

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 BACKGROUND**

Diabetes is one of the chronic, non-communicable diseases that affects people throughout the world. In diabetic patients, apart from suffering from chronic conditions of the disease, they also have to face its complications which often lead to disability or even death. According to the World Health Organization (WHO), in 2000 at least 171 million people worldwide suffered from diabetes, which was the 2.8% of the world population. Two-thirds of them live in the developing world, especially in Asia. The concern is the situation will become worse as the number of diabetic people is increasing rapidly. It is estimated that by the year 2030, it is likely that there will be at least 366 million diabetics, which will be the 4.4% of the world population, with a major prevalence of type 2 diabetes (90% of all diabetic cases) at a younger age (Diabetes Care volume 27, 2004). Each year around 3.2 million people die from diabetes, one death in every 10 seconds (WHO, 2007).

Thailand, as a developing country, has confronted rapid increase in diabetes as well, particularly in the last 20 years. The record from WHO shows that in the South-East Asia region, the prevalence of diabetes in Thailand ranks fourth. (India, Indonesia and Bangladesh rank 1,2 and 3 respectively.) This situation is due to population growth, aging, urbanization and increasing prevalence of obesity and physical inactivity (Sarah, Gojka, Anders, Richard, & Hilary, 2004). Thai people tend to adopt a western style diet and therefore turn to high-fat food with less intake of fruit and vegetables. Sugary drinks and fast food which are causes of obesity, one of the major risk factors for type 2 diabetes, have become more popular. Moreover, modern technology helps people to work easier, but at the same time it causes people to do less physical activities which can result in an increasing number of ill people with diabetes. As we can see from the table below, diabetes is the sixth leading cause of illness in Thailand.

**Table 1. Data on Illness of Thai People Ranked Orderly With Morbidity Rate per 100,000 Population by Region, 2007**

| Causes of illness   | All region |              | Northern |              | North-Eastern |              | Central  |              | Southern |              |
|---|------------|--------------|----------|--------------|---------------|--------------|----------|--------------|----------|--------------|
|   | Rank       | Rate         | Rank     | Rate         | Rank          | Rate         | Rank     | Rate         | Rank     | Rate         |
| Endocrine, Nutritional and Metabolic Diseases             | 1          | 1,031.2      | 2        | 857.1        | 1             | 941.5        | 1        | 1216.7       | 2        | 1163.8       |
| Complication of pregnancy, childbirth and post-childbirth | 2          | 914.3        | 4        | 759.2        | 2             | 710.9        | 2        | 1055.6       | 1        | 1380.9       |
| High Blood Pressure                                       | 3          | 778.1        | 1        | 879.9        | 8             | 520.1        | 3        | 998.4        | 3        | 885.7        |
| Digestive Diseases  | 4          | 709.4        | 3        | 853.6        | 5             | 634.5        | 6        | 681.9        | 5        | 745.0        |
| Intestinal Nematode Infection                             | 5          | 703.5        | 6        | 597.3        | 3             | 696.1        | 5        | 736.1        | 4        | 809.9        |
| <b>Diabetes Mellitus</b>                                  | <b>6</b>   | <b>650.4</b> | <b>5</b> | <b>612.6</b> | <b>6</b>      | <b>605.5</b> | <b>4</b> | <b>764.1</b> | <b>6</b> | <b>611.7</b> |
| Diseases of the Blood and Blood Forming organs            | 7          | 598.5        | 8        | 509.8        | 4             | 669.6        | 7        | 614.4        | 9        | 515.8        |
| Other Infectious and Parasitic Diseases                   | 8          | 514.9        | 10       | 466.2        | 7             | 521.5        | 8        | 510.6        | 7        | 573.3        |
| Certain Conditions Originating in the Perinatal Period    | 9          | 440.7        |          |              | 9             | 411.7        | 9        | 506.2        | 8        | 543.2        |
| Heart Diseases and Pneumonia Disease                      | 10         | 394.6        |          |              |               |              | 10       | 463.2        |          |              |

*Note.* From สรุปรายงานการป่วย พ.ศ. 2550, กลุ่มภารกิจด้านข้อมูลข่าวสารและสารสนเทศสุขภาพ, สำนักนโยบายและยุทธศาสตร์, กระทรวงสาธารณสุข

The record from the Ministry of Public Health in 2006 showed that more than 3.2 million people had diabetes. Unfortunately, only 1.4 million people were aware that they had the disease. Most people never recognized symptoms before diagnosis and were diagnosed when under care for another health problem mostly because

diabetes symptoms developed slowly and may be subtle during the early stage of the disease. One problem is it is difficult to convince people, who have insufficient knowledge of diabetes, with 'silent' or painless conditions to modify their lifestyle modification. Even more people may feel that there is a little reason to be concerned or to have to know about diabetes. Consequently, due to the lack of knowledge of the disease, they underestimate the risks associated with diabetes. Moreover, many Thais still have inaccurate attitudes and health belief to live with diabetes because they do not really understand how serious diabetes is and why it should be treated; as a result, they allocate less time and attention than needed to manage with the disease.

