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การศึกษาเชิงคุณภาพ



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SELF-CARE OF OLDER PERSONS LIVING WITH DIABETES IN VIETNAM:
A QUALITATIVE STUDY

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A Thesis Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Nursing Science Program in Nursing Science
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การศึกษานี้มีวัตถุประสงค์เพื่ออธิบายความหมายของการดูแลตนเองในมุมมองของผู้สูงอายุที่ป่วยด้วยโรคเบาหวาน และเพื่อค้นหาพฤติกรรมดูแลตนเองของผู้สูงอายุที่ป่วยด้วยโรคเบาหวาน รูปแบบการวิจัยเป็นการวิจัยเชิงคุณภาพ โดยการสัมภาษณ์เชิงลึกในผู้สูงอายุชาวเวียดนามจำนวน 16 คน ที่ป่วยเป็นโรคเบาหวานชนิดที่ 2 นอกจากนี้ ผู้วิจัยได้ใช้แบบสังเกตและแบบบันทึกข้อมูลภาคสนามเพื่อเก็บข้อมูลการสะท้อนแนวคิด และการให้ความหมายของการดูแลตนเอง การวิเคราะห์ข้อมูลใช้การวิเคราะห์เชิงเนื้อหา

ผลการศึกษาสท้อนความหมายของการดูแลตนเองในมุมมองของผู้สูงอายุที่ป่วยเป็นโรคเบาหวานชนิดที่ 2 ผู้ให้ข้อมูลในการศึกษานี้ให้ความหมายของโรคเบาหวานว่า เป็นโรคที่เกี่ยวข้อง “น้ำตาลในปัสสาวะ” โรคเบาหวานเป็นที่ “เป็นตลอดชีวิต” และ “รักษาไม่หาย” วัตถุประสงค์ข้อที่ 1 พบว่า “ความหมายของการดูแลตนเอง” ประกอบด้วยสองแก่นหลัก ได้แก่ 1) ความรับผิดชอบตนเองในการดูแลตนเองตลอดชีวิต และ 2) การแสวงหาข้อมูลเกี่ยวกับการดูแลตนเองที่ดี วัตถุประสงค์ข้อที่ 2 พบว่า “การดูแลตนเอง” มี 7 ด้าน ได้แก่ 1) การกำกับติดตามระดับน้ำตาลในเลือดของตน 2) การใช้ยารักษาเบาหวานเป็นประจำ 3) การควบคุมอาหาร แต่ทำได้ยาก 4) การมีกิจกรรมทางกายเพื่อให้เหงื่อออก 5) การดูแลเท้า 6) การใช้ชีวิตร่วมกับโรค และ 7) การใช้ยาด้วยตนเอง

ผลการวิจัยเชิงคุณภาพนี้ ได้เพิ่มเติมความเข้าใจเกี่ยวกับการดูแลตนเองตามบริบทของผู้ป่วยเบาหวาน เกี่ยวกับการให้ความหมายของการดูแลตนเองและการจัดการโรคของตนเอง การพัฒนาโปรแกรมที่เหมาะสมการดูแลตนเองที่เหมาะสมสำหรับผู้ป่วยโรคเบาหวานชาวเวียดนาม จะช่วยให้ผู้ป่วยสามารถจัดการกับโรคและป้องกันภาวะแทรกซ้อนได้ ดังนั้น พยาบาลควรมุ่งเน้นผู้ป่วยเฉพาะราย ในการส่งเสริมความเข้าใจต่อโรคที่ดีขึ้น และวางแผนสุขศึกษาที่เหมาะสมกับผู้ป่วยแต่ละรายตามภาวะโรค สภาพแวดล้อมและวัฒนธรรมของผู้ป่วย

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KEYWORDS: DIABETES TYPE 2 / SELF-CARE / SELF-CARE BEHAVIOR / QUALITATIVE RESEARCH

QUYEN TRUONG THI MAI: SELF-CARE OF OLDER PERSONS LIVING WITH DIABETES IN VIETNAM: A QUALITATIVE STUDY. ADVISOR: ASSOC. PROF. JIRAPORN KESPICHAYAWATTANA, Ph.D., 156 pp.

This study aimed to describe the meaning of “self-care” from the perspectives of older persons living with diabetes and explored the self-care behaviors of older persons living with diabetes. The qualitative method was applied in this study. Data were collected by in-depth interview of 16 older persons with Type 2 diabetes in Vietnam. In addition, field note and observation note were written on the reflections, ideas, and meaning of self-care and self-care practices during the data collection process. All data were analyzed by using content analysis method.

The results of the study were reflected the self-care from the perspective of older people with type 2 diabetes. The informants in this study stated the meaning of the disease as diabetes is a disease of “sugar pee”; and diabetes is the “lifelong” and “forever” disease. The first objective in this study is that “Meaning self-care” which including 2 themes 1) Self-responsibility to take care of self for the lifelong, and 2) Seeking information to take good care of self. And the second objective is “Self-care practices” with including 7 themes: 1) Self-monitoring of blood sugar level, 2) Taking diabetes medication regularly, 3) Control eating but it is difficult, 4) Doing some physical activities to get sweat, 5) Caring for their foot, 6) Living with the disease, 7) Taking home remedies.

This qualitative research methodology expands the understanding of the context in which finding the meaning of self-care, diabetes self-care occurred and how they used to manage their diabetes. Developing interventions for Vietnamese older persons with diabetes could help them to manage their diabetes mellitus and prevent or delay diabetes related complications. So, the nurses should focus on each person with Type 2 diabetes and evaluate the patients to facilitate greater understanding of the patients’ knowledge structures to have the plan for health education in accordance with their individual conditions, circumstances and culture.

Field of Study: Nursing Science

Student's Signature

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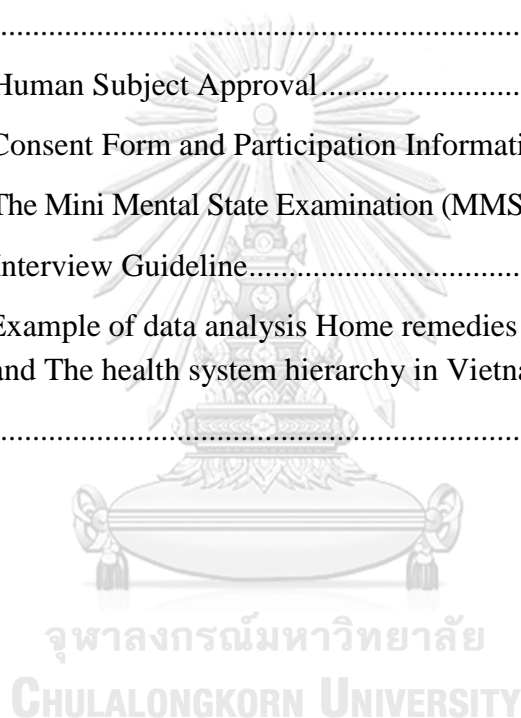
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CHAPTER I

INTRODUCTION

Background and significance of the study

Diabetes mellitus (DM) is now recognized as the disease “epidemic” of the 21st century and type 2 diabetes is considered one of the greatest health challenges facing healthcare providers in this century (Wu et al., 2011). Diabetes is a problem for the aging population; about 26% of patients over the age of 65 years have diabetes, and this number is expected to grow rapidly in the coming decades (World Health Organization, 2011).

The number of elderly people in Vietnam is increasing; Vietnam's population is aging rapidly. In 2017, Vietnamese governmental predictions place the Vietnamese population officially into the period of "aging" (Vietnam General Statistic Office, 2011). Diabetes is one of the most common health problems among Vietnamese older people and it is a major health care burden as the disease causes a range of complications (World Health Organization, 2016). Every day, there are 150 Vietnamese people who die because of diabetes mellitus (Ministry of Health Portal, 2015). The number of Vietnamese with DM is predicted to double in 2030 compared to numbers in 2010, from 1.65 million people in 2010 to 3.42 million people in 2030 (Shaw, Sicree, & Zimmet, 2010). In 2010, Vietnam was named the nation where the number of people with diabetes had increased the most in the world with about a 300% increase over the last ten years and currently Vietnam is approaching a 48% increase per year (Vietnam Ministry of Health, 2010). Financial expenditure related to diabetes care in Vietnam is estimated to be about 3% to 6% of the nation's total

healthcare budget (Ministry of Health, 2011). WHO reported that diabetes was the seventh cause of death from non-communicable diseases in Vietnam in 2012 (World Health Organization, 2013). Clearly diabetes is a significant health problem for the aging population in Vietnam.

For the older person, diabetes is a lifelong and a twenty-four hour a day condition, so the more self-care activities that can be done, the more possibility for prevention of diabetic complications. With diabetes type 2, glucose control is almost entirely in the hands of the person (Tucker et al., 2014). Self-care in diabetes has been defined as an evolutionary process of development of knowledge or awareness by learning to survive with the complex nature of diabetes in a social context (Shrivastava, Shrivastava, & Ramasamy, 2013). The older person's motivation to eat, exercise, take medication, test glucose levels, and maintain a normal body weight must vie with life's other motivations and must be done every day (Shrivastava et al., 2013). These essential self-care behaviours are influenced by various sociodemographic, psychological, and disease-related factors (Levesque, 2011). These are the essential self-care behaviours in people with diabetes which predict good outcomes. All these behaviours have been found to be positively correlated with good glycaemic control, reduction of complications and improvement in quality of life (American Diabetes Association, 2010; Deakin, McShane, Cade, & Williams, 2005; Povey & Clark-Carter, 2007).

Self-care is crucial to the life of a person with DM Type 2 and is a significant factor in preventing development of diabetes' complications. According to WHO, the major strategy to stay healthy and prevent complications for patients with type 2 diabetes is to control blood glucose. In addition, eating a healthy diet, getting regular

physical activity, performing foot care, taking medicine correctly, and self-monitoring blood glucose (SMBG) regularly are recommended behaviours to patients with type 2 diabetes self-care (World Health Organization, 2016). Effective self-care is an essential component of diabetes care (Zhou, Liao, Sun, & He, 2013). Diabetes is a complex chronic metabolic disorder that requires continual medical treatment with patients responsible for self-care (American Diabetes Association, 2012). According to Laxy et al. (2014), ninety-five percent of diabetes treatment relies on self-care behaviours and effective treatment for diabetics aged ≥ 65 years depends on the success of self-care (Kirkman et al., 2012).

Self-care is important in maintaining health and quality of life for everyone, but especially for individuals with chronic illnesses. Much research reflects increasing concern about self-care and quality of life for individual with hypertension, cancer, arthritis, and diabetes. Chronic illness is a condition which is long term, uncertain, expensive, and intrusive because it is incurable (Committee, 2014; Weinger, Beverly, & Smaldone, 2014). Diabetes, like other chronic disease, is a complex disease requiring life-long self-care. Individuals with diabetes are prone to develop micro and macro angiopathic complications. Once morphologic changes appear, they can be irreversible even when precise regulation is maintained. Self-care is a cultural and social phenomenon within a society and is embedded in the indigenous health care system (World Health Organization, 2009). In Vietnam, the problems of increasing health care costs, shortages in health care personnel, and the lack of health care facilities, especially for persons with chronic illness, underscores the need to shift the health care system from a professionally oriented model to a self-care model, to assist people in their basic needs for behavior change.

Along with rapid economic growth and urbanization, Vietnam is one of the Asian countries that has experienced dietary changes, including increasing fat and meat intake (Khan & Khoi, 2008). There are also concerns about increasing body size (Ta, Nguyen, Nguyen, Campbell, & Nguyen, 2010), physical inactivity (Binh, 2008), tobacco smoking (World Health Organization, 2010), and alcohol overuse (Giang, Allebeck, Spak, Van Minh, & Dzung, 2008) among Vietnamese adults. Increased life expectancy has resulted in a rapid growth in the number of older persons (Hoi, Phuc, Dung, Chuc, & Lindholm, 2009), and low health care expenditures (especially aimed at prevention) also contribute to a high prevalence of T2DM (Palmer MG, 2014). These changes all potentially contribute to the accelerating prevalence of diabetes and also the complications of diabetes in Vietnam.

The current evidence shows that knowledge of self-care among people with type 2 diabetes is low (Saleh, Mumu, Ara, Begum, & Ali, 2012). In Vietnam, one study indicated that 62% of people with type 2 diabetes could answer correctly 50% or more questions related to knowledge of diet and exercise in diabetes (Thuan, 2009) leaving 38% of the T2DM population with incorrect responses. Another study found only 41.5% of people with type 2 diabetes had correct knowledge about foot self-care with diabetes (La, 2010). And only 20% of people with type 2 diabetes actually followed a specific diet or engaged in physical exercise (Binh & Toan, 2007) and only 24% of type 2 diabetes patients performed blood glucose self-monitoring (Lan et al, 2012). When the deficit in self-care occurs, it expresses the imbalance between the action capabilities of the individuals and their demands for care (Orem, S. G. Taylor, & K. M. Renpenning, 1995).

People's perception about the disease and its effects on their physical, psychological and social lives may lead those living with diabetes mellitus to focus on the development of self-care to deal with the illness in a way which fits with their lifestyle and context. According to Barton, Anderson and Thomase (2005) indigenous people with diabetes prefer to share information and learn from someone with diabetes rather than believe the information or follow the advice of health professionals (Barton, Anderson, & Thommasen, 2005). This phenomenon is related to the difference of meaning of diabetes and its management. Understanding the point of view of people with diabetes is an important part of providing health education which aims at supportive self-care.

In Vietnam, cultural aspects are major factors to integrate into provision of effective self-care in the community (Health Care Chaplaincy, 2013) (Ta et al., 2010). Exploring culture (which includes but is much more than race, religion, and ethnicity) through qualitative research is critical to diabetes education and treatment because it allows for learning about people's beliefs, attitudes and practices in their own words.

Cultural factors could be contributing to the understanding of how patients live with diabetes in the cultural context of Vietnam. And this type of research supports improving diabetes self-care which is dependent on understanding the cultural context. Vietnam is a country with 54 minority ethnic groups and six religions. For example, in the south of Vietnam, especially in Lam Dong province, most of the people are farmers, so they likely eat more rice than in other areas. In fact they usually eat rice with every meal (3 times per day) to provide enough energy for farm work. This affects their diabetes management. Some studies of cultural factors

and diabetes found that family and social support may promote diabetes self-care but family and friends may also serve as barriers to diabetes management (Chlebowy, Hood, & LaJoie, 2010; Kadirvelu, Sadasivan, & Ng, 2012). In any case health care providers (and family members) need to be aware of the patient's (and family's) beliefs and practices to better understand the patient's condition. To get better outcomes with diabetic education, diabetes self-care may need to include not only patients but also family members and providers must understand the context for the patient; that is cultural and religious beliefs and practices as well as economic issues and historical oppression/power issues.

Most of reported literature related to self-care behaviours in patients with diabetes are quantitative studies conducted in developed countries. Some of these findings may apply or generalize to common universal human behaviours. However, there are the differences in sociodemographic factors and cultural contexts between the developed and developing countries that may make generalization problematic. Specifically, in the context of Vietnam, factors influencing self-care are embedded in the social structure, and include culturally based practices and preferences, dietary patterns and timing of food intake, activity level (e.g. sedentary lifestyle), and unequal distribution of healthcare resources. In addition, socioeconomic factors such as low income, education, and employment status in Vietnam, have also been found to influence diabetes self-care. Many researchers stated that cultural sensitivity is one of the most important contributing elements for diabetes self-care (Tucker et al., 2014; Walker et al., 2012).

