

Potential Development in Knowledge, Chest Compression Skill, Automated External Defibrillator Skill and Basic Life Support for Thai Village Health Volunteer

Ammara Visuttranukul¹, Kamonphat Visuttipukdee. Ph.D², Panat Chanpleng. Ph.D.³, Jomtup Khwanrat⁴, Thanakorn Panyasaisophon⁵

¹Assistant Professor, Educational and Psychological Test Bureau, Srinakharinwirot University, Bangkok, Thailand. ORCID number: 0000-0002-1294-6325

²Faculty of Health Sciences, Thongsook College, Bangkok, Thailand. ORCID number: 0009-0007-0524-1371

³Educational and Psychological Test Bureau, Srinakharinwirot University, Bangkok, Thailand. ORCID number: 0000-0002-7728-801X

⁴Lecturer Educational and Psychological Test Bureau, Srinakharinwirot University, Bangkok, Thailand. ORCID number: 0000-0002-0426-5183

⁵Assistant Professor Faculty of Science, Phranakorn Rajabhat University, Bangkok, Thailand. ORCID number: 0009-0000-4617-1284. Email: thanakorn.phrru@gmail.com

KEYWORDS

Chest Compressions, Automated External Defibrillator, Basic Life Support, Village Health Volunteer

ABSTRACT

Background and objectives: Currently, emergencies from complications, congenital disease, or physical pathology, such as out-of-hospital cardiac arrest (OHCA), are important causes of death and hospital admission, and sudden cardiac arrest occurs until the heart stops working immediately. This study aims to examine the results of repeated measurements with Qualitative Confirmation of results, knowledge, understanding, chest compression skills, use of AEDs, and basic life support for village health volunteers (VHV).

Methods: This mixed-method. Phase 1 quasi-experimental research. The sample group consisted of 30 Village Health Volunteers (VHV) selected using a simple random sampling method. The tool used in this research was the basic life support program that seduces a group process. Knowledge assessment form and basic life support skills. Data collection was performed by repeated measurement six times; Phase 2, qualitative research by discussing Basic life support program of Village Health Volunteers (VHV) that participated in the quantitative research program. After the 6th follow-up repeat measurement for one month, the sample was selected randomly from 10 participants in the program in phase 1. Quantitative data were analyzed using descriptive statistics, one-way analysis ANOVA with repeated measures, and statistical data. Qualitative data were analyzed using content analysis.

Results: The findings of the quantitative study showed that Village Health Volunteer (VHV) had knowledge scores on patient assessment and environment, chest compression, use of AED, and basic life support. From each measurement, there was a better direction statistically significant at the qualitative level of 0.01.

Conclusion: Basic life support program using group processes can develop potential and increase confidence in knowledge and understanding, skills in patient assessment and environment, chest compression, use of AED, and basic life support. Therefore, knowledge, understanding, and basic life support skills should be regularly and continuously reviewed to ensure resuscitation efficiency.

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1. Introduction

Currently, emergencies from complications, congenital disease, or physical pathology, such as out-of-hospital cardiac arrest (OHCA), are important causes of death and hospital admission, and sudden cardiac arrest occurs until the heart stops working immediately. The pumping of blood into various vital organs is disrupted. As a result, patients lose consciousness, have no pulse, and die if they do not receive correct and appropriate help on time (American Heart Association, 2018). Medical emergencies with a high risk of death. The high risk of death is mainly caused by 2 main causes: Cardiac cause from an existing heart disease often found in patients over 35 years of age and from a lack of oxygen in various parts of the body due to accidents or emergencies (Baunoo, 2001). The World Health Organization (WHO) revealed that in 2015, the heart disease group and atherosclerosis were the

number one cause of death for people around the world, with approximately 17.7 million people dying from heart disease and atherosclerosis, accounting for 31 percent of the global death rate. Thailand according to the Public Health Statistics Report. The Ministry of Public Health found that the death rate from coronary heart disease (I20–I25) per 100,000 people throughout the country from 2016 to 2017 was 31.91, 31.82. Data on death and illness from coronary heart disease show that the disease is still more violent. This is because of the tendency to increase continuously.

From the situation in the United States in 2019, it was found that approximately 356,000 patients had cardiac arrest outside of hospitals, or approximately 1,000 people per day, and 10 percent survived until being discharged from the hospital (Sudden Cardiac Arrest Foundation, 2019) and in Thailand. According to the emergency medicine statistics report in 2020, there were 8,483 emergency patients whose cardiac arrest occurred outside of hospitals (National Institute for Emergency Medicine, 2020) American Heart Association (American Heart Association, 2018). There are suggestions about increasing the survival rate if cardiac arrest occurs outside of the hospital. Survivors should have proper basic life support (BLS) training so that bystanders can assess the patient. Seeking help from the medical team can help provide basic resuscitation correctly, quickly, and continuously. From the study of factors that increase the rate of resuscitation in patients with cardiac arrest outside of the hospital by being able to provide basic life support correctly, appropriately, and efficiently, bystanders can increase the patient's chance of survival by as much as 50 percent (Daya et al., 2015). For this reason, training, and workshops on basic life support, which increases basic life support knowledge and skills for each individual, is therefore extremely necessary. This is because it develops the potential of individuals to be able to work or do various things. confidently and correctly (Waelveerakup, 2019).

