Study on the Behavioral Change, Prevention and Control of Complications in Diabetic Patients in Ongkharak District, Nakhon Nayok, Thailand: Application of Motivational Theory to Disease Prevention

Samrong Koonawoot* and Somporn Naklang

Faculty of Public Health, St Theresa International College, 1Moo 6, Rangsit, Nakhonnayok Road, Klong 14, Bungsan, Ongkharak, Nakhonnayok-26120, Thailand.

http://dx.doi.org/10.22207/JPAM.12.1.27

(Received: 20 January 2018; accepted: 03 March 2018)

Adaptive Behavior Change Prevention Program for Diabetes Mellitus by Applying Prevention Motivation Theory with Teaching and Public Health Counseling. Amphoe Ongkharak Nakhon Nayok This research was a quasi-experimental research. The experimental group consisted of 34 people aged 35 years and older who were diabetic. Before-After one group design was used to collect data. The data were analyzed by frequency, percentage, mean and standard deviation. Paired Samples t-test and Pearson Product Moment Correlation Coefficient. The results of the study revealed that the experimental group had demographic characteristics. The demographic characteristics of the experimental group were mostly 70.6 percent women aged 50 years and over. 85.3 major occupations were farmers, 44.1 percent had diabetes. Most of the patients had hypertension (44.1%), diabetic eye disease (20.6%), and comparison of mean scores in the experimental group before and after the experiment. Statistics at 0.05. When analyzing the relationship between the variables studied and their practice in preventing complications from lung disease. It found no relationship. The results of this study conclude that the behavioral modification program for preventing complications from diabetes by applying preventive motivation theory to health counseling techniques. Can change the behavior of diabetes prevention complications.

Keywords: Behavioral modification, prevention, control, diabetes mellitus and preventive motivation.

Diabetes is a chronic disease that is a major public health problem in the country. And the leading cause of death in the country. And diabetes also makes patients with complications such as heart disease. Hypertension, cataracts, chronic wounds, chronic addiction to permanent disability. Stroke paralysis caused by disability. And data from the health behaviors of diabetic patients found that drinking alcohol, smoking, eating sweet, it is salty, not exercise. And lack of awareness in health

care. It is a factor that is also a health problem, increasing the negative impact on the economy. Society and Family The quality of life of the people decreased. Lose budget the results of the screening of diabetic patients in the health promotion area of Ban Bang Khaem, Amphoe Ongkharak Nakhon Nayok in 2011, there were 75 diabetic patients. In 2016, 160 patients with diabetes and data from the health survey of patients. Diabetes in the area of responsibility. The home health promotion hospital found that drinking alcohol, eating sweet, it was salty, not exercise. And lack of awareness in health care. It is also a health problem. From the statistics. The number of patients has increased causing loss. Economic, social, family and human resources. It is

^{*} To whom all correspondence should be addressed.

another important public health issue. Public health officials or staff must work together to resolve the problem. By providing advice and encouraging diabetics to act properly. To control the subsequent complications^{1,2,3,4}.

Researchers have developed a counseling program that uses the motivational theory of disease prevention in combination with teaching and counseling to prevent complications from diabetes. Faculty of Public Health, 4th year Teaching and Counseling in Health Care (902 307 Teaching and Counseling in Health Care).

Research Objectives General Objectives

To study the effectiveness of behavioral counseling programs by applying preventive motivation theory to teaching and health counseling to prevent complications in diabetic patients.

Specific Objectives

To study the changing behavior of target population. In the perceived violence of complications. Perception of risk Expectations of self-efficacy Expectations

The result intends to follow the behavior. And to prevent complications in patients with diabetes. Perception of complication. Perception of risk Expectations of self-efficacy Expectations in results Intentional Behavior Prevention of complications in diabetic patients.

Research problems

Behavior Modification Program Applying the theory of motivation to prevent disease with proper teaching and counseling can result in better control of diabetic complications. or not

Research Methodology

This research Quasi-Experimental Research. People with diabetes who voluntarily

Independent-variables

Behavior Modification Program

- Activities to create awareness and expectations.
- 1.1 Education Participatory instruction, questioning, using instructional strategies and counseling.
- 1.2 Discussion on the severity and risk of complications from diabetes.
- 1.3 Talk about the expectations and ability to control, prevent, complicate from diabetes
- 2. Intentional Behavioral Activities
- 2.1 Counseling, encouraging, and informative Practices in correct consumption.
- 2.2 Provide counseling about self-care Foot Massage and Exercise
 - 2.3. How to Relax and Stress Relief
- 2.4 Targeted Practice to Control Diabetes Complications

Variables

- Perception of violence, complications from diabetes.
- Perceived risk of complications from diabetes.
- 3. Expectations of Self-Control to Prevent Diabetes Complications
- Expectations in the prevention of complications from diabetes.
- Intention to behave in the prevention of complications from diabetes.

Practice in prevention.