When caring for older persons with type 2 diabetes, health care professionals should consider patients' diabetic self-care (Redman, 2004). One study about diabetes

self-management among adults with type 2 diabetes in Vietnam explores diabetes knowledge, belief in treatment effectiveness, family and friends' support, health care providers' support and diabetes management self-efficacy. This study found that these factors directly influenced the patients with diabetes self-management. However, the study also found Vietnamese adults and older adults had limited knowledge about diabetes (Hanh, 2012). Thanh (2013) conducted a preliminary study of 175 adults with type 2 diabetes in the outpatient clinic of 115 People's Hospital in Ho Chi Minh City to assess diabetes self-care activities and metabolic control (Thanh, 2013). Diabetes self-care activities were measured by the Summary of Diabetes Self-Care Activities (Toobert, Hampson, & Glasgow, 2000). Physiologic measures obtained were body mass index, blood pressure, and HbA1c level. Findings showed that one third of patients with type 2 diabetes had poor diabetic control (HbA1c > 8.0 %) but most were not overweight. Patients reported the number of days in a week they adhered to taking medication on average was six days per week, followed by healthy eating, exercise, foot care, and self-monitoring blood glucose with 4.7 days, 3.9 days, 2.9 days, and 0.4 day, respectively (Thanh, 2013). Results indicated that a large portion of persons with type 2 diabetes were not achieving optimal metabolic control and were not engaging fully in daily self-care activities. Studies conducted were all with adult populations and they were all quantitative studies. As diabetes increases dramatically in Vietnam especially in older person groups, understanding how DM is perceived by people and how they describe their self-care behaviours can add valuable insight for caregivers caring for these people. This gap in knowledge suggest the importance of conducting a systematic research exploration to know

about how Vietnamese culture influences patient's perceptions of their diabetes and Vietnamese type 2 diabetic patients' descriptions of self-care.

Older persons with diabetes may experience more barriers to their treatment regimens due to financial limitations and the functional abilities that accompany the aging process (Zhou et al., 2013). Competence to perform self-care activities can decrease in older age. Marques et al. (2013) found that very few (6 %) of the older persons with type 2 diabetes had the competence to provide for their self-care independently (Marques-Vidal et al., 2013). Low levels of education and bad eyesight were contributing factors; this group needs more help and mobility devices or other instruments for performing their self-care. Moreover, they may not aware that diabetes is a dangerous disease that has serious complications. As a result, they may not perform self-care regularly. Diabetes is a chronic disease, which requires a life-long commitment to a pattern of self-care behaviors. DM requires modification of lifestyles and self-care to prevent diabetic complications. The complications of DM are extensive and expensive with significant effects on mortality and morbidity (Burke, Sherr, & Lipman, 2014).

Understanding how people perceive their diabetes mellitus and how they conduct their self-care behaviours is essential for nurses in order to collaborate with the patient/patient's family to develop the best plans for complication prevention and support and maintenance for continuing illness management. Health care services which are based on this understanding are likely to enhance participation and cooperation of clients which ensures a better quality of life for older people living with diabetes mellitus. Because of the significance of understanding clients' perspectives, this study will be conducted to describe the meaning of "self-care" from

the perspectives of older persons living with diabetes and will explore the self-care practices of older persons living with diabetes. In addition the study will seek to describe the cultural and socio-demographic context of older persons with diabetes in Vietnam. A qualitative study is proposed to increase knowledge about the Vietnamese cultural context and Vietnamese type 2 diabetes patients' descriptions of self-care is proposed.

Research Questions

1. What is the meaning of “self-care” to older persons living with diabetes in Vietnam?
2. What are the identified self-care behaviours of older Vietnamese persons living with diabetes as they themselves report?

Purposes of the study

1. To describe the meaning of “self-care” from the perspectives of older Vietnamese persons living with diabetes
2. To explore the self-care behaviours of older persons with diabetes in Vietnam.

Scope of the study

Literature review about self-care in diabetes show that there are seven essential self-care behaviours: healthy eating, being physically active, monitoring of blood sugar, compliance with medications, good problem-solving skills, healthy

coping skills and risk-reduction behaviours (Shrivastava et al., 2013). These essential self-care behaviors are influenced by various sociodemographic, psychological, and disease-related factors (Levesque, 2011). These will be used as a “preconceived notion” in combination to understand about Vietnamese culture to develop the interview guidelines.

Qualitative research is an appropriate approach to explore the complexity of self-care among individual older person with diabetes within their natural contexts and from their own perspectives. This study will be conducted to describe the meaning of “self-care” from the perspectives of older persons living with diabetes and will explore the self-care practices of diabetes older person in Vietnamese culture.

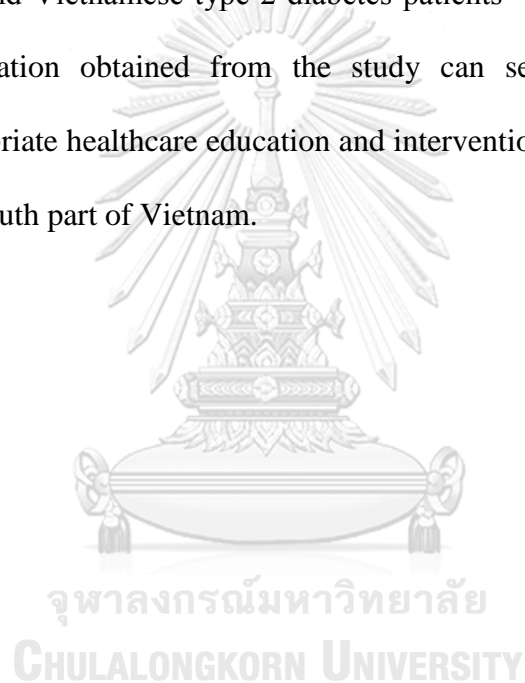
Operational Definitions

Self-care has been defined as ‘the ability of individuals, families and communities to promote health, prevent disease and maintain health and cope with illness and disability with or without the support of healthcare professionals’ (World Health Organization, 2009). In this study, self-care refers to the individual’s care of themselves according to their personal values, experiences, and interests in maintaining life, health, and well-being.

Older persons with type 2 diabetes mellitus were Vietnamese people who had medically diagnosed with type 2 diabetes at least 6 months, in older adult aged (age is 60 years old or above), both male and female.

Expected benefits

This study will be conducted to describe the meaning of “self-care” from the perspectives of older persons living with diabetes and will explore the self-care practices of older persons living with diabetes. In addition the study will seek to describe the cultural and socio-demographic context of older persons with diabetes in Vietnam. A qualitative study is proposed to increase knowledge about the Vietnamese cultural context and Vietnamese type 2 diabetes patients’ descriptions of self-care is proposed. Information obtained from the study can serve as a foundation for developing appropriate healthcare education and interventions that fit with the context of people in the south part of Vietnam.



CHAPTER II

LITERATURE REVIEW

Literature was reviewed the literature in six areas:

1. Aging situation in Vietnam.
2. Type 2 diabetes mellitus
 - 2.1 The burden of diabetes
 - 2.2 The older adults with diabetes
 - 2.3 Overview of diabetes mellitus in Vietnam
3. Self-care of diabetes in older person
 - 3.1 Definition and uses of self-care
 - 3.2 Self-care in Type 2 diabetes
 - 3.3 Diabetes Self-care Behaviours
4. The current status of diabetes care in Vietnam
5. Culture, belief, practice and traditional valued that influence self-care in Vietnam.
 - 5.1 Religious beliefs, culture, beliefs and practices related to health of Vietnamese people
 - 5.2 Traditional Vietnamese Beliefs about Diabetes
6. Qualitative research
7. Related research involving self-care

1. Aging situation in Vietnam

The aging population is trending upward worldwide. There were 901 million people aged 60 years or over in 2015, which is an increase of 48% over the 607 million older persons globally in 2000 (United Nation, 2015). Projections are for this population to reach 1.4 billion (56 per cent) in 2030, and by 2050, the global population of older persons is projected to more than double its size from 2015, reaching nearly 2.1 billion (United Nation, 2015).

The current population of Viet Nam is 94,832,756 (as of Tuesday, November 22, 2016), based on the latest United Nations estimates (Worldometers, 2016). Viet Nam's population is equivalent to 1.27% of the total world population. Vietnam ranks number 14 in the list of countries by population (Worldometers, 2016).

According to the United Nations Population Fund, Vietnam's population is aging rapidly as a result of the achievements of economic development (United Nation, 2015). In 2017, predictions of the Vietnamese population officially entered the period of "aging" when the proportion of people aged sixty years or more will hit the threshold of ten percent (Trang, 2012). This forecast has been demonstrated through the results of the Vietnamese population statistics. When comparing the data on the fertility rate and life expectancy of the Vietnamese population in 1999 and 2012, the General Statistics Office of Vietnam (2012) reported that the aging index of Vietnam increased from 24.3 percent to 42.7 percent. Vietnam is one of the fastest ageing countries in Asia. By 2050, the number of people 60 years and over will triple from 8.9 percent to over 30 percent or 32 million people. The number of people over 80 will also triple to over 6 percent of the population (United Nation, 2015).

Vietnam is in the top 10 countries with the fastest rate of aging population in the world. According to the Law of Vietnam, people of 60 years old and above are considered elderly. Along, with the general trend of the world, the older people of Vietnam is increasing both in number and percentage (United Nations Population Fund (UNFPA), 2012).

Table 0.1 Number and percentage of the Elderly in Viet Nam (United Nations Population Fund (UNFPA), 2012)

Year	Population (million person)	Number of older persons (million person)	The proportion of older persons (%)
1979	53.74	3,71	6,90
1989	64,41	4,64	7,20
1999	76,32	6,19	8,11
2009	85,85	7,45	8,70
2012	88,53	9,03	10,2
2035	109,59	21,16	19,3
2050	123.78	32.04	30.8

From the standpoint of nursing, this means that care issues for the elderly will increase especially with increases of chronic diseases including hypertension, diabetes, memory loss, and limitations in activities of daily living. On average, each elderly person in the country suffers from 14 years of illness in his or her life. Up to 95 percent of the elderly are ill, mostly with chronic diseases such as heart disease, high blood pressure, diabetes (United Nation, 2015). This increase is accompanied by a series of issues related to the professional nursing activities.

2. Type 2 Diabetes Mellitus

2.1 The burden of diabetes

The World Health Organization 2016 reported that the global burden of non-communicable disease continues to increase in the 21st century that includes cardiovascular diseases, cancers, chronic respiratory diseases and diabetes (World Health Organization, 2015). These diseases kill 38 million people each year, and almost three quarters of NCD deaths - 28 million - occur in low- and middle-income countries (World Health Organization, 2015). Sixteen million NCD deaths occur before the age of 70; 82% of these "premature" deaths occurred in low- and middle-income countries (World Health Organization, 2015).

The diabetes burden is increasing fast around the world. The dynamics of the diabetes epidemic are changing rapidly and now type 2 diabetes has spread to every country in the world. According to the International Diabetes Federation, diabetes affects at least 285 million people worldwide, and that number is expected to reach 438 million by the year 2030, with two-thirds of all diabetes cases occurring in low- to middle-income countries (International Diabetes Federation, 2011). The number of adults and older adults with impaired glucose tolerance will rise from 344 million in 2010 to an estimated 472 million by 2030. Globally, it was estimated that diabetes accounted for 12% of health expenditures in 2010, or at least \$376 billion—a figure expected to hit \$490 billion in 2030 (Krug, 2016). Its increasing prevalence and associated health complications threaten to reverse economic gains in developing countries.

Diabetes is a major health problem all around the world and the incidence of diabetes has increased significantly in developing countries. Recently, diabetes has

become a major health problem in Vietnam with many Vietnamese adults and older adults affected by type 2 diabetes. WHO reported that diabetes was the seventh cause of death from non-communicable diseases in Vietnam in 2012 (World Health Organization, 2013). And Vietnam was named the nation where the number of people with diabetes had increased the most in the world with about a 300% increase over the last ten years and currently approximately a 48% increase per year (Vietnam Ministry of Health, 2010).

2.2 The older adult with diabetes

The reality that people are living longer has resulted in an increased life expectancy for both men and women (Dobriansky, Suzman, & Hodes, 2007). Aging is categorized as follows: young-old 65-75, old 75-85, old-old 85-100 and elite-old over 100 years of age (Easley & Schaller, 2003). Currently the term elderly or older adult refers to an age continuum that begins sometime after 60. This continuum is characterized by a gradual and progressive frailty that continues until one dies (Easley & Schaller, 2003).

The prevalence of type 2 diabetes increases with age (Easley & Schaller, 2003). In addition, diabetes related complications tend to occur more frequently in the older adult (Pooley, Gerrard, Hollis, Morton, & Astbury, 2001). Older adults, in particular, face unique challenges in achieving optimum blood glucose levels and performing diabetes related self-care activities (American Diabetes Association, 2016). These difficulties are reported to be associated with changes in cognitive function, physical limitations, and the increased incidence of depression (Glasgow et al., 2005)

Disability, morbidity and mortality are strongly associated with diabetes in the older adult (Easley & Schaller, 2003). The factors such as a decreased ability to perceive thirst, a decreased tolerance for exercise, declining vision, arthritis, cognitive changes, depression and social isolation contribute to difficulties managing diabetes in the older adult. In particular, the changes in cognition affect the older adult's ability to learn and comply with medication regimes frequently required for individuals living with chronic illness (Ebersole, Hess, & Luggen, 2004). Researchers suggest that because older adults may have specific needs in relation to diabetes self-care, their treatment goals need to be individualized (Committee, 2014). Recognizing that the population is aging, special attention needs to be focused on the older adult with diabetes

2.3 Overview of Diabetes Mellitus

Type 2 diabetes, previously referred to as “non - insulin - dependent diabetes” or “adult - onset diabetes”, accounts for 90 - 95% of all diabetes. This form encompasses individuals who have insulin resistance and usually relative (rather than absolute) insulin deficiency (American Diabetes Association, 2016).

Diabetes is usually diagnosed based on plasma glucose criteria. Recently, an International Expert Committee added the hemoglobin A1C (threshold ≤ 6.5 %) as a third option to diagnose diabetes (American Diabetes Association, 2012).

Type 2 diabetes is the most common type of diabetes in adults and older adults. There's no cure for type 2 diabetes, but people with Type 2 diabetes can manage the condition by eating well, exercising and maintaining a healthy weight. If diet and exercise don't control the blood sugar, they may need diabetes medications or insulin therapy.

In Vietnam, the prevalence of diabetes doubled between 1994 and 2003 (Binh, 2008). Diabetes disease tends to increase especially in major cities. Sixty percent of the patients with diabetes had complications and there were 150 of cases death related to diabetes. Currently, the prevalence of diabetes in whole country is 6% (Ministry of Health, 2016).

