUGIMORI Daito Bunka University	 Shu-Ti CHIOU Health Promotion Administration	 Win Myint OO University of Medicine 1, Yangon	 Yaw-Tang SHIH AHLA	 Ching-Te LAI Tainan City Government
 Samdan DULAMSUREN NPHA	 Hsin-Huang HSIAO Academia Sinica	 Diane LEVIN-ZAMIR Clalit Health Services	 Paras POKHAREL BP Koirala Institute of Health Sciences	 Kristine SØRENSEN Maastricht University
 Hai-Gwo HWU Mental Health Foundation	 Angela LEUNG Hong Kong University	 Chi-Hung LIN New Taipei City Government	 Minh Khue PHAM Haiphong University of Medicine & Pharmacy	 Ken N. KUO Taipei Medical University
 Jürgen PELIKAN LBIHPR	 Hiroshi FUKUDA Juntento University	 Stephan VAN DEN BROUCKE Université Catholique de Louvain	 Chun-Keng TSAO MJ Group	 Hui-Jen SU National Cheng Kung University
 Vincent ROLLET Wenzao Ursulines University of Languages	 Chung-Ching CHIO Chi-Mei Medical Center	 Sanjay PATTANSHETTY Manipal University	 Tzuu Yuan HUANG SinLau Hospital	 Peter CHANG Taipei Medical University
 Jang-Yang CHANG NCKU	 Vo Van THANG Hue University of Medicine and Pharmacy	 Shen Che LIN Tainan City Government	 Fu Keung WONG City University of Hong Kong	 Masahiro TAKEDA Osaka University

報名費匯款方式

銀行：兆豐商業銀行 (017)
分行：思源分行
戶名：社團法人新北市亞洲教育科學文化協會
帳號：235-09-01653-8

報名費	一般	外縣市學生	台南市學生
9月30日前	NT\$1,200	NT\$500	NT\$300
10月1日後	NT\$1,500		

報名請洽

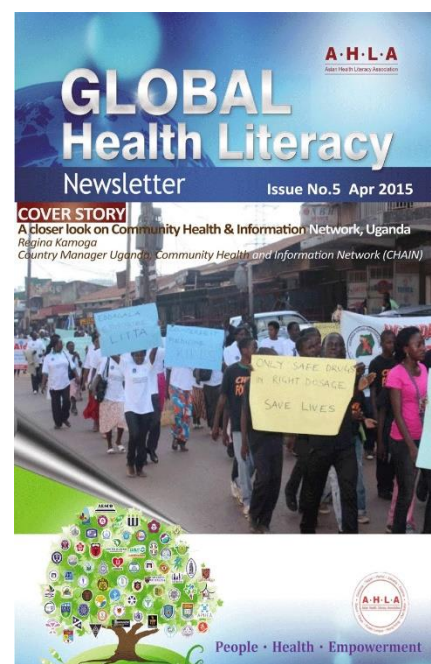
林秘書(Alice):alicelin0420@gmail.com
郭秘書(Carrie):candy1987824@gmail.com
For more information, please visit website:
<http://ahla-asia.org/>



Sponsors & Organizers

指定飯店：臺南大德麗緻 Tayih Landis Hotel
Tayih 大德麗緻酒店





Nov 7-9, 2016 Haiphong



THE 4TH AHLA INTERNATIONAL HEALTH LITERACY CONFERENCE

HEALTH LITERACY AND QUALITY OF HEALTHCARE SERVICES

November 7-9th, 2016 | Haiphong City, Vietnam



THEMES

- Health literacy and medication safety
- Patients' satisfaction, quality of life, and health literate services
- Health literacy and effectiveness of medical services
- Health finance, universal health coverage and health literacy
- Health literacy and health policy
- Health literacy and community health services
- Health literacy in the aging populations
- Psychological health and health literacy
- Non-communicable diseases and health literacy
- Health literacy emerging infectious diseases
- Health literacy, health promotion, and social determinants for health
- Health literate organization
- Health literacy and nutrition safety
- Health literacy and marine lives
- Sexual and reproductive health literacy
- "One Health Literacy"

