The Effect of Health Literacy on Smoking Cessation Aid Program (HLSCAP) on Health Literacy and
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ผลของรูปแบบการสร้างเสริมความรอบรู้ด้านสุขภาพในการช่วยเลิกบุหรี่ ต่อความรอบรู้ด้านสุขภาพ และการรับรู้ทักษะในการช่วยเลิกบุหรี่ ของอาสาสมัครสาธารณสุขประจำหมู่บ้าน

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บทคัดย่อ

การวิจัยกึ่งทดลองนี้ มีวัตถุประสงค์เพื่อศึกษาผลของโปรแกรมการสร้างเสริมความรอบรู้ด้านสุขภาพในการช่วยเลิกบุหรี่ ต่อความรอบรู้ด้านสุขภาพและทักษะการช่วยเลิกบุหรี่ของอาสาสมัครสาธารณสุขประจำหมู่บ้าน (อสม.) กลุ่มตัวอย่างคือ อสม. ในอำเภอเมืองนครปฐม จังหวัดนครปฐม ประเทศไทย จำนวน 48 คน โดยการสุ่มอย่างง่าย เครื่องมือวิจัย ได้แก่ แบบสอบถาม ความรอบรู้ด้านสุขภาพ และแบบสอบถามทักษะในการช่วยเลิกบุหรี่ วิเคราะห์ข้อมูลโดยใช้ค่าเฉลี่ย ส่วนเบี่ยงเบนมาตรฐาน และ Dependent t-test

ผลการวิจัยพบว่า กลุ่มตัวอย่างมีค่าเฉลี่ยความรอบรู้ด้านสุขภาพ ได้แก่ ความรู้ความเข้าใจในการช่วยเลิกบุหรี่ การเข้าถึง ข้อมูลสุขภาพ การตัดสินใจ การสื่อสาร การจัดการตนเอง การรู้เท่าทันสื่อ และการรับรู้ทักษะในการช่วยเลิกบุหรี่ สูงกว่าก่อนเข้า ร่วมโปรแกรมอย่างมีนัยสำคัญทางสถิติ (p <.01)

พยาบาลสามารถประยุกต์ใช้โปรแกรมการสร้างเสริมความรอบรู้ด้านสุขภาพในการช่วยเลิกบุหรี่เพื่อส่งเสริมความรอบรู้ ด้านสุขภาพและการรับรู้ทักษะใน อสม. เพื่อนำไปใช้ในการช่วยเลิกบุหรี่ต่อไป

คำสำคัญ: ความรอบรู้ด้านสุขภาพ; ทักษะ; โปรแกรมการเลิกบุหรี่; อาสาสมัครสาธารณสุขประจำหมู่บ้าน

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Abstact

This quasi-experimental research aimed to study the effect of health literacy on a smoking cessation aid program (HLSCAP) on health literacy and skill in helping smoking cessation among Village Health Volunteers (VHVs) in Muang Nakhon Pathom, Thailand. The samples were 48 VHVs by simple randomly selected. Research instruments comprised the Health Literacy Questionnaire (HLQ) and the Perceived Skills in Helping Smoking Cessation (PSSC). The data were analyzed using percentage means, standard deviations, and Dependent paired t-test.

The research findings showed that after the intervention, mean scores in knowledge and understanding, accessing health information, decision-making, communication, self-management, and media literacy, including perceived skills in helping smoking cessation, were significantly higher than before the intervention statistically (p <.01).

Nurses can apply the HLSCAP to promote health literacy and skill in assisting people with smoking cessation among VHVs, which can help increase smoking cessation.

Keywords: health literacy; skill; smoking cessation program; village health volunteers

Introduction

Nowadays, smoking is a global problem affecting health, society, and the economy. There are 1.3 billion smokers around the world, and 6 million people die from smoking every year, and it is estimated that there will be more deaths by 2030. Since many diseases caused by smoking are up to 8 million people yearly, 80.00% are in low-and middle-income countries. 22.3% of the global population used tobacco, 36.70% of all men, and 7.80% of women worldwide[1]. In Thailand, there was a smoking rate of 20.70%, or 11.4 million people, in 2021[2].

Moreover, smoking is a significant risk factor for disease and causes health problems in males, and economic loss accounted for 0.50 percent of the gross domestic product[3]. The loss value covers medical expenses, directly and indirectly, resulting from losing the ability to earn an untimely death [4]. Therefore, if the number of smokers is reduced, it will decrease the risk of illness and deaths from diseases caused by smoking, as well as reduce economic losses at the person, family, and country levels.