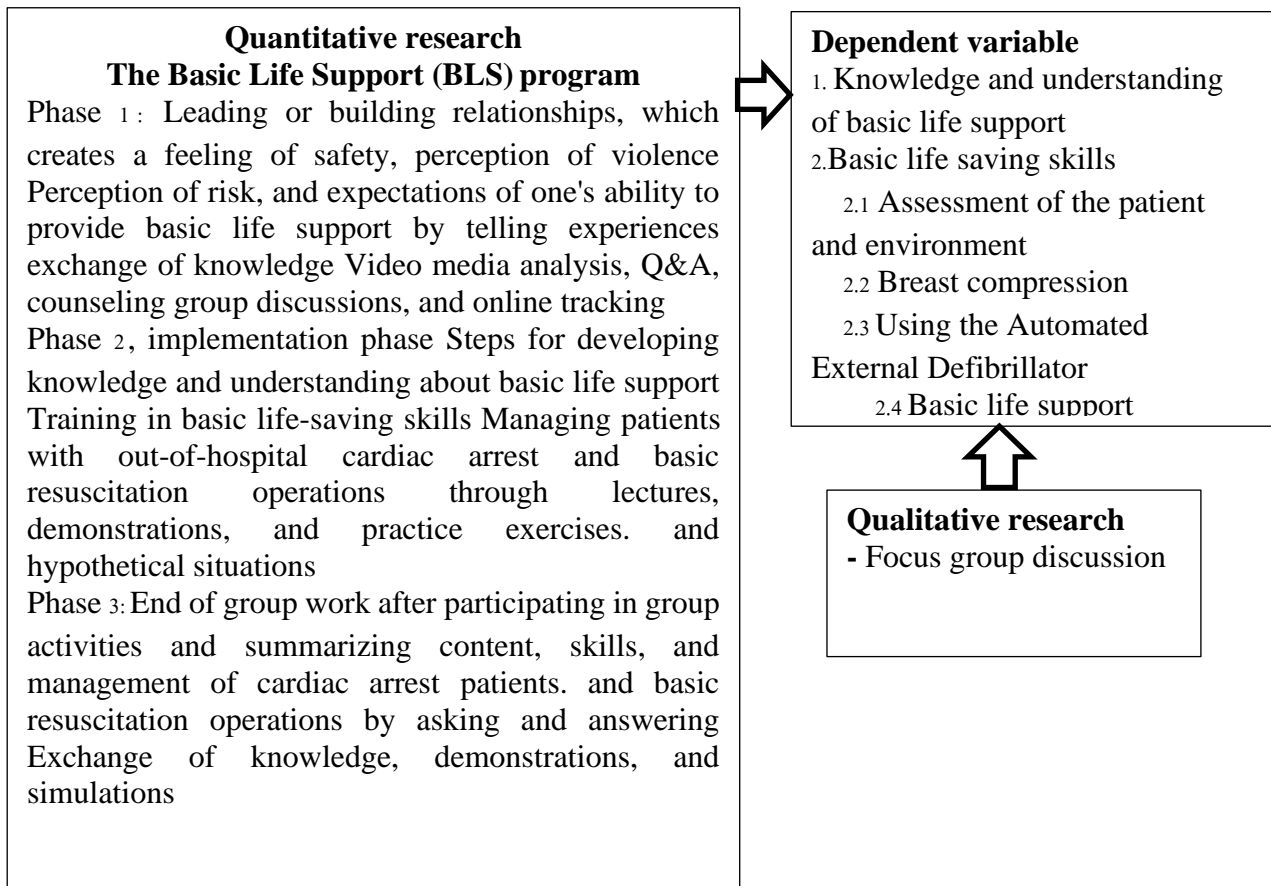
Roger's Protection Motivation Theory is a concept of motivation based on inducing fear as an incentive to perform behavior, evaluating health hazards including noxiousness, perceived probability, response efficacy, and self-efficacy, and causes appropriate behavior and awareness of disease prevention. Rogers. (1983). In summary, the Protection Motivation Theory states that the motivation to prevent disease works best when a person perceives that the danger to their health is severe. A person feels at risk of harm. Adaptation is believed to be the best method to eliminate danger. People have confidence in themselves in adapting to the response. The benefits of the response are good and the barriers are low, which leads to the development of motivation. In Thailand, Village Health Volunteers (VHV) are a group of people who are close to people in the community, play an important role in promoting public health operations activities, and play a role in promoting public participation in taking care of their health. Accurate knowledge can be transmitted to community members. Basic life support training will be a guideline for Village Health Volunteers (VHV) to use and practice in taking care of family members and communities, or if they find someone who has experienced an emergency accident able to provide first aid or basic life support correctly before forwarding it to medical personnel who will be able to help reduce the death of patients (Rochini Uppara et al., 2021)

