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Research Article

# STUDY OF BEHAVIORAL CHANGES OF THE ELDERS AFTER APPLYING KAP THEORY WITH TEACHING AND PROVIDING COUNSELING IN HEALTH CARE PROGRAMME OF THANYABURI DISTRICT, PATHUM THANI PROVINCE, THAILAND

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**ABSTRACT**

The elderly health care promotion in the changing of behavior of the elder's modification program, applying KAP theory together with the teaching techniques and health care counseling in the elderly group of Bueng Sanan Subdistrict, Thanyaburi District, Pathumthani Province. This research is a quasi-experimental research (Quasi - Experimental Research). A group of 40 persons between 60 years of age and over is the sample group in the study. The research is done by the Before-After Research one group design model. Tools used are questionnaires; statistic is by mean, Pearson's simple correlation moment. Using frequency, percentage, average and standard deviation. According to the study, 28.8% are female and 21.3% are male. Most of them are between 60-69 years old. Most of them have primary school education or equivalent. 31.3% of the sample group of people had an average income earning of less than 1,000 Thai Baht per month, and 33.8%, and most did not work, while the other 37.5% have had the knowledge, practices and having attitudes concerning the promotional program of elderly health care in the experimental group before and after the experiment. From the research results on the appropriate health care promotional program for the elderly in the responsibility area of Bueng Sanan Health Promoting Hospital, Thanyaburi District, Pathum Thani Province, it is found that the elders need the Public Health officers to visit them, in order to educate them in the eating habits, exercises, in oral and dental health care and in the prevention of accidents.

**Keywords:** Counseling, Health Promotion, Elders, Teaching and KAP Theory.

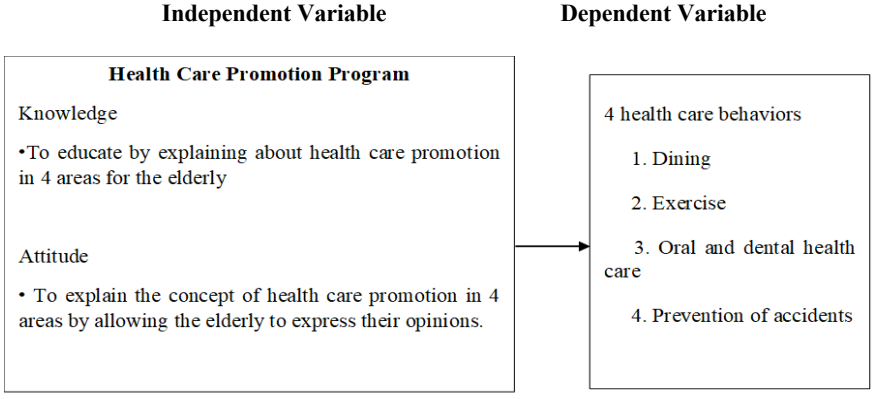
## INTRODUCTION

To study the changing behavior in the health care promotion program by applying KAP theory together with teaching techniques and health care counseling in the elderly group[1,2]. To study and collect general information from the sample group of elders of Bueng Sanan Health Promotion Hospital, Thanyaburi District, Pathum Thani Province. To compare the knowledge, the attitudes and the practices concerning eating habits, doing exercises, oral and dental health care and prevention of accidents. To study the correlations between the knowledge, the attitudes in eating, doing exercises, oral and dental health care and prevention of accidents.

### Research Problems

If health promotion behavior change program by applying KAP theory together with teaching techniques and health counseling in the elderly, it would achieve the result in the elderly having self-health promoting behaviors in the diet, exercises, in the oral and dental health care and better protection against accidents.

### Conceptual Framework



**Research Methodology**

This research is a quasi-experimental research (Quasi - Experimental Research). The 40 elders in the community under the responsibility of Bueng Sanan Health Promoting Hospital, Thanyaburi District, Pathum Thani Province, have participated in the changing of health care promotion program of the normal daily life. The research pattern of Before-After one group design is as follows.

**Experiment Chart**

| Experimental group | $O_1O_2$ | |
|---|---|---|
| $O_1$ | Means | collecting data before the experiment |
| $O_2$ | Means | collection data after the experiment |
| X | Means | Behavior modification program |

**Population and Sample Selection**

The people used in this research consisted of elders aged 60 years and over, both men and women living in Bueng Sanan Subdistrict, Thanyaburi District, Pathum Thani Province, Thailand; acquired by specifying an example from the elders who used the services of Bueng Sanan Sub-District Health Promotion Hospital.