The goal of treatment in type 2 diabetes is to achieve and maintain optimal blood glucose, lipid, and blood pressure levels to prevent or delay chronic complications of diabetes (American Diabetes Association, 2010). Many people with type 2 diabetes can achieve blood glucose control by following a nutritious meal plan and exercise program, losing excess weight, implementing necessary self-care behaviours, and taking oral medications, although others may need supplemental insulin (Control & Prevention, 2014). Diet and physical activity are central to the management and prevention of type 2 diabetes because they help treat the associated glucose, lipid, blood pressure control abnormalities, as well as aid in weight loss and maintenance. When medications are used to control type 2 diabetes, they should augment lifestyle improvements, not replace them.

3. Self-care of diabetes in older person

3.1 Definitions and Uses of Self-Care

The definitions and meaning of self-care in dictionaries and literature vary (Dean, 1989). Vietnamese dictionaries do not include the term “self-care” but do have the separate term, “self” and “care”. The definition of “self” in both Vietnamese dictionary and Longman Dictionary of Contemporary English refers to individual as one self only, and the term “care” refers to taking care of, or giving serious attention

and protection (Mayor, 2009; Phê, 2013). The definition of self-care was found in only English dictionary, the Random House Dictionary (House, 1987), wherein “self-care” refers to care of the self without medical or other professional consultation.

Referencing the term “self-care” in electronic searches, such as CINAHL and MEDLINE (2016), points toward definitions that address consumer performance of activities traditionally performed by professional health care providers. The concept includes care of oneself or one’s family and friends. These searches also give related terms, such as activities of daily living, nursing diagnosis, and Orem’s self-care model. The concept of “self” has been extended to mean individuals and their families.

The definition of self-care from the general dictionary reflects the concepts of self-help, self-reliance, and autonomy. However, definitions from the professional literature reflect the ideas of transferring responsibility or authority to individuals and their families. The term self-care has been used in conjunction with many other terms (the definition of self-care are shown in table 2.2). Some of the terms related to self-care are: health behaviour, health promotion, lifestyle, self-help, self-reliance, compliance, adherence, self-management, and self-regulation.

Table 0.2: The Definitions of Self-Care and Their Derivative Concepts

Sources	Derivative Concepts
<p>The Random House Dictionary (House, 1987):</p> <p>Self-care refers to care of the self without medical or other professional consultation.</p>	<p>Self-help</p> <p>Self-reliance</p> <p>Self-control</p>
<p>CINAHL and MEDLINE (2016):</p> <p>Self-care refers to consumer performance of activities traditionally performed by professional health care providers</p>	<p>Compliance</p> <p>adherence</p>
<p>WHO (World Health Organization, 2009)</p> <p>The World Health Organization (WHO) defines self-care as "the ability of individuals, families and communities to promote health, prevent disease, and maintain health and to cope with illness and disability with or without the support of a health –care provider</p>	<p>Lifestyle</p> <p>Decision-making</p> <p>Natural context</p> <p>Primary care</p>
<p>The Department of Health (Department of Health, 2005) maintains self-care refers to</p> <p>"The actions individuals and carers take for themselves, their children, their families and others to stay fit and maintain good physical and mental health; meet social and psychological needs; prevent illness or accidents; care for minor ailments and long-term conditions; and maintain health and wellbeing after acute illness or discharge from hospital."</p>	<p>Activities</p> <p>Lifestyle</p> <p>Decision-making</p>
<p>Orem (D. E. Orem, S. G. Taylor, & K. M. Renpenning, 1995)</p>	<p>Action</p>

<p>Self-care is the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health, and well-being. Self-care is action of mature and maturing individuals who have developed the capabilities to take care of themselves in their environment situations</p>	<p>Capability Situation context</p>
<p>Dean (Dean, 1989)</p> <p>Self-care represents the range of behaviour undertaken by individuals to promote or restore their health</p>	<p>Health behaviors</p>
<p>Wilkinson & Whitehead (Wilkinson & Whitehead, 2009)</p> <p>Self-care is an individual's capacity to act and make choices in order to stay physically, mentally, and spiritually fit and healthy and "to successfully manage the symptoms, treatment, physical, psychosocial, cultural and spiritual consequences and inherent lifestyle changes required for living with a long-term chronic disease</p>	<p>Activates Lifestyle</p>
<p>Hoy et al (Høy, Wagner, & Hall, 2007)</p> <p>Hoy et al defined self-care as 'rooted in a perception of health as functionality, responsibility, integrity and growth'. According to Hoy et al., self-care is 'linked less to learning facts about specific health issues and more to learning how to set goals and organize resources and action strategies'.</p> <p>Focusing on the perspectives of older persons, Hoy et al. defined self-care as being either 'a health capability' or 'a process for health' and introduced three new concepts: personal potential, independence and adaptability.</p>	<p>Perception Health capability or 'a process for health'</p>

Self-care can be viewed as a goal, as a process, as a strategy, and as actions or activities (Dean, 1989; Wilkinson & Whitehead, 2009; World Health Organization, 2009). The objective of self-care is to increase and promote appropriate traditional and modern self-care (Glasgow et al., 2005). Orem (1995) proposed that the goal of nursing care is to help individuals to help themselves, or in the other words, increase their self-care (Orem et al., 1995).

Self-care as a basic level of health care is seen as a mean or strategy of primary health care. The WHO described self-care as primary health care resources that encompass various forms of care: self-management, self-medication, self-diagnosis (World Health Organization, 2009).

Self-care has been defined as actions or activities (Dean, 1989; Department of Health, 2005; Orem, 1979; World Health Organization, 2009). The Department of Health maintains self-care refers to "The actions individuals and carers take for themselves, their children, their families and others to stay fit and maintain good physical and mental health; meet social and psychological needs; prevent illness or accidents; care for minor ailments and long-term conditions; and maintain health and wellbeing after acute illness or discharge from hospital ." (Department of Health, 2005). Wood (1989) conceptualized self-care as actions that an individual performs to promote optimal health, prevent illness, detect symptoms, and manage chronic illness, as well as a process of self-monitoring and assessment, symptom perception and labeling, and evaluation of severity and treatment alternatives (Woods, 1989).

Self-care has also been defined as a process (Cooper, Booth, & Gill, 2003; Shrivastava et al., 2013; Thorne, Paterson, & Russell, 2003). The Longman Dictionary defines "care" as the process of looking after and giving attention to

someone who needs it (Mayor, 2009). Self-care can be viewed as a decision-making process involving observation, symptom perception and labeling, judgment of severity, and choice and assessment of treatment (Godfrey et al., 2011).

Orem (1995) defined self-care as the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health, and well-being. Self-care is an action taken by mature and maturing individuals who have developed the capabilities to take care of themselves in their environment (Orem et al., 1995). Although Orem viewed “self-care” as actions, practices, and behaviors, she also discussed the process of self-care under the concept of self-care agency. Self-care agency includes “capabilities for self-care operation” that comprises three phases of deliberate action: estimate, transitional, and production operations (Orem et al., 1995).

In 2007, Hoy et al. defined self-care as “rooted” in a perception of health as functionality, responsibility, integrity and growth’. According to Hoy et al., self-care is ‘linked less to learning facts about specific health issues and more to learning how to set goals and organize resources and action strategies’ (Høy et al., 2007).

Focusing on the perspectives of older persons, Hoy et al. defined self-care as being either ‘a health capability’ or ‘a process for health’ and introduced three new concepts: personal potential, independence and adaptability (Høy et al., 2007). As a health capability, self-care was defined as an action capability whereby the older persons maintain, promote or enhance their functional ability, limit illness, and/or prevent dysfunction and disability in daily life. It refers to their personal potential to address universal needs, goals and health issues in order to acquire well-being and independence (Høy et al., 2007). As a process for health, self-care was defined as an individual health development process related to illness and well-being. It

demonstrates the older persons' continuous adaptability to the circumstances of their lives and refers to a mindset facilitating connectedness to contexts, personal growth and integration of self in daily life.

In conclusion, although there was no consensus about the definition and scope of self-care, the six disciplines represented, including medicine, nursing, psychology, health education, sociology, and public health, agreed that self-care: (1) is situation and culture specific; (2) involves the capacity to act and to make choices; (3) is influenced by knowledge, skills, values, motivation, locus of control, and efficacy; and (4) focuses on aspects of health care under individual control.

3.2 Self-care in Type 2 Diabetes

The self-care concept used within nursing was influenced by Orem's self-care theory and definitions. One of the basic theories in nursing for diabetic patients, is Orem's self-care theory (Orem et al., 1995). This theory expresses the idea that human beings are individuals who have some degree of self-thought. The patient is not just a passive recipient of health services, but a strong, reliable and responsible being with power to make decisions related to self-care. When applying this theory to type 2 diabetic patients, patients need to increase their knowledge about diabetes self-care principles including continuous control of HbA1c level to prevent early and late complications of the disease, which ensures a longer life for the patient and a reduction in health care costs. Undoubtedly, achieving such goals requires dynamic and continuous public participation. Without patient education and self-care, health care costs will continue to increase, and quality of life for the patients will suffer further decline (American Diabetes Association, 2016).

As mentioned earlier, self-care has been defined as ‘the ability of individuals, families and communities to promote health, prevent disease and maintain health and cope with illness and disability with or without the support of healthcare professionals’ (World Health Organization, 2009). In essence, self-care can be understood as a part of day-to-day living, whether a person is healthy or ill. It ranges from simple actions to promote health, including daily hygienic activities and avoiding hazards in the environment, to more complex actions to restore health, such as, understanding symptoms and taking appropriate action, selecting appropriate treatment, taking medicine, monitoring treatment, and rehabilitation activities (Newman, Steed, & Mulligan, 2008; Nolte & McKee, 2008).

Patients with long term conditions like diabetes are expected to be responsible for self-managing their disease and coping with the consequences of the illness, which has a huge impact on their lives (Barlow, Wright, Sheasby, Turner, & Hainsworth, 2002). In long-term conditions, the concept of self-care always refers to the individual’s ability to manage the symptoms, treatment, physical and The success of diabetes management largely depends on the ability and willingness of the patients to carry out complex and multifaceted self-care activities (Evangelista & Shinnick, 2008). psychosocial impacts, and lifestyle changes inherent with the illness (Barlow et al., 2002). Patients living with diabetes are expected to actively manage their diabetes and cope with the demands of the disease and its complications (Martha Mitchell Funnell, 2010).Diabetes is one of the diseases where the main treatment is the patient's responsibility. Therefore, self-care can reduce problems caused by the disease.

In addition, patients also need to make decisions about their diet adjustment, physical activity level, or the dosage of medication to avoid episodes of hypoglycaemia or hyperglycaemia (Lerman, 2005). Four components of self care in type 2 diabetes: have been identified as the cornerstones in diabetes management. These are: diet modification, physical exercise, adherence to medication, and self-monitoring blood glucose (Walker et al., 2012; Whittemore, Chase, Mandle, & Roy, 2002).

3.3 Diabetes Self-care Behaviors

3.3.1 Nutrition

Nutrition is an integral component of diabetes self-care for all people with diabetes regardless of age. Patients perceived that their poor diet control related to many factors such as blood glucose level unrelated to dietary control, feeling bored with diabetes control, getting used to the taste of food, and difficulty in limiting sweet foods (Keeratiyutawong, Thampanichawat, Melkus, Khuwatsamrit, & Youngpradith, 2003). The problem of dietary control usually occurred because of energy expenditure inconsistency in each day (American Diabetes Association, 2012). Following a healthy diet is a well-recognized factor that impacts one's ability to achieve glycemic targets and prevent or delay the onset of severe diabetes complications; however, following a healthy diet is challenging for most people with diabetes (Katula et al., 2010; Weinger et al., 2014).

Nutritional guidelines do not differ for younger versus older adults but older adults with diabetes have the challenges that impact their ability to follow a healthy diet. For example, older adults may have limited finances or experience difficulties with food shopping and meal preparation. Besides, most of the older adults are at

greater risk for altered taste and smell perception, swallowing difficulties, dentition problems, altered gastrointestinal functioning, anorexia due to under nutrition and skipping meals due to cognitive dysfunction and/or depression (Weinger et al., 2014).

Carbohydrates: Older adults still require the same or higher levels of carbohydrate nutrients to promote optimal health outcomes (American Diabetes Association, 2012).

Protein: The ADA (2012) suggests 10 to 20% of total caloric intake be from protein sources for the older adults. This nutrient helps to build and repair muscles, skin, and every cell in the body. Fifty percentage of protein can be converted to glucose in the body. There are two types of protein, namely plant and animal protein. Plant protein is found in dry beans and peas, nuts, and soy products such as tofu and soymilk. These sources tend to be cholesterol free and low in saturated fat. Therefore, they are good for patients to eat. In contrast, animal protein is found in fish, poultry, meat, cheese, milk, and eggs which contain cholesterol and can be high in saturated fat.

Fat: The amount of fat that should be consumed in the diabetic diet has been liberalized to 15% of the total calories for the older adults (American Diabetes Association, 2012). This nutrient has more calories per bite than any other nutrient. It also supplies energy, helps maintain healthy skin, and helps transport some vitamins. Ten percentage of fat can be converted to glucose by the body.

Sodium: Several meta-analyses and reviews have documented the relationship between sodium intake and blood pressure. The mean effect of a moderate sodium restriction is reported to be a reduction of 5 mmHg for systolic and 2 mmHg for diastolic blood pressure in hypertensive patients and a reduction of 3 mmHg for

systolic and 1 mmHg for diastolic blood pressure in normotensive people. Sodium restrictions should be carefully evaluated. Older adults tend to have reduced taste perceptions, so careful use of salt by the older people should be stressed especially if they cook for themselves.

Vitamin and mineral: These nutrients are needed in small amounts for the body to work correctly. Patients must get these nutrients from food because the body cannot make them. Vitamin and mineral pill supplements are sometimes recommended.

Alcohol: This nutrient is essential for life. It does not have calories. Alcohol is a kind of water, however, ADA (2007) recommended that if adults with diabetes choose to use alcohol, daily intake should be limited to a moderate amount (one drink per day or less for women and two drinks per day or less for men). In addition, to reduce risk of nocturnal hypoglycemia in individuals using insulin or insulin secretagogues, alcohol should be consumed with food because moderate alcohol consumption (when ingested alone) has no acute effect on glucose and insulin concentrations but carbohydrate co-ingested with alcohol (as in a mixed drink) may raise blood glucose.

3.3.2 Physical activity

Daily physical activity is important to health for people of all ages. Lack of physical exercise and obesity are major contributory factors to insulin resistance. The potential benefits of regular physical activity in patients with diabetes include improvements in insulin sensitivity and glycemic control, reduction in cardiovascular risk, improvements in blood pressure, lipid profile and weight loss (Sigal, Kenny, Wasserman, Castaneda-Sceppa, & White, 2006).

