

CHAPTER 1

INTRODUCTION

The aim of this chapter is to present the background and significance of Type 2 diabetes and to formulate objective and research questions of the study. Additionally, its conceptual framework will be discussed.

Background and Significance of the Problem

World Health Organization (WHO) reported that approximately 150 millions people have diabetes worldwide (WHO, 2002). The numbers of adults with diabetes in the world are expected to increase from 135 million in 1995 to 300 million in 2025 and a major part of the change would occur in developing countries (King, Aubert & Herman, 1998). Large numbers of the adult population are affected by the disease because of obesity, unhealthy diet, sedentary lifestyle, urbanization, and industrialization (Wing et al., 2001; WHO, 1998). The evidence implies a burden to the country, society, and the community at large.

Diabetes is one of the most prevalent chronic diseases among Malaysians as well. The prevalence of diabetes has steadily increased over the past 10 years. In 1986, the prevalence was 6.3% and had increased to 8.3% by 1995 (Ministry of Health, 1998). With a 21 million population (1996 estimated), the number of diabetes sufferers is approximately 1.7 million. By the year 2020, the prevalence is expected to exceed to 10% (Anuar, 1998). Likewise in the state of Kelantan, northeastern Malaysia, the prevalence of diabetes was 5.3 % as reported by second Malaysian National Health Morbidity Survey (NHMS, 1996). In 1999 another study was done and it showed that it has increased to 10.3% (Mafauzy, Mokhtar, Wan Muhamad & Salmah, 1999). In addition, the number of in-patients with diabetes at the University Hospital Science Malaysia, Kelantan, is increasing every year. In 2003, the number of cases was 1,176, whereas it was 628 in 2002 and 413 in 2001 (Medical Record of University Hospital Science Malaysia, 2004). The escalating in diabetes prevalence, coupled with its chronic complications such as retinopathy, nephropathy, and angiopathy will greatly increase the burden of health care. Therefore, investment on promoting self-care of persons with diabetes and preventing its complications would reduce the burden of the disease in future.

At present, it seems clear that both developed and developing countries will be able to provide specialized long-term care for the vast number of diabetes patients in coming decades (WHO, 1998). However, the patients with diabetes should develop their capabilities to maintain their healthy life styles in controlling their glycaemia and preventing its complications (Tuomilehto, Lindstrom, Erikson & Valle, 2001).

Prevention of diabetes complications is very important for improving quality of life of the population (Hjelm, 2003). A study carried out by Chan (1999) revealed that diabetes education may improve knowledge and increase patients' ability to comply with the diabetes regimen. In order to help patients with diabetes to change their behaviors and comply with the regimen, diabetes education is required (Carter, 2000). In addition, diabetes education enables the diabetes patients to perform their self-care practice, i.e., dietary control, exercise, medication taking, personal hygiene, stress management (The Diabetes Control and Complication Trial Research Group, 1993).

Masawang (2000) found the effects of health promotion and diabetes education on improving self-efficacy, practice in self-care, and glycaemic control. The results indicated that diabetes patients who received the program had better self-care than the control group. Similarly, Puangkwan (2002) found that intervention of diabetes education is an effective approach for fostering self-care behavior. Nunthaphiboon (2001) found that the development of self-care agency of diabetes patients was statistically significant through diabetes education, i.e., the experimental group gained a statistically higher level of knowledge on diabetes, self-efficacy, dietary control, exercise, and medication taking than the control group.

Moreover, concept of promoting and supporting patients' participation in health care has been widely accepted as the essential component in increasing self-care and self-reliance (Nunthaphiboon, 2001). In application of this concept to nursing practice, patients have to change from being passive recipients to be active participants (Wongwaiwit, 1996). Participation in the diabetes education program will empower patients to be the agent of their own care.

Many studies conducted in western countries showed the effect of using supportive - educative approach (later changed to supportive-developmental approach by Orem Study Group, 2004) in improving self-care of diabetes patients (Burks, 2001; Folden, 1993; Jaarsma et al., 1999; Scott, Kline & Britton, 2004), however, no evidence in Malaysia examined the

effectiveness of the intervention. Regarding to the increasing of number people with Type 2 diabetes in Kelantan Malaysia, comparing to the prevalence of diabetes in Malaysia (Mafauzy, 1999), the researcher hypothesized that enhancing self-care of the population will contribute to controlling of the disease and ultimately promote their quality of life. Therefore, this study was planned to examine the effect of a supportive-developmental nursing program on self-care practices of the patients with Type 2 diabetes patients. The study results will provide knowledge and guidelines for improving self-care practices of the diabetes population in Malaysia.