Public health implementation in Thailand sets primary healthcare services as the most crucial priority because this level is closed to public healthcare. With the increasing demand for health care, more than 1 million village health volunteers (VHVs) have gotten involved in the primary health service level for groups of people in case of health promotion and illness prevention such as non-communicable diseases[5]. According to the WHO Framework Convention on Tobacco Control (WHOF-CTC) policy, tobacco control in Thailand has therefore given importance to tobacco control at the primary health service level, which is implemented by nurses in sub-district health promotion hospitals together with the VHVs[6]. The group of healthy volunteers is spread in every village across the Thai country. They are closed to people at the local level. They are expected to help nurses implement health information, screening, and following up, which is a strong point in smoking control and public health care related to cigarettes. Suppose people are involved in promoting smoking cessation. In that case, they help screen and report smoker evidence in the

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community, which induces smoking cessation programs to be more effective in assisting smokers in quitting sustainably[7].

However, from past actions in helping quit smoking by VHVs, such as the Quit for King project, it was found that VHVs' knowledge and skills in helping to quit smoking are insufficient. As a result, the number of smokers did not successfully leave, presenting that the project did not reach its objectives[7,8]. The demand for village health volunteers to help with smoking cessation has been increasing in the community; however, there are only a few studies of health literacy on smoking cessation among the VHVs. Therefore, this study aimed to study the effect of health literacy on a smoking cessation aid program on health literacy and perceived skills in helping smoking cessation among the VHV in Mueang Nakhon Pathom District, Nakhon Pathom Province, Thailand. The study's result will help increase the VHV's abilities by applying health literacy theories and knowledge to help smokers quit. The capabilities included knowledge and skills of information access, communication, decision-making skills in helping people quit smoking, social media literacy, and self-management in assisting smokers to quit smoking. Furthermore, this study's results can be used as a guideline to develop health literacy in VHVs to help quit smoking and create a smoke-free environment.

Objective

To study the effect of health literacy on a smoking cessation aid program on health literacy and perceived skills in helping smoking cessation among the VHV in Thailand.

Methodology

This was a quasi-experimental study with one group pretest-posttest design. The study samplings are the Village Health Volunteers (VHVs) who live in a sub-district in Mueang Nakhon Pathom District, Nakhon Pathom Province, Thailand—a province that comprises the rural and urban areas. The sample size was determined using the sample computational formula using Power analysis by the G*Power program[9]. The significant values were determined at the .05 level, the power of test .80, and effect size 0.3[10], a total of 48 subjects were selected by Multi-stage Random selection. Firstly, two villages from 8 villages in this subdistrict were selected using cluster sampling. Secondly, all VHVs who met the inclusion criteria were selected using sampling random sampling. Research sampling based on the inclusion criteria of the study was selected.

Inclusion criteria

1. Live and work in a research area
2. Have smokers in the area of responsibility
3. Able to read and write in the Thai language
4. No Smoking
5. At least 18 years of age

Exclusion criteria: Have an alcohol problem, leading to awareness of an evaluation of health literacy and perceived skills.

Ethical consideration

Ethics committee approval was obtained from the Ethical Review Committee for Research Involving Human Research Subjects, Nakhon Pathom Rajabhat University (COA No. 004/2020) on 25th February 2020. This approval also met the criteria of the local research governance requirements.

The Health Literacy on Smoking Cessation Aid Program (HLSCAP)

The researchers created the Health Literacy on Smoking Cessation Aid Program (HLSCAP) in helping to quit smoking among village health

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volunteers. The HLSCAP consisted of 1) an activity plan to develop health knowledge in smoking cessation and 2) a smoking cessation guide for VHVs. This program was created by the researchers using the application of Nutbeam's theory of health literacy[11]. The HLSCAP illustrates knowledge, and understanding to quit smoking, information access, communication skills, and decision-making skills in helping to quit smoking, including mastery of social media literacy and self-management in helping to quit smoking. The HLSCAP was validated by three experts in smoking cessation areas and proof of the feasibility of the accuracy by 10 VHVs before application in this study.

