Effects of Family Participation Enhancing Program on Health Behaviors of Muslim Elderly with Hypertension in Thung Yang Daeng District, Pattani Province

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Abstract

The quasi-experimental research aimed to compare health behavior scores and blood pressure values of Muslim older adults with hypertension in the experimental group before and after receiving the program and between those receiving the program and those receiving formal nursing care. Develop a program based on Cohen and Uphoff's contribution concept. The sample group were elderly Muslims with high blood pressure who received outpatient ward, Thung Yang Daeng Hospital, and 60 people, selected by a specific method, divided into a control group and an experimental group of 30 people each. The control group received only formal medical care for eight weeks. The research tools were the Health Behavior Questionnaire and the Family Participation Promotion Program on Health Behaviors of Muslim Elderly with Hypertension, developed by the researcher, three qualified people. The reliability of the Health Behavior Questionnaire was Cronbach's alpha coefficient of .78. The data were analyzed using descriptive statistics and t-Test.

The study found that after receiving a program to promote family participation, the experimental group had mean scores of health behaviors (Mean=127.07, S.D.=4.77) than before receiving the program (Mean=62.6, S.D.=3.43) and significantly more than the comparison group (Mean=78.5, S.D.=4.31) <0.001 (p-value <.000). Mean systolic blood pressure and mean diastolic blood pressure after the trial were significantly lower than those before and significantly lower than the comparison group <0.001 (p-value <.000). The results obtained from using the program allow family members who are primary caregivers to be more involved in monitoring and evaluating the changing health behaviors of Muslim Elders with high blood pressure and support them in self-management in changing health behaviors and controlling blood pressure continuously, correctly and appropriately.

Keywords: Participation, Promotion, Program, Health Behavior, Hypertension, Caregiver

Article history: Received 29 January 2023, Revised 01 February 2023, Accepted 27 April 2023

1. Introduction

Hypertension is a common chronic disease and a crucial public health problem in all countries around the world. A global health survey found that the number of patients with hypertension who die from premature complications from hypertension tends to increase [1], is the most common in the Thai elderly [2], which is related to the circulatory system in the body, measured based on systolic blood pressure levels and diastolic blood pressure levels which is the blood pressure when pumping blood acting on the vascular surface. Caused by increased age, causing the deterioration of the body in various aspects that affect blood pressure levels, and blood vessels that have decreased flexibility and hardening of the arteries increased [3]; therefore, most elderly patients are unable to take care of themselves to have appropriate health behaviors.

Pattani Province has a Muslim population of 75.66% [4]. Statistically, patients with hypertension in Pattani province found the most among seniors. Public Health Statistics for the year 2016-2020 of Pattani Province, the prevalence of hypertension for the elderly was as follows: between 60-69 years old found 49%, between 70-79 years old found 54.2% and older than or equal to 80 years old 60.8%, respectively, which is consistent with the statistics of hypertension in the lower southern provinces. reported that the elderly had the highest incidence of hypertension accounted for 68% [5]. Thai Muslims believe that illness is a test from God whether or not it will disappear depending on God [6]. Elderly Muslims with high blood pressure need to know the cause, how to prevent and control disease and can face high blood pressure by taking care of appropriate health behaviors based on awareness of health behaviors in the Muslim context with self-management on health behaviors in terms of taking medicines dining manage stress and exercise

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correctly and appropriately according to the treatment plan.

From working in Thung Yang Daeng District Pattani Province, 99.00 percent of the population were Muslims and believed in practicing health behaviors according to religious principles according to their understanding. As a result, the practice of health behaviors for disease prevention in the area was ineffective, not understanding and cannot be put into practice. Including the collection of data on the adherence to treatment of hypertension in terms of drug use among Muslim elderly in the area, 39 percent of the elderly with high blood pressure did not meet the doctor according to the treatment plan, resulting in each year, patients with paralysis in the area increased and in 2018, 7 cases of paralysis complications were found due to high blood pressure and in 2019, an increase of 12 cases. Part of the reason why elderly Muslims change their health habits irregularly and intermittently is because they forgot to take medicine and thought that they had recovered from the disease and therefore did not receive further treatment. There are side effects of drug use. Therefore, they reduced the dose by themselves or did not want to burden their relatives in taking them to hospital to pick up the medicine, resulted in lack of continuity in the treatment.

Registered Nurse at Non-Communicable Disease Clinic, Thung Yang Daeng Hospital, is aware that the health problems of elderly Muslims with high blood pressure in the area is one of the problems that the service system needs to improve. Although currently, professional nurses organize activities according to quality NCD clinics (non-communicable disease) or quality non-communicable disease clinics, the policy of the Ministry of Public Health. However, it is an activity that provides a limited prescription and some aspects are still not covered. Moreover, it is also a treatment that is available to patients only. The main caregivers have not yet been involved in the activities of the patient care process. Therefore, researchers saw the importance of integrating the concept of participation proposed by Cohen Uphoff (1980) [7] with the principle of faith in God into the program this time.

