



Quality of life Education and Health-Promoting Behavior of the Elderly, Na Seaw Sub-District, Muang District, Chaiyaphum Province

Suwimolrat Robrujen¹, Torranin Khunkhavan M.N.S², Sirisak Ardwichai Ed.D³, Somjit Daenseekaew⁴

¹Assistant Professor Ph.D., Faculty of Nursing, Chaiyaphum Rajabhat University, Chaiyaphum Province

²Lecturer, Faculty of Nursing, Chaiyaphum Rajabhat University, Chaiyaphum Province

³Assistant Professor Ed.D., Faculty of Education, Chaiyaphum Rajabhat University, Chaiyaphum Province

⁴Associate Professor Ph.D., Faculty of Nursing, Mahasarakham University, Mahasarakham Province

***Corresponding author:** Suwimolrat Robrujen, Assistant Professor Ph.D., Faculty of Nursing, Chaiyaphum Rajabhat University, Chaiyaphum Province, Email: suwimolrat.1967@gmail.com

Submitted: 15 January 2023; Accepted: 10 February 2023; Published: 05 March 2023

ABSTRACT

This research aimed to study the general conditions of the community, quality of life, and health-promoting behaviors of the elderly. The study also examined the quality-of-life development process and health-promoting behaviors of the elderly in Na Seaw Sub-District, Muang District, Chaiyaphum Province. The sample group consisted of 30 older people in Na Seaw Sub-District and a group of key informants: village health volunteers, public health officials, municipal council members, village headman, village philosopher, and school teacher representatives for ten people. The research tools used were as follows 1) Quality of life questionnaires, 2) Health promoting behaviors, 3) Knowledge of how-to self-care and elderly care, 4) Satisfaction with participating in educational activities to improve the quality of life and health-promoting behaviors, 5) In a group conversation, data were analyzed using descriptive statistics and use test statistics, Paired t-test. The results of this research found that four magnitudes of life quality are good physical and mental conditions, social and environmental relations at a high level, and health-promoting behaviors of the elderly must also be high. The quality-of-life development process and health-promoting behaviors of the elderly include organizing food training according to nutrition, exercise, stress management, exchange of experiences to build interpersonal relationships, meditation practices for spiritual development, and group discussion. The elderly were satisfied with participation in educational activities to improve their quality of life and health promotion behaviors at the highest level ($M = 4.44$, $SD = 0.61$).

Keywords: *Quality of Life Education, Health-Promoting Behavior, Elderly.*

Problems significant

The changing demographic structure has resulted in significant trends in global social change, particularly in the population's longevity. Many countries are moving towards an "Aged Society." Thailand's aging population is expected to become an entirely aging society in 2564 B.E. It will become an aging society in 2578 B.E. A Report on the Situation of the Thai Elderly B.E. 2559 of the Foundation of Thai Gerontology Research and Development Institute. Regarding the situation and population structure of countries in the ASEAN community, there was a difference in the aging population in ASEAN in 2018. The United Nations estimates that the total population of ASEAN is 654 million, of which 67 million are elderly, or 10% of the total population. ASEAN has been an aging society since 2018. The four ASEAN member countries that are already aging societies are Singapore (20%), Thailand (18%), Vietnam (12%), and Malaysia (10%). It is expected that Myanmar will become an aging society in 2019, and Indonesia will be an aging society in the next two years (Foundation of Thai Gerontology Research and Development Institute B.E. 2561). For the world's elderly, it will increase to 1,500 million or 16.0% of the world's population (United Nations, 2020).

The increasing trend of the elderly, as mentioned, will cause health conditions that are at risk from ground health problems. Chronic non-communicable diseases are significant health problems for the elderly and Thai society. The family system is essential in caring for the elderly; this rapidly aging population may affect the welfare that the government should allocate to the elderly and prepare them to face the changes in society that will occur in the future. An older adult who has developed the potential and ability to live in modern society, the aging society in Thailand has been able to provide welfare for the elderly since B.E.2536 (Jiamjit Sangsuwan B.E. 2559). The health problems of the elderly and the quality of life of the population aged 60 years and over in Thailand found that most of them were caused by the decline in physical performance, disability, and

chronic illness (Foundation of Thai Gerontology Research and Development Institute B.E.2561).