Research instruments

1. The health literacy questionnaire in helping to quit smoking, which the researchers developed, consists of knowledge and understanding in helping to quit smoking, accessing health information, decision-making, communication, self-management, and media literacy. The knowledge and understanding in helping to quit smoking comprised ten questions with two options (yes or no). The VHVs get one score for a correct answer. The other constructs consisted of 5 questions, each with four rating scales ranging from "regularly practiced" to "never practiced." The interpretation of the results is four levels: very good (7.51-10.00), good (5.01-7.50), fair (2.51-5.0), and poor (0.00-2.50). This questionnaire was analyzed for its psychometric properties using the score content validity index from five-panel experts (S-CVI = 0.88). The scales' reliability was conducted using the Kuder- Richardson (KR-20) for the knowledge and understanding in helping to quit smoking and Cronbach's alpha coefficient for the others, which was 0.83.

2. The researchers developed the perceived skill in helping smoking cessation. The questionnaire included questions asking participants how frequently they do activities in helping to quit smoking—the scale ranging from never practiced to regular practice. The interpretation of results is four levels: very good (3.01-4.00), good (2.00-3.01), fair (1.01-2.00), and poor (0.00-1.00). The questionnaire was also analyzed for its psychometric properties using the score content validity index from five-panel experts (S-CVI = 1.00), and Cronbach's alpha coefficient was 0.92.

Data Collection

After approval by the Human Research Ethics Committee, the researchers collected data by submitting a request for permission and asking for cooperation in collecting data from the leader of the Mueang Nakhon Pathom District, Nakhon Pathom Province, Thailand. Then the researchers clarified the research purpose, sample rights, and information before randomly selecting the sample according to the inclusion criteria. Next, the researcher met VHVs to introduce the researchers and provide information about the research benefits and confidentiality. The researchers randomized the subjects and then made an appointment to clarify the study and obtain informed consent. The researchers collected research data among VHVs, in Nakhon Pathom Province, Thailand, from October 2021 to January 2022. Research data were primarily collected using a pretest before the intervention, and then the posttest was conducted one month after the intervention.

Data Analysis

Research data were analyzed using SPSS program version 22. The research hypothesis was examined by using a Dependent paired t-test with a statistical significance of 0.05.

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Results

Most study participants ranged in age from 35 to 39 years (66.67%) and from 40 to 59 years 33.33 %. Almost all are female (91.67%) and male 4%. Half of the sample completed primary school education (50%), and the rest graduated from secondary and vocational school (41.67%) and bachelor's degrees (8.33%), respectively. 25% of the sample have more than ten years of working experience as a VHV, 41.67% have 6 to 10 years of experience, and 33.33% have 3 to 5-year-experience as VHV, respectively.

Table 1 The health literacy and perceived skill in helping smoking cessation analyzed by Dependent T-test statistic (n = 48)

Variables	Pretest	Posttest	t	df	p-value
	$\overline{X}$ (SD)	$\overline{X}$ (SD)			
Health Literacy					
Knowledge and understanding	5.15 (1.29)	7.38 (0.79)	10.17	47	<.01
Accessing health information	2.69 (0.47)	3.71 (0.46)	10.59	47	<.01
Decision-making	2.61 (0.57)	3.63 (0.49)	9.33	47	<.01
Communication	2.63 (0.53)	3.67 (0.48)	9.72	47	<.01
Self-management	2.65 (0.53)	3.65 (0.48)	9.70	47	<.01
Media literacy	2.71 (0.46)	3.71 (0.46)	11.20	47	<.01
Perceived skill in helping smoking cessation	2.71 (0.46)	3.79 (0.41)	11.08	47	<.01

From Table 1, it was found that after participating in the HLSCAP intervention, the research samples had health literacy on smoking cessation and perceived skill in helping smoking cessation significantly higher than before the intervention. By that, their knowledge and understanding, the skill of accessing health information, decision-making, communication, self-management, and media literacy, including perceived skills in helping smoking cessation, were statistically significant (p <.01).

Discussion

This study found that the HLSCAP affected the health literacy on smoking cessation and perceived skill in helping smoking cessation (p <.01). This study follows the conceptual framework of Nutbeam's health literacy[12] to encourage VHVs, who are essential personnel in primary health care systems. The VHVs need to have knowledge, motivation, and the ability to understand and apply knowledge and health information to advise smokers to quit smoking[8]. Notably, the WHO Framework Convention on Tobacco Control (WHO FCTC) proposes this concept to help people take into account and make daily decisions about care[5-7].