A careful medical history and physical examination should focus on the symptoms and signs of disease affecting the heart and blood vessels, eyes, kidneys, feet, and nervous system before increasing usual patterns of physical activity or an exercise program (American Diabetes Association, 2012). Aerobic physical activity should be recommended; for example, walking, jogging, swimming, dancing and cycling, and other endurance activities, depending on the individual's preference. Individuals must be taught to monitor closely for blisters and/or other potential damage to their feet both before and after physical activity. Proper hydration is also essential, as dehydration can affect blood glucose levels and heart function adversely. Adequate hydration prior to physical activity is recommended, i.e. 500 ml of fluid consumed 2 hour before physical activity. During physical activity, fluid should be taken early and frequently in an amount sufficient to compensate for losses in sweat reflected in body weight loss (American Diabetes Association, 2012).

A standard recommendation for patients with diabetes is that physical activity includes a proper warm-up and cool-down period. A warm-up should consist of 5 to 10 minutes of aerobic activity at a low-intensity level. The warm-up session is to prepare the skeletal muscles, heart, and lungs for a progressive increase in exercise intensity. After the activity session, a cool-down of 5 to 10 min should be structured similar to the warm-up. This helps to gradually reduce the heart rate down to the pre-exercise level and reduce the risk of post exercise hypotension and arrhythmias. It is recommended for patients with diabetes to engage in aerobic exercise roughly every other day or 3 to 5 days each week (American Diabetes Association, 2012). Chair exercise is another alternative for older adults who are homebound, have limitations in mobility, or where safety of participation in a more traditional exercise program

may be a concern (American Diabetes Association, 2012). For patients who cannot exercise for any reason increasing energy expenditure whenever they have chance is recommended. For example, patients can be counselled to increase physical activities through walking to the market, going up and down stairs, cleaning the house, and gardening.

3.3.3 Self-monitoring

Self-monitoring skills for detecting hyperglycemic or hypoglycemic symptoms are important skills for patients with diabetes. Hyperglycemia and hypoglycemia can cause numerous physical symptoms in patient with diabetes mellitus. A patient should learn how to observe his or her physiological responses to glucose change and learn how to interpret those symptoms as well as how to cope when those symptoms and other symptoms related to diabetes complications occur such as foot ulcer, and fungal infection. Furthermore, food intake awareness, and increased physical activities should be encouraged through self-motivation. Keeratiyutawong et al. (2003) reported that patients with type 2 diabetes tended to rely on their subjective feeling of physical symptoms and their direct experiences of self-care rather than believe suggestions from health care providers. However, a problem arises when symptoms are not easily recognized or are interpreted inaccurately.

Hypoglycemia is a common complication in older adults , particularly for those in poor glycemic control and those who were recently hospitalized (Bertoni, Krop, Anderson, & Brancati, 2002).

Older age creates a greater vulnerability to hypoglycemia secondary to diminished counter-regulatory responses and changes in pharmacokinetics (reduced

renal elimination) and pharmacodynamics ((Kirkman et al., 2012; Seaquist et al., 2013). The association between hypoglycemia and cognitive function is well known, so, it is very important when caring older adult to prevent hypoglycemia. Findings of a recent population-based prospective cohort study of 783 older adults with diabetes (Yaffe et al., 2013) suggest that the relationship is bidirectional. Over a 10-year period and controlling for comorbidities and change in cognitive function, subjects who had experienced a severe hypoglycemic event were 2 times more likely to develop dementia and subjects who had developed dementia during the follow up period were 3 times more likely to have a subsequent severe hypoglycemic event (Yaffe et al., 2013). Clearly, efforts to prevent hypoglycemia in older adults with diabetes are essential for health and well-being of this population.

Therefore, self-monitoring is a necessary skill of patients with diabetes for evaluation of their health status at any time. Patients with diabetes should learn to monitor themselves everyday regarding food intake, symptoms of hyperglycemia or hypoglycemia, and check their body's skin.

3.3.4 Medication-taking

Patients with diabetes should learn about the action of drugs, how to take medications, and the side effects of their medications. Moreover, nurses should explore patients' problems about medication taking and collaborate to solve those problems with patients.

A recent systematic review examined the impact of cognitive impairment on medication adherence in older adults (Campbell et al., 2012). Cognitive dysfunction imposes many barriers to medication adherence. Patients may have difficulty

understanding directions regarding how to take new medication and knowledge of why the medication was prescribed (Campbell et al., 2012).

The problems of drug administration usually occurred in patients with diabetes. Most patients with diabetes do not take medicines following the prescription for many reasons (Binh & Toan, 2007). Because patients must take medications every day, they occasionally miss their medication. Moreover, the individuals may have many medicines to take because of having other comorbidity diseases; thus, they sometimes forget or feel too bored to take their medication. Another reason for failure to take prescribed medication is that Vietnamese patients often take traditional medicines such as herbs instead. Others take both the traditional medicine and the prescription drugs.

3.3.5 Problem solving, healthy coping skills and risk-reduction

An important objective of diabetes care is to provide patients with self-regulation skills. For patients to assume responsibility for their own regimens, they need to have good problem-solving skills to cope with ongoing personal, social, and environmental barriers to adherence. Besides, learning appropriate coping skills is important to staying emotionally as well as physically healthy in self-care for type 2 diabetes. Diabetic complications are not inevitable. So, reducing risk is one of the important factors of self-care behaviors

3.3.6 Foot care

Foot ulcers and amputations are major long-term complications for persons with diabetes. Four main risk conditions related to foot ulcers and amputations include peripheral neuropathy, peripheral vascular disease, previous foot ulcers, and altered biomechanics (limited joint mobility, severe nail pathology, and evidence of

increase foot pressure) (ADA, 2005). A visual foot examination is recommended at every visit. A more in-depth inspection should be performed at least annually to identify high-risk foot conditions including an assessment of protective sensation, vascular status, skin integrity, and foot structure/ biomechanics. Besides, persons with diabetes should wash their feet daily. Because the temperature receptors in the lower extremities of a person with diabetes may be impaired, water should always be tested with the wrist or elbow or by another family member. As soft towel should be applied gently to dry the feet, and it is important to dry well between the toes. Immediately after washing is the best time to cut toenails because the water has softened them. Toenails should be cut along the top of the toe, without digging into the corners and without cutting below the end of the toe. A person with diabetes should carefully inspect their feet daily, this should include the tops and the soles of the feet, the heels, and the areas between the toes. If patients cannot see well under the feet, a small mirror can help or a family member can make the inspection.

In this study, self-care refers to the individual's care of themselves according to their personal values, experiences, and interests in maintaining life, health, and well-being.

4. The current status of diabetes care in Vietnam

The overall goals of diabetes management are to avoid or delay immediate or long-term complications of diabetes by maintaining blood glucose levels as close to normal as possible, to eliminate episodes of hypoglycemia, and reduce related risk factors, such as high blood pressure and high cholesterol levels (ADA, 2008). Treatment goals for Vietnamese patients with diabetes include maintaining HbA1c

level equal or less than 7 %, controlling blood pressure (130/80 mmHg for diabetes patients without complications and 125/75 mmHg if protein in Urine > 1g per day), controlling Lipid (LDL-c < 2, 5 mmol/L, Cholesterol < 4,5 mmol/L, and Triglyceride < 2 mmol/L), weight loss (BMI ≤ 22), eyes check (1 time per year), foot examination (every 6 to 12 months), and check of protein in urine (1 time per year) (Binh, 2004).

Health care systems in Vietnam, are decentralized. Treatment pricing is managed by powerful hospitals that are under-resourced. Care is mainly focused in hospitals in large urban areas. Doctors and nurses at these facilities are overburdened and therefore unable to spend enough time to educate patients about diabetes. Most primary and specialized care is delivered through provincial hospitals with some areas roughly providing 6.2 doctors per 100,000 patients. Vietnam provides insurance to civil servants, state employees, private corporate employees and children under 6 but this does not cover all costs for diabetes care. In 2002, a national strategy for prevention and control of non-communicable diseases was issued, however the infrastructure for managing diabetes in Vietnam is less than adequate, resulting in inappropriate or no treatment at all (Elizabeth, 2010).

Evidence showed that Vietnamese persons with type 2 diabetes did not achieve the acceptable glycemic control and did not practice self-care well enough to control its progression and complications (Yokokawa et al., 2010). According to a national general nutrition survey, protein and fat intake in Vietnamese increased remarkably from 1985 to 2000 due to socioeconomic development (Ministry of Health, 2003). A nutritional survey reported that Vietnamese adults in urban areas had high lipid intake compared to other areas (Hanh et al., 2001). Rice is still the staple food and provides more than 50% of daily energy intake. The problem is that rice has

high glycemic index values which can lead to large postprandial fluctuations in blood glucose and insulin levels. However, Vietnamese people with diabetes lack potentials for adaptation to dietary change which is considered an important component of diabetes self-management. A study in persons who followed up at the hospital of Endocrinology, showed that persons with type 2 diabetes also had high caloric intake, especially high carbohydrate and animal protein (Binh, 2006).

Moreover, Phong and Ninh (2006) conducted a cross sectional study to investigate knowledge, attitude and practice in secondary prevention among diabetic patients in a health center in Ho Chi Minh City and found that 91 percent of patients could not identify symptoms of high blood glucose levels and only 21 percent of them monitored blood glucose frequency. Huyen (2008) conducted a study with 84 patients with type 2 diabetes at the diabetes out-patient clinic of Endocrinology Department in Bach Mai Hospital, Hanoi and found that the mean responses to health promoting behaviors were 2.84 on a 4-point scale (Huyen, 2008). Spiritual growth had the highest mean among sub-domains whereas physical activity had the lowest mean.

Furthermore, a study by Loi (2010) in Thai Nguyen Hospital in Vietnam found that patients with type 2 diabetes did not have adequate knowledge about foot care and their behaviour about foot care was moderate (Subgranon, 2016). Foot care is often neglected in a health care setting. As a result, many people with diabetes do not have their feet checked until it is too late. However, this can be prevented with simple education for self-management and prevention of foot complications. In addition, Mull, Nguyen, and Mull (2001) reported that Vietnamese patients with type 2 diabetes did not go for regular health check-ups and felt uncomfortable to ask

health instruction from a health care professional. Adherence to treatment was found to be a major challenge in Vietnam. The reasons why patients are not adhering to treatment or receiving proper care is the financial burden of the cost (Elizabeth, 2010) and low level of patient's knowledge (Beran et al., 2008). Poor adherence is the start of a vicious cycle of increased illness and complications, increased burden on the individual and the health system, and premature mortality (Beran et al., 2008).

5. Culture, belief, practice and traditional valued that influence self-care

Lifestyle or health-related behaviours are strong determinants of health, and perceptions of health and illness play an important role in self-care. In a wider social context, self-care has its roots in people's history, religion and culture.

5.1 Religion belief, culture, believes and practices related to health of Vietnamese people

Religion Belief

There are several religions in Vietnam. The earliest established religions include Taoism, Confucianism (originating from China) and Buddhism (originating from both India and China). Other religions introduced later into Vietnam included Christianity, Islam and Hinduism. Religions indigenous to Vietnam were Caodaiism (Cao Đài) and Hòa Hảo. In mountainous and remote areas, different religious beliefs exist among minority tribal communities. Currently, six religions are officially recognized by the Vietnamese government: Buddhism, Catholicism, Protestantism, Islam, Caodaiism and Hòa Hảo.

Among many religions practiced in Vietnam, Buddhism is the most popular. Approximately 85% of Vietnam's population identify themselves as Buddhist

although they may not practice Buddhism on a regular basis. Buddhism's concept of life is an attainment of enlightenment through experiential learning to overcome ego and desire which are believed to cause suffering in life. The combination of the three religions dictates morality, order, harmony and pragmatism, consequently emphasizing the virtues of obedience, hierarchical social interactions, and a shy and modest personality.

Vietnamese Culture

Vietnamese culture has an Oriental cultural heritage. Vietnamese culture emphasizes family tradition, values the welfare of family over the welfare of individuals, and expresses deep respect to ancestors, elders, and the whole family unit. Traditionally, the father or eldest son is the representative of the family with the highest level of interaction with other people outside the family. Men are expected to carry out heavy physical household tasks, make final decisions and support the rest of the family in times of family crisis. Women are expected to do housework, nurture the children, and they tend to support the belief that the father or husband has the legitimate right to make final decisions. Women are the primary carers of ill family members.

Older persons receive high levels of respect from other people, and grandparents often assist with housework such as preparing meals or taking care of grandchildren. Older persons are normally cared for at home, and as such institutionalizing an aged family member in a nursing home is believed to be disrespectful to them.

Health beliefs and practices

Vietnamese health beliefs and practices are greatly influenced by Chinese traditional medicine, and to a lesser extent by Western biomedicine as a result of a long-term Chinese and French domination. Illness is conceptualized in three different of health beliefs.

The first and least common health beliefs is supernatural or spiritual. This model explains that illness can be brought on by a curse, sorcery or non-observance of religious ethics. Mental and physical illness is associated with spiritual ailments. People who have strong beliefs in supernatural forces often seek consultations from Buddhist monks or traditional medical practitioners for amulets or other forms of spiritual protection, and even exorcism.

The second health belief is the âm-dương equilibrium theory which is similar to yin (âm) and yang (dương) in Chinese medicine. “Âm” is translated as “cold” and “dương” is translated as “hot”, although these concepts are not necessarily referring to temperature. Illness occurs as a result of an imbalance between the two elements. An âm-dương imbalance can be caused by internal factors such as a high emotional state or pregnancy and external factors such as weather and seasonal changes and excessive consumption of “cold” or “hot” foods (Jamieson, 1995). To restore the balance, many home treatments are applied, for example eating or drinking countering foods, using traditional herbal medicine, drinking leaves, using balm to expel the “bad” forces out of the body. According to the Vietnamese Ministry of Health, Vietnamese traditional medicine has been recognized officially since 1957 and included in curricula of medical universities. The use of herbal medicines is the most common form of traditional health practice.

The third health belief is Western biomedicine, which was introduced into Vietnam in the nineteenth century during the French domination period. However, biomedicine beliefs are often combined with âm-dương beliefs (Jamieson, 1995). Diseases are believed to be caused by germs or contaminants in the environment. People seeking health care from biomedical doctors often expect an immediate diagnosis and some form of drastic treatment. Invasive diagnostic or surgical procedures are not welcome due to a perception that blood loss in such procedures will worsen the illness.

In summary, Vietnamese people view health from different perspectives and interpret illness as a result of interaction between spiritual factors and internal inequities. These health conceptualizations lead to a mix of health-seeking behaviours in which various diagnostic and treatment methods can be used to obtain perceived health benefits. Such beliefs and practices remain popular among Vietnamese people.

5.2 Traditional Vietnamese Beliefs about Diabetes

Vietnamese traditional diabetes self-care might be associated with beliefs and knowledge about diabetes. In the traditional Vietnamese diet, rice is a major dietary source of carbohydrates, and is eaten at every meal throughout the day. It had been assumed that traditional Vietnam carbohydrate staples have lower glycemic index values as compared to Western carbohydrates staples. In the study by Chan et al. (2001), the authors found that rice had surprisingly high glycaemic index values, which may be associated with an increased risk of developing type 2 diabetes.