Using strategies to create awareness for people in the community to solve problems, mobilize cooperation, and develop various services for the elderly in their communities, supporting the community's potential to cooperate in solving problems, is a way of strengthening communities. This is based on spreading various tasks under the management of local government organizations and community contexts as much as possible. With the community as the core of problem-solving, participants were an opportunity for people and organizations from all sectors to cooperate. Decision-making for more efficient elderly care development projects in the community (Wilai Tapasi, Prapaiwan Danpradit and Sinuon Ratanawijit B.E.2560) and in line with the 2nd National Plan on the Elderly (B.E. 2545–2564), has established strategies for promoting the elderly. Organizing school services for the elderly is another form of organizing activities that promotes the quality of life of the elderly. Lifelong learning involves skill development and informal education for the elderly, and the activities of senior school will be of interest to the elderly and are essential for the betterment of their daily lives (Senior Potential Promotion Division Department of Older Persons B.E. 2559).

The Na Seaw Sub-District, Muang District, Chaiyaphum Province, is another area in the Northeastern Thailand community. It has been found that the elderly population tends to increase progressively, according to the population survey B.E. 2561- 2565. The number of elderly citizens is 2,300 from a total population of 11,832 people, divided into elderly between the ages of 60-69 years old, 1,326 people ages 70-79 years old, in total 698 people ages 80 years and older, the total is 276 people (Na Seaw Sub-District Municipality Office B.E. 2561). The elderly is the age at which there is a deterioration in the functions of various organs in the body, thereby affecting and causing health problems. According to the health survey data, most elderly had more than one chronic disease, such as hypertension, diabetes, and musculoskeletal pain, classified by their ability to care for

themselves. The elderly that can take care of themselves were 85.4%, the elderly who can take care of themselves partially were 13.4%, and the elderly who cannot take care of themselves were 0.79% (Na Seaw Health Promoting Hospital B.E.2563). The main problem that the elderly often encounter is health problems caused by deteriorating body changes, having more illnesses, and chronic diseases such as high blood pressure, diabetes, heart disease, and dementia (Foundation of Thai Gerontology Research and Development Institute B.E.2561).

The situations mentioned above caused the researcher to be interested in studying the quality of life and health-promoting behaviors of the elderly in the Na Seaw Sub-District, Mueang District, Chaiyaphum Province. Due to the current rapidly changing situation, the social culture and lifestyle of the elderly are changing. This study used a sample area in a rural context with various economic, social, and health aspects. It connects the way through the health of people who travel from many provinces, including Bangkok, Nakhon Ratchasima, Phitsanulok, Nakhon Sawan, and Phetchabun. However, there is still no information on existing quality-of-life development activities that meet the needs of the elderly and how they need quality of life and health promotion behaviors. There is still a need to study the quality of life of the elderly to benefit them in the entire community. Organizations are involved in the development of the quality of life of the elderly to promote health behaviors while living in society, and organizations have used it as information in laying out guidelines for caring for and helping the elderly to have a good quality of life. This will help achieve the goal of improving the quality of life of the elderly in the future

Research Objectives: 1) To study the general condition of the community area, quality of life, and health-promoting behaviours of the elderly in the Na Seaw Sub-District, Mueang District, Chaiyaphum Province. 2) To study the quality-of-life development process and health-promoting behaviours of the elderly in the Na Seaw Sub-District, Mueang District, Chaiyaphum Province. 3) To study the results of improving the quality of life and health-

promoting behaviours of the elderly in the Na Seaw Sub-District, Mueang District, Chaiyaphum Province. Research Questions: 1) What is the general condition of the community area, quality of life, and health-promoting behaviors of the elderly in Na Seaw Sub-District, Mueang District, Chaiyaphum Province? 2) The educational process for improving the quality of life and health-promoting behaviors of the elderly in the Na Seaw Sub-District according to the process steps, how is it? 3) What are the results of the study on improving the quality of life and health-promoting behaviors of the elderly in the Na Seaw Sub-District?

