

EXPLANATORY MODEL BASED ON PERSPECTIVES OF DIABETIC PATIENTS IN NORTHERN THAILAND

Sukanya Boonvarasatit^{*}, Wanich Suksathan^{**}, Kantapong Prabsangob^{***}

^{*}*College of Nursing and Health, Suan Sunandha Rajabhat University, Thailand*

E-mail: sukanya.bo@ssru.ac.th, wanich.su@ssru.ac.th

^{***}*College of Allied Health Science, Suan Sunandha Rajabhat University, Thailand*

E-mail: kantapong.pr@ssru.ac.th

ABSTRACT

Introduction: Diabetes Mellitus (DM) is one major problem in Thailand. DM patients have their own beliefs and perceptions about the illness. Only few studies explained diabetes in a patient's perspective. This study aimed to elicit type II diabetes mellitus patients' explanatory model of diabetes in a sub-district health promotion hospital, in northern Thailand.

Methods: A qualitative study was used. The participants included patients who have been diagnosed with type II diabetes for at least one year. A total of 16 participants including 6 men and 10 women were recruited from out-patient clinics at a sub-district health promotion hospital, in northern Thailand. Data were collected by in-depth interviews and were tape recorded. Data were analyzed using content analysis.

Results: Both men and women patients explained the illness model similarly, including the cause of diabetes, the symptoms in the beginning of diabetes, the effects of diabetes to their life, the severity of diabetes, and the beliefs about treatments. However, details of the perspective were different between men and women patients.

Conclusions: Most patients understand diabetes in terms of a chronic and incurable disease. They related the illness with blood sugar level, which causes them to keep taking medication. Effective communications between patients and physicians are needed.

Keywords: explanatory model, diabetes, sub-district health promotion hospital

INTRODUCTION

Diabetes is a chronic disease. The patients must see their physicians regularly for health check-up, picking up some medicine, and taking physicians' advice. While examining, the patients must inform symptoms and health problems related to their diabetic illness. The physician will provide recommendation of how to take better care of them, and how to control blood sugar to normal level; prescribe medicine; and explain how to take medicine correctly. In order to make patients understand and follow physicians' advice correctly, communication between patients and physicians must be effective. The important components to improve mutual and better understanding are language usage in communication and point of views on the topic discussing. Both patients and physicians must understand what the other try to communicate and what the other perceive on the subject they are discussing. When the patients do not understand health information, they will not follow physicians' direction. However, although some of the patients with diabetes understand and recognize health information and physician's recommendation well, they deny following physicians' advice. That because of their thought and point of view towards their diabetes differs from the physicians'. According to Arthur Kleinman [1], he explained that medical staff always viewed patients' illness as a disease. It was important to focus on curing a disease through medication. In contrast, patients viewed their illness as incapability to perform their normal activity. That had an impact on behavior change and social role. Since both physicians and patients had different views on patients' illness, there was a gap between physicians and patients in understanding health care plan or treatment. As the consequence, it causes delay in care and treatment; lack of patients' cooperation; dissatisfaction in care and treatment; error diagnosis; and inappropriate treatment [2].

Population of each culture groups have accumulated knowledge and beliefs about explanations of how diseases happen and how to cure them, which is called by Klienman [3] "Explanatory Model of Illness or

EM". The model is the process used in exploring causes or factors that explain certain beliefs and behavior, emphasizing that different races and nationalities give different meanings of illness and health. Moreover, patients' exploratory model of disease is meaningful as a reflection of their experience of illness and surrounding conditions. These give an explanation of what disease they have; why they are sick; how to prevent, control, or cure that illness; why some are sick and others are not [4]. Exploratory Model of Disease has several functions. The first function is that the model sets criteria in making a decision whether a person is sick. In some cultures, it is hard to accept an illness, while individuals cannot make themselves to understand that particular state. The second function is that the model indicates reasons why individuals are sick. In deeper analysis, the results may contribute to explanation of other related conditions or factors and ways to increase individuals' immunity against diseases and what decreases their immunity. The third function is that the model explains 3 levels of causes of diseases: (1) immediate causes such as changes of syndrome, insulin resistance; (2) underlying causes such as eating foods with high sugar as regular habit, lack of exercises; (3) ultimate causes such as bad luck, karma, stress, insufficient exercises, food and etc. [3].

Explanatory Model of Illness broadly explains behavior of illness. Generally it explains about causes of illness aligned with unbalance of patients' living and nature and supernatural, and relationship between patients and surrounding society. This leads to actions of seeking how to cure illness based on local ways, folkways and professional ways of different races. Even though changes of economic, politics, society and culture may influence villagers to use modern healthcare service, they do not completely neglect traditional ways. This is a reason of mobility in Thailand between traditional and modern healthcare [5].