Non-Sung Hospital Nakhon Ratchasima Province is a primary care unit (PCU). It was found that from 2021 to 2022, there were 59, 47, and 34 patients in cardiac arrest who would lose consciousness, have no pulse, or not breathe, respectively, divided into patients in the hospital. There were 10, 13, and 5 nurses and 49, 34, and 29 patients, respectively, before arriving at the hospital (Non Sung Hospital, 2023). Therefore, the researcher emphasizes the importance and awareness of sudden cardiac arrest among the people in the area and reviews the important role and duty of basic life support in that area, namely village health volunteers (VHV). From the researcher's evaluation of Village Health Volunteers (VHV) regarding basic life support, it was found that basic life support knowledge and skills were not yet correct, and they had only undergone basic life support training. From the aforementioned problem, village health volunteers (VHV) play an important role in public health care, especially in the case of an emergency, and it is extremely important to provide proper assistance. This method is correct and appropriate. Therefore, the researcher is interested in studying the results of the disease prevention incentive application program on basic life support knowledge and skills of the Village Health Volunteer (VHV), Non-Thai District, Nakhon Ratchasima Province, to use the results as a guideline

for planning the village health volunteer (VHV) management model with expertise for basic life support that is correct and appropriate.

Objective: To examine the results of repeated measurements with Qualitative Confirmation of results, knowledge, understanding, chest compression skills, use of AEDs, and basic life support for village health volunteers (VHV).

Research Conceptual Framework: The research team developed the program using the group process concept of Maram (1978), along with the application of Rogers. (1983) disease prevention theory of motivation in writing the conceptual framework is as follows.



2. Methodology

This research is mixed-method research using an Explanatory Sequential Design (Creswell & Creswell, 2018) consisting of quasi-experimental research using one group of Repeated Measurement Design and Qualitative Research. This research was conducted in two phases:

Phrase 1: Quasi-experimental research using one group Repeated Measurement Design

The population and sample consisted of Village Health Volunteers (VHV) who worked and were appointed to perform their duties. Don Chum Phu Subdistrict Health Promoting Hospital, Non Sung District Public Health Office Nakhon Ratchasima Province for at least three months, using the theory of calculating sample size in the case of experimental research or correlation with medium-sized experimental results ($ES=0.8$) (Cohen, 1969) to test hypotheses and draw meaningful conclusions. Statistically important at the implementation level. and a confidence value of 95%. The sample consisted of 20 individuals per group. The researcher increased the number to 30 people per group to prevent loss during research. A simple random sampling (Thanakorn Panyasaisophon. 2021). This was accompanied by voluntary participation in the research.

The inclusion criteria were as follows: village health volunteers (VHV) who can speak, read, and write Thai, know about and work at Don Chomphu Subdistrict Health Promoting Hospital. Under the

jurisdiction of the Non-Sung District Public Health Office, Nakhon Ratchasima Province, for at least three months

Exclusion criteria: Village Health Volunteers (VHV), who have a chronic disease affecting participation in research activities, such as heart disease, asthma, and osteoarthritis. or knee replacement surgery who voluntarily participated in the research program but missed the required number of participants and/or withdrew from the study research for any reason.

Research Tools

The researcher created a program and proposed it to three experts to check Content Validity (Chusri, 2017) including 1) a basic life support program, 2) a teaching plan and PowerPoint for basic life support, 3) basic life support knowledge assessment form, and 4) Basic Resuscitation Skills Assessment Form. These were used to calculate the Content Validity Index (CVI) of the tool to be equal to .98, 1.00, .99 and .99 respectively. Consequently, it was modified according to the recommendations of experts to ensure appropriateness before actual use, consisting of:

Village Health Volunteer (VHV) potential development program is a knowledge and understanding development activity plan that promotes and develops Village Health Volunteer (VHV) learning processes and basic life support skills using group processes from the group process concept (Maram, 1978) by exchanging knowledge and experiences cognition by organizing the Village Health Volunteer (VHV) potential development program in basic life support, divided into three phases: the introduction phase and, the implementation phase. and the end of the group work, as detailed in Table 1.

Content and equipment used in the Village Health Volunteer (VHV) potential development program included teaching plans for knowledge and understanding. and developing basic life support skills through activities and media from telling experiences exchange of knowledge Video media analysis, Q&A, group discussions Consulting Online tracking, lectures, demonstrations, hands-on exercises, and hypothetical situations Video media of basic resuscitation procedures and equipment, including Electronic CPR Manikins, used for Cardiopulmonary Resuscitation Training (CPR) and Automated External Defibrillator (AED).

Table 1: Village Health Volunteer (VHV) capacity development program in basic life support

Operation Duration	Duration	Activity
Phrase 1: Leading period	30 minutes	<ul style="list-style-type: none"> - Building relationships by introducing oneself Saying hello and exchanging experiences to create familiarity and friendliness. -Creating awareness of the severity of sudden cardiac arrest by sharing experiences and exchange of knowledge through Video media analysis and Q&A. - Creating awareness of the risk of sudden cardiac arrest By exchanging knowledge, analyzing video media, Q&A, and group discussions. - Creating expectations for one's abilities in basic life support by analyzing video media, Q&A, and group discussions, consulting, and online tracking.
Phrase 2: Operation period	120 minutes	<ul style="list-style-type: none"> - The researcher conducted a pre-test to provide basic life support knowledge, basic life support skills, and the use of automatic cardiac defibrillators. -The researcher taught knowledge and understanding about basic life support, including causes of cardiac arrest, patient assessment, and the environment, assisting, basic life support skills, and using an Automated External Defibrillator (AED) through lectures, Video media, demonstrations, practice exercises, and hypothetical situations -The researcher divided the sample into 3 groups of 10 people each, with each group having a group mentor who supervised them.

