



The Open Public Health Journal

Content list available at: <https://openpublichealthjournal.com>



RESEARCH ARTICLE

The Association between Health Behavior and Health Promotion Needs of Village Health Volunteers in Thailand

Ormjai Taejarennwiriyaikul^{1,*}, Chorlada Keatrungrarun¹, Thanachapon Yuenton¹, Panita Jantosee¹ and Apisara Sommatas¹

¹Department of Health Promotion, Faculty of Physical Therapy, Srinakharinwirot University, Thailand.

Abstract:

Background:

Village health volunteers (VHV) are health community leaders responsible for improving the health and quality of life of the people of a community. For example, screening for COVID-19 in the community.

Materials and Methods:

The cross-sectional survey research aimed to study the association between health behavior and health promotion needs of VHV in Ongkharak District, Nakhon Nayok Province, Thailand. The subjects consisted of 270 VHV in Ongkharak District. The research instrument was a questionnaire with Cronbach's alpha coefficient at 0.81. Data were analyzed by descriptive statistics, Chi-square, and Pearson's Product Moment Correlation Coefficient.

Results:

The health behaviors of VHV ($M = 1.9$ $SD = 0.3$) were at a moderate level. The health promotion needs ($M = 2.9$ $SD = 0.3$) were at high level. Health behavior was positively related to the health promotion needs of the VHV significantly ($r = 0.0318$, p -value = 0.000).

Conclusion:

The findings of this study may be used to provide insights to agencies involved in health promotion in order to determine how to best assist VHV in receiving health promotion and suitable services that conform to their requirements.

Keywords: Village Health Volunteer, Health behavior, Health promotion needs, COVID-19, Public Health, Cronbach's alpha.

Article History

Received: March 31, 2021

Revised: September 3, 2021

Accepted: October 01, 2021

1. INTRODUCTION

Village health volunteers, also known as VHV, are now in charge of driving the community health system and the public health sector through the village health management process. These volunteers have been a key part of primary health care in Thailand during the past four decades. The Ministry of Public Health manages 1.04 million village health volunteers across the country [1 - 4]. They are community health leaders who are responsible for improving the health and quality of life of the community's people. To assist public health authorities, they conduct health surveys, collect data, maintain family health records, and conduct disease prevention campaigns. During outbreaks like COVID-19, their thorough records of community members' medical histories are used for monitoring

health and contact tracing. The volunteers also help people protect themselves from long-established diseases [4]. A village health volunteer acts as a liaison between people in the community and government authorities, as well as a leader for healthy lifestyle changes. Village health volunteers possess knowledge and expertise in the administration of community health systems, allowing them to assist members of the community in achieving their desired level of health and well-being [1]. Village health volunteers have evolved into public-sector health workers who play an essential role in the health system of Thailand. If a volunteer's personal health is poor, it will have a direct impact on his/her ability to execute tasks, making their job less effective. It may even result in the area's public health operations being halted. Therefore, assessment of health status, health behavior, and the survey of four health promotion needs, *i.e.*, physical, mental, social, and intellectual [5 - 9], was conducted to prevent the occurrence of diseases in

* Address correspondence to this author at the Department of Health Promotion, Faculty of Physical Therapy, Srinakharinwirot University Nakhonnayok, 26120, Thailand; Tel: + 6626495000; E-mail: ormjai@g.swu.ac.th

volunteers. The aforementioned health concerns can be addressed if the volunteers' health condition, health behavior, and health requirements are identified and taken care of. If the volunteers maintain their health, they will be able to serve as role models and share their experiences with others in the community, resulting in positive developments.

It can be observed from literature review research that there is a lack of studies on health promotion needs and health behaviors of volunteers in Thailand, especially in Ongkharak district Nakhon Nayok province. Therefore, a study on the needs for health promotion and behavior of village health volunteers in Ongkharak district Nakhon Nayok province, Thailand, has been conducted

1.1. Objective

The study aims to study the relationship between health promotion needs and health behavior of village health volunteers in Tambon Health Promoting Hospital Ongkharak District, Nakhon Nayok Province, Thailand.

2. MATERIALS AND METHODS

This study is a survey research based on—cross-sectional descriptive research on factors that correlate between healthy behaviors and health promotion needs of village health volunteers.

2.1. Sample Size

The sample size of the study population was calculated by using Taro Yamane formulae, and the formulae used was stated as $n = \frac{N}{1 + N(e)^2}$, where, n = sample size; N = total population; and e = tolerable error (0.05 or 95%). The population of 829 village health volunteers in the area of responsibility, Health Promoting of Tambon Hospital, Ongkharak District, Nakhon Nayok Province, Thailand, was considered the total population, and a sample size of about 270 was calculated. Village health volunteers were selected randomly by sampling the lists from the area of responsibility, Health Promoting of Tambon Hospital, Ongkharak District, Nakhon Nayok Province, Thailand.