Complications from diabetes

- Consumption of sweet, salty and fatty foods.
- 2. Exercise regularly.
- 3. Massage and viewing and foot.
- 4. Relaxation
- 5. Stress Management

Research Framework

J PURE APPL MICROBIO, 12(1), MARCH 2018.

participated in a behavior change program were 34 patients, including diabetic patients. Participated in 34 behaviors change behaviors as usual. Before-After one group design:

Experimental charts

Experimental group O 1 X O 2

- O1 means pre-trial data collection.
- O2 means post-trial data collection.
- X means refers to a behavior modification program.

Population and sample selection

The population in the study were people with diabetes mellitus, living in the 6th district. Amphoe Ongkharak Nakhon Nayok the researcher selected the following criteria:

- 1. People with diabetes Both male and female.
- 2. No problems with hearing, sight, speech
- 3. volunteering to participate in behavior change program

RESULTS

This research Applying the theory of motivation to prevent diseases together with counseling by students to prevent complications in diabetes of people aged 35 years and over. Amphoe Ongkharak 34 people in Nakhon Nayok Province followed the steps of the behavior change program. The data collected were analyzed and presented in 3 parts.

Part 1 General information on demographic features.

Part 2 compares the differences between pre and post-trial variables.

Part 3 Test Results Relationship Perception of violence Perception of risk Expectations on self-efficacy Expectations in results Intention to behave in the control of complications from diabetes mellitus in the experimental group.

Part 1 Results of general data analysis on population demographics

The demographic characteristics of the experimental group were mostly female, 70.6% male, 29.4% male, 15-24 age group, 2.9% age group, 35-49%, 11.8% age group, 50% and 85.3% respectively. 50.0 percent of the population were Islamic, 50.6 percent were married, 67.6 percent were married, and 17.6 percent were married. The majority of the respondents were 88.2 percent in upper secondary school, 8.8 percent

in upper secondary school, and 2.9 percent in upper secondary school. The main occupations were farmers, 44.1 percent, 26.5 percent, 14.5 percent. There were 11.8% occupation and 2.9% occupation. The average income was lower than 2,000 baht, 35.3%, 2,001-6,000 baht, 52.9%, 6,001-10,000%, 8.8% and more than 10,000 baht. Cool and diabetes of the 44.1 percent with diabetes, 20.6 percent had diabetes, and 5.9 percent had heart disease, 2.9 percent had diabetes, and 11.8 percent had diabetes. 11.8 percent, 70.6 percent, 14.7 percent, and 5.9 percent, respectively, exercised less than 3 times / week, 55.9 percent in the past year. There are 94.1 percent.

Part 2. Comparison of variance in experimental group. Before and after the experiment

Comparison of mean scores of perceived violence within the experimental group before and after the experiment. The average score was 2.61 and the standard deviation was 0.397. After the experiment, the average score was 2.87 and the standard deviation was 0.212. After the experiment, the scores were significantly higher than before the experiment and significantly different (p-value <0.05).

Comparison of mean scores of perceived risk in the experimental group before and after the experiment. The average score was 2.63 and the standard deviation was 0.431. After the experiment, the average score was 2.92 and the standard deviation was 0.192. After the experiment, the scores were significantly higher than before the experiment and significantly different (p-value <0.05).

Comparison of mean score for aspiration in the experimental group before and after the experiment. The average score was 2.89, with standard deviation of 0.144. The average score was 2.98 and the standard deviation was 0.259. After the experiment, the scores were significantly higher than before the experiment and significantly different (p-value <0.05).

Comparison of mean scores of expectations in the experimental group before and after the experiment. The average score was 2.84 and the standard deviation was 0.259. After the experiment, the average score was 2.99, and the standard deviation was 0.019. After the experiment, the mean score was higher than before the experiment and was significantly different (p-value <0.05)

Comparison of mean scores of intention to practice in the experimental group before and after the experiment. The average score was 2.88, with standard deviation 0.226. After the experiment, the average score was 2.96 and the standard deviation 0.096. After the experiment, the scores were significantly higher than before the experiment and significantly different (p-value <0.05).

Comparison of mean score of self-efficacy in preventing complications from diabetes mellitus in the experimental group before and after the experiment. The average score was 2.17 and the standard deviation was 0.299. After the experiment, the average score was 2.19 and the standard deviation was 0.194. After the experiment, the scores were significantly higher than before the experiment and significantly different (p-value <0.05).

Part 3. Test results. Perception of violence Perception of risk Expectations of self-efficacy Expectations in results Intentional Behavior And prevention of diabetes. Before the experiment was found

Perception of violence Perceived risk, expectations, expectations, results, and intentions. There was no correlation between the management of diabetes mellitus and the prevention of complications.

Summary and discussion

Research Results Behavior modification to control complications in diabetic patients. Bueng Phra Achan Amphoe Ongkharak Nakhon Nayok Province can be summarized as follows.

