

## Factors related to Health Literacy in Illness Prevention among Buriram Rajabhat University Students

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### KEYWORDS

Health Literacy, Illness, Prevention

### ABSTRACT

A health science student is a health personnel with a role in caring, promoting, preventing, and maintaining health, thus they must be literate and knowledgeable about health in order for people to have a good quality of life. The aims of this study were to assess the level of health literacy in illness prevention and to study the relationship between health literacy and illness prevention among nursing students, Faculty of Nursing, and students from the Department of Public Health, Faculty of Science, Buriram Rajabhat University. The data were analyzed using mean, percentage, standard deviation, and Pearson correlation coefficient. The results revealed that the overall health literacy in illness prevention of nursing students (average score of 82.46 percent,  $\bar{x}$  =4.12, S.D.= 0.7, very good level) was higher than the public health science students (average score of 79.04 percent,  $\bar{x}$  =3.81, S.D.= 0.72, moderate level). When considering each aspect, it was found that health literacy of most nursing students was at a very good level while for the aspect of changing self-health behavior and the aspect of transmission of information in health care were at moderate levels. As for the health literacy of the public health science students, most of them were at a moderate level while the comprehension of adequate information and health services was at a very good level. In addition, health literacy was positively correlated with illness prevention ( $r=0.248$ ) which indicated that good health literacy had a positive effect on preventing illness.

### 1. Introduction

Global health problems tend to increase. Part of it comes from a lack of knowledge about health, especially the basic health knowledge causing inability to take care of their own health properly. Low literacy levels directly and indirectly affect people's health status.

However, if they have sufficient basic health knowledge, it will affect their health, for example, having good health conditions will reduce the rate of illness, reduce the admission rate in-hospital, and reduce health costs. Health literacy is therefore an important issue around the world in the 21st century (Tanasugran, 2017). Assessment of public health literacy on 3 E 2 S (food, exercise, emotions, non-smoking, non-drinking alcohol) in the age group of 15 years and over found that most of them had insufficient health literacy which can be accounted for 59.4 percent, followed by 39.0 percent of having a moderate level of health literacy and only 1.65 percent of having a very good health literacy (Kaeodumkoeng & Junhasobhaga, 2021).

Nursing students, Faculty of Nursing, and students from the Department of Public Health, Faculty of Science, Buriram Rajabhat University will be health personnel who have a role in caring, promoting, preventing and maintaining health that is important in the health care of people in the future as in line with the 20-year National Strategy (2017-2036), Strategy 3 on the development and enhancement of human resource potential in order to enhance the quality of Rajabhat University students for the 21st century to meet the needs of the community that consists of 3R 7C, which is the goal of teaching and learning in the current health science curriculum and requires graduates to have complete 21st century skills. Hence, health care providers are considered to be extremely important individuals to have excellent health literacy qualifications who can present information and communicate health issues in ways that enable service recipients to understand and be able to better act according to the information received (Roma et al., 2020). Thus, Faculty of Nursing Buriram Rajabhat University studied factors related to health literacy in preventing illness among Buriram Rajabhat University students to be used for improving the teaching and learning process, preparing and developing potential for students in the health science field of every year level, being aware of the importance of health literacy for their own health care, and having the capacity to take care of public health (Nutbeam, 2000). which has a holistic effect on the health of people in the community.

## Research Objectives

1. To assess the level of health literacy in illness prevention among nursing students, Faculty of Nursing, and students from the Department of Public Health, Faculty of Science Buriram Rajabhat University
2. To study the relationship between health literacy and illness prevention of nursing students, Faculty of Nursing, and students from the Department of Public Health, Faculty of Science, Buriram Rajabhat University

## Research Conceptual Framework

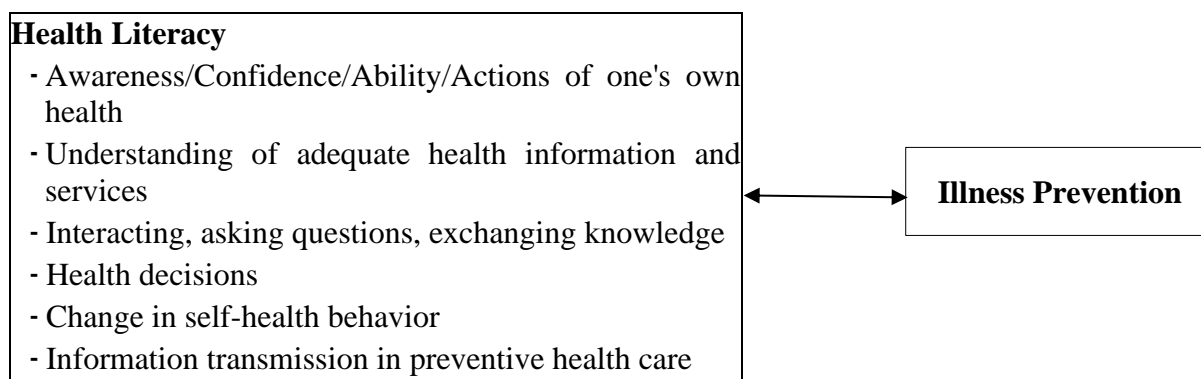


Figure 1: Conceptual framework Research Ethics

This study was approved by the Human Research Ethics Committee, Buriram Rajabhat University, License number 9/2566, Date of permission 23 February 2023. Before conducting the study, a document was prepared to clarify the objectives, methods and duration of the study, data collection procedures, asking for cooperation in collecting the data along with clarifying the right to accept or refuse to participate in this study. Moreover, acceptance and rejection will have no effect per sample and the information obtained will be treated as confidential.