2. Materials and Methods

This study was a quasi-experimental Research with a two-group pretest and posttest design, divided into two groups; a control group and an experimental group, to compare health behavior scores and blood pressure values of Muslim elderly with hypertension in the experimental group before and after receiving the program, and between the programmed group and the formal nursing group.

The sample consisted of both male and female elderly who were diagnosed with hypertension, selected according to the inclusion criteria, that is, the systolic pressure level was in the range of 150-179 mmHg. and diastolic pressure levels in the range of 90-109 mm Hg for three consecutive times and without concomitant diseases that affect the cardiovascular system, such as heart disease, stroke, as well as being of good consciousness. No hearing problems and can be reached by phone. The exclusion criteria is not to participate in all activities according to the program. Required hospitalization at the time of the trial and had comorbidities detected during the trial, including heart disease, kidney disease, and stroke. Calculate the sample using Cohen's formula. The total sample size was 60 people, divided into two groups, 30 people in each group, 30 people in the control group received formal medical care, and the other 30 people were in an experimental group that received a family participation promotion program along with regular medical care.

2.1 Research Instrument

2.1.1 Instrument used to collect information

1) Personal information questionnaire of Muslim elderly with hypertension consisting of 2 parts; Part 1 was Personal Information, twelve questions were gender, age, marital status, education level, occupation, income, adequacy of income, cohabitant, doctor's appointment, pill organizer, escort, and service place satisfaction. Part 2 was Health information, seven questions: body weight, height, body mass index, blood pressure level, period of disease, use of other drugs in combination with treatment, history of smoking or tobacco leaves, history of alcohol use, exercise, stress, self-care knowledge resources which, was created by the researcher from the review of relevant literature.

2) A personal information questionnaire of family members who are primary caregivers with nine questions: gender, age, religion, marital status, education level, occupation, income, period of care for elderly patients with hypertension, experience taking care of other patients, was created by the researcher from the review of relevant literature.

3) Health behaviors of Muslim elderly with hypertension questionnaire, created from a review of the literature and adapted from the self-care behavior questionnaire of hypertension patients ChonlakarnChaikul (2014) [8], 37 questions covering four health behaviors, namely, eating behavior, fifteen questions, exercise behavior, nine questions, stress management, seven questions, and drug taking behavior, six questions, a question to choose from, and negative questions on a 4-point scale.

The questionnaire contains both positive and negative questions. The scoring criteria for each item are as follows:

- Respondents perform activities on that item at least five times in 1 week, giving 4 points.

- Respondents perform activities on that item at least 3-4 times in a week, giving 3 points.

- Respondents perform activities on that item 1-2 times in a week, giving 2 points.

- Respondents did not perform any activity at all, giving 1 point.

Develop criteria for assessing health behaviors using the stratification principle, define the score range into three levels and interpret the results as follows:

- A score of 37.00-74.00 means health behavior is low

- A score of 74.01-111.00 means health behavior is at a moderate level

- A score of 111.01-148.00 means a health behavior is at a high level

Content validity checked by three experts who reviewed the correctness of the text as follows: one doctor specializing in chronic disease care, one nurse practitioner specializing in family and community nursing, and one advanced practice nurse in family and community practice. After a qualified person has already examined the equipment Suggestions have been taken to improve and verify the validity of the content of the tool again, the content validity index (CVI) was obtained for CVI = 0.81. The health behavior questionnaire was then used to check its validity, applied to the actual experiment with a sample group with the same qualifications as the sample group of 20 people and the score obtained was analyzed for reliability, equal to 0.78.

2.1.2 Instrument used in the experiment

1) Guidelines for using the program is the practice of the program user, consisting of instructions for using the program, introductory, description of the program about the background and magnitude of the problem, program objectives, Target group and program users, program duration, and locations for organizing activities according to the program.

2) A plan to promote family participation in the health behaviors of elderly Muslims with hypertension, divided into participation process of primary caregiver family members according to the process of participation of each individual divided into four steps: Participation in decision-making, participation in activities, Participation in receiving benefits arising from operations, and 4) Participation in the evaluation.

3) Self-management manual on health behavior modification, produced in the form of a book containing content about illness, truth of the disease recovery and commitment (both the patient and the family member who is the primary caregiver), and behavior modification advice, attached a health behavior record form for tracking each week as well by communicating in Thai and Malay (Arabic) characters that are clear and suitable for Muslim patients.

