Health Literacy and Related Factors of the Residents in Dong Nai Province, Vietnam

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Abstract

Introduction: *Health literacy concerns everyone involved in health promotion and protection, disease prevention and early screening, health care and maintenance, and policymaking. Healthcare is the primary and first element in evaluating Health Literacy. Health Literacy assessment in general and in the healthcare field, particularly in the community in Vietnam, is still limited, especially in the South, Vietnam.*

Objective: *This study determined the rate of people in Trang Bom Town, Trang Bom district, Dong Nai province in 2019 with sufficient health literacy and related factors.*

Methodology: *Cross-sectional descriptive study surveyed 356 permanent residents in Trang Bom town during the study by questionnaires HLS-Asia.*

Result: *The rate of having enough Health Literacy in health care in the study is 48.0%. The recorded healthcare-related factors are birth, age, education level, occupation, number of communication channels used to access medical information, and frequency of periodic health checkups.*

Conclusion: *Assessing a culture of health in the community is essential. In particular, the health care factor is fundamental and necessary for higher levels of Health Literacy. The research results are a reference database for other regions and the basis for developing future health policies and interventions to minimize adverse effects due to Limited-induced Health Literacy.*

Keywords: *Health Literacy, Health Education, HLS-Asia-Q*

I. Introduction

As a term first proposed in the 1970s, health literacy concerns everyone involved in health promotion and protection, disease prevention and early screening, health care and maintenance, and policymaking [1]. Health literacy skills are needed for dialogue and discussion, reading health information, interpreting charts, making decisions on health or environmental issues. Some factors may influence an individual's health literacy, including living in poverty, education, race/ethnicity, age, and disability.

With a deeper understanding of health literacy in academic circles, more and more researchers find that a lack of health literacy can cause some adverse effects for individuals and society. Low literacy is associated with a variety of adverse health outcomes, including increased mortality, hospitalization, and in some cases, more inadequate control of chronic health conditions [2]. Additionally, limited health literacy impacts the prevention of diseases, the health behavior, the taking of patients' history, and the interpretation of diagnoses [3]. Knowing little about preventive care, people with low health literacy tend to use more medicines and more expensive healthcare services, including hospitalization and emergency services [4].

In Vietnam, health literacy focus on intervention in schools is a valuable strategy to improve students' health awareness [5], the nature of maternal health literacy [6], and health literacy in older adults [7]. This study will be focused on health literacy and related factor's effect.

II.   Methodology

Studying Design: this study applied the cross-sectional study.

Participants: all residents live in Trang Bom Town, Trang Bom District, Dong Nai Province, Vietnam in 2019.

Including criteria:
-       Residents living in Trang Bom Town, Trang Bom District, Dong Nai Province, Vietnam
-       Above eighteen years old
-       Volunteer to join the study.

Excluding criteria:
-       Represent over three times for researching.
-       Residents can not answer the question due to healthy and mental problems.
-       Residents can not complete the health literacy survey, the European health literacy questionnaire (HLS-EU-Q47).

Research instruments: this study applied the health literacy survey tool European health literacy questionnaire (HLS-EU-Q47) for the public in several Asian countries [8]. The questionnaire contained 47 items measuring health literacy rated on a 4-point Likert scale (1 = very difficult, 2 = difficult, 3 = easy, and 4 = very easy), with a possible lowest mean score of 1 and a possible highest mean score of 4. The indices for health literacy were standardized to unified metrics from 0 to 50 using the formula: *Index = (mean – 1)* *(*50/3*). In this paper, the range of index from 0 to 33 means no health literacy, and range of index from 34 to 50 means health literacy.

Data analysis

The data were input by the Epidata version 3.1 software and analyze by the Stata version 14 software.

Ethical Consideration

After we clearly explained the study's objectives, the participants voluntarily signed the consent form to participate in the study. We ensured that participants were not affected by any benefits in their work.

III. Results

The study conducted a survey on 356 permanent residents in Trang Bom Town, Trang Bom district, Dong Nai province through face-to-face to give questionnaire from April to the end of May 2019.