Research Hypothesis: 1) A Study on quality-of-life development and health-promoting behaviours of the elderly after development showed higher scores than before development.

2) Comparison of mean scores on knowledge about elderly health care, quality of life, and health promotion behaviours for the elderly after development is higher than before development. 3) The results of the study on quality-of-life development and health-promoting behaviours of the elderly were significantly different; satisfaction is high.

RESEARCH METHODOLOGY

This study is an action research and the process of improving the quality of life and health-promoting behaviors of the elderly using the concept of Kemmis and McTaggart (1992) in four steps:

- 1) Planning.
- 2) Implementation according to the plan.
- 3) Observing the consequences of performance.
- 4) Results reflection.

Assurance of the sample group rights

Human Research Ethics approved this research project (No. HE 65-1-012/2565), approved on September 19, B.E. 2565, at Chaiyaphum Rajabhat University. The researcher and team have suggested clarifying the background of the research, objectives, and conduct of the research, and Participation in the study was conducted by volunteers who signed the consent forms. The

research project implementation process was carried out from September B.E. 2565 until January B.E. 2566, according to 4 action research steps:

Step 1. Planning is a crucial performance group, such as five village health volunteers, one public health worker, one municipal council member, a village headman or one village headman's assistant, one village sage, and one teacher representative from the school. Participation in planning guidelines and providing opinions on the self-care of the elderly, health promotion for the elderly, and guidelines for improving the quality of life of the elderly conducted during the period of September-October B.E. 2565, at Ban Na Si Nuan Temple Hall, Moo 5, takes 2 hours and 30 minutes.

Step 2. Compliance with the plan conducted during November-December B.E. 2565 comprised the study's first phase. A study of the quality of life of the elderly, health promotion behaviours of the elderly, and phase 2, the operation.

Phase 1. A study of the general conditions of the community area quality of life and health-promoting behaviours of the elderly.

Population and sample

The population of this study was an older person aged 60-89 years who can read, write, communicate, and understand, residing in the Na Seaw Sub-District, Mueang District, Chaiyaphum Province in B.E. 2565, totaling 835 people.

Sample Group

A total of 30 people were derived from the analysis of the power to test with a packaged program G-power, and the researchers determined the influences value of the sample size from the research, with an effect size of .47 and alpha value at .05 use test power value (power) at .90 get the total sample size as 27.5 people and increase the sample size to 20%. According to the concept of (Frison & Procock SJ., 1992), to prevent the loss of the sample group or the sample group still needed to complete the

questionnaires, the researcher increased the sample group to 30 cases.

The research tools used a questionnaire consisting of four sections, as follows:

Section 1.

Personal information with a total of 11 items consisting of:

- 1) Gender
- 2) Age
- 3) Religion
- 4) Marital status
- 5) Educational level
- 6) Source of income.
- 7) Occupation
- 8) Average monthly income
- 9) Current health conditions
- 10) Congenital disease
- 11) Medications that are taken regularly.

Section 2 - Questionnaire on the quality of life of the elderly

The researcher developed The World Health Organization Quality of Life Questionnaire (Thai Version) (WHOQOL_BREF_THAI), translated by the Department of Mental Health (Ministry of Public Health B.E. 2559) There were 26 items consisting of four aspects:

- 1) Physical conditions
- 2) Mental status
- 3) Social relations
- 4) Environmental factors.

Answers are rated on a 5-level scale: max, much, moderate, slightly, and not at all (Supaporn Sudnongbua B.E. 2565).

Quality of life scores were assigned a score ranging from 26 to-130 points. The results were interpreted as follows:

Good quality of life 96-130 points.

Medium 61- 95 points.

Bad 26 – 60 points.

Section 3 - The questionnaire on health-promoting behaviors of the elderly that the researcher has developed from the study according to the theoretical framework of Pender

et al. (2011), with 47 items consisting of six aspects:

- 1) Health Responsibility
- 2) Exercise
- 3) Nutrition
- 4) Interpersonal public relations
- 5) About spiritual development and,
- 6) Stress management.