The Vietnamese people love to use herbal teas. Herbal teas are used as supplements to insulin and other Western treatments as a need to cool the body and restore its overall balance. In addition, bitter substances were used because of the

assumptions that bitter substances are opposite to sweets and thus lower blood sugar (Mull et al., 2001; Pham, 2003). An ethnographic study by Mull et al. (2001) of 38 Vietnamese with diabetes found that people's ideas about the cause and proper treatment of diabetes was influenced significantly by culture. In that study, culture was defined as the set of shared attitudes, values, goals, and practices that were inherent within Vietnamese adults. Results of that study showed that the majority of participants used traditional home remedies for diabetes and also that many had not achieved good control of their blood glucose level.

The Vietnamese older people believed that perspiration was desirable because it removed body toxins that could damage vital organs. This finding suggested that there were cultural influences on health and well-being and misconceptions of disease and illness among Vietnamese with diabetes, which might impede recognition of early warning signs and delay them in seeking medical treatments (Mull et al., 2001).

Many Vietnamese believe in the principles of yin and yang to achieve harmony with nature, and that those beliefs influence how they self-care their diabetes. The Vietnamese research participants categorized the organs of the body as either yin or yang. Illness was believed to be a byproduct of an imbalance between the two principles. Illness was either an excess or deficiency of one principle, and could be removed or restored to maintain balance (Helman, 2007)

In an attempt to achieve harmony with yin and yang, Pham (2003) found that diabetes management sometimes caused disharmony with family traditions. For instance, those with diabetes may need separately prepared meals, and may eat at different times from the rest of the family. As a consequence, Vietnamese with diabetes can feel uncomfortable that they are imposing an extra burden on the family,

which may decrease their motivation to adhere to treatment recommendations. In addition to the Vietnamese family traditions and use of herbal products, Nguyen also found that the participants in her study believed that the use of a shaman, or folk doctor, to alleviate the disease was effective (Nguyen, 2014)

6. Phenomenology

Phenomenology is a philosophical approach and a research method within the constructivist paradigm which studies the lived experiences of humans of descriptions of phenomena (Cerbone, 2014; Hammond, Howarth, & Keat, 1991; Lincoln, Lynham, & Guba, 2011; Lopez & Willis, 2004; Streubert & Carpenter, 2011). Phenomenology is anything which presents itself to someone or as one experiences it (Hammond et al., 1991). Phenomenology is a philosophy because it deals in the realm of the ideal, pure, and perfect. It is also a methodology dealing with the practical world of concession, compromise, and approximation (Hammond et al., 1991)

There are three main phenomenological methodologies : transcendental phenomenology, existential phenomenology and hermeneutic phenomenology (Streubert & Carpenter, 2011)

Transcendental phenomenology

Husserl (1859-1938) – the father of pure or transcendental, the founder of phenomenology, Husserl introduced the concepts of subjectivity and ‘lifeworld’ and emphasized that philosophy must begin with the phenomena (things) themselves (Fjelland & Gjengedal, 1994). Husserl’s work concentrates on experience and focus on epistemological question of knowing; Looking at the lived experience from outside, from the view point of a detached observer (Koch, 1995). It comprise three

main themes: intentionality, essences or constitution of meaning and phenomenological reduction or bracketing (Koch, 1995).

Existential phenomenology

Existential phenomenology was influenced by the later work of Husserl which focused on the lived-world from the detached observer's perspective (Ashworth, 2003). Existential philosophy understands that observers cannot separate themselves from the world (Walters, 1994). Existential phenomenology concerns of being and ontology (Edralin & Garcia, 2014; Ricoeur, 1967). Ontology examines questions of relatedness to being and existence (Edralin & Garcia, 2014).

Heidegger (1889-1976) took phenomenological philosophy further and moved the focus from epistemology to ontology (Edralin & Garcia, 2014). Heidegger's work "Being and Time", argues that the world and consciousness are not separate (Polkinghorne, 2005). His philosophy was mainly concerned with existential ontology, describing the concept of a person and Being-in-the-World (Edralin & Garcia, 2014).

Hermeneutic phenomenology

Hermeneutic phenomenology is a philosophy of the individual (Van Manen, 1990). It focuses on a human experience as it is lived and aims to create meaning and gain deeper understanding of lived experience (Laverty, 2003; Van Manen, 1990).

The work of Heidegger and Gadamer is recognized as pioneering in the field of hermeneutic phenomenology. The major work "Being and Time" of Heidegger state that hermeneutic is one among a variety of methods of investigating phenomena. Several important principles of Heidegger: pre-understanding, co-constitution and interpretation, the hermeneutic circle (Van Manen, 1990).

Heidegger's term "pre-understanding" is used to describe the meaning and culture which exists in the world before people understand them; when persons position themselves in a situation, they bring their stories or pre-understanding with them (Van Manen, 1990).

Humans and the world are co-constructed; that is the world constructs people and people construct the world in which they live from their experience and background. Thus, the world and persons cannot be understood and separate (Koch, 1995). Heidegger used the words "Dasein" (being there) to stress that individual existence is always existence in the world and "Sein" to refer to Being or presence (Cohen, 1987). Being is understand. It is a fundamental characteristic of a mode of human "being" in the world (Koch, 1995).

The development of understanding is called "interpretation" (Heidegger, 1962). Individuals' interpretation is based on their background and culture. They have the world and life at a cultural level through acts of interpretation (Koch, 1995). Heidegger contended that "to be human is to be interpretive, for the very nature of human realm is interpretive" (Streubert & Carpenter, 2011)

The word phenomenology is derived from the Greek word phenomenon and means appearance, or to put in light or manifest something that can become visible in itself (Heidegger, 1962). The scope of the phenomenological movement begin in the nineteenth and early twentieth century. Phenomenology is a philosophical perspective that provides a framework and method for studying a person's lived experience; it is the study of essences, and provides an in-depth description of the person's experience (Smith, 2015; Speziale, Streubert, & Carpenter, 2011). The purpose of phenomenology is to describe a particular phenomenon, or the appearance of things as

a lived experience; it is both a way of thinking or perspective, that is, a philosophy, and a research method (Speziale et al., 2011; Streubert & Carpenter, 2011). Phenomenology is a careful examination of the human experience, and understanding the essential qualities of the experience in turn can illuminate the experience for others. To accomplish this, one must focus on the particular object in its own right, and then move the focus to the perception of the object and away from the object itself (Smith, 2015).

Phenomenology is both a philosophy and a research method. As a philosophy, phenomenology is a particular way of approaching the world and apprehending lived experience (Cohen, 1987). Phenomenology focuses on the inward experience, the absolute essence of an object separate from its existence. One is simply concerned with what things are, not whether they are. The context of the experience is a given reality. It is present in time and space. Phenomenology as a premise and methodology seeks and accepts only the evidence that is offered by the consciousness itself (Smith, 2015). The only true knowledge of an experience comes from those living-in-the-world of the experience. It is from personal autobiography that meaning emerges and insight is revealed. As a research method, phenomenology is a rigorous process of reexamining what Husserl (1962) termed “the things themselves.” The question of phenomenological inquiry is about the meaning of human experience and asks, “What is it like?” Phenomenology is a way of thinking about what life experiences are like for people (Speziale et al., 2011) and is primarily concerned with interpreting the meaning of these experiences.

Current nursing research is influenced by the works of Husserl, Heidegger, and the Dutch phenomenologists. Phenomenology is the attempt to construct a full

interpretative description of some aspect of the life world. Phenomenological research is an introspective human science, the intent of which is to interpret and to understand as opposed to observing, measuring, explaining, and predicting (Van Manen, 1990). The intention is to go beyond the aspects of life taken for granted and “to uncover the meanings in everyday practice in such a way that they are not destroyed, distorted, decontextualized, trivialized or sentimentalized” (Speziale et al., 2011). To answer the question, “What is it like?” and to enter into the dialectic of the study and fully portray the reality of the experience, a process of phenomenological reduction is utilized. All previous or a priori knowledge gleaned from clinical practice, the study of gerontology and from personal experience is suspended or bracketed.

7. Related Research

Reviewing the literature showed that there are some studies that explored self-care in diabetes in different contexts. Collins et al (2009) conducted a study on diabetics patients in Ireland based on in-depth interviews. They revealed that patients’ perceptions effect on their self-care competence in diet and exercise choices, frequency of blood glucose monitoring, and compliance with prescribed medication regimens (Collins, Bradley, O’Sullivan, & Perry, 2009).

Thorne et al (2003) reported that patients with chronic illness perceived self-care decision making as a complex process than simply learning and complying with therapeutic recommendations that occurred within the context of a disease trajectory, a healthcare culture, and a uniquely meaningful life that involved assuming control. They explain the manner in which people with chronic illness come to rely heavily on a knowledge and skill base founded on personal experience with the disease within

the context of their unique lives rather than standardized knowledge alone (Thorne et al., 2003).

In another study, Hjelm and Bard (2013) state that both biomedical and traditional explanations were found, and active self-care behavior with frequent use of herbal remedies in Latin American migrants diagnosed with diabetes mellitus living in Sweden . When compared the self-care behaviors and beliefs of diabetic Swedish women with diabetic Latin American migrants women living in Sweden. There is a clear difference between the two groups. The Latin American migrants' diabetics had a more passive attitude toward their illness and their self-care, relying on cultural traditions. They showed less inclination toward self-care. In contrast, the Swedish diabetics expressed themselves in terms of medicine and healthy lifestyles and took an active role in self-care (Hjelm & Bard, 2013). Therefore, diabetic patients are not homogenous. Their gender, racial background, individual attitudes, personalities and cultural beliefs play an important role in diabetes self-care (Hjelm & Bard, 2013).

Rose and Harris (2006) who conducted qualitative interviews among Vietnamese speaking participants who live in Australia with Type 2 diabetes. They found that this group experienced a number of challenges with their diabetes self-management, including poor social support and minimization of diabetes by friends and family (Swerissen et al., 2006).

Studies conducted in Vietnam have been mostly quantitative studies. In the Vietnamese context, no study was found to explore the meaning of self-care among diabetic patients. The meaning of self-care may also possibly be associated with the context of a disease trajectory, healthcare culture, individual attitudes, personalities and cultural beliefs. However, contemporary literature about type 2 diabetes in Vietnam has

focused on the prevalence (N. Son, Trung, Kaoru, & Shigeru, 2006), the risk factors (Chan et al., 2009; L. Son, N,T,D., et al., 2004; N. Son et al., 2006), the blood glucose control (Yokokawa et al., 2010), the physical health problems (Chuang, Tsai, Huang, & Tai, 2002; Yokokawa et al., 2010), the patients' compliance with health care professionals' commendations (Yokokawa et al., 2010), and few health education programs (Binh & Toan, 2007; Chinh, 2015; L. Son, N,T,D., et al., 2004; Yokokawa et al., 2010). There is a study about investigating diabetes self-management among adults with type 2 diabetes in Vietnam. In this study, diabetes knowledge, belief in treatment effectiveness, family and friends' support, health care providers' support and diabetes management self-efficacy directly influenced their diabetes self-management; (Hanh, 2012). Many studies in Vietnam indicate that most patients do not achieve acceptable glycemic control due to poor diabetes-specific knowledge, non-adherence to lifestyle modification, and lack of motivation to make behavior changes (Hoang, 2008; Huyen, 2008).

However, all of the studies were conducted in adults and they are quantitative studies. As diabetes increases dramatically in Vietnam especially in older person groups, understanding how DM is explained to people and how their self-care behaviors play an important role in caring diabetes is crucial. It is important to conduct a qualitative research to know about Vietnamese cultural influences on diabetes and Vietnamese type 2 diabetes patients' descriptions of self-care.

CHAPTER III

METHODOLOGY

This study uses a qualitative design to explore the personal perceptions of type 2 diabetes older patients towards self-care, from the participants' perspective as diabetic patients. A qualitative research is designed to observe social interaction and understand the individual perspectives. Also, it provides insight into what people's experiences are, why they do, what they do and what they need in order to change. Streubert & Carpenter (2011) describe it: "qualitative research is any kind of research that produces findings not arrived at by statistical procedures or other means of quantification" (Streubert & Carpenter, 2011).

Research Design

Qualitative research provides rich and descriptive data (Catherine Marshall & Rossman, 2014) and thus was the ideal approach to elicit illness representations of Vietnamese with diabetes. This study utilized a descriptive design.

An overview of the research design based on the descriptive method describes settings, key informants, instruments, data collection, and ethical considerations involved in the data collection, data analysis, and issues of rigor.

Setting

The Socialist Republic of Vietnam, generally referred to as Vietnam, is located in South East Asia bordered by China to the north, Laos to the northwest, Cambodia to the southwest and the East Sea to the east (Glassman, 2015). It has 63 provinces, 5 metropolitan cities and 54 different ethnic groups (Walther, Embrick,

Thakore, & Henricks, 2015). In 1945, the North of Vietnam gained their independence from French colonization and Japanese occupation (Stiftung, 2016). In 1975, the South of Vietnam was liberated from American colonization and the country was united as one (Stiftung, 2016). In 1986, Vietnam underwent significant economic reforms and since then the economy in Vietnam has grown rapidly at the rate of approximately 8% every year (Stiftung, 2016). Currently, Vietnam is a developing country with a population of approximately 93 million and has the second fastest economic growth rate among countries in East Asia and the fastest in Southeast Asia (Stiftung, 2016). The urbanization and adoption of a more Westernized lifestyle that has occurred in Vietnam at a rapid rate has strongly affected the lifestyle and habits of Vietnamese people (Tran & Hanh, 2012).

Vietnam health care system comprises by four administrative levels of health establishments: central level, provincial level, district level, commune level. The Ministry of Health of Vietnam, the governmental agency and the leading organization in central level, is responsible for the care and protection of people's health including issuing law and other legal documents for health care and protection. This organization also has duties in making long-term plans and strategies for the further development of the health sectors (Le, Kubo, Fujino, Pham, & Matsuda, 2010).

Provincial, district and commune health facilities are under the competence management of the Ministry of Health and responsible for the implementation and development of health care services in corresponding level. In these levels, the people's committee is responsible for allocating finance and human resource, while provincial or district health department is responsible for professional competence

under the supervising and monitoring of Ministry of Health. Provincial and district health department also have duties in supporting people's committee in corresponding level in term of health care and protection for people (Le et al., 2010) ((Appendix E: The health system hierarchy in Vietnam)

Commune Health Centers provided a range of basic services, such as: mother and child health care, family planning, treatment for acute respiratory infections, immunization and treatment of common ailments. In Commune Health Centers, there is also the data about each family in the area including the number of people who get diabetes, hypertension (Le et al., 2010)

Health insurance was first introduced in 1992 in Vietnam in order to raise fund for the health care system and to protect people from financial risk when they have to access health care services. Starting with the first few schemes, health insurance now consists of compulsory scheme which contains three programs: social health insurance, health care for the poor and free health care for children under 6 years old (Le et al., 2010).