ORGANIZERS

Ministry of Health, Vietnam
 Haiphong University of Medicine and Pharmacy
 Asian Health Literacy Association
 International Union for Health Promotion and Education (IUHPE)
 Global Health Literacy Academy
 Hanoi Medical University
 Hanoi School of Public Health
 Hue University of Medicine and Pharmacy
 Ho Chi Minh City University of Medicine and Pharmacy
 Taiwan Health Evaluation and Promotion Association
 Kaohsiung Medical University
 Chung Shan Medical University Medical Center
 Tufts University of School of Medicine
 RCI/CFDH-AT, Taiwan
 University Medical Sing Mark Hospital
 HPA, Taiwan
 MOHW, Taiwan
 Health Evaluation and Promotion Association Taiwan

SPONSORS

THU DUC HOSPITAL
 HAIPHONG INTERNATIONAL HOSPITAL
 VIETNAM ONE HEALTH UNIVERSITY NETWORK (VOHUN)
 NATIONAL INSTITUTE OF OCCUPATIONAL AND ENVIRONMENTAL HEALTH
 ADB (ASIAN DEVELOPMENT BANK)
 M.J. HEALTH GROUP
 UNIVERSITY MEDICAL SHING MARK HOSPITAL
 HEALTH PROMOTION ADMINISTRATION, TAIWAN
 ASIAN ADVANCED TECHNOLOGY CONSULTANCY (AATC)
 INSTITUTE FOR HEALTHCARE ADVANCEMENT (IHA)
 ASIAN EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION (AESCO)
 DEPARTMENT OF PUBLIC HEALTH, TAIWAN
 MEDICAL COMMITTEE NETHERLANDS-VIETNAM
 BEQUEREL & SIEVERT CO. LTD

ABSTRACT SUBMISSION

ABSTRACT DEADLINE: Monday, August 15th, 2016
 Announcement of abstract acceptance: Aug 31st, 2016
 For abstract submission, visit:
<http://hpmu.edu.vn/ahla2016>



SPEAKERS INCLUDING

 Noor Hayat Abu Kasim	 Thi Thu Ha Bui	 Peter W.S. Chang	 Van Dung Do	 Diane LEVIN-ZAMIR
 Tuyen V. Duong	 Soc Escalante	 Van Minh Hoang	 Sabrina Kurtz-Rossi	 Dulamsuren Samdan
 Angela Leung	 Ngoc Hoat Luu	 Quan Minh Nguyen	 Thanh Hoi Nguyen	 Lazeena MUNA-MCQUAY
 Van Hung Nguyen	 Sanjay M. Pattanshetty	 Jurgen Pelikan	 Duc Muc Pham	 Natasha Khurshid
 Minh Khue Pham	 Van Thuc Pham	 Yaw-Tang Shih	 Kristine Sorensen	 Siew Yim Loh
 Tin Tin Su	 Hiroki Sugimori	 Min-Jer Tsai	 Stephan Van Den Broucke	 Chi-Kung Ho
 Chi-Wei Lin	 Van Thang Vo	 Stanley Fenwick	 Duc Phuc Pham	 Li-Hui Yu

CONTACTS

Haiphong University of
 Medicine and Pharmacy
 72A Nguyen Binh Kiem St,
 Ngo Quyen District, Haiphong City

Tel: (+84)313.731.907
 Fax: (+84)313.733.315
 Email: hpmu.ahla2016@gmail.com

REGISTRATION

Early Bird Registration Fees (by Aug 31st, 2016)
 Register on website: hpmu.edu.vn/ahla2016

Developed Country	\$200 USD
Developing Country	\$150 USD
Low Income Country	\$100 USD
International Student	\$20 USD
Vietnam	1,000,000 VND
Vietnamese Student	300,000 VND

Health literacy and Quality of Healthcare Services



Nov 12-14, 2017, Kuala Lumpur

Health literacy and population health



**The 5th AHILA International
Health Literacy Conference :
Health Literacy & Population Health
Kuala Lumpur | 12th–14th November 2017**