The answer is a 4-level estimation clause, which is practice as a routine, practice often, practice once in a long while, and never practice anywhere. A score of 4-1 interpret a level using the mean criterion (Best, 1981). Therefore, the high level scored more than 141.0 points, moderate level scored 103.4-141.0 points and low level scored less than 103.4.

Section 4: A questionnaire on self-care knowledge of the elderly has 20 items. There were three question types: yes, no, and do not know. One point was given for correct answers, and 0 points for incorrect or unknown answers. Interpret the level of scores by the criteria of (Bloom, S. J., 1975).

Therefore, high level equal to or greater than 80% means 16.00-20.00 points, a moderate level is 60-79% means 12.00-15.99 points, and lower than 60% is a low level means 0.00-11.99 points.

Quality of research tools and find content validity index (IOC). To determine validity, it was at 0.80 and to determine the validity. The questionnaires were used with 30 elderly people who were similar to the sample in Na Fai Sub-District, and the alpha coefficient of Cronbach (1996) was 0.82. A questionnaire on the self-care knowledge of the elderly was administered using the Kuder method using the KR-20 formula. For a correct answer, 1 point is given, and 0 points are given for incorrect or unknown answers; the alpha coefficient is 0.76.

To collect data, the researcher distributed quality of life questionnaires, health promotion behaviors, and knowledge to 30 elderly people, and receive feedback from the elderly immediately after completing the questionnaire. They were given 15 min to answer at the town hall of Ban Na Si Nuan.

Data analysis, using descriptive statistics, was conducted on the quality of life and health-promoting behaviors of the elderly in Na Seaw Sub-District, Muang District, Chaiyaphum Province, using group discussions. The duration of the study was four weeks.

The key informant consisted of a driving group for the development of the process of studying the quality of life and health-promoting behaviors, consisting of 10 people selected by purposive sampling living in Na Seaw Sub-District for more than one year, able to read and write, and attended group meetings throughout the research. Five village health volunteers, one public health worker, one municipal council member, one village headman, one village philosopher, and one school teacher were representatives for this study.

Research tools

This is a group discussion about opinions on the quality of life of the elderly and community participation in developing the quality of life of the elderly. related organizations about current healthcare systems for the elderly. Support from community leaders' network partners and the need to develop health promotion behaviors of the elderly developed by the researcher from the concept of Pender (Pender et al., 2011) and from the plans.

Data collection method

The researcher and ten key informants created a guideline based on Appreciation-Influence-Control (A-I-C) (Sin Sarobol B.E. 2552). It is based on the steps and techniques of the planning process, and observes health promotion behaviours for the elderly. The group discussion was divided into two small groups. The group leader was the researcher, and it took two hours and 30 minutes with voice recording and taking notes on group conversations.

Data analysis uses content analytics from recording and transcribing the health status of the elderly and studying their quality of life and health promotion behaviours.

Phase 2: Operations apply the process of studying the quality of life and health-promoting behaviors of the elderly.

Population

Elderly people aged 60 years and above, who can communicate and understand, read, and write, and are willing to volunteer to participate in development activities. The population in the Na Seaw Sub-District, Mueang District, Chaiyaphum Province was selected for this study.

Sample Group

Thirty people were selected by random sampling using a draw lot and randomly received Ban Na Si Nuan, Moo 7, and Na Seaw Sub-district as the target area.

Data Collection Method

The researcher conducted a study on the quality of life and health-promoting behaviors of the elderly. This study involved a population of the elderly in Ban Na Si Nuan, Moo 7, Na Seaw Sub-District, Mueang District, Chaiyaphum Province, with 30 people, seven activities, and 19 hours for 12 weeks:

- 1) Training on food for the elderly.
- 2) Correct exercise for the elderly.
- 3) Stress Management.
- 4) Exchange of experiences for building interpersonal relationships.
- 5) Meditation
- 6) Honouring senior citizens.
- 7) Home visit

Step 3. Observing the results of operations

The researcher moderated the group discussions and took notes on the issues according to the discussion and observation guidelines for studying the quality of life and health of the elderly. This was done by examining and collecting data from questionnaires, observing the participation of the elderly, and checking the accuracy of the information.