1. People who uses the services of Bueng Sanan Health Promotion Hospital
2. The elders who have no problems with hearing, vision, speech
3. Voluntarily joined in the behavior modification program

Study procedures were approved by institutional ethical committee (Proc. No 6/PH/STIC/2019). Consent was taken from subjects while collecting the data, explained clearly bout the study and was in accordance with ICH GCP Guidelines.

**Programs used in the Research**

Behavior modification program is done by 3-5 groups of 4th year students of the Faculty of Public Health, St. Theresa International College. With 60 minutes of counseling activities for the elderly group. Having discussions, exchanging experiences, expressing opinions, words of encouragement, supporting one another, demonstrations the selection of choosing proper and healthy food and practicing the skill of doing exercises, oral and dental health care and prevention of accidents. The elderly group is divided into 3 areas:

1. To educate the elderly to be knowledgeable about eating properly and healthy food.
2. To enable the elderly to recognize the benefits of proper physical exercises.
3. To enable the elderly to have knowledge about correct oral and dental health care.
4. To enable the elderly to know of how to prevent accidents.

**Activities consisted of the followings**

1. To establish familiarity between researchers and group members and among the members themselves. With activities of getting to know each other, to know themselves and recognize the characteristics of their fellow members.
2. To clarify the objectives of health care promotion program for the elderly
3. To give advises on eating behavior/ habits, of doing exercises, oral and dental health care and how to prevent accidents.

Followed by discussions on the issues of knowledge, experience, opinions and problems of each member concerning health care promotion

**Attitude**

1. To exchange experiences, to analyze situations, problems, causes and find solutions to the problems of changing the behavior.
2. To let the group members, know the importance and benefits of health care promotion.

**Activities consisted of the followings**

1. To explain about having proper meals, to do exercises, oral and dental health care and how to prevent accidents, using a model that performs well and correctly. Discussions on how to practice recognize the problems, obstacles and solutions, together with encouraging the members to ask questions, exchange experiences, opinions and give each other praises, compliments in giving attention and participating in the promoting of health care program in 4 areas and allowing members to help in summarizing the good results.
2. To open issues for members to discuss concerning having proper meals, doing exercises, oral and dental health care and prevention of accidents. The members are to summarize the health care promotion models. The researcher suggested 4 correct health promotion methods.

**Practice**

1. To exchange experiences, to analyze the situations, the problems, causes and to find the solutions.
2. To explain to the group members, to recognize the benefits and the importance of health care promotion program.
3. To enable the group members to practice the activities in the promotion of correct health care.

**Activities include**

1. To explain the members concerning eating properly, to do exercises with correct postures and movements, proper oral and dental health care and how to prevent accidents. To explain on how to handle the problems, to recognize the obstacles and to find solutions. Together with encouraging the members to ask questions, exchange experiences, opinions and give each other praises, compliments in giving attention and participating in the promoting of health care program. Also, to explain the disadvantages of non-compliance.
2. To give the time for the members of the elderly group to practice the correct exercises.

## RESULTS AND DISCUSSION

This research is an experimental research. (Experimental Research) to study the appropriate health promotion program for the elderly in the community under the responsibility of Bueng Sanan Health Promotion Hospital, Thanyaburi District, Pathum Thani Province, Thailand. The researcher therefore proposed to divide this research into 3 parts:

- Part 1: Analyzing general information concerning the elderly in the experimental group by frequency distribution average percentage.
- Part 2: Comparison of knowledge, attitudes and practices concerning health care promotion among the elderly in the experimental group before and after the experiment using paired sample t-test statistics.
- Part 3: Study the correlation between knowledge, attitudes and self-practice in the promotional health care program of the elderly by using Pearson product moment correlation coefficient. (Pearson Product Moment Correlation Coefficient)

### Part 1: The analysis of general data concerning the characteristics of the sample group of people in the study

It is found that the majority of the elderly are female of 23 persons, representing 28.8%, and 17 males which are 21.3%. 28.8% of the people in the sample group who areat the ages between 60-69 years, followed by 16.3% of people at the age of 70 - 79 years, 3.8% of those in the range of 80-89 years old, 1.3% of those in the range of 90-99 years old accordingly. Education levels revealed that most seniors, 31.3%, have finished primary school, 10.0% did not have any education, followed by 3.8% undergraduates. Lower secondary education is 2.5 percent and Bachelor degree 2.5 percent, accordingly. It is also found that the monthly income of the elderly mostly is less than 1,000 baht or 33.8%, followed by earning an income between 1,001 - 2,000 baht and 6.3% of the group earning more than 4,000 baht per month, 2.5% of those earning 2,001 - 3,000 baht, and 1.3% earning 3,001 - 4,000 baht. Concerning having an occupation, it is found that most did not work, equals to 37.5%, followed by 5.0% of having employment, 2.5% of pensioners and in trading business. 1.3% in agriculture and other occupations.