UP FOR GRABS

**YIHLA Scientific Awards
{USD 1000 & USD 500}**

**3 Best Oral Awards
3 Best Poster Awards
CPD Points**

Important Dates

Abstract Submission : 15th August 2017

Acceptance Notification : 15th – 30th August 2017

Early Bird : 15th September 2017

Standard Registration Deadline

for Presenters : 30th September 2017

**Venue
Research Management & Innovation Complex
University of Malaya, Malaysia**

Contact :

E-mail : ahla2017@um.edu.my

Tel : +603-7967 7513

Register Now



For further information, please visit our website at
<http://umconference.um.edu.my/ahla2017> or scan the QR Code



A · H · L · A
Asian Health Literacy Association



**DISTINGUISHED GUESTS & INVITED SPEAKERS :
THE 5th AHLA CONFERENCE LOCAL ORGANIZING CHAIR AND CO-CHAIR**

Kuala Lumpur 12th – 14th November 2017





Oct 25-27, 2018, Taichung





Nov 10-12, 2019 Ho Chi Minh City

Health literacy in smart universal healthcare



A·H·L·A
Asian Health Literacy Association



2019
NOV 10 - 12

7AHLA

Health Literacy In Smart Universal Healthcare
CONVENTION CENTER 272
272 Vo Thi Sau, District 3, HCM City



CONFERENCE BOOK

Website: www.7ahla2019.org - Email: 7ahla2019@gmail.com









副總統賴清德3日晚間出席「2021全球健康識能高峰會」開幕典禮。(圖:總統府)

Oct 27-28, 2022, Lukang Chang Hua

Health literacy and social resilience



Distinguished speakers

- | | | |
|--|--|--|
| William Lai
Vice President, Taiwan | Jui-Yuan Hsueh
Minister of Health and Welfare
Taiwan | MinHo Huang
President, Show Chwan
Health Care System |
| HueiMei Wang
Chang Hua County Mayor | Peter Chang
President, AHLA | Wayne Huang
Chief medical superintendent,
Show Chwan Health Care System |
| Hung-Tsang Yen
Superintendent,
Chang Bing Show Chwan
Memorial Hospital | Kristine Sorensen
President, IHLA | Okun Orkan
Vice President, IHLA |
| Sabrina Kurtz-Rossi
Tufts University School
of Medicine | Carmen C. Tolabing
Vice President, AHLA | Angela Leung
Hong Kong Polytech U
Hong Kong |
| Duong Van Tuyen
Vice President, AHLA | Altyn Aringazina
Caspien International School of
Medicine, Kazakhstan | Padmore Adusei Amoah, PhD
Lingnan University
Hong Kong |
| Sarawut Boonsuk
Deputy Director-General
Department of Health, Thailand | Helmut Brand
Université catholique de Louvain
India | Stephan Van den Broecke
Université catholique de Louvain
Vice President, IUHPE |
| Chao Chin Chao
Superintendent, Kaohsiung
Municipal Gangshan Hospital | Su-Lih Chia
Deputy Director-General
Health Promotion
Administration, Taiwan | Li-Chi Chiang
Vice President,
Taiwan Nurses Association |
| Tai-Yuan Chiu
President, Taiwan Medical
Association | Bikun Chuang
Superintendent, Chu Shang
Show Chwan Hospital | Trần Quốc Cường
Thủ Đức, Vietnam |
| Hiroshi FUKUDA
Graduate School of Medicine
Juntendo University, Japan | Enkhzul Jargal
Global Together, Mongolia | Pham Minh KHUE
Haiphong University of Medicine
and Pharmacy, Vietnam |
| Jürgen M. Pelikan
WHO-CC Health Promotion in
Hospitals and Health Care, Austria | Wachira Pengjuntr
President of Thai Health Literacy
Promotion Association (THLA) | Paras K Pokharel
BP Koirala Institute of Health
Sciences, Nepal |
| Hendrar Prihadi
Semarang city, Indonesia | Chii-Jeng Lin
Chairman, Joint Commission
of Taiwan | Hazreen Abdul Majid
University of Malaysia, Malaysia |
| Padmini Murthy
Professor, NGO representative of American
Medical Women's Association to United Nations | NURJANAH
UDINUS, Indonesia | Wongsa Laohasiriwong
Khon Kaue University, Thailand |
| Enny Rachmani
UDINUS, Indonesia | Dulamsuren Samdan
National Public Health
Association, Mongolia | Chung-Liang Shih
Deputy Minister, Ministry of
Health and Welfare, Taiwan |
| Hyunyoung Deborah Shin
Health & Welfare Committee
Member, National Assembly of
Republic of Korea | Tin Tin Su
Monash University, Malaysia | Yunita D. Suminar
Head of Health Department, Central
Java Province, Semarang |
| Vo Van Thang
Hue University of Medicine
and Pharmacy | LiangMiin Tsai
Superintendent,
Tainan Municipal Hospital | Gaafar J. Uherbelau
Health Minister, Palau |
| Omengkar D. Wally
Ministry of Health, Palau | Yingwei Wang
Hualien TzuChi Hospital
TzuChi University | ChaoChun Wu
Director-General
Health Promotion Administration |
| Chi-Chieh Yang
Superintendent, Show Chwan
Memorial Hospital | Diane Levin-Zamir
Haifa University, Clalit Health, Israel | |