Many are diagnosed after many years of onset when the damages have already begun. High blood sugar over a period of time slowly injures the blood vessels, nerves and organs in patients' bodies which can result in serious complications such as heart disease, kidney failure, blindness and foot amputation. Even worse, people may die from these complications. The table below shows that diabetes is one of the top ten causes of death in Thailand.

**Table 2. Top Ten Causes of Death, All Ages, Thailand, 2002**

| Causes                                | Deaths    |          |
|---------------------------------------|-----------|----------|
|                                       | (000)     | (%)      |
| All causes                            | 419       | 100      |
| HIV/AIDS                              | 56        | 14       |
| Ischaemic heart disease               | 28        | 7        |
| Cerebrovascular disease               | 24        | 6        |
| <b>Diabetes Mellitus</b>              | <b>19</b> | <b>5</b> |
| Road traffic accidents                | 18        | 5        |
| Chronic obstructive pulmonary disease | 17        | 4        |
| Liver cancer                          | 13        | 3        |
| Lower respiratory infections          | 12        | 3        |
| Nephritis and nephrosis               | 11        | 3        |
| Trachea, bronchus, lung cancers       | 9         | 2        |

*Note.* From *Mortality country fact sheet 2006*, World Health Organization web site  
<http://www.who.int/entity/healthinfo/statistics/bodgbdeathdalyestimates.xls>

Thus, it should be the nation's health agenda to educate Thais about diabetes. If the Ministry of Public Health successfully provides the effective diabetic education and practical guidance on how to behave in order to be safe from diabetes for the public, not only will the number of people with diabetes be lower but the government would be able to save a significant amount of money for curing diabetes and other diabetes-related diseases also.

In order to save Thai people from this life threatening disease, awareness and knowledge of diabetes among Thais should be observed. This information will be used as a guideline for the government and related organizations to improve their strategies that help raise awareness and increase knowledge of diabetes in Thais.

## **1.2 STATEMENT OF THE PROBLEM**

This study aims to answer the following questions:

- 1.2.1 How much knowledge do Thai office workers in Bangkok have about diabetes?
- 1.2.2 What is the awareness of Thai office workers in Bangkok of diabetes?
- 1.2.3 What are the suggestions of Thai office workers in Bangkok on how to improve the diabetic education program?

## **1.3 OBJECTIVES OF THE STUDY**

The objectives of this study are the following:

- 1.3.1 Main Objective  
To investigate the knowledge and awareness of diabetes mellitus among Thai office workers in Bangkok.
- 1.3.2 Sub-Objectives  
To obtain suggestions from Thai office workers in Bangkok on how to improve the diabetic education program.

#### **1.4 DEFINITION OF TERMS/ VARIABLES AND DEFINITIONS**

The definitions of the terms of this study are as follows:

**Diabetes Mellitus:** A chronic condition occurring when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces.

**Knowledge of diabetes mellitus:** The level of understanding of general knowledge about diabetes mellitus which a person should know or recognize. The knowledge of diabetes refers to the following aspects:

- Diabetes causes and risk factors
- Diabetes symptoms and diagnosis
- Diabetes complications
- Diabetes prevention

**Awareness of diabetes mellitus:** Ability to feel or perceive that something exists and is important. Awareness of diabetes refers to the following aspects:

- Awareness of the chance to develop diabetes
- Awareness of how serious diabetes is
- Awareness of the benefits of the diabetes preventive action
- Awareness of the barriers of the diabetes preventive action

#### **1.5 SCOPE OF THE STUDY**

This study focuses on the knowledge and awareness of diabetes mellitus among Thai office workers in Bangkok. Since this study includes only 120 respondents, the findings may not be represented to the whole population in Bangkok; however, they can be used as a guideline for health care professionals or organizations to improve their strategies that help raise awareness and knowledge of diabetes in Thai people.

#### **1.6 SIGNIFICANCE OF THE STUDY**

1.6.1 This study provides a primary result of the awareness and knowledge level of diabetes among Thai office workers in Bangkok.

1.6.2 The results will be useful for some organizations such as the Ministry of Public Health to develop a diabetic education program.

1.6.3 The findings will be used as a guideline for other people or organizations to conduct further research or create related studies to broaden other interesting areas of such knowledge.

## **1.7 ORGANIZATION OF THE STUDY**

The study of Knowledge and Awareness of Diabetes Mellitus among Thai Office Workers in Bangkok in this paper is divided into five chapters as follow:

Chapter One consists of the background, statement of the problems, objectives of the study, definitions of terms, scope of the study and significance of the study, respectively.

Chapter Two provides a literature review which includes the theory used in this study and related research and information.

Chapter Three covers the methodology used this study which includes subjects, materials, procedures and data analysis.

Chapter Four shows the results of the study.

Chapter Five presents a summary of the study and findings, discussion, conclusions and recommendations for further research.