Objective

To examine the effect of supportive-developmental nursing program on self-care practices in Type 2 diabetes patients.

Research Question

Do Type 2 diabetes patients who receive usual care coupled with supportive-developmental nursing program have a higher score of self-care practices than those who receive only the usual care?

Hypothesis

Type 2 diabetes patients receiving usual care coupled with supportive-developmental nursing program have a higher score of self-care practices than those who receive the usual care.

Conceptual Framework

The construction of conceptual framework of this study is based on Orem's Self-Care Deficit Nursing Theory (SCDNT) (Orem, 2001). Orem's supportive developmental nursing system forms the basic strategies in the intervention program. According to Orem, "self-care is the practice of activities that the individual initiates and performs on one's own behalf in maintaining life and well being." The actions are directed to respond to three different types of self-care requisites: universal, developmental, and health deviation requisites. Orem identifies these three requisites as important for persons with illnesses, diseases, and disabilities. Effective

performance in response to the requisites known as therapeutic self-care demands enables patients to involve in their disease management and learn to live with their health problems.

Based on Orem's theory, it is important to formulate nursing program aimed to develop patients' capabilities on responding to their self-care needs. The nursing program would enable diabetes patients to gain knowledge and skills that lead them to care for themselves. It is a supportive-developmental nursing system that facilitates patients' learning process and promotes their self-care practices (2004). The supportive-developmental nursing program used to be named as supportive-educative nursing system (Orem Study Group, 2004), comprising of building relationship, teaching, guiding, providing support, and managing environment condition for developing patients' capabilities to care for themselves. The nursing interventions are expected to help the diabetes population meet their therapeutic self-care demands, i.e., dietary control, exercise, stress management, medication taking, and personal hygiene (Funnel & Haas, 1995). Therefore, the nursing assistances for persons with Type 2 diabetes is considered as major concerns in this study.

The supportive-developmental nursing program in this study will emphasize on understanding of the diabetes, and its clinical effects and complications. In addition, self-care management on diet, exercise, stress management, medications, and hygiene care will be supported. Understanding health problems caused by the diabetes is important for the patients to make judgment and decision in performing self-care practice. Through the intervention, the diabetes patients will be motivated for operating self-care practices towards dietary control, exercise, medication taking, stress management, and personal hygiene. In summary, the persons with diabetes who receive the supportive-developmental nursing program are expected to be capable in performing self-care. The theoretical basis which forms the conceptual framework for this study is shown in Figure 1.