### Part 2: Comparison of knowledge, attitudes and practices concerning health care promotion for the elderly in the experimental group before and after the experiment

In the Knowledge of eating properly and healthy food, it is found that before the experiment, the elderly had an average knowledge of 13.37, standard deviation 1.294; After the experiment, having an average of 15.00, standard deviation 0.000. Showing a higher level of knowledge than before the experiment with a statistic significant (p-value <0.05). The level of knowledge of the elders in doing the exercises, before the experiment, the average is at 12.85 Base 0.921. After the experiment, an average of 15.00, standard deviation of 0.000, which is higher than before the experiment, with statistically significant difference (p-value <0.05). In the knowledge of oral and dental health care, before the experiment, the elderly had an average knowledge of 14.30, standard deviation 1.488, after the experiment had an average of 15.00, standard deviation 0.000, which is higher than before the experiment with significantly different (p-value < 0.05). The knowledge of elderly in health care promotion, concerning the prevention of accidents, it is found that before the experiment, the elderly had an average knowledge of 14.87, standard deviation 0.463, after the experiment, with an average of 15.00, standard deviation 0.000, which is higher than before the experiment and there is no statistic difference. When comparing the knowledge on health care in all the four areas, it is found that before the experiment, the elderly had an average knowledge of 55.40, standard deviation 2.696, after the experiment had an average of 60.00, standard deviation 0.000, which is higher than before the experiment with statistically significantly different (p-value <0.05).

In Attitudes, it is found that the average attitude in the promotion of elderly health care in the aspect of eating proper healthy food, before the experiment, the elderly had an average attitude of 14.67, standard deviation 0.828, after the experiment, with an average of 15.00, standard deviation 0.000, which is higher than before the experiment with significantly different (p-value <0.05). The level of attitudes about the promotion of elderly health care in terms of doing exercises, it is found that before the experiment, the elderly had an average attitude of 14.30, standard deviation 1.285, after the experiment had an average of 14.95, the standard deviation of 0.316, which is higher than before the experiment with statistically significant differences (p-value <0.05). In the aspect of oral and dental health care, it is found that before the experiment, the elderly had an average attitude of 10.70 standard deviations, 1.814, while after the experiment, with an average of 10.97, standard deviation 0.697, which is higher than before the experiment and with a different in statistical significance (p-value<0.05). The average attitude in the prevention of accidents, it is found that before the experiment, the elderly had an average of 14.95, standard deviation of 0.316, after the experiment had an average of 15.00, standard deviation of 0.000, which is higher than before the experiment and there is no difference. The overall average level concerning the promotion of elderly health care in all four areas, it is found that before the experiment, the elderly had an average of 54.62, standard deviation 2.382, after the experiment had an average of 55.92, standard deviation 0.693, which is higher than before the experiment and with a difference of statistical significance (p-value <0.05).

In the Practice, it is found that the average level of practice of eating proper and healthy food, before the experiment, the elderly had an average of 12.82, standard deviation 0.812. After the experiment, the average is 12.95. The standard deviation is 0.316. The average is higher than before the experiment and there is no statistically significantly difference. The practice level of the elderly health care promotion in terms of doing exercises, it is found that before the experiment, the elderly had an average of 14.72, standard deviation of 0.784, after the experiment had an average of 14.97, standard deviation 0.158 and significantly different (p-value <0.05). The average performance level regarding health care promotion, in oral and dental health care showed that before the experiment, the elderly had an average practice of 12.72, standard deviation 1.339, after the experiment had an average of 13.12, standard deviation 0.607, which is higher than before the experiments and there is no statistically difference. The practice average level in the prevention of accidents, it is found that before the experiment, the elderly had an average of 13.72, standard deviation of 1.037, after the experiment had an average of 13.85, the standard deviation of 0.948, it is higher than before the experiment and with no difference. Overall average of practice regarding the promotion of elderly health care in all four areas, it is found that before the experiment, the elderly had an average performance score of 54.0, standard deviation 2.207, after the experiment had an average score of 54.90, standard deviation 1.194, with an average score higher than before the experimental and with a statistically significantly different (p-value <0.05).

**Part 3: The study of the correlation between the knowledge and attitudes concerning self-efficacy in the elderly health care promotion with the experimental group before the experiment**

From the study, it is found that before the experiment, there is no correlation between the knowledge and the practice of health care promotion. As for the attitudes, there is a statistically significant correlation with the practice of health care promotion (P-value <0.05). Results of the study were concomitant with the several studies[1-6].