Step 4. Reflection on practice

Research tools reflecting practice and maintaining proper practice are as follows.

1) It is a meeting to exchange experiences to find obstacles and find ways to develop activities to study the quality of life and health-promoting behaviours according to the context of the area and,

2) A satisfaction questionnaire on the quality of life and health-promoting behaviours of the elderly was created by the researcher, consisting of 10 items, which is a 4-level rating scale:

Max (4 points) Moderate (3 points) Low (2 points) and Lowest (1 point)

Data Collection Method

After implementing the activities to study the quality of life and health-promoting behaviors of the elderly, the researcher used the following:

1) Meeting technique (A-I-C), a sample group of 30 elderly people, to discover facts. and understand themselves in participating in the activities to study the quality of life and health promotion behaviors of the elderly and,

2) Have the elderly answer the satisfaction questionnaire for 30 min at the Ban Na Si Nuan town hall.

Data on self-care knowledge of the elderly 's quality of life and health promotion behaviors were analyzed using descriptive statistics and paired t-test.

RESULTS

General condition of the community area

Na Seaw Sub-District, Mueang District, Chaiyaphum Province, located in the north of Mueang District, Chaiyaphum Province, is approximately 16 km from the Muang Chaiyaphum District Office, with a total area of 66,578.50 rai or approximately 106.54 square kilometers. There are 2,661 households with a total population of 7,403 people. Most of these are forest and agricultural areas, and most farmers rely on water from wells. Health promotion behaviors of the elderly in health care

when they are slightly sick are used to buy their medication. If the symptoms do not improve, they visit the Na Seaw Sub-District Health Promoting Hospital. If it does not improve, they visit Na Seaw Sub-District Health Promoting Hospital and transfer to Chaiyaphum Hospital, which is 20 kilometers away, taking 30 minutes by driving car.

Personal information of the sample

The sample's demographics revealed that 90% of the population was elderly, averaging 71.33 years (SD = 7.33). Among these, 56.60% were divorced or widowed, and 53.3% were identified as Buddhists. Nearly 50% of the respondents worked in farming, including crops, rice, and plant gardening, and 93.3% had completed their

primary education. The typical family's monthly income was 4,230 THB. Participants in good health had an underlying disease in 70% of cases, 70% had an underlying disease, 23.3% had two diseases, and 20% had 1-3 kinds of regular medicine.

Comparison of overall quality of life scores categorized by aspects of the elderly in Na Seaw Sub-District, Mueang District, and Chaiyaphum Province before and after development showed that overall quality of life scores was at a high level. After development increased significantly (p <0.001) when classified by aspect, it was found that development increased in all four aspects (Table 1).

TABLE 1: Comparison of overall quality of life scores and classification by aspect elderly people in Na Seaw Sub-District, Muang District, Chaiyaphum Province before and after the development of Paired t-test (n=30).

Results	Before Development		After Development		Mean differences (95%CI)	t	p-value
	Mean	SD	Mean	SD			
1. A good health conditions	23.36	4.77	24.53	3.58	1.16(0.58-1.74)	4.108	<0.001
2. Mental health	18.66	3.86	20.43	3.20	1.76(0.77-2.76)	3.636	0.001
3. Social relation	16.86	3.21	18.46	1.69	1.60(0.78-2.41)	4.000	<0.001
4. Environment	27.90	3.91	29.53	2.50	1.63(0.66-2.60)	3.433	0.002
Total average	86.80	12.58	92.96	7.98	6.16(3.74-8.58)	5.207	<0.001

*p < .05

Comparing the scores of health-promoting behaviors of the elderly in Na Seaw Sub-District, Muang District, and Chaiyaphum Province before and after development, it was found that the overall scores of health-promoting behaviors

were high. After development, it increased significantly (p <0.001) when classified by aspect. It was found that development increased in all four aspects (Table 2).