Asia Health Literacy Association, AHLA, is an international professional nonprofit organization which has been established in 2014 (CHE-437.18.205) and registered in the global health hub Geneva Switzerland. The AHLA aims to provide support to all the Members and global communities continuous and effective programs and actions in promotion, coordination, and partnership with local, regional, and global academic, corporate, and administrative stakeholders in Asia Pacific and beyond. The AHLA has established more than 15 AHLA offices in various cities and with more than a hundred international institutional members in 20 plus countries. The AHLA also organizes annual international conference in different cities across Asia, including Haiphong, Ho Chi Minh, Kuala Lumpur, New Taipei, Taichung, Tainan, and Taipei, to disseminate and promote health literacy activities to better serve the communities and societies. The 8th AHLA International Health Literacy Conference will take place in Changhua, Taiwan, October 27-29, 2022.

Contact Information
PHONE: +886-4-7813888 ext. 71650-71653
E-MAIL: showmcm@gmail.com



Advertiser
Ministry of Science and Technology | Ministry of Health and Welfare | Ministry of Foreign Affairs
Bureau of Foreign Trade | Health and Welfare Foundation, Taiwan

CO-HOST ORGANIZATION & INSTITUTION

Show Chwan Memorial Hospital, MJ Health Resource Center, ATLife, TATSI TATIA, CCU CIRAS, ISEE AC, IRCAD TAIWAN, HUNGKUANG UNIVERSITY, UDINUS, PERSAKMI JAWA TENGAH, Taipei Medical University, Université catholique de Louvain, Belgium; University of Haifa School of Public Health, Israel; WHO-CC Health Promotion in Hospitals and Health Care, at Austrian Public Health Institute, Austria; University of Florence, Department of Health Science, Italy; Technical University Munich, Germany; Jagiellonian University Medical College, Krakow, Poland; Prasanna School of Public Health, Manipal Academy of Higher Education, India; University of the Philippines College of Public Health, Philippines; The Hong Kong Polytechnic University, Hong Kong; University of Medicine and Pharmacy, Hue University, Vietnam; Haiphong University of Medicine and Pharmacy, Vietnam; University of Malaysia, Malaysia; Monash University (Malaysia Campus), Malaysia; BP Koirala Institute of Health Sciences, Dharan, Nepal; The University of Sydney, Australia; Mahidol University, Thailand; Soegijapranata Catholic University, Semarang, Indonesia; Taiwan Nurses Association; Thailand Health Literacy Association; NEW PUBLIC HEALTH NGO; THE HONG KONG POLYTECHNIC UNIVERSITY; University Dian Nuswantoro UNIVERSITY OF CUU LONG

Sponsor
Ministry of Science and Technology | Ministry of Foreign Affairs | Health Promotion Administration | Taiwan Medical Association
National Chung Cheng University | TAIWAN BONE BANK CO., LTD. | Eisai CO., LTD. | CON SOU BIOTECH CO., LTD.
Bestgen Biotech Corp.