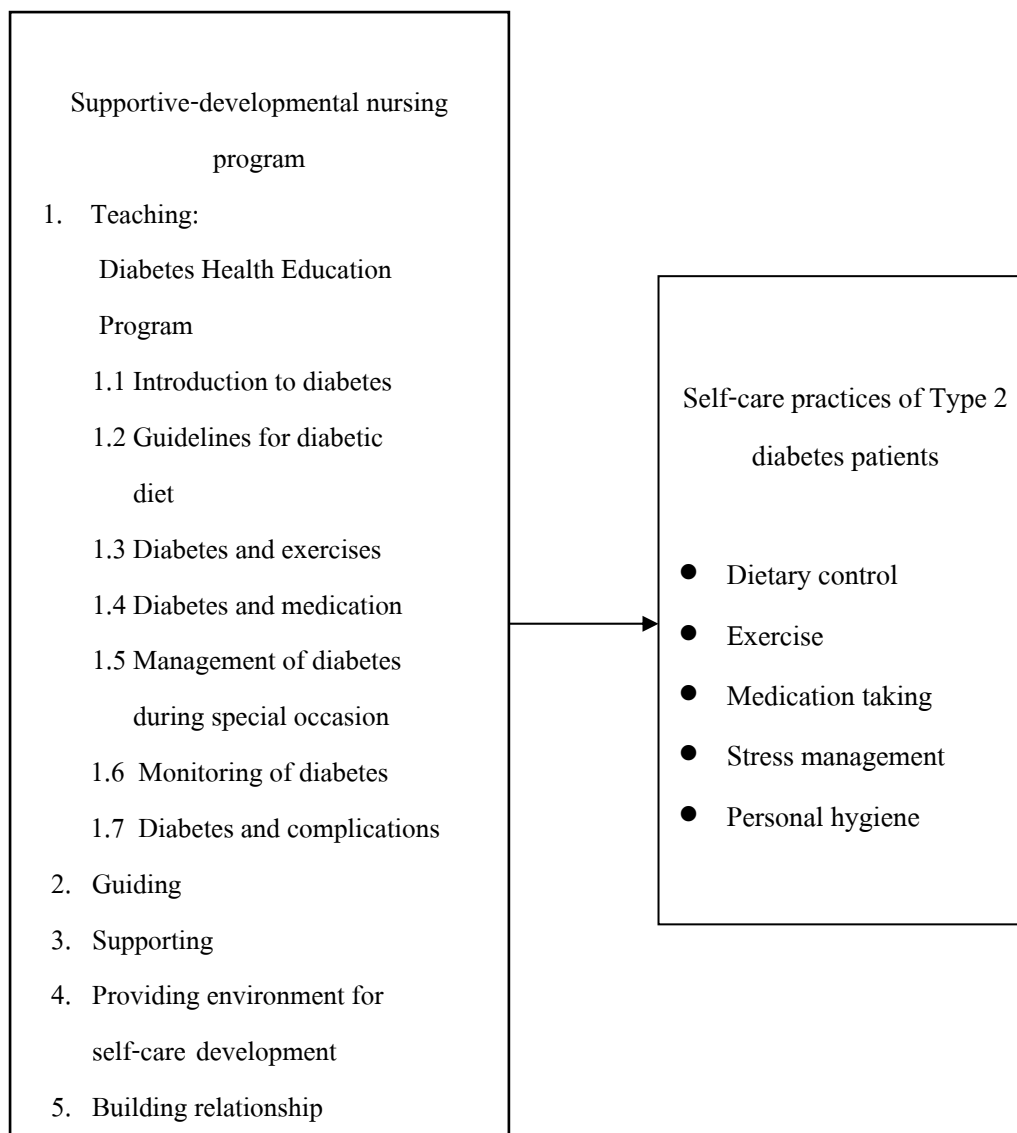


Figure 1. Theoretical framework of the study

Definitions of Terms

Patients with Type 2 diabetes refer to individuals who have been newly diagnosed as having Type 2 diabetes mellitus and attending the outpatient clinic in University Hospital Science Malaysia not more than three months.

Supportive-developmental nursing program refers to the nursing program as defined by nursing theory of Orem's (2001), which aims to promote the capabilities of diabetes patients to perform their self-care practices. The program consists of provision of teaching, guiding,

supporting, providing environment, as well as building relationship to promote the patients' self-care abilities towards dietary control, exercise, medication taking, stress management, and personal hygiene. The supportive-developmental nursing program was comprised of the following components:

Teaching refers to actions taken by the researcher in order to develop knowledge and skills of diabetes self-care management by giving information related to Type 2 diabetes mellitus patients such as definition of diabetes, its clinical effects, severity of its complication, including the patients' self-care management on dietary control, exercise, medications taking, stress management and personal hygiene. The teaching guideline is based on a manual handbook, which was developed by Epidemiology Unit of Health Department Kelantan and validated by a committee of physician, Ministry of Health. It has been used to teach diabetes patients in the entire health centre in Kelantan since 2004. The researcher will give handouts on the manual handbook to the patients with diabetes to use as a guideline for self-care practices at home.

Guiding refers to actions taken to provide encouragement to the patients to make decision on their self-care practices. The researcher will provide suggestions and alternatives to the persons, and help them to assess their choices through discussion and choose what would be suitable for them.

Supporting refers to providing support which includes emotional and informational support, for example, how to change meal plan, how to treat minor skin problems, and giving praise or compliment whenever they manage to take good care for themselves.

Providing environment refers an action for self-care development in building relationships between researcher and the persons with diabetes throughout the program especially during the meeting and teaching session. The researcher will use this method based on the senses of: 1) willing to help, 2) willing to listen, 3) concerning for patients' needs, 4) providing conducive room for the patients to share their self-care experiences.

Building relationship refers to actions of the researcher who is willing to help and listen by expressing herself in friendly manner, smiling, and talking softly in order to encourage diabetes patients to acknowledge on attention, trust, and to express freely their worries and doubts.

Self-care practices refer to the practice level of activities that were performed towards dietary control, exercise, stress management, medication taking, and personal hygiene care. The level of self-care practices will be measured using Diabetes Self-Care Questionnaires developed by the researcher based on Orem's SCDNT (2001) and diabetes management guidelines (Funnel & Haas, 1995).

Significance of the Study

The study results will be useful for the clinicians to look into the performance of diabetes patients in self-care practice and eventually it may help in the management of diabetes. It will also provide information for academic purpose in teaching nursing students and nurses on how to educate diabetes patients and to help them to gain better understanding on intervention promoting self-care practices of patients with diabetes. In addition, the research findings will provide information for future research regarding the concept of self-care not only for diabetes but for other population.