It is found from the study that the knowledge concerning the promotion of elderly health care in eating healthy food, exercises, oral and dental health care, and the prevention of accidents, that after the experiment, the level of the knowledge gained is higher than before the experiment with the differences in statistical significance (p-value <0.05), while of the oral and dental health care knowledge, there is no difference. The attitude towards promoting health care for the elderly, in the aspects of eating habits, doing exercise, in oral and dental health care, and in the prevention of accidents, it is found that the level of the knowledge gained after the experiment is higher than before the experiment with statistically significant differences (p-value <0.05). The levels of practices on promoting health care for the elderly in the aspects of eating proper and healthy food, exercises, oral and dental health care and the prevention of post-trial accidents are significantly higher than before with significantly different (p-value <0.05) while in the aspect of oral and dental health care knowledge there is no difference. The correlations between the knowledge and attitude and the practices ofhealth care promotion in the elderly, it is found that there is no correlation between the knowledge and the practices of health care promotion. As for the attitude, there is a significant correlation with the practices of health care promotion (P-value <0.05).

**Part 1: Analysis of general information concerning the elderly in the experimental group**

According to the study, most elderly people are female. 28.8% And 21.3% of males, aged between 60-69 years, accounting for 28.8% of primary school education, equivalent to 31.3 percent; 33.8 Percent of the elders having an average income of less than 1,000 baht per month and 37.5 percent of not working.

In the aspect of Knowledge, it is found that the knowledge level in the promotion of elderly health care, in the post-test diet is significantly higher than before the test with a statistically significantly different (p-value < 0.05). In the post-test of doing exercises, an average level is higher than before the test with a statistically significantly different (p-value < 0.05). In oral and dental health care, the average after the experiment is higher than before the experiment and with a difference of statistically significance (p-value < 0.05). In the prevention of accidents, the average level after the experiment is higher than before the experiment and there is no statistically difference. Comparing the knowledge of health care in all the four areas, the average level after the experiment is higher than before the experiment and significantly different (p-value < 0.05). It shows that that the program of promoting health care for the elderly, applying the KAP theory together with teaching techniques and health counseling for the elderly, can help the elderly to learn to promote better healthy living.

The average level of Attitude found from the study in the aspect of eating proper and healthy food, is higher than before the experiment and significantly different (p-value < 0.05). The post-test level in doing exercises is higher than before the experiment with a significantly different (p-value < 0.05). In oral health and dental care, the average level after the experiment is higher than before the experiment and statistically significantly different (p-value < 0.05). In the prevention of accidents, the average level after the experiment is higher than before the experiment and there is no statistically difference. It is found that overall, the levels of promotion of elderly health care in all the four areas, are, after the experiment, higher than before the experiment with statistically significantly different (p-value < 0.05). It shows that the program of promoting health for the elderly, applying KAP theory together with teaching techniques and health counseling in the elderly, can help older people to have a better attitude to promote better health.

In Practice, it is found that the average level of practice in the diet after the experiment is higher than before the experiment and there is no statistically difference. In doing the exercises, the average level of practice, after the experiment is higher than before the experiment with a statistically significantly different (p-value < 0.05); In oral and dental health care, the average level after the experiment is higher than before the experiment and there is no statistically difference. It shows that the elderly has a good oral and dental health care. In the prevention of accidents, the average level after the experiment is higher than before the experiment with no statistically different. It shows that the elderly has a good care in preventing accidents. In the Practice of the four aspects regarding the promotion of elderly health care, the average levels are higher than before the experiment and with a statistically significantly different (p-value < 0.05). It shows that the program of promoting health care for the elderly, applying the KAP theory together with teaching techniques and health counseling in the elderly, can help the elderly to practice and self-efficacy in promoting a better health[3-5].

**Part 2: The study of correlation between the knowledge, the attitudes and self-efficacy in elderly health care promotion with the experimental group before the experiment**

From the study, it is found that there is no correlation between the knowledge and the practice of the promotion of health care before the experiment. As for the attitudes, there is a statistically significant correlation with the practice of health promotion (P-value < 0.05). The elderly health promotion behavior modification program, by applying the KAP theory together with teaching techniques and health counseling among the elderly, can change their attitudes to practice for better health promotion. Similarly, studies have been reported[5-9].

## CONCLUSION

From the study of the Health Care Promotion Program in the Changing Behavior of the Elders, Applying KAP Theory in the Teaching and Providing Counseling in Health Care In Thanyaburi District, Pathum Thani Province, Thailand, it is found that in all the aspects of eating properly and healthy food, in doing exercises, in oral and dental care and in the prevention of accidents, are at a high level of behavior which could be used and beneficial to the other elderly groups.

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