		<p>Ensure that sample groups practice basic life support skills for adults (Electronic CPR Manikins).</p> <p>-The researcher encourages follow-up and lets the sample group talk. Exchange knowledge and experiences within the group, including knowledge and understanding about basic life support, basic life support skills, and the use of automatic cardiac defibrillators.</p> <p>-The researcher assessed basic life support skills and the use of automatic cardiac defibrillators of the sample group and provided recommendations for skill development for individuals, groups, and exchanges within the group.</p> <p>-The researcher conducted an assessment of basic life support knowledge, basic life support skills, and the use of automatic cardiac defibrillators. During the 2nd and 3rd operation and evaluation after the 4th operation.</p> <p>- The researcher conducted follow-up and assessment of basic life support knowledge, basic life support skills, and the use of automatic cardiac defibrillators after the 5th-6th operation</p>
Phrase 3: Ending period	30 minutes	<p>-The researcher had each group's mentor summarize and exchange experiences, including basic life support knowledge, basic life support skills, and the use of automatic cardiac defibrillators.</p> <p>-Researchers and sample groups join in exchanging and evaluating the potential development of basic life support.</p> <p>-Opportunity for sample groups to exchange knowledge and ask and answer questions.</p>

Tools used to collect data are divided into 3 parts (Bloom, 1986) as follows.

The researcher conducted the knowledge and understanding assessment, an assessment of basic life support skills, and the use of automatic cardiac defibrillators, which were improved according to the advice of experts and used to test with the Village Health Volunteer (VHV) group in other sub-districts that which had similar characteristics to the sample group of 30 people, consisting of:

- General information included gender, age, education level, marital status, congenital diseases, monthly income, practice period, basic life support training, and basic life support knowledge from various media. The questionnaire was a checklist with ten questions.
- Knowledge test about basic life support Criteria Correct answer 1 point Wrong answer/no answer 0 points Interpretation of results Good level 80.00-100.00 percent Moderate level 50.00- 79.99 percent Improved level 0.00- 49.99 percent (17) Value Confidence (KR-20) equals 0.89 for 11 items.
- Basic Life Support Skills Assessment Form. Criteria for correct practice: 1 point. Incorrect practice/no practice, 0 points. Interpretation of the Results. Very good level of 80.00-100.00 percent. Moderate level 50.00- 79.99 percent. Improved level 0.00- 49.99 percent (17) There was confidence equal to 0.87 for 5 items.
- Assessment of skills in using an AED (AED) Criteria for correct practice 1 point, incorrect practice/no practice 0 points, interpretation of results, very good level 80.00-100.00 percent, moderate level 50.00-79.99 percent, and improved level 80.00-100.00 percent. 0.00-49.99(17) has a confidence equal to 0.82 for six items.

Data Collection

Quantitative Data Collection

- The researcher requested permission to conduct research from the sampling agency and scheduled a meeting with responsible persons and sample groups by providing knowledge and understanding in conducting research, clarifying objectives benefits, and the nature of research operations to support the decision to participate in research and sign consent to

participate in the research.

2. The researcher conducted an assessment before the first experiment: basic life support knowledge, basic life support skills, and the use of automatic cardiac defibrillators, and provided basic life support knowledge, basic life support skills, and the use of automatic cardiac defibrillators according to the experimental plan.
3. The researcher evaluated the 2nd - 3rd experiment and provided basic life support knowledge, basic life support skills, and the use of automatic cardiac defibrillators according to the experimental plan.
4. The researcher conducted a 4th post-experiment evaluation and carried out the experimental plan to provide basic life support knowledge, basic life support skills, and the use of automatic cardiac defibrillators according to the experimental plan.
5. The researcher conducted follow-up and evaluation for the 5th-6th time on basic life support knowledge, basic life support skills, and the use of automatic cardiac defibrillators.

Data Analysis

Statistics used for general information included the frequency, mean, percentage, and standard deviation. and comparing knowledge, basic life support skills, and use of automatic cardiac defibrillators One way ANOVA with repeated measures

Qualitative Data Collection

Qualitative data collection using focus groups (Dos Santos Marques, Fouad, Vickers, &Searinci, 2020). The researcher selected 10 Village Health Volunteers (VHV) who participated in quantitative research over eight weeks. To participate in group discussions use 2 periods of 60 minutes each (Fleetwood, 2021) by a simple random sampling method, and the results of the basic life support program using the group process included basic life support knowledge and understanding, basic life support skills, and an automatic cardiac defibrillator. The period after the 6th follow-up evaluation was 1 month, using an open-ended, semi-structured, in-depth interview format (Gizir, 2007). Focus group discussions included: Moderator, Note-taker, and Facilitator (Facilitator) with questions about basic life support, including questions 1) characteristics of the mannequin and quality of CPR mannequins 2) knowledge about basic life support 3) patient assessment and environment skills 4) heart compression skills 5) skills Using AED 6) basic life support 7) After the basic life support training, how to apply the knowledge and the answers obtained were analyzed by content analysis.