Distinguished speakers

- | | | |
|--|--|--|
| William Lai
Vice President, Taiwan | Jui-Yuan Hsueh
Minister of Health and Welfare
Taiwan | MinHo Huang
President, Show Chwan
Health Care System |
| HueiMei Wang
Chang Hua County Mayor | Peter Chang
President, AHLA | Wayne Huang
Chief medical superintendent,
Show Chwan Health Care System |
| Hung-Tsang Yen
Superintendent,
Chang Bing Show Chwan
Memorial Hospital | Kristine Sorensen
President, IHLA | Okun Orkan
Vice President, IHLA |
| Sabrina Kurtz-Rossi
Tufts University School
of Medicine | Carmen C. Tolabing
Vice President, AHLA | Angela Leung
Hong Kong Polytech U
Hong Kong |
| Duong Van Tuyen
Vice President, AHLA | Altyn Aringazina
Caspien International School of
Medicine, Kazakhstan | Padmore Adusei Amoah, PhD
Lingnan University
Hong Kong |
| Sarawut Boonsuk
Deputy Director-General
Department of Health, Thailand | Helmut Brand
Manipal High Education Academy
India | Stephan Van den Broecke
Université catholique de Louvain
Vice President, IUHPE |
| Chao Chin Chao
Superintendent, Kaohsiung
Municipal Gangshan Hospital | Su-Lih Chia
Deputy Director-General
Health Promotion
Administration, Taiwan | Li-Chi Chiang
Vice President,
Taiwan Nurses Association |
| Tai-Yuan Chiu
President, Taiwan Medical
Association | Bikun Chuang
Superintendent, Chu Shang
Show Chwan Hospital | Trần Quốc Cường
Thủ Đức, Vietnam |
| Hiroshi FUKUDA
Graduate School of Medicine
Juntendo University, Japan | Enkhzul Jargal
Global Together, Mongolia | Pham Minh KHUE
Haiphong University of Medicine
and Pharmacy, Vietnam |
| Jürgen M. Pelikan
WHO-CC Health Promotion in
Hospitals and Health Care, Austria | Wachira Pengjuntr
President of Thai Health Literacy
Promotion Association (THLA) | Paras K Pokharel
BP Koirala Institute of Health
Sciences, Nepal |
| Hendrar Prihadi
Semarang city, Indonesia | Chii-Jeng Lin
Chairman, Joint Commission
of Taiwan | Hazreen Abdul Majid
University of Malaysia, Malaysia |
| Padmini Murthy
Professor, NGO representative of American
Medical Women's Association to United Nations | NURJANAH
UDINUS, Indonesia | Wongsa Laohasiriwong
Khon Kaue University, Thailand |
| Enny Rachmani
UDINUS, Indonesia | Dulamsuren Samdan
National Public Health
Association, Mongolia | Chung-Liang Shih
Deputy Minister, Ministry of
Health and Welfare, Taiwan |
| Hyunyoung Deborah Shin
Health & Welfare Committee
Member, National Assembly of
Republic of Korea | Tin Tin Su
Monash University, Malaysia | Yunita D. Suminar
Head of Health Department, Central
Java Province, Semarang |
| Vo Van Thang
Hue University of Medicine
and Pharmacy | LiangMiin Tsai
Superintendent,
Tainan Municipal Hospital | Gaafar J. Uherbelau
Health Minister, Palau |
| Omengkar D. Wally
Ministry of Health, Palau | Yingwei Wang
Hualien TzuChi Hospital
TzuChi University | ChaoChun Wu
Director-General
Health Promotion Administration |
| Chi-Chieh Yang
Superintendent, Show Chwan
Memorial Hospital | Diane Levin-Zamir
Haifa University, Clalit Health, Israel | |