## 2. Methodology

**This study was a survey study with the following research methodology:**

**Population:** The population of this study was 493 students studying in the second semester of academic year 2012 which can be divided into 155 first to fourth year nursing students, Faculty of Nursing, Buriram Rajabhat University, consisting of 42 first year students, 44 second year students, 43 third year students, and 26 fourth year students, and 338 first to fourth year students from the Department of Public Health, Faculty of Science, Buriram Rajabhat University. Regarding their study years, they consisted of 106 first year students, 87 second year students, 82 third year students, and 63 fourth year students. The criteria in selecting the population were that they were students who voluntarily provided information, were not a sample of pilot study, and had no sickness at the time of data collection.

**Sample:** The sample of this study consisted of 262 students. The sample size was determined by calculated from Yamane's sample size determination formula with the confidence level of 95%, 5% of the proportion of error from the sampling ( $e = 0.05$ ), and 15% of the margin of error. Then, multi-stage sampling was performed by calculating the proportion of samples from two groups as illustrated in Table 1.

Table 1. Calculating the proportion of samples from two groups

Year	Nursing		Public Health	
	Population	Sample	Population	Sample
First	42	42	106	78

Second	44	29	87	38
Third	43	27	82	24
Fourth	26	13	63	11
<b>Total</b>	<b>155</b>	<b>111</b>	<b>338</b>	<b>151</b>

Research Instrument: The instrument used to collect the data was a health literacy questionnaire developed by the Division of Health Education, Ministry of Public Health (Intarakamhang, 2017) It consisted of eight items of personal information and 55 items of health literacy in illness prevention. The items of health literacy in illness prevention included 13 items of understanding adequate health information and services, 14 items of communication, access to health information and services, nine items of monitoring health information and decisions, 10 items of making appropriate self-health decisions and nine items of information transmission in preventive health care. The questionnaire was in the form of 5-point rating scale in which 5 means strongly agree, 4 means agree, 3 means neutral, 2 means disagree, and 1 means strongly disagree. The content validity of the questionnaire was checked with Index of Item Objective Congruence (IOC) equal to 0.80 and was piloted with 50 nursing students from Western Buriram University, who had a similar characteristic to the population in order to analyze the reliability and validity which had Cronbach's alpha coefficient of 0.8.

Data Collection Procedures: The researcher explained to the sample the research method, objectives and research details. The students who participated in the research has the right to cancel their participation at any time without any impact. The presentation of the data will be presented as an overview of all samples and the information will be kept confidential. The data collection procedures were as follows:

1. Explain to the sample the objectives of the research, the method of conducting the research, and the right to cancel participation at any time without any impact
2. Clarify the questionnaire response in which the researcher required students to answer the online questionnaire through Google Form

Data Analysis: The data were analyzed using mean, percentage, and standard deviation. In addition, to find the relationship between illness prevention and health literacy, the correlation was analyzed with the Pearson product-moment correlation coefficient at the significance level of 0.01 by considering the correlation coefficient using the Hinkle's criterion (Hinkle, Wiersma, & Jurs, 2003)

## Findings

The sample group consisted of 262 students in total which was divided into 247 females (94.27 percent) and 15 males (5.73 percent). Most of them were from Department of Public Health (142 students, 54.20 percent), and 45.80 percent were studying in the first year. When there was a slight illness, they buy modern medicine to take care of themselves (70.6 percent), followed by not taking any medicine (11.1 percent), respectively. In addition, most of them had a behavior of not exercising/seldom exercising (49.2 percent) as depicted in Table 2.

Table 2. Number and percentage of general information of nursing students (n=262)

General Information	Nursing Students	Public Health	Total
Amount (Percentage)	Amount (Percentage)	Amount (Percentage)	Amount
<b>Gender</b>			
Male	6 (5.00)	9 (6.34)	15 (5.73)
Female	114 (95.00)	133 (93.66)	247 (94.27)
	120 (45.80)	142 (54.20)	262 (100)
<b>Year Level</b>			
First Year	42 (35.00)	78 (65.00)	120 (45.80)