Protecting the rights of sample groups

The researcher was conducted after receiving research ethics approval from the review board, Human Research Ethics Nakhon Ratchasima Provincial Public Health Office Research project number NRPH 080, dated July 28, 2023, when permission was granted. The purpose of the study was explained to the participants. Research methods and benefits will be gained from this research and the right to accept or refuse participation in the research. without any impact on the sample group had the sample sign a consent form to participate in the research. While conducting research, subjects had the right to request termination of research participation and withdrawal from the research at any time without any consequences. The obtained data will be kept confidential. The presentation of information will be completed as a whole and will not be disclosed individually.

Quantitative Findings

Table 2: General Data (n=30)

General Data	Number (Percentage)
1. Gender	
Male	1(3.3%)

Female	29(96.7%)
2. Average age	52.9 years (Max=66,Min=29)
3. Education Level	
Primary level or lower	13(43.3%)
Secondary level or lower	16(53.4%)
Bachelor degree or higher	1(3.3%)
4. Marital Status	
Married	21(70.0%)
Single	3(10.0%)
Widow/Divorces/Separated	6(20.0%)
5. Congenital disease	
Diabetes	1(3.3%)
High blood pressure	1(3.3%)
Hypercholesterolemia	7(23.3%)
Diabetes combined with high blood pressure	1(3.3%)
None	20(66.8%)
6.Monthly Income	
Lower than 5,000/month	20(66.7%)
5000-10000 Baht/month	8(26.6%)
10001-15000 Baht/month	2(6.7%)
7.Operation period	
below 5 years	6(20.0%)
5 – 10 years	9(30.0%)
11 – 15 years	7(23.3%)
More than 15 years	8(26.7%)
8. Have you ever been trained for basic life support?	
Yes	7(23.3%)
No	23(76.7%)
9. Have you ever got basic life support from other media such as internet, Youtube, TV ?	
Yes	6(20.0%)
No	24(80.0%)

From Table 1, it is found that Village Health Volunteers (VHV) are mostly female, with an average age of 52.9 years, high school education or equivalent, marital status, no chronic diseases, monthly income less than 5000 baht/month, working period of 5 - 10 years, never received basic life support training, and never received basic life support knowledge from various media.

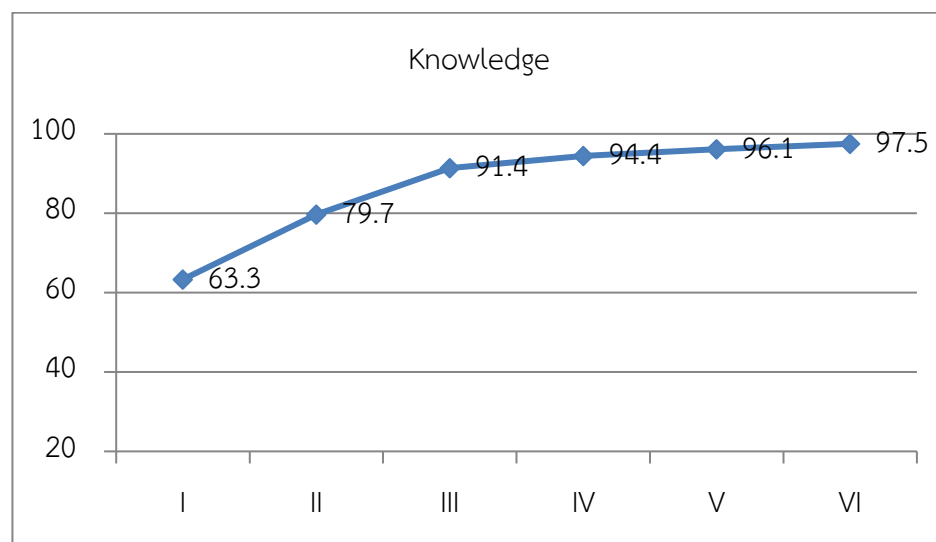


Figure 1: Score of Knowledge of basic life support

From Figure 1, it was found that the sample group's basic life support knowledge scores increased accordingly from the 1st to 6th measurement.