亞洲健康識能學會Asian Health Literacy Association, AHLA, 由亞洲與國內多所大學與醫學中心與國內健康促進、健康義務、健康與福利、與健康傳播重要專家，結合亞太國家公共衛生、醫療、教育、心理學、社會學專家共同組成。於2014年正式成立於瑞士日內瓦的國際非政府組織(CHE-437.18.205)；2018年於倫敦設立歐洲辦公室(No.11519376)，於亞洲成立超過12個AHLA辦公室，目前於超過20個國家，擁有100個以上國際機構會員，致力於整合亞洲地區和各國健康識能的推動，建立亞洲各國健康識能資料庫，分析比較差異，藉由健康識能的提昇以改善醫療衛生效能，鼓勵各國加強健康識能的推廣與立法，促進各國人民健康持續改善與提升。

2022年10月27-29日於台灣彰化舉行第8屆國際會議
網站: <https://ahla-conference.com/2022/>

聯絡資訊
聯絡電話: +886-4-7813888 轉 71650-71653 國際專業發展部
E-MAIL: showmcm@gmail.com

歡迎廠商參展，會議攤位請電洽

- 指導單位
科技部 | 衛生福利部 | 外交部 | 國民健康署 | 經濟部國際貿易局 | 財團法人厚生基金會
- 舉辦單位
亞洲健康識能學會國際健康促進與教育聯盟 | 彰化縣政府 | 彰化縣衛生局 | 南投縣衛生局 | 台南市衛生局 | 高雄衛生局 | 臺北醫學大學 | 中正獨立大學 | 國立中興大學 | 中國醫藥大學附設醫院 | 中山醫學大學附設醫院 | 弘光科技大學 | 中華民國民眾安全聯合會 | 漢譯基金會 | 財團法人財團防衛基金會 | 臺灣健康城市聯盟 | 社團法人台灣健康識能學會 | 臺灣健康識能學會 | 彰化秀傳紀念醫院 | 彰濱秀傳紀念醫院 | 臺南市立醫院 | 高雄市立四山醫院 | 竹山秀傳醫院 | 秀傳亞洲遠征醫療中心 | 綠島教育基金會 | 國立彰化師範大學 | 建國科技大學 | 大華大學 | 明道大學 | 臺灣護理學會 | Thailand Health Literacy Association | NEW PUBLIC HEALTH NGO
THE HONG KONG POLYTECHNIC UNIVERSITY | Universitas Dian Nuswantoro | UNIVERSITY OF CUU LONG
- 贊助單位
科技部 | 外交部 | 國民健康署 | 醫事公會全國聯合會 | 國立中正大學 | 台灣產房股份有限公司 | 衛策製藥股份有限公司 | 康碩生技有限公司 | 倍晶生技股份有限公司