This study was done in the southern part of Vietnam. In report in 2012 showed that the prevalence of diabetes in the Southern part of Vietnam is one of the highest prevalence (6% population) in the whole country (Nation Endocrinology Hospital, 2012). The study were conducted in Da Lat city. The population of the Da Lat not only varies in accordance with the nature but also increases or decreases in accordance to the changes of the history, politics and administrative structure. This city has attracted a significant number of immigrants from other provinces in recent years and the population has been growing rapidly. And Da Lat also has around 25 minority ethnic groups. Dalat is the main city of Lam Dong province, so there is the

provincial hospital in Dalat, namely Lam Dong General Hospital. Besides, Dalat have the Dalat Medical Center (District level), and there are 14 Commune Health Center under Dalat Medical Center. Besides, there is 1 private hospital in Dalat, namey Hoan My Hospital

The key informants for this study were selected at Commune Health Centers, in Da Lat city. This study were conducted in Da Lat for several reasons. First, Da Lat is the place where there are many people from different areas in Vietnam visit. This enhances the generalization of research findings for Vietnamese older people with type 2 diabetes. Secondly, according to the report of Da Lat Medical Center, there were about more than 2,000 person with type 2 diabetes mellitus in total 14 Health Commune Centers of Da Lat , this number showed the higher prevalence of type 2 diabetes in Da Lat in comparing with the other provinces. This gives the opportunity for the researcher to secure key informants. Thirdly, after completion of this current study the researcher desires to provide a diabetes self-management support program for the older people with Type 2 diabetes in Da Lat.

Located in the Central Highlands economy, the social economy in Da Lat mainly focuses on the development of the agriculture services and tourism. Because of the soil and favourable climate, Da Lat has many favourable conditions to grow temperate crops, many kind of vegetables and flower. Currently, the Da Lat agricultural sector still attracts 40 % of social employees (Dung, 2017).

Key informants

In a qualitative study two principal criteria exist for eligibility: 1) to have experienced, and 2) willingness to talk about that experience to an interviewer. This type of sample is purposeful (Morse, 1991), key informants selection is based on the study's need to ensure authentic, useful and rich data which represent the phenomenon.

The key informants were the older persons who diagnosed type 2 diabetes in outpatient clinics of Commune Health Centers in Dalat city, Lam Dong province. In addition, the inclusion criteria were as follows:

- (1) Both male and female key informants who are diagnosed to have Type 2 diabetes at least 6 months
- (2) Age is 60 years old or above
- (3) No cognitive impairment by assessment through MMSE (Kurlowicz & Wallace, 1999), and the score should be over 24 which indicates a normal cognition.
- (4) No diabetes-related complications (end stage renal disease, heart failure, lower extremity amputation), or other serious illness, or haemoglobinopathies, or alcoholism, or any blood diseases
- (5) Willing to participate in the study and being able to communicate in Vietnamese language with the researcher,
- (6) Able to give informed consent

Instrument

In qualitative research, a researcher is an instrument. This concept of human-as-instrument has been applied in data processing and confirms the result with respondents in the field. During data collection and analysis process, the researcher needs to develop characteristics that ensure sensitive responses to all personal and environment cues in the fieldwork. Further characteristics are adaptation to multiple situations and taking a holistic view. In this current study, the triangulation had been used to confirm the validity between the data from interviewing and observation, from the key informants.

For a researcher of this study, personal and professional backgrounds are presented in the world view and characteristics to conduct this research. I am single, 31 years old. I was born in Da Lat city and grew up in a Vietnamese family. My worldview is Vietnamese cultures. Another aspect of my worldview stems from my religious beliefs. The religion of my family is Buddhism, both father and mother. So I understand about the religious and beliefs of Vietnamese people in Dalat.

The researcher finished bachelor degree in nursing in 2009. After graduation, I worked as a nursing teacher at Yersin University of Da Lat for 5 years. And after that I continued to work at Lam Dong Medical College until now. In both university, every morning on weekdays, I take her students to the Internal Medicine department of Lam Dong Province Hospital. My area of interest is caring for chronic illness patients since there are more patients with diabetes and hypertension in the Internal Medicine department, and they also get more complication. I want to focus on educating patient with chronic illness so that they can take care of themselves and prevent complication.

The researcher have work in Dalat for 8 years. I am also the assistant of the Dean at Faculty of Nursing - Lam Dong Medical College about the clinical fields. So I has experienced and good relationship with the Commune Health Centers. I am also trusted and well-known to community members and leaders. This was useful in establishing rapport with interviewees. I am a current member of the Executive Committee of Lam Dong Nursing Association. The researcher's observations and experiences in the community qualify her to be effective interviewer and researcher in this study

Mantzoukas (2004) pointed out that in qualitative research, the researcher is the central figure, the interpreter, the writer, the creator, and the constructor (Mantzoukas & Jasper, 2004). The researcher need more experience and skills before conducting a qualitative study. So the professional literature review, professional experiences, and personal experiences play an important role to develop the researcher's skill and readiness to do the qualitative research. Therefore, attending on training courses about qualitative research with 3 credits at master degree at Chulalongkorn University, help researcher to strengthen research skills in qualitative research.

As being a researcher is being a human research instrument, I have designed myself to studying the qualitative method not only by gaining experiences in qualitative exercises but also learning from my supervisor. I learn a lot about doing qualitative research from her research supervisors - Professor Dr. Jiraporn Kespichayawattana who rich experiences in qualitative research. I attend on training courses about qualitative research with 3 credits, with the course QUAL RES NUR (no 3600626) for the master degree at Chulalongkorn University with my supervisor.

In this course, I also do the pilot study about “Self-management of people with Type 2 diabetes in Vietnam”. Besides, my supervisor also help me to have a chance to be trained with an expert nursing-scientist, namely Professor Dr. Dawn Doutrich. Dr. Dawn Doutrich is Professor of the Washington State University College of Nursing – Vancouver. So this help researcher to strengthen research skills in qualitative research. And with the support from supervisor, the researcher believe that she can conduct this study effectively.

Interview Guideline

The interview guideline were prepared by the researcher to use as the guideline the initial interview. It contained open-ended questions, but it is not necessary for key informants to adhere strictly to the questions. Generally, the researcher used only an opening question asking key informants to relate their experiences with diabetes in the first interview. Demographic and diabetes-related questions were also asked when they were related to the topic discussed (Appendix D).

Demographics included age more than 60 years old, gender, marital status, religious preference, educational background, and occupation. Diabetes related profiles types of diabetes, duration of diabetes, types of regimens, complications, diabetes education experiences, hospitalization experiences, and recent blood glucose levels. These data obtained from individual’s health records. The observation notes about family members, housing, and the community where key informants reside recorded as memos and field notes. The reflective notes include part of describing researcher’s personal thoughts, feelings, problem, ideas, and impressions.

In-depth interviews were optimal for collecting data on individual's personal histories, perspectives, and experiences, particularly when sensitive topics are being explored. And the new questions developed for each key informant during the interview. Interview questions move from the general to the particular. The researcher used probing techniques suggested by Rubin and Rubin (1999) to obtain data that are as specific as possible. If initial responses offered were lacking, ambiguous, or confusing, the researcher used elaboration and clarification probes to expand on a point by seeking richer, more detailed answers (Rubin & Peyrot, 1999). In this study, some key informants the researcher visit three time, if needed the third interview, the third interview probe more specific areas of ambiguity or incomplete data than the first interview.

Ethical consideration

The study proposal, in-depth interview questions, information sheet, and consent form were reviewed and approved by the Ethics Review Committee for Research Involving Human Researches Subjects of the Hanoi School of Public Health (No 017-251/DD-YTCC). The researcher asked the permission for data collection process from the key informants. If the key informants allow, the researcher gave the information sheet to the key informants. When the key informants expressed their intention to join the study, all key informants were gave informed consent and sign in. The appointments were made by the researcher to meet the key informants for the in-depth interview. The chosen place for interview was also selected on mutual agreement between the researcher and the key informants. Ethical issues in this study involve assurance of confidentiality and autonomy for the key informants.

Data collection

The data was primarily collected from in-depth interview with individual older people with type 2 diabetes at their houses. The field work including preliminary observation was done by the researcher during April to July 2017 by observation and in-depth interview.

The researcher contacted the director of Dalat Medical Centers in Dalat city to inform the director about the study and criteria for key informants selection. He discussed with the researcher to choose the 4 Commune Health Centers where there are more diabetes patients to the researcher. He introduced the researcher with the head of Commune Health Centers in district 1,4,7 and Ta Nung village of Dalat city. The researcher met and described the study to the head of of Commune Health Centers in district 1,4,7 and Ta Nung village. The head and the researcher discussed about the criteria of case selection with nurse in the clinic. The nurse provided the list of eligible key informants and identify the older persons' health status and locations in which they reside. In each Commune Health Centers, the nurse contacted each potential family via telephone and ask their permission for them and the researcher to visit and explain the study. The nurse set up the time for the first meeting with the key informant.

To perform the interview, nurses from four research sites acted as the gatekeeper and helped introduce the researcher to the key informants. For the first meeting, the nurses took the researcher to the key informant's home and introduce the researcher with them. The information that have to inform the key informants including of researcher name, a status of the researcher as student in doing the thesis, and the objectives of the study to understand self-care behaviour of older people with

type 2 diabetes. And the researcher asked to set up the next time to visit the key informants and interview them.

For the second meeting, the researcher explained again about the objectives, and data collection method to the key informants and their families. The older persons are be assessed by the Mini Mental State Examination (MMSE) for the assessment of cognitive function in older persons (Kurlowicz & Wallace, 1999). The key informants were asked to sign consent forms and asking their verbal permission on tape recorder to confirm their willingness to be the key informants in this research. After that, interviews are conducted face-to-face to uncover their experiences. Each interview session took about 50-80 minutes depending on each case. There are 4 cases the researcher visit three times.

Informants who agreed to participate in research were requested to sign in consent form. They also are informed that they can withdraw from interview at any time. All interview sections were recorded by audio digital recorders with the permission of informants, and then transcribe and code. To assist the data collection, the observation protocol, interview guideline that prepared by the researcher were prepared to ensure necessary and important information would be collected.

After each interview, the researcher asked the permission of key informants to call them via phone in case the researcher need more information or check the information again. Seeking information stopped when data saturation occurred, there are 16 key informants in this study.

Details related to observations, interview sections were recorded in field diary to chronicle researcher own thinking, feeling, experiences and perceptions throughout this process. Photo taken were applied to capture activities that happen at site with the agreement of the key informants. These were used for education and research purpose only.

Data Analysis

Data analysis use content analysis and comparison to reveal the meaning of “self-care” from the perspectives of older persons living with diabetes and to explore the self-care behaviours of diabetes older person., the content analysis was applied to make sense of the data (Krippendorff, 2012). Content analysis has been shown to be useful for studying qualitative research as it can be used with unstructured material and it is sensitive to the context and symbolic forms of data

The first step is organizing and preparing data for analysis. All audiotapes were transcribed verbatim and typed up in Vietnamese by the researcher as each interview is completed. Transcripts were compared with the audiotapes to note relevant information. These records were stored in Microsoft Word files on the researcher laptop with protected password. And all the records were translated into English by the researcher and after that they were checked by the English teacher who has the master degree in English. But in the first stage of the analysis be undertaken in Vietnamese by the researcher to ensure meanings were not distorted by translation.

Then, the key themes and sub-themes were created. The researcher read through all collected data and deciding which pieces of information/opinions are most relevant to themes or subthemes and which are details that do not need to be included in the summary.

The data was coded into themes and sub-themes. A coding scheme was developed in relation to the research questions. The information were extracted into themes and sub-themes by manual scrutiny techniques. Coding and analysis then occurred using an interactive processes of discussion with supervisors about the data transcripts, and the memos, and debriefing notes of the researcher. Themes were

compared, discussed and decided upon and this process was continued until no new themes emerged from the data. Then, the most comprehensive set of ideas that depict key informants' views on their experience were generated.

The final data analysis step was to elucidate the essence of the experience through each topic. In the final step, the researcher translated the Vietnamese themes into English and discussed and reviewed these with her supervisors.

Trustworthiness of the study

A trustworthy study is truthful and consistent as well as useful to other people. Trustworthiness depends on how the research process has been carried out and how closely the findings represent the experiences of the key informants (Ybema, Yanow, Wels, & Kamsteeg, 2009). According to Lincoln and Guba (1985), all research must respond to the quality and criteria against which the trustworthiness of the project can be measured (Lincoln, 1995). These criteria were addressed by four concepts to achieve internal and external validity, reliability and objectivity. In this study, trustworthiness was measured through four constructs: credibility, transferability, dependability, conformability and confidentiality.

Credibility: Credibility of a qualitative study relates to the believability of the findings. The goal of credibility is to demonstrate that the inquiry was conducted in such a manner as to ensure that the subject was appropriately identified and described (C Marshall & Rossman, 2006). The researcher spent nearly 4 months from April to July in the process of data collection in community. The researcher attempted to establish a good relationship with the key informants in order to build trust and rapport in the data collecting process. The data collecting methods were used various

sources, such as in-depth interviews, field note and observation, to increase the credibility. The researcher described the results of this study based on the key informants' information.

Transferability: Transferability applies to the usefulness of the findings to others in similar situations, with similar research questions or questions of practice (Schwandt, Lincoln, & Guba, 2007) Transferability was achieved by the thick description of data. In this study, the researcher also described the setting and context of the research in detail for future researchers, so the future researchers can determine whether the cases described can be transferred for new research or transferred to other settings.

Dependability: Dependability can be referred to as reliability in conventional research. It is associated with the replication of findings by independent researchers (Lincoln, 1995). The data include reflective journals, field notes, and the method of data analysis were documented and saved in laptop of the researcher. In addition, supervisor of researcher have experience qualitative research who were not involved in the interview evaluated the analysis for accuracy and validated the coding schema.

Conformability: When checking the accuracy of transcribed data, the researcher listened to the recorded interview at least twice while doing the cross-check. In addition, the transcripts were coded by the researcher and then discuss with the researcher's supervisor to develop a coding structure and data interpretation.

Confidentiality: During the interview with older people, the researcher let the older people know that what they said was "just between you and me". Therefore, the researcher made a personal commitment to protect their information in the strictest

confidence. Any written versions of any findings captured in this study with older people were not included their name. Moreover, the data involving the names, activities, events and locations of key informants kept in a separate, secure computer files with the password.