TABLE 2: Comparison of scores on health promotion behaviors of the elderly in Na Seaw Sub-District, Muang District, Chaiyaphum Province before and after the development Paired t- test (n= 30)

Results	Before Development		After Development		Mean differences (95%CI)	t	p-value
	Mean	SD	Mean	SD			
1. Health responsible	22.20	2.51	24.96	1.60	2.76(1.75-3.77)	5.613	<0.001
2. Exercise	13.93	2.89	16.80	2.07	2.86(1.82-3.91)	5.606	<0.001

3. Nutrition	30.60	5.14	33.76	3.56	3.16(1.72-4.60)	4.503	<0.001
4. Interaction with people	25.43	5.84	27.93	3.35	2.50(1.06-3.93)	3.558	<0.001
5. Spiritual development	31.16	4.84	34.00	4.52	2.83(1.80-3.85)	5.658	<0.001
6. Stress management	16.76	3.08	19.73	2.42	2.96(1.89-4.03)	5.661	<0.001
Total average	140.10	17.86	157.20	9.23	17.10(12.56-21.63)	7.711	<0.001

*p < .05

The level of self-care knowledge when divided according to the specified criteria, was at a high level as 73.3%, followed by a moderate level at 23.3% and a low level 3.4%, when going through development activities. All participants had a good level of knowledge (100 %) (Table 3).

TABLE 3: The level of self-care knowledge of the elderly before and after the development.

Level of knowledge about self-care	Before Developed		After Developed	
	Number of people	Percentage	Number of people	Percentage
Max level	22	73.3	30	100.0
Moderate level	7	23.3	-	-
Low level	1	3.4	-	-
Mean (SD)	17.56(3.04)		18.76(1.47)	

In the comparison of the average self-care knowledge scores of the elderly before and after development, it was found that the average knowledge score after development increased significantly statistically (p-value=0.005) (Mean diff =1.20 95%CI for mean diff 0.38-2.01) (Table 4).

TABLE 4: Comparison of the mean scores of self-care knowledge of the elderly before and after development using Paired t- test (n= 30)

Results	Before Delvelope		After Delveloped		Mean differences (95%CI)	t	p-value
	Mean	SD	Mean	SD			
Knowledge score	17.56	3.04	18.76	1.47	1.20(0.38-2.01)	3.004	0.005*

*p<.05

Evaluation Results of the study on quality-of-life development and health-promoting behaviors of the elderly using the satisfaction questionnaire showed that the elderly was satisfied with participating in the quality-of-life development study and overall health-promoting behavior at the highest level (M = 4.14, SD = 0.61).

DISCUSSION

The study's findings on the community area's general state indicate that it is a place with value. The context for the community in the northeastern region corresponds to the culture of rural communities. Elderly people in the Na Seaw Sub-District, Mueang District, and Chaiyaphum Province may maintain their quality of life and engage in health-promoting habits.

Before the adoption of general developmental activities, an overview of the quality of life and health-promoting behaviors of the elderly was high. This is most likely due to the presence of senior citizens in the neighborhood. In an aging society, the northeastern region maintains its health. According to data that reflect the demands of the elderly, extending the working years of the population will enable them to meet the indicators of older work performance. Out of the 11.7 million elderly persons overall, roughly 4.4 million older people are still employed (Foundation of Thai Gerontology Research and Development Institute B.E. 2561).