Socio-Demographic Characteristics

      The percentage of men in the study is higher than that of women, 58.2% versus 41.9%. The age group "from 25 to 34 years old" accounts for 30.9% of the research sample, the age group "from 35 to 44 years old" and the age group "from 45 to 54 years old" account for the same percentage of 20.8% compared to 19.4%. The education level of the study sample is mainly from high school or higher with 72.5%, with 03 cases with Intermediate level and 01 cases of literacy. Subject's occupation is mainly in "Technology, engineering" with 26.1%, followed by "Business, consulting, finance, management" with a 20.5% sample rate. Working in "Education" is 14.6%, and in the field of "Health," it is 2.5%.

Health literacy

Table 1. Health literacy Score (n= 356)

	Mean	SD	Maximum	Minimum
Health literacy Score	31.72	8.81	50	0

The average score of health literature in health care is 31.98 ± 8.26 points, recognizing that a few cases that do not meet any criteria in healthcare evaluation with the score are zero.

Table 2. Relationship between the Health Literacy and Soci Demographic Characteristic (n= 356)

Soci Demographic Characteristic	Health Literacy		p	PR confidence interval 95%
	Yes (%)	No (%)		
Gender				
Male	93 (44,9)	114 (55,1)	0,164	0,86 (0,69 – 1,06)
Female	78 (52,4)	71 (47,6)		1
Age				
18 – 24	31 (60,8)	20 (39,2)		1
25 – 34	54 (49,1)	56 (50,9)	0,151	0,81 (0,60 – 1,08)
35 – 44	36 (48,7)	38 (51,3)	0,175	0,80 (0,58 – 1,10)
45 – 54	31 (44,9)	38 (55,1)	0,083	0,74 (0,52 – 1,04)
≥ 55	19 (36,5)	33 (63,5)	**0,018**	**0,60 (0,39 – 0,92)**

Chi-Square Test

The result showed that participants over 55 years old got health literacy lower than other age groups.

Table 3. Relationship among the Health Literacy, Education and Professional **(n= 356)**

| Characteristic | Health Literacy | | p | PR |
	Yes (%)	No (%)		confidence interval 95%
Education			*	
Primary	7 (29,2)	17 (70,8)		1
Secondary	26 (37,1)	44 (62,9)	0,495	1,27 (0,64 – 2,55)
Highschool	55 (43,3)	72 (56,7)	0,237	1,48 (0,77 – 2,86)
University	80 (61,1)	51 (38,9)	**0,023**	**2,09 (1,10 – 3,97)**
College	3 (75,0)	1 (25,0)	**0,028**	**2,57 (1,11 – 5,97)**
Professional				
Business	29 (39,7)	44 (60,3)	**0,038**	**1,88 (1,03 – 3,41)**
Education	31 (59,6)	21 (40,4)	**<0,001**	**2,82 (1,59 – 4,99)**
Public administration	8 (47,1)	9 (52,9)	**0,032**	**2,22 (1,07 – 4,61)**
Health	6 (66,7)	3 (33,3)	**0,001**	**3,15 (1,56 – 6,35)**
Technology	53 (57,0)	40 (43,0)	**<0,001**	**2,69 (1,55 – 4,69)**
Housewife	13 (44,8)	16 (55,2)	**0,026**	**2,12 (1,09 – 4,11)**
Other	20 (64,5)	11 (35,5)	**<0,001**	**3,05 (1,70 – 5,48)**
Farmer	11 (21,2)	41 (78,8)		1

*Chi-Square Test   *Fisher Test*

There is an increase in the health literacy rate of health care according to the education level of the target population, in which the university and college groups have a statistically significant difference compared to the primary group.

Employees in the Health sector have a higher rate of health literacy in terms of health care than the rate of the professions.