2.2 Sample Rights Assurance

The research project was approved for human research ethics by the Research Ethics Review Board, Pattani Provincial Public Health Office Approval number 005/65 dated January 31, 2022. The sample group decided to participate in the research by themselves after knowing the purposes and procedures for collecting data, and received the opportunity to withdraw from the research at any time, and will still receive regular medical treatment if they want to know the results of the experiment, the researcher will inform them as a whole.

2.3 Research Methodology

The duration of the research was eight weeks.

Experimental group received the family participation promotion program. The experiment was conducted in 3 phases as follows:

2.3.1 **Phase 1: Preparation,** 1st time, 1st week, details are as follows:

1) Introduce yourself, build relationships, clarify research objectives and ask for cooperation in conducting research

2) Assess health status by measuring blood pressure, weight, height, waist circumference and BMI calculation for the first time.

3) Collect general information and have the patient complete the 1st Health Behavior Questionnaire before joining the program.

2.3.2 Phase 2: Promote family participation, consisting of

1) Participation in decision-making activities "Force of Faith wisdom in making decisions"

- Build relationships and explain participation in activities according to the steps in the experimental program.

- Educate about the meaning of the disease. Ready to show examples of realistic food models

- Watch the real video through the screen. "Acute ischemic heart disease, silent death"

- Provide an opportunity to find out the causes of worse behavior related to managing past health behaviors as well as participating in planning decisions, finding alternatives to doing things together, and creating a common commitment.

- Encourage self-reflection in order to motivate and make decisions in the practice of changing health behaviors.

2) Participation in the implementation of the activity "Join together, help each other Create Niamat"

- Set self-management goals for behavior change individually and jointly formulate self-management guidelines for health behavior change with family members who are primary caregivers.

- Provide an opportunity to find out the causes of worse behavior related to managing past health behaviors as well as participate in planning decisions, and look for ways to choose a way of doing things together, and forming a common commitment.

- Clarify the follow-up phone call and evaluation in the 2nd, 4th week, the home visit for the 6th week, and

the program evaluation for the 8th week, and schedule the next appointment.

2.3.3 Phase 3: Monitoring and Evaluation of Performance

1) Participation in the benefits

Activities "work together, benefit together, make a phone call, visit a house for Allah", 3rd and 4th (2nd and 4th weeks) by telephone and 5th (6th week) by individual home visits.

2) Participation in the evaluation

Patients and families shared their results over the past eight weeks, measuring blood pressure and assessing health behaviors No. 2

Control group, 1st time (1st week) blood pressure measurement, health behavior assessment 1st time, nursing as usual, namely, questioning symptoms, advice, providing information about individual blood pressure control practices according to the problem condition, and making an appointment to see a doctor. Week 2-7, the sample group self-cares at home. Week 8, 2nd time blood pressure measurement and health behavior assessment, 2nd time.

2.4 Data Analysis

Comparing the difference between mean health behavior scores and mean systolic blood pressure and diastolic blood pressure within the experimental group a paired t-Test. Comparing the difference between mean health behavior scores and mean systolic blood pressure and diastolic blood pressure between the experimental group and the control group, independent t-test was used for 2-group t-test.

3. Result and Discussion

Compare the mean scores of overall health behaviors of the experimental groups before and after the experiment using Paired t-Test after receiving the program to promote family participation. The experimental group had a higher mean score on health behaviors than before receiving the family participation promotion program, statistical significance at the .001 level as shown in Table 1.

Compare the mean scores of overall health behaviors before and after the experiment using independent t-Test statistics. The experimental group and the control group had overall health behavior scores, statistically significant difference at the .001 level and after receiving the program, the experimental group had an overall mean score of health behaviors significantly higher than the formal nursing group at the .001 level as shown in Table 2

Comparing the mean systolic blood pressure and diastolic blood pressure of the experimental group before and after the experiment using paired t-test statistics, after receiving the program to promote family participation, the experimental group had mean systolic blood pressure and diastolic blood pressure statistically significantly lower than before programmed at the .001 level as shown in Table 3

Comparing the difference in mean systolic blood pressure and diastolic blood pressure before and after the experiment using independent t-test before receiving the family participation promotion program, the mean systolic blood pressure and diastolic blood pressure were not significantly different between the experimental group and the control group. But after receiving a program to promote family participation, the experimental group had mean systolic blood pressure and blood pressure. Diastolic was significantly lower than the formal nursing group at the .001 level as shown in Table 4