2.2. Research Instruments

A questionnaire was developed for this study. The questionnaire was put through the face and content validation by experts, and reliability was achieved via the test retest method. The Cronbach's alpha of the questionnaire had an overall reliability value of 0.8. Health promotion behavior and needs questionnaire was divided into 4 parts:

Part 1: General information; gender, age, period of volunteering, village health, status, congenital disease, and occupation.

Part 2: Health status assessment form included weight, height, BMI, waist circumference, and blood pressure.

Part 3: Health behavior scale consisted of 24 items and the items were scored on a 4-point Likert-type scale: 0 never, 1 sometimes, 2 often, and 3 regularly. It had six subscales: 1) health responsibility, 2) interpersonal relationship, 3) nutrition, 4) exercise, 5) spiritual growth, and 6) stress management. To

calculate the mean score of the scale, the scores of all items were summed up, ranging from 0 to 3. High mean scores from the scale were interpreted as positive health behaviors. The mean score of the scale indicated healthy behavior; score 0 – 1.00 indicated poor behavior, score 1.01 – 2.00 indicated moderate behavior, and score 2.01 – 3.00 indicated good behavior.

Part 4: Health promotion needs scale consisted of 11 items and the items were scored on a 5-point Likert-type scale: 0 very low, 1 low, 2 moderate, 3 high, and 4 the most. It had four subscales: 1) physical, 2) mental, 3) social, and 4) spiritual. To calculate the total score of the scale, the scores of all items were summed up, which could range from 0 to 5. High mean scores from the scale were interpreted as high health promotion needs. Score 0 - 1.33 indicated low, score 1.34 – 2.67 indicated moderate, and score 2.68 – 4 indicated high health promotion needs.

2.3. Collecting Information Methods

2.3.1. Step 1 Preparation phase

1.1 Researchers are to send introduction letters explaining the purpose and operating methods of education through the Faculty of Physical Therapy Srinakharinwirot University to the Health Promoting of Tambon Hospital to collect the data.

1.2 Collaboration with the director staff and volunteers to make an appointment to collect information.

2.3.2. Step 2 Implementation phase

2.1 Protection of the population sampling explaining the objectives and details of the project to the sample group and allowing volunteers to sign consent to provide information.

2.2 On the appointment date, each volunteer answer the questionnaire with the researchers' help.

2.3 The researchers examine the questionnaire for completeness and conduct statistical analysis.

2.4. Data Analysis

Data were analyzed using descriptive statistics, Chi-square test, and Pearson's correlation tests. Statistical significance was set at $< .05$.

2.5. Ethical Consideration

The study protocol was approved by the ethics committee of the Physical Therapy Faculty, Srinakharinwirot University, Thailand (identifier: ID PTHP 2019-005). The aim of the study was explained to the participants and informed consent was obtained voluntarily. The participants were also informed that their information might be used in publications or conference presentations, and their identities will remain anonymous.

3. RESULTS

Data of personal factors [A1] showed that the majority of the village health volunteers (VHV) were females (224), 82.9%, with ages ranging from 50 to 59 years, 34.8% (94) were volunteers in the period of 1-9 years, and 53.7% (145) were

married. Education is at the elementary level for 199 people or 73.7 percent of the population. There were 126 persons in all, accounting for 46.7 percent of the total population. General employment accounts for 117 people or equivalent to 43.3 percent of the population, whereas congenital disease (high blood pressure, obesity, and diabetes) affects 153 persons, or 56.7 percent.

2. According to health data [A1], out of 270 village health volunteers, 131 individuals (48.52%) were obese with extra waist circumference, whereas 160 people (59.3%) had normal

blood pressure (124.58 ± 14.24).

3. The sample's health behavior data revealed that the majority of village health volunteers had moderate health habits, with an average of 1.9 points out of 3 and 178 participants (65.9%) (Table 1).

4. The health promotion needs of the sample suggest that the majority of public health volunteers have high overall health promotion needs, with an average score of 2.9 out of 4 and 173 people (64.1%) (Table 2).

Table 1. Health behavior (n=270).