掃描QRCode
大會網站 | 投稿上傳

2022 10.27.Thur - 10.29.Sat
第八屆亞洲健康識能國際會議
8th AHLA International Conference

 秀傳醫療財團法人彰濱秀傳紀念醫院
Chang Bing Show Chwan Memorial Hospital

 A·H·L·A
Asian Health Literacy Association

| 開幕敬邀 |

謹訂於2022年10月27日(四)上午9點於彰濱秀傳紀念醫院1F國際會議廳舉辦

2022年 第八屆亞洲健康識能國際會議開幕儀式

此研討會之目的為推動並建立亞洲各國衛生識能合作研究，
藉由健康識能的提昇以改善醫療衛生並重視健康識能的重要性。

~ 誠摯邀請您蒞臨指導 ~

 秀傳醫療體系
Show Chwan Health Care System

總 裁 黃明和
執 行 長 黃靖媛
營 運 長 陳秀珠
國 際 長 張武修
中 部 院 區 總 院 長 黃士維
彰 濱 院 區 院 長 顏鴻章

敬邀

- | 指導單位 |   科技部
Ministry of Science and Technology  中華民國外交部
REPUBLIC OF CHINA/TAIWAN  衛生福利部
國民健康署  財團法人厚生基金會
- | 贊助單位 |  經濟部國際貿易局
Bureau of Foreign Trade  中華民國醫師公會全國聯合會
Taiwan Medical Association  Eisai  Bestgen
藥品生技股份有限公司  臺灣骨庫
TAIWAN BONE BANK
- | 主辦單位 |  秀傳醫療財團法人彰濱秀傳紀念醫院
Chang Bing Show Chwan Memorial Hospital  A·H·L·A
ASIAN HEALTH LITERACY ASSOCIATION
- | 協辦單位 | 亞洲健康識能學會暨國際健康促進與教育聯盟、彰化縣政府、彰化縣衛生局、南投縣衛生局、台南市衛生局、高雄市衛生局、
臺北醫學大學、國立中正大學、國立中興大學、中國醫藥大學附設醫院、中山醫學大學附設醫院、弘光科技大學、
中華民國醫師公會全國聯合會、演譯基金會、財團法人腎臟病防治基金會、臺灣健康城市聯盟、社團法人台灣健康醫院學會、
臺灣健康管理學會、彰化秀傳紀念醫院、臺南市立醫院、高雄市立岡山醫院、竹山秀傳醫院、秀傳亞洲遠距微創手術中心、
錫卿教育基金會、國立彰化師範大學、建國科技大學、大葉大學、明道大學、中台科技大學、臺灣護理學會、
Thailand Health Literacy Association、NEW PUBLIC HEALTH NGO、THE HONG KONG POLYTECHNIC UNIVERSITY、
Universitas Dian Nuswantoro、UNIVERSITY OF CUU LONG

 秀傳醫療財團法人彰濱秀傳紀念醫院
Chang Bing Show Chwan Memorial Hospital

活動會場：彰濱秀傳紀念醫院 醫療大樓 1F 國際會議廳
地 址：彰化縣鹿港鎮鹿工路6號
聯絡電話：04-7813888轉71650-71653 (國際事業發展部)

Tufts University School of Medicine

wishes congratulations and success to 8th AHLA Conference

presenters and participants and \$35 US discount to attend



Global Health Literacy Leadership Institute

<http://go.tufts.edu/healthliteracyleadership>

Overview: This online course of study is for professionals and students looking to apply health literacy to transform healthcare and public health across the globe.

Logistics: Each module contains 90 minutes of pre-work and 90 minutes of live instruction via Zoom. Participants may attend all 4 modules or select individual modules by topic.

Cost: Cost per module is \$35 US discount for AHLA 8th International Conference presenters and participants. All others cost per module is \$85 US.

Schedule:

Topic	Course work via Canvas	Live session via Zoom (choose one per module)
Module 1: Foundations for Health Literacy Study and Practice	3 - 10 November 2022	Thurs, 10 Nov 2022; 9:00 – 10:30 (CST) OR Fri, 11 Nov 10:30 – 12:00 (EST)

Module 2: Advancing Health Literacy Through Teaching and Training	10 - 17 November 2022	Thurs, 17 Nov 2022; 9:00 – 10:30 (CST) OR Fri, 18 Nov 2022; 10:30 – 12:00 (EST)
Module 3: Research and Evaluation for Health Literacy Improvement	1 - 8 December 2022	Thurs, 8 Dec 2022; 9:00 – 10:30 (CST) OR Fri, 9 Dec 2022; 10:30 – 12:00 (EST)
Module 4: Leadership and Emerging Health Literacy Interventions	8 - 15 December 2022	Thurs, 15 Dec 2022; 9:00 – 10:30 (CST) OR Fri, 16 Dec 2022; 10:30 – 12:00 (EST)

Learning Objectives

- **Outline a health literacy program for your community or organization based on health literacy research and practitioner informed strategies**
- **Review the latest health literacy research and best practices for application in your own work and evaluation methods for program improvement**
- **Demonstrate a peer review process and how an interdisciplinary and multinational group of professionals and students can learn from each other to improve their practice**
- **Build leadership skills and make lasting connections to colleagues applying health literacy strategies in different sector, context, and countries around the world**

Course Directors

Sabrina Kurtz-Rossi, MEd (USA), Assistant Professor, Public Health & Community Medicine, Tufts University School of Medicine, designs training programs that are tailored to meet the needs of all participants.



Kristine Sorensen, PhD (DK), Founder of the Global Health Literacy Academy; Lecturer, Bielefeld University; President, International Health Literacy Association.



Peter Chang, MD (TWN), Adjunct Assistant Professor, Public Health & Community Medicine, Tufts University School of Medicine; President, Asian Health Literacy Association.