Describe characteristic of the key informants

The key informants for this ethnographic study were 16 Vietnamese men and women with type 2 diabetes ages 60 to 80 years. A total of 16 key informants met all criteria for inclusion in the study and gave consent. All 16 individuals, 8 women and 8 men, participated in the face-to-face in-depth interviews and a total of 16 interviews were used in the analysis. Each key informant selected a place for his/her interviews and all the interview were conducted at the key informant's residence. Regarding the data collection, the characteristic and baseline of the older people were described as below:

Table 0.1 Characteristics and baseline information of key informants

No	Characteristics of KI	Information
1	Gender :Male Age :63 Duration of being DM :7 Religion : Buddhist Education level : 12/12	<ul style="list-style-type: none"> • The researcher visited this KI for 3 times. The total interview took around 70 minutes. • Before retire, he works as the chairman of at the people's committee of seventh ward. Now, he is a farmer, divorce 3 years ago, he has 4 children but now he live alone • Latest blood sugar: HbA1C: 7.5 • Take 2 kind of medicine: Glucopha 850mg, Diamicron. Besides he take Magie B6 each morning • Home remedies: drink wild bitter melon every day • 3 month, check HbA1C at Ho Chi Minh city; use drug in private clinic in Dalat
2	Gender :Female Age :80 Duration of being DM :7 Religion : Buddhist Education level : 5/12	<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 55 minutes. • Before 75 she do home-based business. Now, just stay at home and do house-working. • She has 3 children, now she live with her husband • Latest blood sugar: HbA1C: 7.2 • Take oral medication 3 times/day • Home remedies: drink Beale's barberry for many years, but now she stop to use it. • Each 2 weeks, she go to see the doctor in the private clinic to take medicine
3	Gender :Male Age :60 Duration of being DM :9 Religion : No Education level : 12/12	<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 60 minutes. • Before retire: he is the Chief of police station in district 4, and now he just stay at home, no work • He live with his wife and 2

		<p>children</p> <ul style="list-style-type: none"> • Latest blood sugar: HbA1C: 8 • Take oral medication 2 times/day • He doesn't use any kind of herbal • Each month (on twentieth), he go to Lam Dong General Hospital to check his blood sugar and take medicines. And each 3 month, he check HbA1C but he don't care about HbA1C
4	<p>Gender :Male Age :74 Duration of being DM :22 Religion : Buddhist Education level : 12/12</p>	<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 70 minutes. • Before retirement: being a soldier for 27 years. After that, working in the Province Army Service, retired from 1990. <p>After retirement: gardening, since 2000 no work</p> <ul style="list-style-type: none"> • He live with his wife and 2 children • Latest blood sugar: 11mmol/L, he doesn't know about HbA1C • Take oral medication 3 times/day • He drinks wild bitter melon leaves, and he likes it • Every fifteen days, he check his blood glucose level at Commune Health Center in district 4 and take medicine
5	<p>Gender :Female Age :68 Duration of being DM :17 Religion :Buddhist, ancestors worship Education level : 12/12</p>	<ul style="list-style-type: none"> • The researcher visited this KI for 3 times. The total interview took around 75 minutes. • Before 60 years old she sold iron things in Dalat market. Now, she stays at home and her children raise her. • She lives with her husband, her son, her daughter in law and 2 grandchildren. • Every day, she goes to the market to buy food for the family(It is about 1 km from her house to the market) • Latest blood sugar: 170 mg/dl. She use the machine at home for each 10 days to check her blood glucose level. She doesn't know about HbA1C.

			<ul style="list-style-type: none"> • Take oral medicines in the morning and in the evening: one tablet of 500 g Glucophamine for each time. At noon, she injects insulin of 18 units • She drinks bear bile • Each month, she goes to the Commune Health Center to check her blood glucose level and get the medicine
6	Gender :Male Age :74 Duration of being DM :22 Religion : Buddhist Education level : 12/12		<ul style="list-style-type: none"> • The researcher visited this KI for 3 times. The total interview took around 75 minutes. • Before retirement: Soldier. And now he work as the soldier association in the district • He lives with his wife and 2 children. • In 2004, he treat for Basedow, and in 2006, he went to hospital to check his heath and he know that he got diabetes. • Latest blood sugar: HbA1C: 8 • He has personal meter, so he checks blood glucose level at home, twice a week. He also go to the Commune Health Center to check blood glucose level each month and take medicines. For HbA1C, he checks in Lam Dong General Hopital but he shares that he rarely check it. • Take oral medicines 2 times per day: Glucofa, Diamicron • Every day, he drinks leaves that he heard that they help to lower blood sugar, like bitter melon, bear bile leaves, just cook to drink. He doesn't drink water, just use water when take medicines.
7	Gender :Male Age :75 Duration of being DM :13 Religion : Buddhist Education level : 12/12		<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 75 minutes. • Before retirement: he was a delegate of two-level people's council in Dalat and After 60 years old, he stayed at home, composed poems, written poems.

	<ul style="list-style-type: none"> • He widowed, he has 4 daughters, one of them died, now I have 3 daughters and one son. So he live with his son and daughter-in-law. • Latest blood sugar: HbA1C: 8.5, he check his HbA1C for every 6 months at Lam Dong General Hospital. Each month, he get the medicines form this hospital too. Sometimes he buy medicines in the drug stores by himself because he think that drugs bought outside are better than drugs from health insurance. • Every 10 days, he checks his blood glucose level at Commune Health Center • He drinks too much dry tea, he make the strong tea to drink, and he also takes medicines with tea. (His daughter told the researcher) • He drink bear bile leaves 1 cup every day
<p>8</p> <p>Gender :Female Age :69 Duration of being DM :10 Religion : Catholic Education level : 6/12</p>	<ul style="list-style-type: none"> • The researcher visited this KI for 3 times. The total interview took around 80 minutes. • She sells in the market • She lives with her husband. She has 6 children (4 daughters and 2 sons). All of them live on their own. Four of them live near key informant's house (around 100m), and two of them live in another district. • Latest blood sugar: HbA1C: 7.5. She check her blood sugar level each 6 month at Ho Chi Minh city, it is very far form Dalat, although she has the insurance but she never check in Lam Dong General Hospital • Take oral medicines 2 times per day. • She drunk bitter melon, pendant leaves, and bear bile for 10 years. But now she doesn't drink any kind of leaves • She goes to the Cathedral every Sunday

9	<p>Gender :Female Age :73 Duration of being DM :13 Religion : Buddhist Education level : 12/12</p>	<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 70 minutes. • Before 58 years old, she sales vegetable. Now she stay at home and do housework only • She lives with her husband, her eldest son and grandchild • She don't know how long she got diabetes, but 2 years ago her health in Ho Chi Minh city and she know that she got diabetes • Latest blood sugar: HbA1C: 7.5. Now her son came to check her blood sugar once a month at her house and she takes medicine in Healthcare Center 1 for each month, because she has the health insurance there. For her HbA1C, she check 6 months ago at the private clinic, but she doesn't know why she must check it. • Take oral medicines 2 times per day. • She drinks bear bile leaves every day
10	<p>Gender :Male Age :62 Duration of being DM :5 Religion : Cristian Education level : 10/12</p>	<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 55 minutes. • Before retirement: driver in the Army Academic Institute and now he stays at home and does gardening • He lives with his wife, he has 4 children but they live with their own family. • Latest blood sugar: HbA1C: 7.5, he check his HbA1C for every 6 months at Hoan My Hospital (the private hospital in Dalat) because his daughter-in-law works in Hoan My hospital. So she monitors and takes medicines for him. • He drinks wild bitter melon leaves instead of drinking water. He doesn't drink water, just drink water when taking medicines.

11	<p>Gender :Female Age :66 Duration of being DM :10 Religion : Buddhist Education level : 10/12</p>	<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 65 minutes. • Before retirement: teaching at Pedagogical College of Dalat. Now, she just stay at home. Every day on weekdays, she take her 2 grandchildren to the school by walking (it is about 1 km for her house to the school) • She lives with her husband, the eldest daughter, two granddaughters • Latest blood sugar: HbA1C: 9.8. Every 3 months, she check her blood sugar level at Lam Dong general Hospital. Every 10 days or whenever she feel tired, she check her blood glucose level by the machine at home • Take oral medicines 2 times per day, and inject insulin. She also drinks traditional medicines, these from her friend from another district gave her to drink to control blood glucose. • She drank wild bitter melon and bear bile for a while, but she saw it did not work so she change to drink Indian Maithi seeds.
12	<p>Gender :Female Age :66 Duration of being DM :10 Religion : Buddhist Education level : 10/12</p>	<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 55 minutes. • Before retirement: building worker in Hanoi. Now, she just stay at home. • She lives with her husband, she has 6 children and they live near her house. • Latest blood sugar: HbA1C: 7.5. Every 3 months, she check her blood sugar level at Lam Dong general Hospital. Each month, she comes to the Commune Health Center to take medicine • Take oral medicines 2 times per day, • She drinks bitter melon roots. And she also grow bear bile plants.

13	<p>Gender :Male Age :64 Duration of being DM :5 Religion : Buddhist Education level : College</p>	<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 65 minutes. • Before retirement: Rector of Dong Da High School. After retirement: Local Communist Party Unit Secretary, light gardening • He lives with his wife and 2 children who are in the high school. • Accidentally, at retirement he check his health and he found that he has Type 2 • Latest blood sugar: HbA1C: 7.5, he check his HbA1C for every 6 months at Lam Dong General Hospital, but he don't know about HbA1C. He told the researcher that <i>"I had blood sugar tested 2 months ago. It was 7.5. They took my blood, I don't know that is HbA1C or not."</i> • Each month, he check his health at Lam Dong General Hospital and get medicines there. Take oral medicines 2 times per day • He drinks wild bitter melon leaves. After drinking he felt normal and his blood sugar level is the same. So he stopped to use it.
14	<p>Gender :Female Age :78 Duration of being DM :15 Religion : Buddhist Education level : 2/12</p>	<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 55 minutes. • Before retirement: saleswoman. Now, she just stay at home. • She lives with her husband, she has 6 children but they live in another places. They just give them money for meal and daily life • Latest blood sugar: HbA1C: 9. Every 3 months, she check her blood sugar level at Lam Dong general Hospital. Each month, she comes to the Lam Dong Medical Hospital to take Medicine • Take oral medicines 2 times per day,

			<ul style="list-style-type: none"> • She trusts western medicines only, but she had try to drink bear bile before
15	Gender :Male Age :63 Duration of being DM :8 Religion : No Education level : 12/12		<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 60 minutes. • Before retirement: Army officer. After retirement: Local communist party secretary • He knows that he has Type 2 diabetes by chance. He went to hospital to check blood lipid disorder and at that time, the check glucose level test also, and he found that he got Type diabetes in 2009. • Latest blood sugar: HbA1C: 7.8, he check his HbA1C for every 3 months or six months at Lam Dong General Hospital • Each month, he check his health at Lam Dong General Hospital and get medicines there. Take oral medicines 2 times per day: gliclazide 80mg and two Metfomin 500mf. • He drinks herbal tea, like dandelion, Voi leaves, bear bile leaves, bitter melon leaves. After drinking this leaf for a while about ten days, he changes into other types.
16	Gender :Female Age :60 Duration of being DM :5 Religion : Buddhist Education level : 12/12		<ul style="list-style-type: none"> • The researcher visited this KI for 2 times. The total interview took around 60 minutes. • Before retirement: worker. Now, she just stay at home, housewife. • She lives with her husband and 3 sons • Latest blood sugar: HbA1C: 8.5. She test her blood sugar once a month at Commune Health Centers, and HbA1C every 3 or 4 months at the private clinic • Take oral medicines 2 times per day • For 1 month, she drink avocado leaves in the first week, Voi leaves in the second week, avocado in the third week and Voi in the fourth week.

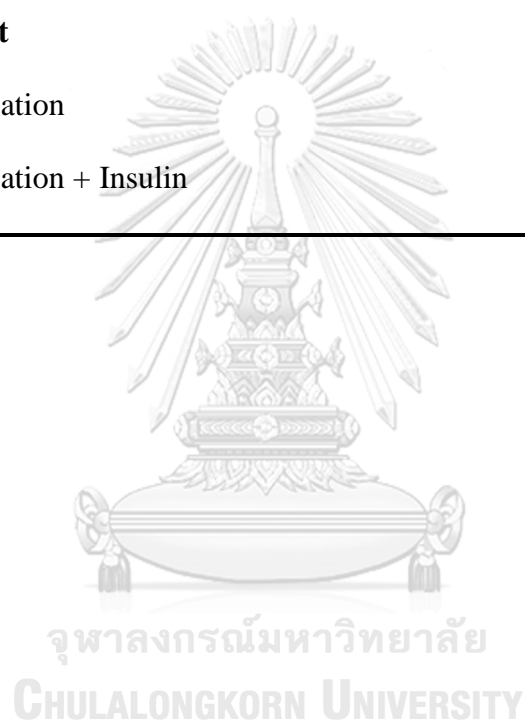
In summary all of 16 cases, the researcher group the key informants' demographic and describe as below:

Table 0.2: Demographic attribute of key informants

Demographic	N	%
Age (Years): Youngest 60 years, oldest 80 years (Mean = 67.93)		
- 60 - 65 years	07	43.75%
- 65 years – 80 years	09	56.25%
Religion		
- Buddish	11	68.75%
- Catholic	01	6.25%
- Cristian	01	6.25%
- No Religion	03	18.755%
Birth place		
- North of Vietnam	08	50%
- Central of Vietnam	07	43.75%
- South of Vietnam	01	6.25%
Marital status		
- Married	14	87.5%
- Single/ Widowed/ Divorce	02	12.5%
Living arrangement		
- Live alone	01	6.25%
- Live with spouse	07	43.75%
- Live with spouse and children	07	43.75%
- Live with adult children	01	6.25%
Education level (# of years)		
- 1 – 5 years	04	25%
- 6-12 years	10	62.5%
- College	02	12.5%

Table 3.2: Demographic attribute of key informants (cont.)

Demographic	N	%
Living with diabetes (# years)		
- < 10 years	08	50%
- > 10 years	08	50%
Insurance (to cover diabetes supply and treatment)	16	100%
Type of treatment		
- Oral medication	14	87.5%
- Oral medication + Insulin	02	12.5%



CHAPTER IV

RESULTS

This chapter presents the findings on self-care of diabetes among elderly Vietnamese people. Individual interviews, key informant observation, and field notes were used to identify patient's perceptions of diabetes self-care of older persons in Vietnam. To maintain the nature of the key informant 'verbatim responses, all quotations have been literally translated from Vietnamese to English and some quotes may appear grammatically incorrect. The first objective of this study is to describe the meaning of "self-care" from the perspectives of older persons living with diabetes. The second objective is to explore the self-care practices of older persons with diabetes.

1. Meaning of the disease

For all of the key informants in this study stated that diabetes is a disease of sugar pee. People's actions are based on their cognitive representation of a particular illness. All key informants were asked "What do you call your illness?" With dramatic consistency, this question elicited the same responses from all of the key informants. All of the key informants used the general Vietnamese terms *tieu duong* (sugar pee) and *benh tieu duong* (disease of sugar pee) to label diabetes. In addition, the terms *tieu duong* and *benh tieu duong* were commonly used to describe diabetes.