Part 1. General information on demographic features

Mostly female. The experimental group was mostly aged 59 years. The majority of the subjects were 88.2% in the experimental group. The majority of them were the middle school students (5.9%). The majority of them were the experimental group (67.6%). Most of the labors were 26.5% of the experimental group. The average was 4,170 baht per month. All patients had diabetes. Most family members did not have diabetes. 88.1% had no history of smoking, 85.3% did not change their body weight in the last 6 months, 70.6% did not change their body weight, had no history of drinking alcohol, 91.2% exercised, 44.1% exercised, 3 times a week, 55.9% had a history of blood sugar penetration, most of

them measured by blood sugar in the past year 94.1%.

Part 2 compares the differences between pre and post-trial variables

The results showed that before the experiment, there was a high level of perceived violence. The average level of education was 61.8%. The low level was 2.9%. After high level, 94.1% was medium level, 5.9% was higher and significantly different the chart. High risk perception the average level of education was 76.1%. The average level was 5.9%. The average level was 5.9% high expectations of competence are 100 percent. After the experiment, there is an expectation of competence in the high level. The average score is 100%. And the difference was statistically significant.

Expectations in results Is high 94.1% had moderate level, 5.9% after the experiment, the results were moderate. 100% were significantly higher and statistically significant. difference Intentional Behavior Is high 94.1% had moderate level, 5.9% had high intention after the experiment. 100% were significantly higher and statistically significant difference.

Practice in controlling the complications of diabetes. Is high the average level was 64.7%, low level was 32.4%. After the experiment, the patients had high level of preventive measures. The average level was 85.3%, low level was 11.8% which was higher and significantly different.

Part 3 Test Results Relationship Perception of violence Perception of risk Expectations on self-efficacy Expectations in results Intention to behave in the prevention of complications from diabetes before and after the trial.

The results showed that before the experiment. Perception of violence Perception of risk Expectations on self-efficacy Expectations on results and intentions. There was no correlation between self-care behaviors and diabetes control.

DISCUSSIONS

The results of this study show that the prevention of complications from diabetes mellitus in diabetic patients using the motivation theory for prevention of diabetes mellitus. Together with teaching and health counseling According to the fourth year of Faculty of Public Health, 902 307

Teaching and Counseling in Health Care has been used in the study of people with diabetes. Helping the target audience gain knowledge. And the practice is different from before the experiment. Similar reports have been reported by several researchers^{5,6,7,8}.

The results of a study on behavioral modification to prevent complications in diabetic patients. District Teacher Amphoe Ongkharak Nakhon Nayok It is known that participants have knowledge about diabetes and complications caused by diabetes. Patients are able to control and prevent it in a better way and, it can be done better and reduce the disease caused by complications if the responsible person in the area gradually stimulates the patient in eating. exercise Relaxation, stress reduction, drinking and smoking. This approach can be used for other diabetic patients in the community. The results of the current study in agreement with other research reports made by the several authors^{8,9,10,11}.

Suggestions for the next study.

- 1. Study other behaviors. It is expected that affect the blood sugar control of patients with diabetes, such as drinking habits. Continuous drug consumption.
- 2. The case study should be studied in depth. In diabetes patients who cannot control blood sugar.

REFERENCES

1. Roger RW. A protection motivation theory of fear appeals and attitude change. *J Psychol* 1975;

91:93-114.

- 2. House JS. The association of social relationship and activities with mortality: Community health study. *Am J Epidermiol* 1981; **3**:25-30.
- 3. http://www.teacher.ssru.ac.th/terada/file.php/1/ research/Self_— _Care _Behavior _ of_Diabetic_Patients_at_Bangpo_General_ Hospital_Bangkok/substance/Chapter_2.pdf
- 4. http://gishealth.moph.go.th/healthmap/upload/document/work_05017_161115_131054.pdf
- 5. http://www.google.co.th/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&sqi=2&ved=0ahU KEwjt3KGOhPjRAhWJuY8KHRViBzoQFgg3 MAU&url=http%3A%2F%2F203.157.186.15%2Fhyt%2Ffiles%2Fdocs2603200915-16-30.doc&usg=AFQjCNHM8J5R9lNt5NnpXLWy QWqKDxUgig&sig2=Kl5tSog9oPWv4pljXQdRg&bvm=bv.146094739.d.c2I
- http://www.journal.msu.ac.th/upload/articles/ article748 90015.pdf
- 7. http://www.promkiri.go.th/detail/doc_download/a 270514 115121.pdf
- 8. http://ird.stou.ac.th/dbresearch/uploads/161/%E 0%B8%9A%E0%B8%97%E0%B8%97%E0%B 8%B5%E0%B9%88%202.pdf
- 9. https://www.tci-thaijo.org/index.php/JRTAN/article/viewFile/30627/26427
- 10. http://www.teacher.ssru.ac.th/terada/file.php/1/research/Self_Care_Behavior_of_Diabetic_Patients_at_Bangpo_General_Hospital_Bangkok/backend/3._Appendix_B.pdf
- 11. Chutima Leela Udom Lipi (2009). "Self-Care Behaviors of Diabetes Patients." Huai Phueng Hospital Karasin Province". Journal of Health Research and Development. Year 2 (No. 1): http://rdhsj.moph.go.th/ojs2/index.php/rdhsj/article/view/30/32(28)