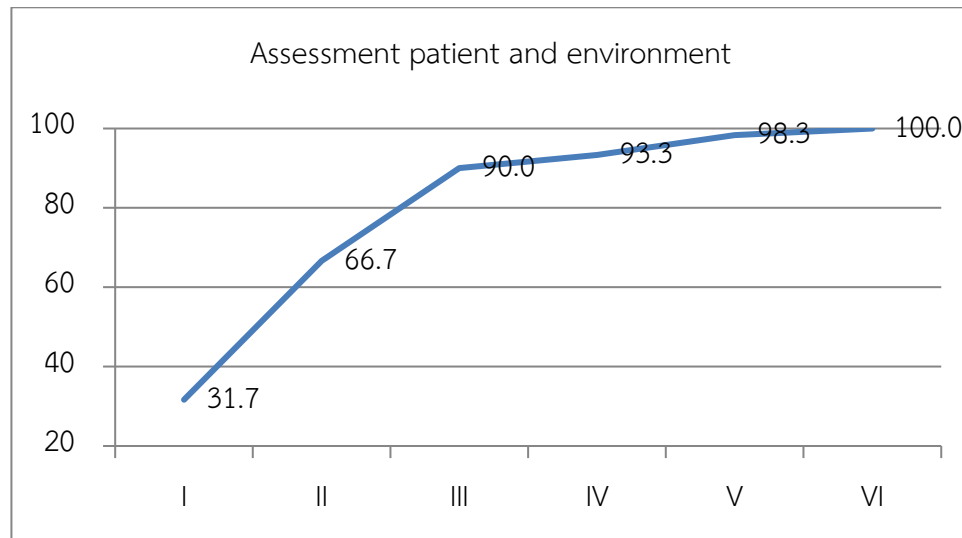


Figure 2: Score of Patient Assessment and Environment

From the illustration, two sample groups had patient score assessments, and the environment in basic life support increased accordingly from the 1st-6th measurement.

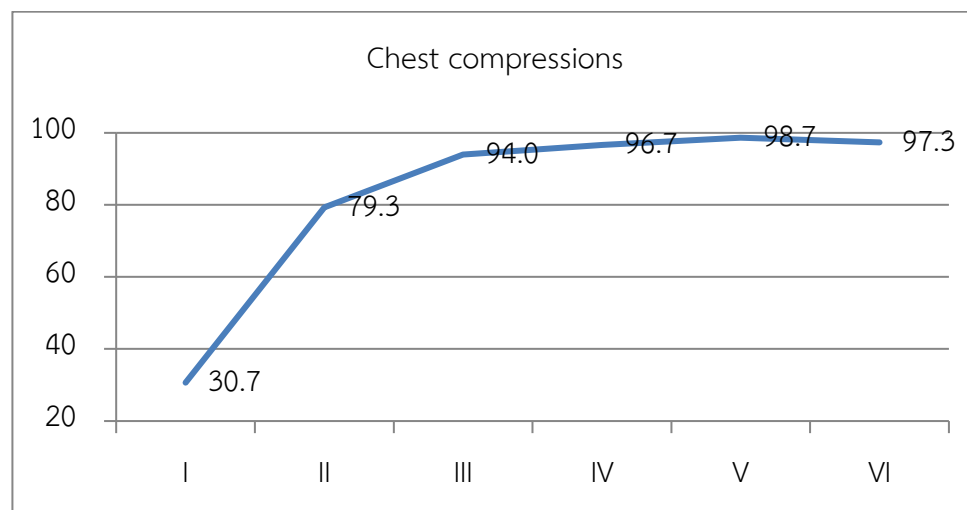


Figure 3: Scores of chest compression of basic life support

From the illustration, three sample groups have chest score compression of basic life support increased accordingly from the 1st-6th measurement.

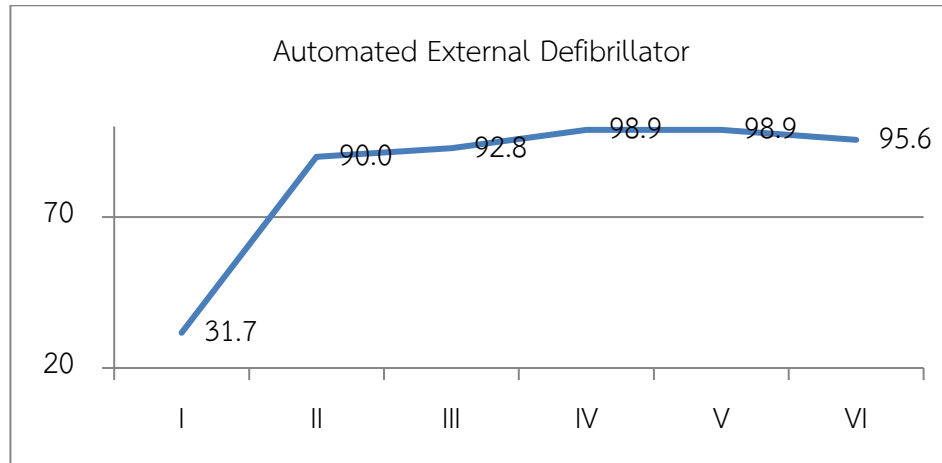


Figure 4: Scores of Automated External Defibrillator of basic life support

From Figure 4, the sample group's scores for using Automated External Defibrillator basic life support increased accordingly from the 1st-6th measurement.

