CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

This chapter is organized into five sections including summary of the study, findings and conclusion, implications of findings, limitations of the study, and recommendations for further research.

Summary of the Study

A randomized controlled trial was used to examine the effects of a diabetes self-management program on knowledge of diabetes, glycemic control, CVD risk, and QOL among people with type 2 diabetes. It especially sought to compare these variables between before and after entering the program of duration 24 weeks and between people with diabetes receiving the diabetes self-management program and those receiving usual care.

The intervention was conducted during a nine-month period, from August 2005 to April 2006. A hundred and fifty seven agreed and enrolled in this study. Final participants for analysis included 147 patients. There were ten participants excluded from the study, six from the control group, and four from the experimental group. The drop out rate was 6.37%.

Six instruments were used in the process of data collection: 1) the diabetic knowledge questionnaire (Arunneatara, 1998); 2) the SF-36 version 2 translated by Methakanjansak (2005); 3) the Biotech Semi-automate Analyzer; 4) the Primus Nycocard

Analyzer; 5) the Beckman Coulter Syncron CX 7 Delta Chemistry Analyzer; and 6) a Sphygmomanometer.

The reliability coefficients of the diabetic knowledge questionnaire was .77 (using K-R 20 to analyze), and that of the SF-36 version 2 was .75. The accuracy and precision of the laboratory equipments and sphygmomanometer were assumed. Data analyses were performed using mean, standard deviation, frequency, percentage, paired t-test, and ANCOVA.

Findings and Conclusions

The sample included 147 participants with type 2 diabetes, with 75 in the experimental group, and 72 in the control group. Approximately 72% were women. The mean age was 56.80 (SD = 10.23). Most of them were married (69.40%), and had completed primary school (92.5%). A large percentage (76.87%) had a monthly household income of less than 5,000 Baht, and had national health care insurance (76.19%).

The findings from this study showed that people with diabetes receiving the diabetes self-management program had significantly better knowledge of diabetes, glycemic control (FPG and HbA_{1c}), lower cardiovascular risk (CHD risk), and better QOL than before entering the program ($p < .001$, $p < .001$, $p < .001$, $p < .001$, and $p < .001$, respectively), and than those receiving usual care ($p < .001$, $p < .05$, $p < .05$, and $p < .001$, respectively).

Implications of Findings

In this section, implications of findings for nursing practice, nursing education, and nursing research are presented as follows:

Implication for nursing practices

The diabetes self-management program should be incorporated into the regular service of diabetic clinics in both community hospital and primary care setting since it demonstrated its effectiveness in improving diabetes control and increasing the quality of life for people with type 2 diabetes. Small group diabetes education and discussion for diabetes self-management should be conducted by nurses with patients who have poor diabetic control. Then, a regular appointment for each specific behavior modification should be made in every follow-up visit until the patients can reach normal or near-normal glycemic control goal. For the new diagnosed patients, the individual counseling on diabetes mellitus and its management should be provided to help patients adjust their behaviors. Then, regular contact should be performed. If patients still could not control their blood glucose to near normal, the small group discussion should be considered. Patients who are successful in glycemic control should be promoted to be a role model for other patients. For patients who are at high risk or have complications, nurses should use home visit to provide self-management education and regular reinforcement to help them. Patients should be taught how to evaluate and monitor themselves to prevent or delay severe complications. The individual session should be integrated into the home health care service since it is the regular service of the community hospital or primary care setting.

Implication for nursing education

The diabetes self-management based on self-efficacy and self-management concept should be addressed in nursing knowledge since they were proved as significant factors for behaviors change, especially in chronic illness and promoting successful outcomes. Since diabetes self-management as proposed in the program requires some specific advanced skills such as self-efficacy enhancement and consultation, advanced nursing education is needed for preparation of advanced practitioner nurses to work with this particular group of patient.

Implication for nursing management

As demonstrated in this study that self-management is vital for glycemic control, nursing administrators need to reconsider integrating self-management program into regular nursing system and services. The administrators may provide on the job training to educate nurses about self-management strategies and facilitate them to work based on the guideline. Recruitment of advanced nurse practitioners who are experts in diabetes mellitus is highly recommended. Moreover, the diabetes self-management education or training guideline, and clinical practice guidelines (CPGs) for different diabetes groups of patients including the newly diagnosed group, poorly controlled diabetes controlled, and diabetic patients with comorbidities should be set.

A network for diabetes self-management at community hospitals, primary care setting, and health stations should be set up for sharing of resources. The community hospital should act as a co-network and preceptor to promote diabetes

self-management and provides materials for other health care settings to distribute quality of care for people with diabetes. The research findings suggest that the cost of intervention program should be analyzed in the further study. It will be useful for management and implication in clinical practice.

Limitation of the Study

1. There were some people with diabetes with uncontrolled blood sugar who did not agree to participate in this study, and their demographic characteristics were not available. It is possible that there might be some differences between those who dropped out and those who remained in the study. The findings, therefore, may not be able to generalize to all diabetic population.

2. The target population in this study was fairly homogenous: had limited educational status at primary level; low socioeconomic status; and had taken oral hypoglycemic drug. In addition, the intervention was conducted in only community hospitals and primary care units of the Eastern region, which may not be the representatives for other levels of hospital. Also, the present program was planned for people who can read and write and have no severe complications. Therefore, it would have limited application for people with type 2 diabetes who have limited literacy or have severe complications.

Recommendations for Further Research

Based on the limitations of this study, recommendations for further study include the following:

1. Replication of the study with a larger size and randomly selected participants from heterogeneous characteristics, and several geographic areas are needed to broaden the generalizability of the study.

2. Further research in a diverse population and setting using a randomized controlled trial should be replicated to assess the effectiveness of the diabetes self-management intervention on glycemic control, CHD risk, and QOL over a long-term period.