From the study of the quality-of-life development process and behavior of the elderly, it was found that in the sample group using the World Health Organization Quality of Life for the Elderly (Thai version), the overall level was at a high level. The results are consistent with the study of Anyarat Sarikalya (B.E. 2564). They studied the quality of life of the elderly in Phasi Charoen Bangkok. It was found that the overall quality of life of the elderly in Phasi Charoen District, Bangkok was high. It is ranked in order of the highest averages for environmental, physical, psychological, and social relations. The study of Jetsada Noknoi and Wanaporn Boripan (B.E. 2560) on the quality of life of the elderly in Songkhla Province found that the quality of life of the elderly in Songkhla Province in terms of social, environmental, physical, and mental health was at a high level. However, there is a difference from the study by Kabmanee, Auicharoen, and Sakulku (B.E. 2564). The authors conducted a study on the quality of life of the elderly in the Nong Phai Sub-District, Muang District, Udon Thani Province. They found that the elderly had an overall quality of life at a moderate level. The factors significantly correlated with the quality of life of the elderly were as follows:

- 1) Income.
- 2) Having a congenital disease.
- 3) Physical health conditions.
- 4) Mental health conditions.
- 5) Social relations.

The differences in the results may be due to the different community contexts in each area. It affects the quality of life of the elderly, and

different contexts and factors may cause differences in the quality of life of the elderly. Therefore, to achieve a clear understanding of the quality of life of the elderly, continuous monitoring and evaluation of the quality of life of the elderly covers all areas and is appropriate for the context in each area. The results of the study of health-promoting behaviors for the elderly in Na Seaw Sub-District, Muang District, Chai Province, after using the process to improve the quality of life of the elderly, and after development, the overall level was higher than before development. These results are consistent with those of Heardkuntod and Satayawongtip (B.E.). 2562). The authors conducted a study to develop the potential of the elderly in taking care of their own health by empowering Ban Mapgrad, Phan Chana Sub-District, Dan Khun Thot District, Nakhon Ratchasima Province B.E. 2562. They found that the results of self-care behavior assessment of the elderly after development were higher than before. This may be because the development of health-promoting behaviors in the elderly increases self-knowledge already present in the elderly. The results of the study of the quality-of-life development process and health promotion behaviors for the elderly concerning knowledge found that the mean score of knowledge about polite care of the elderly was significantly higher than before the development. This may be because the organization of educational activities increased knowledge and understanding of health care. The results are consistent with the study of Rachaneekorn Heardkuntod and Puttipong Satayawongtip (B.E. 2562). The authors also conducted a study to develop the potential of the elderly to take care of their own health by empowering Ban Mapgrad, Phan Chana Sub-District, Dan Khun Thot District, Nakhon Ratchasima Province B.E. 2562. The knowledge assessment results of the elderly after development were higher than those before development.

The study of the results using educational activities to improve the quality of life and health behaviors of the elderly. Elderly people were most satisfied with educational activities to improve their quality of life and health behaviors. This may be because the elderly has learned to

improve their quality of life and health promotion behaviors from educational activities. The results are consistent with the study of Wilai Tapasi, Prapaiwan Danpradit, and Sinuan Ratanawijit (B.E. 2560). The authors developed a study model of healthcare service management for the elderly with community participation in the Wang Taku Sub-District, Nakhon Pathom Province. The provision of health care services for the elderly through community participation developed overall, and the elderly were satisfied at the highest level.

SUGGESTION

1. There should be cooperation in formulating measures to promote health and improve the quality of life of the elderly to cover all four aspects, as follows: 1) Good physical condition namely the promotion of quality preparation before entering old age. 2) Mentally in a good state namely, promoting and encouraging the elderly to remain active aging as long as possible. 3) Good in social relations namely building a good relationship through the participation of various sectors To support the aging society in the community.

and 4) Environmental including the provision of equipment Facilities or services in buildings, places or other public services for the elderly.

2. Research should be conducted on the quality-of-life development activities and

health-promoting behaviours of the elderly; for example, the quality development model for the elderly based on Thai wisdom concepts, consistent with the context of the north-eastern region.

Research limitations

Time constraints in interviewing key informants. Inconvenient to provide information during the COVID-19 outbreak situation. Additional appointments require additional time to collect data. However, The researcher had a telephone interview instead.

New knowledge from research

It helps in improving their cognitive abilities, and communication skills together with 1) The elderly have increased their knowledge. Increased understanding of self-care. 2) The elderly are a group that needs love, generosity and attention from their children quite high. New communication through social media therefore plays an important role.