Klienman's Explanatory Model of Illness explained that there were 3 elements in medical system: (1) defining illnesses; (2) explaining causes of illnesses; and (3) process of treatment. These elements consist of theories about illnesses, symptoms, severity, types of illnesses and treatments. This can be stated that the model provides a systematic thinking that assist explanations of illnesses and determinants of healthcare service choices. In 1981, Klienman explained that individuals construct different explanatory model of disease, especially between patients and healthcare service providers under healthcare service system. This is due to the reason that healthcare service providers have clinical reality concept towards diseases, while general people have social reality concept towards the same thing. This results in different explanatory model of illness between both of them and influences decision making of patients in selecting placements of healthcare service. In a medical process, medical staff explains diseases by relating them with episode of illness and most treatments are dissected. This is because curing under the clinical reality concept requires medical staff to dissect contemplation and understanding about illness and treatments from social beliefs. The Explanatory Model of Illness consists of the following theories of illness: (1). Etiology, (2). Time and Mode of Onset of Symptoms, (3). Pathophysiology, (4). The natural history and severity if the illness, and (5). The appropriate treatments for the condition [6].

Explanatory Model of Illness will be the determinant in selecting healthcare service of patients. Making a comprehension of the Explanatory Model of Illness of patients and physician is very essential in discovering different points of view of both sides. It is especially for chronic patients such as diabetic patients. The study of Cohen, M.Z. et al., [6] found that the Explanatory Model of Disease of diabetic patients and physicians who provide treatment for them was different. Diabetic patients viewed that diabetes caused them difficulties in participating in social activities and changes of daily life. Physicians who provide treatment to diabetic patients viewed that diabetes causes physical difficulties and harmed to their health condition. Moreover, it was found that diabetic patients and their physicians were similar in terms of demographic characteristics, despite of different explanatory model of disease. The Explanatory Model of Illness is broadly beneficial, yet still limited in diabetic treatment particularly in Thailand. The review of literature found no implementation of Klienman's model with diabetic patients.

METHODOLOGY

In the study, a phenomenological qualitative research method was used to elicit type II diabetes mellitus patients' explanatory model of diabetes in a sub-district health promotion hospital in Ngoa district, Lampang

province in north of Thailand. The participants included patients aged between 40-80 years who have been diagnosed with type II diabetes for at least one year. The sample size was based on similar studies, but the critical determinant was saturation during the research process (purposeful sampling) and criterion for stopping data collection was information overlapping. Finally, after the interview with 16 patients, we gained saturated information. A total of 16 participants including 6 men and 10 women were recruited from out-patient clinics at the sub-district health promotion hospital. The participants who met inclusion criteria and who had physical and psychological readiness, and after agreement, were interviewed individually. Semi-structured with open-ended questions was undertaken with each participant to make sure that five domains in Klienman's definition were covered by all subjects. The observation and in-depth interviews were used to collect data about patients' perspectives of diabetes. During the interview, there was tape record. The researcher observed and recorded obtained information from the interview. In addition, an anthropological expert, who was as an advisor making some recommendations, closely advised during an in-depth interview data collection process in order to receive appropriate and accurate information. Data was collected and analyzed by using content analysis to describe the patients' explanatory model of diabetes.

RESULTS

Result of the statistical description analysis

It was revealed that the majority of the participants was average 60.98 years old. The majority of them had income 5,001 - 10,000฿ (47.80 %) and the highest education level at elementary (70.20%). Most of them were diagnosed with DM more than one year (ranged 1-24 years, average 11.40 years) as shown in Table 1.

Table 1
The demographic information of 16 samples

Demographic information	Mean/ %
Age (mean years)	60.98
Income 5,001 - 10,000฿ (%)	47.80
Education (% element school level)	70.20
Duration of diabetes (mean years)	11.40

The result of observation and content analysis

From our observation, the sub-district health promotion hospital provided care and treatment to the patients via physician's appointment and medication. The patients would be scheduled to pick up their medicine and have blood sugar test monthly. If the glucose level exceeded the acceptable level, the patients would be scheduled to see a physician on the next day. When seeing a physician, a nurse would first screen the patients' health through an interview. She would note important information or problem found in the patients' history file, and give some advice at the same time. The assisting of a nurse on this process helped a physician in rapid examination. A physician would have only a few minutes to discuss with the patients because numbers of patients are waiting in line.

Participants' explanatory model of diabetes

Causes of diabetes

Many of them believed that genetic factors are the cause of diabetes. A 56-year-old woman said, "I have diabetes because my mom has it." Some of them believed that diabetes is an outcome of what a person had done during the past life. A 65-year-old man said, "I have severe diabetes because I did bad things during my past life."

The symptoms in the beginning of diabetes

Many participants did not have risk of diabetes. They didn't have presented the beginning of it. Most patients known the first diagnosed from encouraged by providers to participate in a DM screening program. A 46-year-old man said, "I thought I would not have diabetes because I am a strong man. I found that I had

diabetes when I participated in a DM screening program. Some of them believed that they can know whether a person has diabetes from the person's urine swarmed by ants. A 56-year-old man said, "I have relived that I had diabetes because I saw ants swarm my urine."

The effects of diabetes to their life

Many of them believed that to control their blood sugar they must change their life style. A 63-year-old woman said, "I have to do more exercise to decrease my blood sugar and have to be more careful about what I am going to eat because it may seriously increase my blood sugar." Some of them mentioned anxiety and frustration associate with their experience of diabetes. A 61-year-old woman said, "I feel depress because of my severe diabetes."