Table 4. Relationship between the Health Literacy and quantity for communication channels (n= 356)

| Quantity for communication channels | Health Literacy | | P | PR |
	Yes (%)	No (%)		confidence interval 95%
1	40 (33,6)	79 (66,4)		1
2-3	104 (55,3)	84 (44,7)	**0,001**	**1,65 (1,24 – 2,19)**
≥4	27 (55,1)	22 (44,9)	**0,007**	**1,64 (1,15 – 2,34)**

Chi-Square Test

Users of 04 communication channels or more have 1.64 times more culture of health care (95% confidence interval: 1.15 - 2.34) compared to those who use 01 communication channel, p <0.001.

Table 5. Relationship among the Health Literacy, Classification of Health Insurance and Frequence for Physical Examination (n= 356)

| Characteristic | Health Literacy | | p | PR |
	Yes (%)	No (%)		confidence interval 95%
Classification of Health Insurance			*	
Public	119 (46,1)	139 (53,9)	0,522	0,81 (0,42 – 1,56)
Public and Private	14 (58,3)	10 (41,7)	0,956	1,02 (0,49 – 2,11)
Private	20 (52,6)	18 (47,4)	0,820	0,92 (0,45 – 1,87)
No using	14 (48,3)	15 (51,7)	0,657	0,84 (0,40 – 1,78)
No giving anything	4 (57,1)	3 (42,9)		1
Frequence for Physical Exammination				
≥2	41 (73,2)	15 (26,8)	**<0,001**	**2,22 (1,58 – 3,13)**
1-2 times/year	44 (41,9)	61 (58,1)	0,212	1,27 (0,87 – 1,86)
<1 time/year	58 (52,7)	52 (47,3)	**0,009**	**1,60 (1,13 – 2,28)**
Never	28 (32,9)	57 (67,1)		1

*Chi-Square test   * FisherTest*

The study noted no relationship between the type of health insurance used for the healthcare sector.

People with the frequency of regular health checkups from 2 times/year or more have the rate of having adequate health literacy in terms of health care 2.22 times (95% confidence interval: 1.58 - 3.13). For those who never had periodic health checkups, p <0.001.

Table 6. Relationship between the Health Literacy and health education (n=356)

| Health Education | Health Literacy | | p | PR |
	Yes (%)	Yes (%)		confidence interval 95%
Yes	9 (56,3)	7 (43,7)	0,467	1,18 (0,76 – 1,85)
No	162 (47,6)	178 (52,4)		1

Chi-Square test

Those who have been trained or worked in the health field have a health literacy rate of 1.18 times (95% CI: 0.76 - 1.85) compared to those who do not have ones in the health field. However, the difference was not statistically significant.

IV. Discussion

Health Literacy and Gender

In the current period, with the explosion of information technology, most activities to access information and health care services are easily accessible to most people in the community, especially in large city areas, towns, or places with relatively developed infrastructure. Therefore, people in these areas can easily find, access any medical service closest to them, or find out how to improve their lives by consulting information from sources. Our research shows no difference in the number of communication channels between men and women used to access medical information. Therefore, access to health care and finding ways to improve the health of men and women are the same in the ongoing research.

However, women tend to take care of themselves and their relatives more than men [9]. Regularly paying attention to any unusual manifestations of the health of themselves and their families makes it easier for women to detect health problems that they or their families are facing early. From there, early intervention helps disease or disease be prevented in the first place.

Health Literacy and Age

The Health Literacy of health care decreases with age [10], but the differences are not statistically significant in the ongoing study. For Health Literacy in general and the health care sector in particular, this issue is strongly influenced by the sources of medical information and the quality of these information sources. At present, with the development of 4.0 technology, almost all ages can participate and exploit information from online knowledge sources. From there, with each individual's capacity to understand information and evaluate medical information, there will be the best development direction following his health condition. It can be seen that the access to and use of modern equipment for the middle-aged and the elderly is more limited, which partly explains the reduced accessibility and updating the latest information on medicine for the elderly.

Although the study is not significant for research about health literacy, it is essential to pay attention to this factor in future studies or any interventions for health literacy.