After receiving a program to promote family participation in the health behaviors of Muslim elderly with hypertension, the experimental group had a statistically significant mean score for health behaviors before receiving the program at the .001 level, a statistically significant mean score of health behaviors than the control group at the <.001 level, the family engagement program uses the Cohen and Uphoff concept of engagement Effects on health behaviors in Muslim elderly with hypertension, shows that the concept of family involvement has four participatory processes: 1) Participation in decision-making, 2) Participation in operations, 3) Participation in receiving the benefits that arise, and 4) Participation in outcome evaluation. The study results are consistent with the study of ChinkornDankasai, SupawanYodprong, KanitthaKaewdoo, Chaiwat Inchaiya, and Charoenchai Muenhor (2022) [9], the mean scores of health behaviors of the experimental group after the experimental group was higher than before and higher than the formal nursing group statistically significant at p<.001, consistent with the study of NapapornChansri, KanokpornNateethanasombat, and TaweesakKasiphol (2020) [10], self-management in patients with depression Uncontrolled hypertension in the experimental group. Their mean health behavior scores were higher than the comparison group, and their mean blood pressure was significantly lower than the comparison group, p<.001.

After receiving a program to promote family participation in the health behaviors of Muslim elderly with hypertension, the experimental group had mean systolic blood pressure, and diastolic blood pressure was a statistically significant difference at the .001 level. After the experiment, the experimental group had significantly lower mean systolic blood pressure and diastolic blood pressure than the control group, with statistical significance at the <.001 level, which explains the Program to Promote Family Participation in Health Behaviors of Muslim Elderly with Hypertension Effect on the mean blood pressure in Muslim Elders with hypertension. Therefore, after receiving the experi-

Experimental Group	Overall I	Health Behavior Score	t Test	p-value
	\bar{x}	S.D.	t-Test	
Before Trial	62.6	3.43	57.00	<0.001
After Trial	127.07	4.77	-57.09	<0.001

 Table 1. Comparison of the mean overall health behaviors of the experimental group before and after receiving the family participation promotion program using Paired t-Test.

Table 2. Compare the average overall health behavior between the control group and the experimental group before and after the experiment using independent t-Test.

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Experimental Group	Control Group		Experin	nental Group	t-Test	p-value
	\bar{x}	S.D.	\bar{x}	S.D.		
Before Trial	78.4	4.45	62.6	3.43	15.41	< 0.001
After Trial	78.5	4.31	127.07	4.77	-41.40	< 0.001

Table 3. Compare the mean systolic blood pressure. Diastolic blood pressure of the experimental group before and after receiving the Family Participation Promotion Program using Paired t-Test.

Experimental Group	Before Trial		After Trial		t Tost	n voluo
	\bar{x}	S.D.	\bar{x}	S.D.	t-105t	p-value
Systolic Blood Pressure	159.47	6.15	129.77	5.94	-23.55	< 0.001
Diastolic Blood Pressure	95.93	3.22	79.13	7.25	12.04	< 0.001

 Table 4. Comparison of mean systolic and diastolic blood pressure between the control group and the experimental group before and after the experiment using independent t-Test.

Experimental Group	Control Group		Experimental Group		t Tost	n voluo
	x	S.D.	\bar{x}	S.D.	- 1- 1est	p-value
Systolic Blood Pressure						
-Before Trial	157.63	5.03	159.47	6.15	-1.26	.21
-After Trial	154.73	3.53	129.77	5.94	19.79	< 0.001
Diastolic Blood Pressure						
-Before Trial	95.93	3.22	96.17	3.45	-0.27	.79
-After Trial	92.60	4.58	79.13	7.25	8.60	< 0.001

mental group program, the mean blood pressure decreased. The family participation promotion program has a process that helps the experimental group manage to change their health behaviors better. Using the participation strategies of family members who are the core caregivers to encourage the experimental group to change health behaviors appropriately. The experimental group was able to control their blood pressure levels.

Behavioral modification to have appropriate health behaviors is the elementary practice for all Muslim elderly with hypertension, increasing the effectiveness of drug treatment, resulting in lower blood pressure levels, consistent with a study by NantikarnWangji (2015) [11] which found that drug treatment adherence scores in week 8 increased compared to drug treatment adherence scores in week one and the end at the 4th week, statistically significant p<.05, and the BP at the 8th week decreased compared with the BP at the 1st week and at the end of the 4th week, significantly p<.05

4. Conclusions

Based on the study, The mean scores of health behaviors of Muslim elderly with hypertension after joining the program were higher than those before the program and higher than those receiving formal nursing care, statistically significant (p<.001). Mean systolic and diastolic blood pressure of Muslim elderly with hypertension after joining the program were low, statistically significantly lower than Muslim older adults with hypertension before joining the program, and lower than those receiving formal care (p<.001). This research shows that the Family Participation Promotion Program on Health Behavior of Muslim Elders with Hypertension that involves family members as primary caregivers can promote and support Muslim elderly with high blood pressure, change health behaviors continuously, and help control blood pressure better.

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