Second Year	29 (43.28)	38 (56.72)	67 (25.60)
Third Year	27 (52.94)	24 (47.06)	51 (19.50)
Fourth Year	13 (54.17)	11 (45.83)	24 (9.20)
<b>How do you take care of yourself when you have a slight illness?</b>			
Use modern medicine			185 (70.60)
Use traditional			0
Use decoction/pot medicine /herbs/bolus/wood root medicine			0
Not taking any			29 (11.10)
Receive treatment at a clinic nearby			25 (9.50)
Receive treatment at a public health facility			23 (8.80)
Receive treatment at a private health facility			0
Other			0
<b>You are at risk for chronic non-communicable diseases such as diabetes, heart disease,</b>			

From the table 1, it was found that Health literacy in preventing illness among nursing students, Faculty of Nursing (Average score of 82.46 percent,  $\bar{x}$  =4.12, S.D.= 0.7, very good level) overall was higher than public health sciences students, Faculty of Science (Average score of

79.04 percent,  $\bar{x}$  =3.81, S.D.= 0.72, moderate level). When considering each aspect, it was found that health literacy of most nursing students was at a very good level except for the aspect of changing self-health behavior (79.80 percent) and the aspect of transmission of information in health care (78.00 percent) which were at moderate levels. As for the health literacy of the public health science students, most of them were at a moderate level except for the comprehension of adequate information and health services (84.30 percent) and interacting, asking questions, and exchanging knowledge (80.12 percent) which were at a very good level. The details were presented in Table 3.

Table 3. Percentage, mean, standard deviation reflecting nursing students' level of health literacy in illness prevention

Aspect	Nursing Students				Public Health Students			
	Score	Mean	SD	Health Literacy Level	Score	Mean	SD	Category
Aspect 1 Awareness/Confidence/Ability/Actions of one's own health	84.0	4.20	0.73	Very Good	78.90	3.94	0.76	Moderate
Aspect 2: Adequate Health Information and Services	86.00	4.31	0.69	Very Good	84.30	4.16	0.72	Very Good
Aspect 3: Interacting, Asking Questions, Exchanging Knowledge	82.00	4.09	0.77	Very Good	80.12	3.98	0.73	Very Good
Aspect 4: Health Decisions	85.00	4.26	0.70	Very Good	78.90	3.90	0.77	Moderate
Aspect 5: Change in Self-Health Behavior	79.80	3.98	0.78	Moderate	77.00	3.50	0.69	Moderate
Aspect 6: Information Transmission in Preventive Health Care	78.00	3.90	0.77	Moderate	75.02	3.43	0.68	Moderate
Overall	82.46	4.12	0.74	Very Good	79.04	3.81	0.72	Moderate

(Very good level is the average score of  $\geq 80\%$ , moderate level is the average score of 61-79, not good level is the average score of  $\leq 60\%$ )

The relationship between health literacy and illness prevention revealed that health literacy had a positive correlation with illness prevention. To elaborate, if the nursing students, Faculty of Nursing, and the students from the Department of Public Health, Faculty of Science, Buriram Rajabhat University have a high health literacy, it will have a positive effect on the prevention of illness as demonstrated in Table 4.

Table 4. Relationship between health literacy and illness prevention among nursing students

	<b>Correlation Co</b>	<b>efficient (r)</b>
	Health Literacy	Illness Prevention
Health Literacy	-	0.248**
Illness Prevention	-	-

\*\*p <.01

### Discussion

Previous studies on health literacy often focus on the abilities of service recipients rather than the role of health personnel. The general public can become health literate by utilizing the skills necessary to acquire, understand, assess, communicate and use of health information (Oratai Phongkaew & Latdaphon Phutta, 2024). This study found that nursing students had health literacy about changing their own health behaviors and the aspect of information transmission in preventive health care at a moderate level, and students from the Department of Public Health had health literacy in terms of perception/confidence/ability/action of their own health decision-making on self-health behavior change ( Namarak, Chankham & Buajaroen, 2024), and the aspect of information transmission in preventive health care was at a moderate level. This is in line with the study of Tibwongsa and Thongnopakun (2018 ) who found that health literacy, literacy component and comprehension was high. However, it was found that health behaviors were at an inappropriate level. The students from both groups would be health personnel who had a role in taking care, promoting, preventing, and maintaining health that was important in the future health care of people. This is also consistent with the study of Tiller, Herzog, Kluttig and Haerting (2015) who mentioned that information presented and communicated in a way that made the service recipients understand would enable them to act according to the received information better. Therefore, the skills in the aforementioned areas should be developed at a very good level which can increase the safety of service recipients as well. Moreover, health literacy is an ever-evolving need because disease conditions have changed with the times ( Kहुhamanee, Rodjarkpai & Maharachpong, 2020). Therefore, health science

students should promote and develop their own and public health literacy in line with WHO (1988 ) so that people can access, understand and use health information in their daily life correctly and appropriately.

### 3. Conclusion and future scope

Nursing students, Faculty of Nursing and students from the Department of Public Health, Faculty of Science, Buriram Rajabhat University had overall health literacy at very good and moderate levels. In addition, health literacy was positively correlated with illness prevention, that is, having good illness prevention would result from having good health literacy.

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