Health Literacy and Education, Professional

Previous studies have suggested that educational attainment is one factor influencing Health Literacy [10]. When conducting analysis and evaluation in health care, there is a difference in the university and postgraduate group compared to the primary group. The other groups were not significantly different. The difference may be random for the intermediate group since the number of samples analyzed is tiny.

Educational attainment is one of the factors that are consistently ranked top in any field. Educational attainment has a specific influence on each individual's life because it depends on each person's level, perception, and ability to be different development directions. With higher education, the Vietnamese people can find health problems through reflection-in-action or reflection-on-action, which learned from higher education [11]. They trigger their thinking, and they will implement the method to improve their health caring. They also practice more dialogue and discussion, reading health information, interpreting charts, making decisions about participating in research studies, using medical tools for personal or familial health care—such as a peak flow meter or thermometer—calculating timing or dosage of medicine, or voting on health or environmental issues. Besides, their skills and skills are developed based on their academic level. In the health sector, educational attainment is often applied in health education and communication because it depends on the people's ability to choose the most appropriate implementation methods.

In the current period, with the explosion of the media and mass media. The source of medical information is widespread and influential. The health care sector does not require high individual skills in analyzing and evaluating medical information. Therefore, each individual can protect his or her health based on any official or unconventional information source, experience, or folk "word of mouth."

Besides, most people with education levels from primary to upper secondary are trained in the same locality, or there is no difference in the study location—significant differences in environment, living conditions, and culture. As a result, the capacity of people in the same health care sector is almost the same. However, most of them are trained in large city areas where development conditions are better than those where research is being conducted for those with university and college degrees. Besides, training at the university or higher level is an entirely different, specialized development of individual skills. These factors can partly explain the educational attainment influencing health literacy in health care in research.

For careers, those working in the health and education sectors have a higher average Health Literacy score than those in other occupations [12]. However, this is the most basic field in the healthcare field, so people

of all ages and occupations can take care of their health best suited to the situation and reality. It is perfectly appropriate to note that there is no relationship. Health literacy differences are mainly found in health promotion when health and education have more opportunities to develop this problem.

Health Literacy and quantity for communication channels

Information about medicine is widely disseminated through many media such as television, books, magazines, the Internet to help people quickly access and get the desired information. Besides, the level of information inquiry through communication channels is also one factor affecting general Health Literacy and the health care sector.

The study has not found a link between health care and the level of viewing television programs and looking up medical information. However, there is a difference in the proportion of having enough Health Literacy about health care according to the number of communication channels to access medical information. Specifically, those who used 04 or more media had a health care force of 1.64 times as much as those who used one channel or more minor, p <0.007.

For an individual watching television programs about medicine, it is usually the information provided that is themed and is of less interest to the general public. Meanwhile, with a device that can connect to an online network with essential skills to use, people can easily obtain the information they are interested in quickly and meet the information needs of the surname. Therefore, the more access to medical information is, the more Health Literacy will increase. However, the quality of the information source is the decisive factor to increase or limit people's capacity. Content moderation issues by authorized staff and specialist staff are needed to ensure the medical information is widely shared. Besides, a reliable and regularly updated source of official information is the medical staff. However, the access of people in the community to medical staff is often limited.

Health Literacy and Classification of Health Insurance and Frequence for Physical Examination

The study found no relationship between the healthcare sector according to the types of health insurance people use. People who regularly have regular checkups have a higher rate of health care than those who have little or never have regular checkups.

Regular health checkups are more common in the elderly or people with chronic medical conditions than those without health problems. These reasons may come from the elderly, or those with chronic illness tend to be more concerned about their health and those around them. To improve their health, these elderly regularly seek information about the issues they are concerning. Periodic health checkups help subjects easily update their latest knowledge about the subject's disease progression and easily control their risks to have better health. Besides, regular contact with medical staff, a reliable source of health information, will help subjects get the most complete and accurate information about diseases and diseases currently in progress development on social than other media channels.

V. Conclusion

Evaluating the Health Literacy of health care in the community is essential. The research results are a reference database for other regions and build basic policies and future health interventions to minimize negative impacts. Limited Health Literacy causes benefits.

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