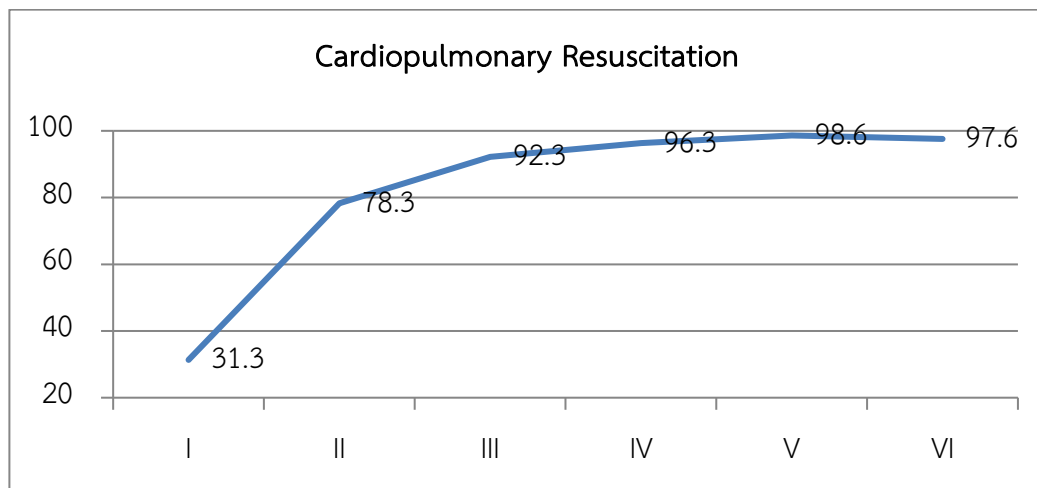


Figure 5: basic life support

As shown in Figure 5, the sample group's basic life support scores increased from the 1st-6th measurement.

Table 2: Compare and contrast the basic life support process from each measurement.

Variables	df	SS	MS	F	p
Knowledge of basic life support	1	26429.39	5285.88	52.494	≤0.01
	29	14600.69	100.69		
2. Basic life support	1	102221.04	20444.20	120.559	≤0.01
	29	24588.83	169.57		
2.1.Patient assessment and environment	1	105833.33	21166.66	40.033	≤0.01
	29	76666.66	528.73		
2.2. Chest compression basic life support	1	105317.77	21063.55	103.830	≤0.01
	29	29415.55	202.86		
2.3.Usage of Automated External Defibrillator	1	102790.12	20558.02	132.558	≤0.01
	29	22487.65	155.08		

From Table 2, it was found that the sample group that received potential development included knowledge about basic life support, patient assessment, and environment, chest compression, basic life support, use of Automated External Defibrillator, and basic life support from the comparison of the first and second repeated measurement 3rd time, 4th time, 5th time, and 6th time, each time has differences with better characteristics statistically significant at the 0.01 level.

Qualitative Findings from the group discussion data. It can be concluded that

The characteristics and quality of the CPR mannequin revealed that the participants performed chest compressions on the mannequin. and suggests that there should be a faster touch system in the puppet. This is because during the CPR experiment, the experimenter was not sure whether it was done correctly, according to the principles. If they press, and the contract does not come up, they will be confident. In addition, the mannequins used for testing should be in perfect condition. This is because some figures are too stiff and do not have the same standards. Data from the group discussion

“The mannequin should have responded faster. If there is no signal, we will not be sure whether we are doing it right or not.”

“I want a more complete figure. Some of them were too hard. The body standards are not equal.”

As for measuring the number of times and the depth of compressions, it was found that in the CPR experiment on a mannequin, all participants were able to press the number of times according to CPR principles by relying on counting the numbers. Press down on the puppet as data from the group discussions.

“Everyone has pressed it all.”

“Speed can be pressed by everyone”

The quality of the puppet's material revealed that the research participants wanted the puppet to last longer. and want the dummy material to be of a quality suitable for CPR; however, the evaluation still depends on the lecturer as the primary evaluation. The quality of mannequins and the price of CPR mannequins are still standard and appropriate for the price. Data from the group discussion

“I want the mannequin to be able to be used for a longer time. If you can get a price that is appropriate for the quality, even better.”

“The price of the model is reasonable, looks standard, suitable for the price.”

Knowledge of about Basic Life Support. Participants were found to have received knowledge about resuscitation. Gain basic knowledge and skills to help patients before being referred to doctors at the hospital. If they encounter a real patient case, this can be done because it has been transferred from the research team that provides training. Data from the Focus Group Discussion.

“Gain knowledge and experience helping unconscious people. Get basic knowledge Gain skills in how to help before sending the doctor.”

“Basic help If the patient is not breathing, please do CPR.”

For patient assessment and environmental skills, it was found that the research participants had a patient assessment and patient situation considering how the patient is, where the patient is located, and how safe the location was found to be, and then call 1169 to request further assistance. The data from the focus groups were as follows:

“Assess the patient's situation, breathing, wake the patient, call for help, then call 1669.”

“If you encounter a situation where you can do it because the doctor teaches you, if you see someone unconscious, call 1669.”

Heart compression skills revealed that the participants had the ability skills to perform heart compressions by feeling the pulse at the wrist. If the vital signs are unclear, change the position of

pressure to the neck area, assess the patient's pulse and heart rate, then use the AED and do as the machine tells you. The data from the focus groups are as follows.

“Assess the patient's situation, breathing, wake the patient, call for help, then call 1669.”

Regarding skills in using AEDs, it was found that the research participants had knowledge and understanding of using AEDs and were able to follow them. Instructions for using AEDs are also available. In addition, we would like to have AEDs in each village.