Health behavior	Numbers (n)	Percentages	M	SD	Level
Health responsibility					
Good	74	27.4	1.87	0.41	Moderate
Moderate	192	71.1			
Poor	4	1.5			
Interpersonal relationship					
Good	92	34.1	1.97	0.44	Moderate
Moderate	177	65.6			
Poor	1	0.4			
Nutrition					
Good	81	30.0	1.99	0.43	Moderate
Moderate	185	68.5			
Poor	4	1.5			
Exercise					
Good	19	7.0	1.52	0.42	Moderate
Moderate	209	77.4			
Poor	42	15.6			
Spiritual growth					
Good	93	34.4	2.21	0.66	Good
Moderate	141	52.2			
Poor	36	13.3			
Stress management					
Good	58	21.5	1.86	0.34	Moderate
Moderate	211	78.1			
Poor	1	0.4			
Overall health behaviors					
Good	92	34.1	1.90	0.60	Moderate
Moderate	178	65.9			
Poor	0	0			

Table 2. Health promotion needs (n=270).

Health promotion needs	Numbers (People)	Percentages	M	SD	Level
Physical					
High	172	63.7	2.93	0.81	High
Moderate	90	33.3			
Low	8	3.0			
Mental					
High	159	58.9	2.79	0.72	High
Moderate	106	39.3			
Low	5	1.9			

(Table 2) contd.....

Social			2.90	0.74	High
High	154	57.0			
Moderate	108	40.0			
Low	8	3.0			
Spiritual			3.00	0.77	High
High	186	68.9			
Moderate	79	29.3			
Low	5	1.9			
Overall health promotion needs			2.90	0.30	High
High	173	64.1			
Moderate	93	34.4			
Low	4	1.5			

Table 3. Relationship between health behavior and health promotion needs (n=270).

Relationship between health behavior and health promotion needs	Overall Health Promotion Needs R	Health Promotion Needs			
		physical R	mental R	Social R	spiritual R
Overall Health behavior	0.32*				
Health responsibility		0.33*	0.25*	0.23*	0.27*
Interpersonal relationship		0.24*	0.19*	0.15*	0.18*
Nutrition		0.23*	0.20*	0.14*	0.24*
Exercise		0.14*	0.07	0.18*	0.14*
Spiritual growth		0.06	0.09	0.11	0.10
Stress management		0.22*	0.16*	0.17*	0.17*

*p - value <0.05

5. Health behavior had statistically significant positive correlations with health promotion needs in a weak relationship (R = 0.32, p-value = 0.00). Moreover, health responsibility, interpersonal relationships, and stress management behavior were significantly related to four types of health promotion needs. Exercise behavior was significantly related to physical, mental, and spiritual health promotion needs (Table 3).

4. DISCUSSION

From the study, results of the relationship between health behaviors and health promotion needs of village health volunteers are discussed as follows:

The total mean score of health behavior obtained in this study was 1.9 ± 0.6, moderate level. This finding was similar to previous study findings [10 - 13]. The total mean score of health promotion needs of village health volunteers in this study was 2.9 ± 0.3, high level. This finding was also similar to previous study findings [9].

Health behavior has a positive link with health promotion needs, indicating that if a person has healthy behavior, his/her efficacy in health promotion will increase. This is inconsistent with the study of Walainaree Phromla [9] and the third group that studied the relationship between health behavior and public health needs. A sample of 100 people found that the sample with good health behaviors reduced their health needs. This may be due to the differences in personal factors, including gender, age, occupation, as well as the group of people with healthy volunteers. The connection is in line with Maslow 4's hierarchy needs theory, which argues that human

behavior is driven by needs and hierarchy [14, 15]. When human beings are met, they will have higher level of demand. The first requirement is physical, which is the basic needs associated with health. If in good health behavior would want to promote their own health even more. Behaviors that appear in addition to the needs, it is also associated with satisfaction. Satisfaction will occur only when the needs of that person are met. And if it was satisfied, the more stimulating the demand and the more effective the behavioral effect.

CONCLUSION

According to the findings of this study, it was revealed that health behaviors are linked to health promotion needs, and the village health volunteers have a moderate level of overall health behavior but a high level of health promotion requirements, indicating that demand has not been satisfied as expected. Therefore, if the village health volunteers have health behaviors in the area of health responsibility, interpersonal relationships, nutrition, exercise, and managing stress at a better level, the health promotion needs of the village health volunteers can be met by providing appropriate service and care, improving work efficiency and making people aware of health care and better quality of life.

SUGGESTION

Activities should be organized to meet needs and the health of village volunteers should be promoted.

The study should be conducted in a qualitative format in order to further increase the efficiency of the research.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study protocol was approved by the ethics committee of the Physical Therapy Faculty, Srinakharinwirot University, Thailand (identifier: ID PTHP 2019-005).

