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Why There Is a Need to Promote Media Literacy in the Use of Medicines and Health Products in Thai Older Adults?

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Abstract. This cross-sectional study aimed to explore levels of health literacy and factors related to health literacy in choosing medicines and health products among Thai older adults who use smartphones. The study was carried out during March to November 2021 among Senior Schools in the North-eastern of Thailand. The analysing with descriptive statistics Chi-square test and the multiple logistic regression were used to test the association between variables**.** The results showed that most participants have a low level of health literacy in medication and health products usage**.** The risking factors that affected to a low-level health literacy were living in a rural area and ability to use a smartphone. Therefore, there should be knowledge enhancement for the older adults with smartphone. Especially, searching information skill and choosing the qualitative media before deciding to buy and use healthy drugs or health products.

Keywords. Health literacy, Medication and Health Products use, Thai Older adults, The senior schools

1. Introduction

Thailand has the second highest number of older adult people in ASEAN countries which is 18% of total population [1], and most (18.9%) live in the Northeastern region [2]. An occurring burden on medical expenses from diseases and health problems, that leads to the reduction of cognitive and auditory ability, psychosocial factors, understanding of health literacy [3] and application to older adults' health care [4].

The survey found that the older adults used the internet only on their smartphones approximately 10 hours a day in communication, information exchange and chatting at 82.5% via social media such as Line and Facebook, while 69.0% in searching for information, and 67.5% in reading books, news, and online articles [4]. About 47% of the participants were not confident that the information appearing on the Internet is reliable and still lacked the skills in inspecting the products before deciding to buy online

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products [5]. This is a key component of health literacy (HL) in enhancing positive health outcomes both at the individual level and community level [6], which could reduce the hospitalization and mortality rates, the risk of chronic non-communicable diseases and results in lower health-related costs and have the capability in self-care for better health and well-being [7] Therefore, there was a study on the levels of HL in using medicines and health products and the factors related to health literacy to be used as information for enhancing HL and skills in seeking accurate information for making decisions in using drugs and health products in order to take care of own health appropriately with their health status.

2. Methods

A cross-sectional study using a face-to-face interview questionnaire in the older adults aged 60 years and older who were the students in the 13 Senior Schools in the Northeastern of Thailand which were selected by the stratified random sampling method. The sample calculation used Cochran's formula and included 20% uncompleted responses that were calculated. Therefore, the total participants are 1,285 cases who were recruited from 1st March to 30th November 2021.

The structured questionnaire consists of a general data collection of 13 questions and 60 questionnaires on health literacy. The health literacy assessment questionnaires about the usage of medications and health products developed by the researcher consist of 6 parts (six components of the V-shape model by the Department of Health) [8] and 10 items per each, totaling 60 items. The questions were answered by rating scale of 5 levels with a total ranging from 60 - 300 points. The content validity of the health literacy assessment questionnaire was examined by using the formula of Rovielli and Hambleton, 1977 by 5 experts and found that the IOC value was greater than 0.5 for all 60 items. We pre-tested and edited it three times. And finally, it had a Cronbach's alpha Reliability coefficient of 0.96.

This research was reviewed and approved by the Mahasarakham University Human Research Ethics Committee (Reference NO. 077/2564), based on the Declaration of Helsinki. Written informed consent was obtained from all patients, or their relatives.

The data were analyzed with descriptive statistics and performed to factor analysis by Pearson's chi-squared test and the Multiple logistic regression. All data were analyzed by using R-studio program. The test had a statistically significant with $p\text{-}value < .05$.

3. Results

Of the 1,285 participants, the mean age was 62.58±5.96 years old (60-87 years). 93.36% did not exceed education in grade six. 97.31% lived in rural areas. And 77.67% had chronic diseases. Most were taken care by young carers within their own family. 61.23% of them lacked of supporting from medical professionals. 79.92% had a mobile phone with internet access, while 41.21% could not access to the internet.

Most of the participants had a low level of HL of drug and health product usage in all components, with the highest level of knowledge and understanding; the decision-making skills, while the lowest was self-management in drug and health product usage respectively. Multivariate analysis found that living in rural and ability to use

smartphones were the risking factors that caused to low health literacy in selecting drugs and health products. (as shown in Table 1)

Table 1. : The level of HL in medications and health product use by V – shape model and factors related low HL with multiple logistic regression; backward stepwise: (N= 1,285)

HL components	Low(N/%)	Medium(N%)	High(N/%)	Mean (S.D.)	Level of HL**
1. access to information and services	1585(99.12)	12 (0.75)	2(0.13)	23.83 ± 7.32	Low
2.Knowledge and understanding	543 (33.96)	885 (55.35)	171(10.69)	24.44 ± 7.78	Low
3. communication skills	893 (55.85)	691(43.21)	15(0.94)	22.90 ± 7.37	Low
4. decision-making skills	792(49.53)	633(39.59)	174(10.88)	23.85 ± 7.58	Low
5. Media literacy	862(53.91)	624(39.02)	113(7.07)	23.87 ± 7.55	Low
6. Self-management	896 (56.04)	689(43.09)	14(0.88)	22.31 ± 7.03	Low
Total (300 pts.)	**998(62.41)**	**580(36.27)**	**21(1.31)**	**145.20 37.13**	**Low**
Factor		OR_{crude} (95%CI)	$OR_{adjusted}$ (95%CI)		*p* value [a]
Living (rural Vs urban)		2.70(1.14,6.25)	2.77(1.18,6.67)		.025*
Smartphone Using Capability (able to use *vs* unable)		1.613(1.20,2.13)	1.61(1.20,2.17)		.001*

* HL scores in each components=50 points , ****Level of Health Literacy 'Low' :** ≤50%**, 'Moderate':** 50-74% and **'High'** : ≥75%) [a]Wald's test, * Significant ($p < .05$), ** Significant ($p < .01$)

4. Discussion

The results confirmed that the older adults who had smartphones had a low level of HL in using medications and health products in all aspects [9-11] which affects receiving and using information, accessing various health services, lacking ability to take care of themselves [12] including less ability to remember and easy to forget things [13]. A low level of education affects the ability to search and seek information to understanding and evaluating the correctness of information and decision-making power to use medicines and health products [14]. Especially if those older adults have equipment and have access to the Internet, but do not have a close advisor [15] or live in a rural area which cloud lead to a lacking access to health resources from health personnel [16]. Even though there were many studies [17-19] found that people with smartphones usually search information and treat themselves appropriately.[15] This study also found that although Thai older adults were able to use smartphones fluently, but still had a low HL in selecting medicines and health products. Especially frequently sharing any exaggerated or unreliable information or fake advertising they found in the internet to each other with their trust and goodwill [20]. And the elderly with smartphones can access a variety of information without screening for accuracy. Therefore, they made decisions to buy them for health increasingly, especially in the era of the COVID-19 situation that more relied on technology [21]. This situation caused to risk of lower HL and poor health.

5. Conclusions

The finding supports that although those elderly people can use smartphones to find information widely and variety in the social media world. But if the information is incorrect and they had low Hl. It can negatively affect their health. The amendments should help access accurate health knowledge and up-to-date references which will be an important factor in improving their health outcomes.

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