“Turn on the machine and take the patch. Before turning on the pump, listen to the heart first before defibrillating. Press the shock device Look at the light to see if it's full or not. Then press the switch. After the machine has delivered an electric shock The machine will order you to continue chest compressions.”

Basic life support revealed that most of the research participants were able to perform CPR, and learning about CPR had increased their knowledge more than before making more understanding of the principles and correct practices. The lecturer was also able to convey knowledge about CPR in detail, allowing participants to practice it correctly. As for the knowledge gained about CPR, recommend knowledge to neighbors and to those interested in using the knowledge with patients in emergencies. The data from the focus groups are as follows.

“Satisfied with the training, knowledge and skills, when faced with a situation, we need to be able to do it.”

“I'm pleased to have received the training, benefited from the knowledge, skills, and methods, focusing on what I will know. I actually got to experiment with the puppets and was very satisfied.”

“I want to have knowledge to be able to advise others. New knowledge can help save lives. It's close to my heart.”

3. Result and Discussion

The study found that Village Health Volunteers (VHV) had knowledge and understanding about resuscitation. resuscitation skills and skills in using an AED from the 1st - 6th measurement showed a better direction statistically significant at the 0.01 level, consistent with the results of qualitative research, namely the basic life support program using group processes to help develop potential and increase confidence in knowledge and understanding, patient assessment skills and the environment, chest compression, the use of Automated External Defibrillator and basic life support, this is because the researchers created a program by applying disease prevention motivation theory along with group process concepts starting with greetings, build good and friendly relationships and open your mind to awareness and resuscitation skills, analyze problems and readiness for resuscitation to help develop the potential of volunteers by teaching lectures, education from video media, case studies about basic life support procedures, demonstrations, and reverse demonstration exercises using mannequins and AEDs together with assigned situations that are consistent with the group process concept of MaRam (1978) believes that using group processes is a process for people to come together into groups, exchanging knowledge, both experiences and knowledge and understanding between members. Decisions are jointly by all members of the group. There is a mutual interaction. Promote and encourage each other along with the disease prevention theory of motivation, which is believed to be able to develop the potential to perceive violence, risk opportunities, and expectations of one's abilities in basic life support. Such activities are carried out to promote the development of potential for the exchange of knowledge and learning practice, resulting in the development of learning more clearly from Measure each time As for resuscitation skills and skills in using an AED machine, which may have come from a group of volunteers studying from a video Demonstration of resuscitation procedures Practice trials

Receiving close advice from group researchers Reinforcement from group members and summarizing and giving suggestions for skill training This causes basic life support skills to increase from each measurement. From the group discussion of volunteers, it was found that participating in the basic life support program using a group process allowed the subjects to develop their potential and increase their confidence in knowledge and understanding, patient assessment and environmental skills, chest compression, the use of AED and basic life support and self-esteem, which expected to help others in emergencies. Therefore, it can be seen that developing the potential of volunteers in basic life support by participating in this program can result in volunteers having knowledge scores and Skills increase from each measurement because the program is a training program. The content was developed in conjunction with the needs of volunteers and responded to their needs. Every participant participated in resuscitation skills training from the instructor by dividing them into groups. 1:10, and closely monitoring and giving feedback until confidence in practice skills; there is also an exchange of knowledge within the group. There is encouragement in training and testing from the group researchers. This shows that using the group process concept, Maram (1978) can make volunteers feel proud and confident that they will be able to provide resuscitation if they witness an accident in the future, which is consistent with research by Olasveengen et al. The results of the study for Guide Basic Life Support Guidelines (European Resuscitation Council) on the issue of knowledge and understanding of cardiac arrest. Notification of emergency service systems, chest compression, ventilation, automatic external defibrillation (AED), quality assessment of basic life support (CPR), state-of-the-art technology safety, and foreign objects blocking the airway for the general public. It was found that people have better knowledge, understanding, and basic life support skills following the steps taught, resulting in better survival rates for people with cardiac arrest, which is consistent with the results. Lunda et al. conducted, a single-group quasi-experimental study on the effects of a basic life support skills development program for volunteer rescuers in patients with cardiac arrest. Under the main concept of the Chain of Survival, together with the use of teaching and learning processes according to Gagne's learning theory, it was found that after receiving the program, the volunteer group had higher knowledge and skills in resuscitation. Before participating in the program, statistically significant.

4. Conclusion and future scope

Results of repeated measurements with Qualitative Confirmation in knowledge, understanding, and basic life support for village health volunteers (VHV) by using the concept of the group process together with the motivation to prevent disease, can increase the potential of knowledge, understanding, and basic life support skills.

Suggestions

It is a guideline for developing basic life support potential for Village Health Volunteers (VHV) in villages in other areas.

The basic life support potential development program using group processes together with the application of disease prevention motivation theory can be applied to teaching other related groups of people such as students and monk communities.

Use it as a guideline for developing the potential of volunteers for basic life support continuously to create knowledge and skills that are sustainable and efficient.

Suggestions for next research

A long-term follow-up evaluation study should be conducted to examine the effects of Basic Life Support knowledge, understanding, and skills, as well as Basic Life Support confidence and decision-making.

A teaching program should be developed to develop basic life support skills through the media of artificial intelligence systems

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