Patrons



Center for Global Public Health

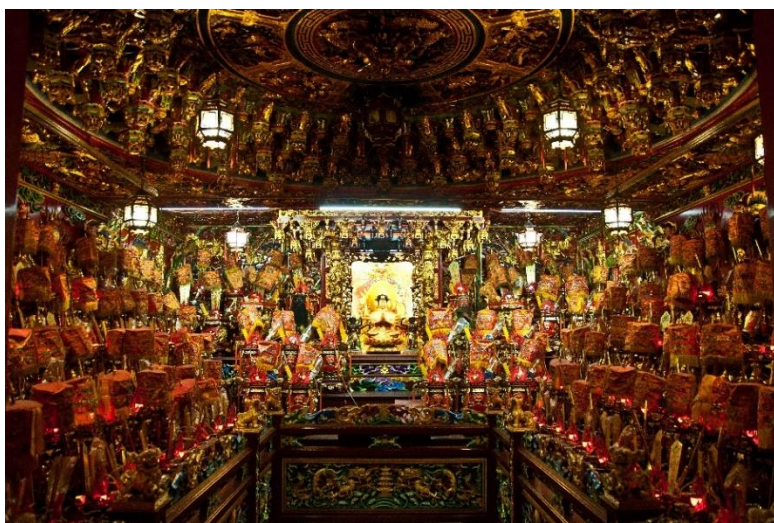
For more information and to register

Global Health Literacy Leadership Institute_

<http://go.tufts.edu/healthliteracyleadership>

Cultural and tour events

Lukang and Changhua (photos derived from google open webpages and [台灣玻璃館臉書粉絲團](#))







仲夏遊參山
陣陣看九天

8.20 六

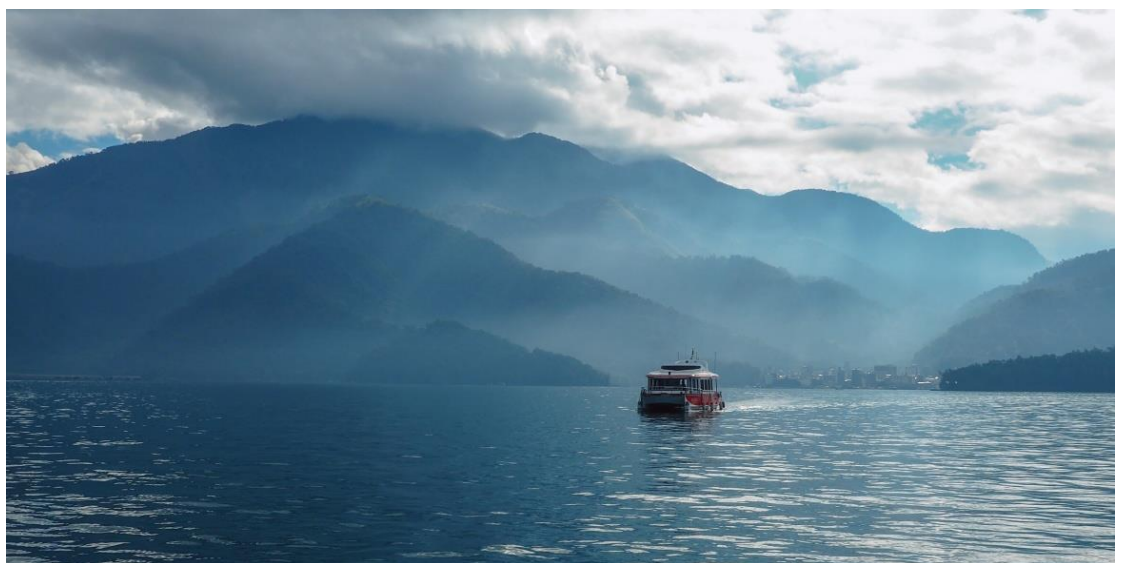
演出時間 ▶ 16:00-17:30
參山市集 ▶ 10:00-17:30

鹿港公會堂前廣場
彰化縣鹿港鎮埔頭街72號





Sun Moon Lake



She Tou Park (Khe-thâu)



Jude Mountain (3952 meter)