HUMAN AND ANIMAL RIGHTS

Not applicable.

CONSENT FOR PUBLICATION

Informed consent was obtained from all participants.

AVAILABILITY OF DATA AND MATERIALS

The raw data and materials used to support the findings of this study are available from the corresponding author [A.M] upon request.

STANDARDS OF REPORTING

STROBE guidelines were followed.

FUNDING

The study was funded by the Physical Therapy Faculty, Srinakharinwirot University Research Foundation (116/2563).

CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

ACKNOWLEDGEMENTS

Extending our thanks to the Director of Health Promoting Tambon Hospital and public health volunteers within the area of Ongkharak District, Nakhon Nayok Province, who supported our investigation and data collection in the area which made this research work a success We would like to thank all public health volunteers for their cooperation in answering the survey conducted by this research.

REFERENCES

- [1] Health Education Division. Operational guidelines for developing health health Literacy 25 media. Nonthaburi: Department of Health Service Support 2020.
- [2] Chuengsationsup K, Suksuth P. Health volunteers in the context of change: Potential and developmental strategies. *J Health Sys Res* 2007; 1(3): 268-79.
- [3] Kowitt SD, Emmerling D, Fisher EB, Tanasugarn C. Community health workers as agents of health promotion: Analyzing thailand's village health volunteer program. *J Community Health* 2015; 40(4): 780-8. [<http://dx.doi.org/10.1007/s10900-015-9999-y>] [PMID: 25744815]
- [4] Kertesz D, Brown R, Bunluesin S. Thailand's 1 million village health volunteers - "unsung heroes" - are helping guard communities nationwide from COVID-19 Available from: <https://www.who.int/thailand/news/feature-stories/detail/thailands-1-million-village-health-volunteers-unsung-heroes-are-helping-guard-communities-nationwide-from-covid-19>
- [5] Tejavivaddhana P, Suriyawongpaisal W, Kasemsup V, Suksaroj T. The roles of village health volunteers: COVID-19 prevention and control in thailand. *Asia Pacific J Health Manag* 2020; 15(3): 18-22. [<http://dx.doi.org/10.24083/apjhm.v15i3.477>]
- [6] Kauffman KS, Myers DH. The changing role of village health volunteers in northeast Thailand: An ethnographic field study. *Int J Nurs Stud* 1997; 34(4): 249-55. [[http://dx.doi.org/10.1016/S0020-7489\(97\)00012-6](http://dx.doi.org/10.1016/S0020-7489(97)00012-6)] [PMID: 9306159]
- [7] Rueangphut P, Jitbantad W. The village health volunteers (VHV) in a case management role for disabled people in community. *Southern College Network J Nurs Public Health* 2019; 6(3): 211-20.
- [8] Phengjard J, Jiewprasat K, Peerakavee N. Experience of volunteer health workers. *Thai Red Cross Nursing J* 2020; 13(2): 114-28.
- [9] Prommla W, Sathathamkul S, Sawangsunthornwet P, Jiwaphaisanpong P. The health needs of the residents of ban mai subdistrict, pathum thani province. *Ramkhamhaeng Res J Human Soc Sci* 2019; 22(2): 12-8.
- [10] Hansakul A, Ngawnaseaw S. Health promoting behavior of village health volunteers in Bantan health promotion hospital Bumnetnarong District Chaiyaphum Province. *J Faculty Phys Edu* 2012; 15: 225-35.
- [11] Wanna W, Kuhirunyaratn P. Prevalence and related factors for overweight among community health volunteers of Tambon Ban Phrao, Mueang Nong Bua Lam Phu District, Nong Bua Lam Phu Province. *Srinagarind Med J* 2016; 32(4): 351-8.
- [12] Phdthapee C, Prasertsuk N. Health promotion behavior for people operated by village health volunteers in District of Boploi, Kanchanaburi Province. *Veridian E-Journal Silpakorn University* 2016; 9(3): 1190-205.
- [13] Sarakshetrin A, Chantra R, Kwanshom R, Ruangdong Ladda. The effects of using health behavior changing program (food, exercise, emotion, smoking, and alcohol cessation) among village health volunteers at Klongchanak, Muang District, Suratthani Province. *The Southern College Network Journal of Nursing and Public Health* 2017; 4(1): 253-64. [<http://dx.doi.org/10.1037/h0054346>]
- [14] Maslow AH. A theory of human motivation. *Psychol Rev* 1943; 50(4): 370-96.
- [15] Maslow AH. *Motivation and personality*. New York: Harper and Row 1954.