REFERENCES

1. Foundation of Thai Gerontology Research and Development Institute. (2017). Situation of the Thai Elderly in 2016. Bangkok: Amarin Printing and Publishing.
2. Foundation of Thai Gerontology Research and Development Institute. (2018). Situation of the Thai Elderly in 2018. Bangkok: Amarin Printing and Publishing.
3. United Nations. (2020). World population aging 2020. New York: Author.
4. Srijakkot, J., Silarat, M., Sangsuwan, J., Boonyaleepan, S., Srisanpang, P. (2016). Quality of Life of Elderly People Who Work in Northeast Socio-Cultural Context. *Journal of Nursing and Health Care*. 34(2) : 41-8.
5. Tapasee, W.,t Danpradit, P.,&Rattanawijit, S. (2017). Health Care Service Model for Elderly by Community Participation, Wangtagoo Sub-District, Nakhon Pathom Province. *Kuakarun Journal of Nursing*. 24(1): 42-54.
6. Senior Potential Promotion Division Department of Older Persons. (2016). *Elderly handbook*. Bangkok: Division of Potential Empowerment of the Elderly, Department of Elderly Affairs. Ministry of Social Development and Human Security.
7. Na Seaw Subdistrict Municipality Office Muang District, Chaiyaphum Province. (2018). *Local Development Plan (2018-2022)*. Chaiyaphum: Na Seaw Subdistrict Municipality.
8. Na Seaw Sub-District Health Promoting Hospital. (2020). *Screening form for diseases and nutritional status of the elderly for the year 2018-2020*. Chaiyaphum: Na Seaw Sub-District Health Promoting Hospital.
9. Kemmis, S., & McTaggart, R. (1992). *The action research planner (3rd ed)*. Geelong: Deakin University Press.
10. Frison L& Procock SJ. (1992). Repeated Measure in Medical Trials : Analysis using Mean Summary Statistics and its Implications for Designs. *Stat Med.* ; 1:1685 –1704.
11. Ministry of Public Health. (2016). *World Health Organization Quality of Life Indicators, abbreviated set, Thai version (WHOQOL-*

- BREF–THAI). Nonthaburi: Department of Mental Health.
12. Sudnongbua, S. (2022). *Caring for the elderly: situation and quality of life* (2nd ed). Bangkok: Publisher Chulalongkorn University.
 13. Pender, N.J., Murdaugh, C.L., & Parsons, M.A. (2011). *Health Promotion In Nurse Practice* (6thed.). The United States of America: Pearson Education LTD
 14. Best, J. W. *Research in education* (4th ed.). New Jersey: Prentice Hall; 1981.
 15. Bloom, S. J. (1975). *Taxonomy of education objective, hand book1: cognitive domain*. New York: David Mckay.
 16. Cronbach, L. J. *Essential of Psychological Testing*. New York: Harper and Row Publishers. 1970.
 17. Sarobol, S. (2009). *Research Methodology for Community Change and Development: A Synthesis of Local Research in Thailand and International Experiences*. Chiang Mai: Wanida printing.
 18. Sarikulya, A. (2021). *Quality of Life of the Elderly in Phasi Charoen District, Bangkok*. *The Journal of Administration Development Research*, 11(1), 102-112.
 19. Noknoi, C. & Boripunt, W. (2017). *The Quality of Life of Elders in Songkhla Province*. *Princess of Naradhiwas University Journal*, 9(3), 94-105.
 20. Kabmanee, N., Ouicharoen, S., & Sakulkoo, P. (2564). *The Quality of Life of the Elderly in Thamboon Nongphai, Muang, Udon Thani*. *Journal of boromarajonani college of nursing, surin*, 11(1), 27-39.
 21. Herdkhunthod, R. & Satayavongthip, B. (2019). *Potential Development among Older Adults for Self Care by Using the Empowerment Process, Ban MabKrad, Panchana Sub-District, DanKhunThot District, Nakhon Ratchasima Province*. *The Office of Disease Prevention and Control 9th Nakhon Ratchasima*, 25(3), 44-53.