The severity of diabetes

Many of them feared chronic complications such as loss of vision, kidney failure, and limb amputation. A 58-year-old woman said, "I have to do whatever a physician told me to do because I do not want to be suffered from kidney failure."

The beliefs about treatments

Many of them believed that they have to follow the physicians' recommendation to control their blood sugar. A 73-year-old woman said, "I have to not eat my favorite sticky rice because my physician recommended me." Some participants believed that taking herbal medicines in addition to their prescribed medications would help their health better. A 68-year-old man said, "I think my prescribed medications could not cure my diabetes. Therefore, I have to take some herbal medicines, although my physician prohibited them."

DISCUSSION

The patients with diabetes have their own belief and attitude on their sickness differently. This leads to individuals' practice in self-care distinguishingly. Similar to this opinion, it was mentioned by Masoudi Alavi et al. [7] and Stonea et al. [8]. Most of the patients worried about chronic complications, similar to Kapur et al. [9], Gilibrand & Flynn [10] and Smith et al. [11] research. At the same time, each physician provides treatment differently based on one's belief and attitude towards the patients' illness. In some cases, both physicians and patients have conflict due to their belief and attitude is unlike. They will not cooperate in controlling blood sugar level or better health care. Some patients rarely provide the information on their health problem and their eating behavior when seeing their physicians. They are not only afraid that the physicians may reject their behavior, but they also refuse to follow the physicians' recommendation as they feel that it is too difficult to practice. In some cases according to the interview, the patients did not take medicine as physicians directed. They took herbal medicine or holy water from traditional healer they believe instead. Similar to this opinion, it was mentioned by Kantapong Prabsangob [12]. On the other hand, the physicians were likely not to find out nor understand the patients' belief and attitude related to diabetes and self-care. They even do not try to adjust their advice and treatment to each patient properly. The differences point of view from both patients and physicians have affected on promoting good health in patients which both definitely join the same goal. Here are some examples that prevent them from good health: The patients are dissatisfied in receiving the treatment; Both patients and physician have less motivation in cooperating in health care. They misunderstand each other as they fail to communicate. Therefore, it is necessary for both patients with diabetes and physicians to understand each other's views in order to have effective communication and lead to the better health of the diabetic patients.

CONCLUSION

The present study demonstrates in-depth interviews of the type II diabetes patients. They similarly explained the perspective related to the disease. Including, the most cause was genetic, the most beginning symptom was didn't present or some participants explained that ants swarm their urine, the effects of diabetes

was changing the lifestyle, the severity of diabetes was loss of vision, kidney failure, and limb amputation, and their belief to follow the physician's recommendation to control blood glucose level.

ACKNOWLEDGEMENTS

I would like to express my sincere thanks to Suan Sunandha Rajabhat University for invaluable help throughout this research.

REFERENCE

- [1] Kleinman A. *The Illness Narratives. Suffering, Healing, and the Human Condition*. New York: Basic Books; 1988.
- [2] Germanin CP. Cultural concept in critical care. *Critical Care Quarterly*. 1982 6(12):61-9.
- [3] Kleinman A. *Patients and Healers in the Context of Culture* Berkeley Calif: University of California Press; 1980
- [4] Clark MM. Cultural Context of Medical Practice in Cross-cultural medicine. *West J Med* 1983;139:806-10.
- [5] Rattana Samrongthong. *Explanatory Models Practice and Seek Treatment of HIV and AIDS Patients : A Case Study at a House of Priest. graduate School: Mahidol University; 1996.*
- [6] Cohen MZ. *Explanatory Models of Diabetes: Patient Practitioner Variation*. *Social Science and Medicine* 1994;38 59-66.
- [7] Masoudi Alavi. N., Ghofranipour F, Ahmadi F, Rajab A, Babae GR. Self care of diabetic patients: grounded theory approach. *Kowsar Medical Journal*. 2004;3(9):229-34.
- [8] Stonea M, Pounda E, Pancholia A, Farooqib A, Khuntia K. Empowering patients with diabetes: A qualitative primary care study focusing on South Asians in Leicester. *UK Family Practice*. 2005;22(647-652).
- [9] Kapur A, Shishoo S, Ahuja M, Sen V, Mankame K. Diabetes care in India -patient's perceptions, attitudes and practices. *International Journal of Diabetes Develop Countries*. 1997;17:5-14.
- [10] Gillibrand W, Flynn M. Forced externalization of control in people with diabetes: A qualitative exploratory study. *Journal of Advanced Nursing*. 2001;34(4):501-10.
- [11] Smith SM, O'Leary M, Bury G, Shannon W, Tynan A, Staines, A., . Qualitative investigation of the views and health beliefs of patients with Type 2 diabetes following the introduction of a diabetes shared care service. *Diabetic Medicin*. 2003;20:853-7.
- [12] Kantapong Prabsangob. Relationships of Health Literacy Diabetes Knowledge and Social Support to Self-Care Behavior among Type 2 Diabetic Patients. *International Journal of Health and Medical Sciences*. 2016;2(3):68-72.