Participating in the program, the VHVs had higher mean scores on health literacy than before the program (p <.01). The samples have health literacy to help quit smoking at a good level $\overline{X}$ = 7.38, SD = 0.79). The program focused on building knowledge and understanding in helping to quit smoking, accessing health information, decision-making, communication skill, self-management, and media literacy. This result can be described as training activities in the program enabling the VHVs to develop health knowledge in helping to quit smoking. The HLSCAP provides the

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VHVs with knowledge and understanding in helping to quit smoking by using the guideline, sharing experiences, and role play. The program offers a smoking cessation guide for VHVs. The procedure provides them with knowledge of helping to quit smoking. Information such as nicotine in cigarettes, substances in cigarettes that causes high levels of unhealthy cholesterol in the blood, and NCDs were addressed. Then they can understand and explain the process of helping to quit smoking. This finding is consistent with the previous study, which found that cognitive aids in smoking cessation help to quit smoking successfully[13,14].

The program provides the VHV's potential development in accessing information by searching and selecting data from reliable sources. There are many resources available to help quit smoking today. Searching for information in the community, the VHVs have various options to bring information related to smoking cessation to help smokers successfully individually. This finding is congruent with a previous study15 which found that Accessing information on smoking cessation aids increases the chances of successfully quitting smoking.

Communication skill is essential in helping to quit smoking. The program builds VHV's intention, confidence, and encouragement to generate information for smokers and families. The VHVs can link information on the health status and benefits of quitting smoking, including whether first and secondhand smoke is harmful to the smoker and others' health, and convince them to take action to stop smoking sincerely[16]. A role-play in the program creates communication skills to help to quit smoking successfully. The VHVs had a chance to share their experiences to help quit smoking in different areas. Sometimes, they miss information; role-playing in the program can help them find another way to approach and help their clients. This is consistent with the

previous study's finding that communication in smoking cessation aids is a crucial factor related to an increased likelihood of successful quitting[17].

Decision-making skills help the VHVs appropriately decide to help quit smoking. They can access a unique problem and enable an individual analysis of the appropriate smoking cessation aid. In this study, the smoking situation was analyzed by smokers' home visits and lessons learned. The VHVs can find the motivation, attitudes, intention to quit, and home environment. Realizing all information, the VHVs have the self-confidence to decide how to help each smoker. This is consistent with a previous study, which indicated that decision-making skills could create smoking cessation appropriately and result in successful quitting[18].

The VHVs' self-management is essential in helping to quit smoking. The program encourages the VHVs to find a way to manage themselves to seek new knowledge related to helping to quit smoking. They are able to set goals and plan for helping smokers. This is consistent with the previous findings, which presented that self-management in smoking cessation aids was to develop oneself with the knowledge and skills in helping to quit smoking. Then they can find the right way, increasing the chances of successfully quitting[19].

The program provides the VHVs media literacy in helping to quit smoking. The program allows them to assess the data resources' validation and reliability before using the information in smoking cessation aid. Media literacy makes teaching and helping to quit smoking more effective by improving knowledge and trustworthy information about the smoking situation. This finding is consistent with the school-based media literacy curriculum study, which found that students who received smoking media literacy presented a more significant reduction in the perceived prevalence of smoking ($p < .001$)[20].

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The program supports the VHV's skills to help convince smokers to have the intention to quit smoking by linking with relevant information. The VHVs help smokers increase confidence in acting by being prepared during and after smoking cessation and then encouraging them to prevent relapse. This finding is congruent with Brockman, Patten, and Lukowski's study, which indicated that skills for the support person needed to encourage their smoker covered main topics such as a rationale for quitting, the role of the support person; or reinforcing any progress smoker makes in the process of leaving can help smokers have ways to manage relapse and setback[21].

This finding is also consistent with the previous studies, which found that skills in helping to quit smoking will result in suitable methods that will increase the chances of successful smoking cessation [22,23].

CONCLUSION

The HLSCAP is very helpful for the VHVs because they are closest to smokers in the community and can help smokers to stop smoking. The program can increase the VHVs' health literacy and perceived skills in assisting smoking cessation, which will lead them to have skills in helping to quit smoking compactly. As a result, enhancing knowledge in helping to quit smoking among VHVs, smokers were able to quit smoking successfully.

RECOMMENDATION

From the results of this research, the following recommendations are as follows:

1. Health personnel can use the HLSCAP to promote health literacy and perceived skills among VHVs to help them have health literacy levels up and can be used to encourage smoking cessation in a community.

2. Health care providers such as nurses should organize training workshops to educate and promote smoking cessation assistance to VHVs at least twice a year to help them earn knowledge and skills to help people in the community quit smoking continuously.

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