The researcher asked the key informants to explain "What happens inside of the body of a person with diabetes?" A majority of key informants were unable to explain the pathophysiology of diabetes. Rather their identity of diabetes was based on the causes and symptoms they experienced. The key informants explained:

I don't know what happens inside the body, but my body feels normal. I went to the doctor and the doctor told me that I have high blood sugar and he gave me medicines to take so I take it. Even before I take the medicines, my body feels normal. (KI#13)

Sugar pee means that we eat too much sweets. It's a disease that is very hard to treat. It's difficult to manage your diet when you have sugar pee. (KI#8)

The key informants thought that diabetes just afflicts to the rich people, because they eat a lot

I did not eat and drink like the rich. Why did I get this sickness (KI#9)

Because having a cognitive representation of diabetes as a disease with sugar in the urine or elevated sugar in the blood, the key informants expected these symptoms to exist if diabetes is present. The key informants equated that if these symptoms do not emerge then there is no diabetes present. For example, the key informants stated:

If you have high blood sugar, it means you have sugar pee. And, if your blood sugar is normal then you no longer have sugar pee. (KI#13)

If your blood sugar is normal then you don't have any problems, no diabetes." (KI#11)

I went out to a corner and urinated. There were many ants around my urine. So I know that I got diabetes and I went to see the doctor immediately (KI#2)

Some of my friends told me that if ants don't crawl around their urine, they don't have diabetes. (KI#3)

These key informants did not understand diabetes can be asymptomatic and without the individual feeling physical symptoms for a long period of time. If treatment or relief of symptoms is the focus of management, this belief may affect medication adherence negatively. These responses indicate that there is a great potential for the construction of diabetes representation that limits the full participation in self-management and achievement of glycaemic control. For example, a man who lived with diabetes for five years but had not adhered to his medication regimen until recently stated: *“Sometime I drink it (medicine) and sometimes I skip doses. Generally, I feel healthy, no symptoms of anything. I don’t take it because I feel fine, I don’t have any problems so I got lazy to take the medicines.”* (KI#13). And he continued: *“I often forget to take medicine. The one-month prescription, I usually take it for one month and a week. But I feel normal. It is OK if I forget to take medicines sometimes.”*(KI#13)

Most of key informants (13 KI) used the term “lifelong” and “forever” to describe their diabetes rather than the term “chronic”. The perception of diabetes as permanent rather than the curable timeline was elicited from key informants who had lived with diabetes longer than ten years. These key informants also had a fatalistic attitude about the course of their diabetes. And they must take care of themselves for the whole life. The following are excerpts on the permanency of diabetes:

Maybe it is all life. I heard that. They say that it lasts all life. It can’t be over, until whenever we die. (KI#2)

This endocrine disease is not hoped to be over. We have to live with the disease, live with medicines (KI#12)

I think there has not been any medicine to cure diabetes. I heard this on television, radio, newspapers and also from doctors. We can only maintain the glucose level in the blood, can not use medicine to cure it. It's nearly the same to HIV. So many people say that we have to live with it all life. (KI#4)

Three of key informants perceived that diabetes was "curable". Although these key informants believed that diabetes is a condition that is curable, curability depends on the treatment one receives:

How long it will last depends on the medications you take. If you take the right medicines, it will cure you. But if you don't take the right medicines, it (diabetes) will last forever (KI#5)

I don't know how long diabetes will last. May be it can be cure. It depend on each person. There are some patients I know have been ill for more than 20 years but still live normal because of their eating and drinking, diet, exercise, or they live with normal lifestyle (KI#14)

2. Meaning of self-care

Meaning of "self-care" from the perspective of older Vietnamese people with Type 2 diabetes in this study consist of 2 parts: 1) Self-responsibility to take care of self for the lifelong, and 2) Seeking information to take good care of self.

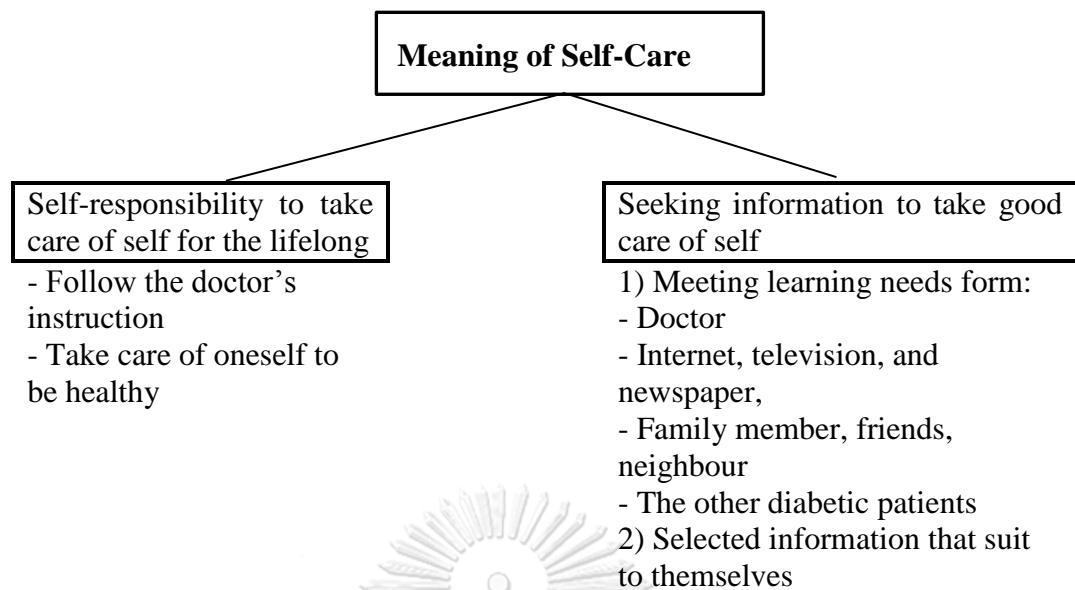


Figure 1 Meaning of self-care of older Vietnamese people with diabetes

Self-responsibility to take care of self for the lifelong

During the interview, the key informants revealed that self-care means that they must be responsible to take care of themselves. To take good care of self, they must follow the doctor's instruction.

No one knows about diabetes so they cannot help me. No one knows about this disease to guide me (smile). I just follow doctors' instruction, and do what they tell me to do, try to follow all (KI#5)

Key informants mentioned that being dependent on others provokes sense of weakness and not being able to meet his/her own needs, and being burden for their children and their husband/wife. So, they must take care of themselves to be healthy

Nobody knows about sugar pee to teach me. Only by myself. No one else could do my work, and take care of me than myself, even my children (KI#16)

No one. Only me, I have to take care of myself (KI#2)

I think I have to stay healthy physically to be healthy spiritually and mentally for a better life. Living with diseases is tiring. I have to take care of myself first. If I don't take care of myself well, I will be a burden for my wife and children and society. (KI#15)

Seeking information to take good care of self

Seeking information is an effort to assume control on diabetes. Each key informant also found their way to control their diabetes. Informants stated that they had to make the way for treating their diabetes and related illness. Sometimes their family members help them to seek diagnosis and treatment or taking them to get health care services. Informants stated that effective self-care require valid information form many kind of source: *“To understand diabetes and how to treat it, you should listen to doctor, TV and newspaper and find the information in Internet”* (KI#1). Seeking information including: (1) listen to doctor and learn what they say, (2) seeking information by themselves through internet, television, and newspaper, (3) seeking information from their family member, friends, neighbour and (4) learn from the other diabetic patients. The following are four examples of key informants who seeking information to take good care of them:

A 80 year-old woman who had diabetes for seven years shared about how she believe on doctor only, and do everything that the doctor said:

I asked doctor and depend only on doctors... Doctors say diabetes has no cure. Only its symptoms can be relieved. I will take medication until I die. . We should listen to the doctors and learn what they say. When someone asked me about how treatment. I also told them to go to my doctor. I told them just to

follow doctors' instructions so that they can observe our diseases, and should not go to this doctor on this day, that doctor on that day. It's not good to change medicines regularly. So I just go to only one doctor's. (KI#2).

The other man also stated how did followed the instructions of doctor: *"I asked doctor and depend only on doctors, just to follow doctors' instructions"* (KI#4)

A 64 year-old man who had diabetes for 5 years shared her experiences in seeking information, she found the information in TV or internet:

Watching on TV and reading in the internet, I know that serious diabetes can cause a lot of complications in heart, liver, kidney, and so on. I read on the internet about eating and drinking. They say that we should not eat some types which I like. For example, bananas, mangos, they say that they have a lot of sugar and we should not eat. (KI#13)

A 66 year-old woman who had diabetes for 10 years reported that she followed her children about how using food, medicine:

My children read the information from the internet and print it for me to read about medicines or meals. Sometimes, they also buy milk, medicines, or supplements for me to take. They told me should eat this, shouldn't eat that, and I follow them (KI#11).

She also reported that she got information about treatment from her friend:

I take traditional medicines of my friend in Duc Trong as I told you before. After taking it, I did the test and found my blood sugar went down, lower than 14. It is extracted from herbs, so it is ok to take. Therefore, there must be a combination of traditional and western medicines. We should not take one type only (KI#11)

A 78 year-old woman who had diabetes for five years shared that she often ask the other diabetic patients about how to take care of themselves:

When I have this disease, I usually ask people with sugar pee what they use to learn. I follow what suits me. Someone suits this, someone suits that. For traditional medicines, I suit avocado leaves, some people suit bitter melon, others suit dandelion. I ask many people, but find out what suits me. I just try to use for a while and see if it works or not. And I tell other people about that. If our blood sugar does not go down, we stop. If it goes down, we continue. For western medicines, they are the same. For leaves, I don't see anyone who drinks avocado and Voi like me. (KI#16)

Seeking information is an effort to assume control on diabetes. Learning is the importance of gathering information through multiple sources. Key informants can seek information from one main source or multiple sources as listing above in promoting diabetes self-care.

However, some key informants also share that they cannot ask physicians for the information about themselves because of the limit time with the physicians when they check their health

I go to Dr. Tr at the hospital. He is fast. Dr. Q is slow and bothersome. Dr. Tr seems be good. But he does not listen to patients. He examines quickly and prescribes. He does not give me any advice. Maybe they don't have time. Maybe if we go to private doctors, they will examine more carefully. So I read in the internet myself and ask my student who is doctor in Duc Trong for more information. (KI#13)

And the physicians also educate the key informants in general such as eating less rice and sweet food, doing exercise regularly, taking medication, checking blood glucose level

They (physicians) give me medicines. And then, they talk about less salty diet, doing exercise, not eating sugar or milk to keep blood sugar not go up, to avoid complications in the liver or the kidneys, they say so. They tell us to do exercise for half an hour a day, but I do not do. I'm tired, I do not exercise. Walking is also tiring, I can't. (KI#8)

3. Self-care practices

The second objective is to explore the self-care behaviours of older persons with diabetes: The illness experiences, self-care behaviours of individuals with diabetes through the course of disease were explored within their natural context. There are 7 themes that related to the self-care practices of older people with Type 2 diabetes, including: 1) Self-monitoring of blood sugar level, 2) Taking diabetes medication regularly, 3) Control eating but it is difficult, 4) Doing some physical activities to get sweat, 5) Foot care is just as cleaning foot, 6) Adaptive Behaviour when get diabetes, 7) The beliefs on Eastern treatment.

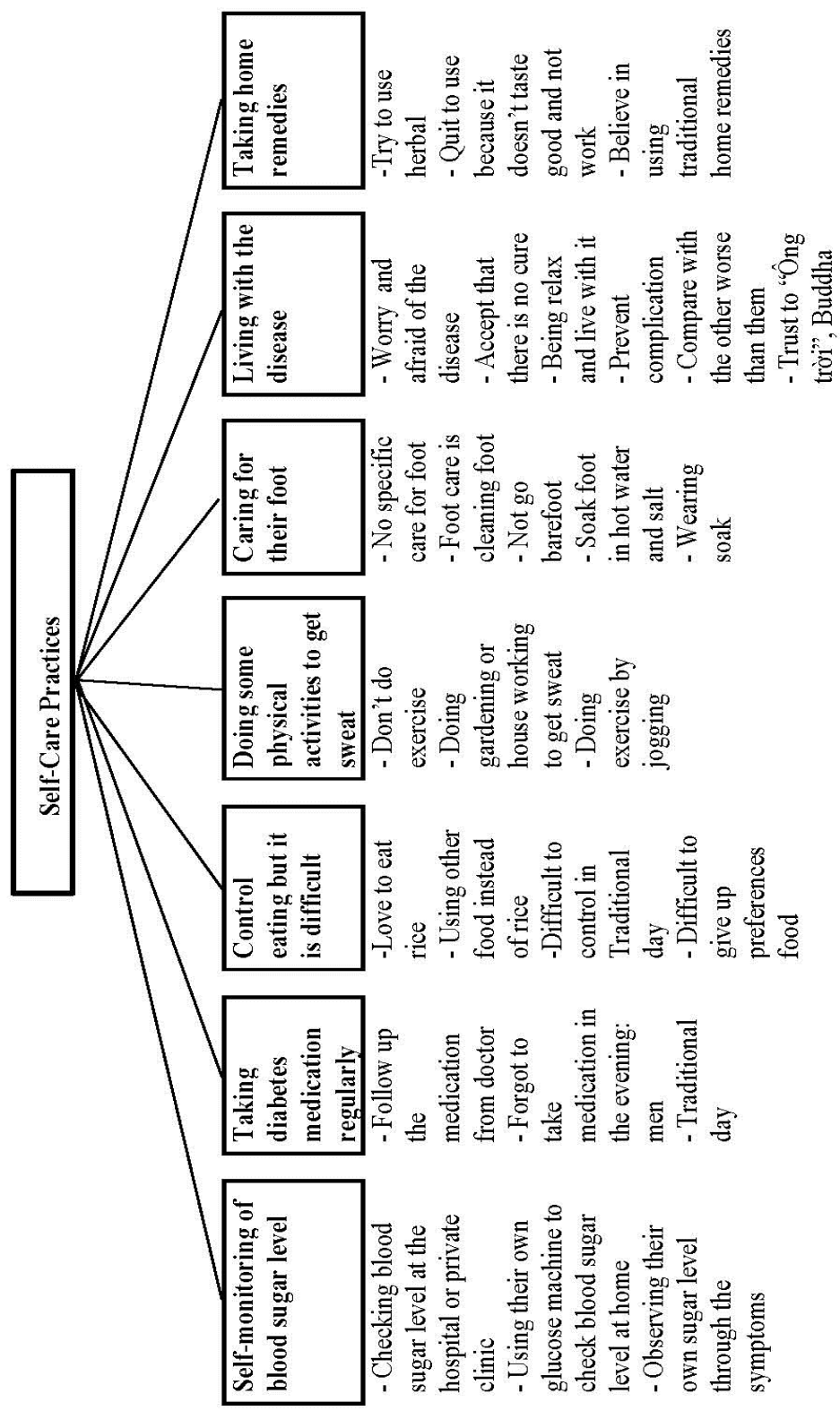


Figure 2: Self-care practices of older Vietnamese people with type 2 diabetes

3.1 Self-monitoring of blood sugar

In general, the study informants demonstrated low levels of diabetes literacy as evidenced by misunderstandings about normal values of glucose monitoring, and the glycosylated hemoglobin (HbA1c) laboratory test. In addition, there were misunderstandings and unawareness about the differences between the HbA1c and random blood glucose testing used by their healthcare providers. This was true regardless of the number of years they have been living with diabetes. Nearly all of the informants did not know about the HbA1c test and they just follow the instruction of physicians about check blood sugar level. They often check their blood sugar level at the hospital or private clinic.

I don't know what HbA1C is. Now, every three months, I go to test once. I just go to the hospital and follow what they ask. That is it. (KI#5)

As I told you, I go to check it on the twentieth of every month. About HbA1C, I don't care much; I check it every three months. At the last time, My HbA1C normal, no problem. (KI#3)

Although if they know about their HbA1C and the level of HbA1C, but they actually don't know why they must test for this.

I test my blood sugar once a month, HbA1C every 3 or 4 months. I have it tested in Dr Sang's, outside the province hospital. I check the blood sugar at the healthcare centre. They don't test HbA1C at the healthcare centre. Therefore, 3 or 4 months, I go to Dr. Sang to check HbA1C. I used to test it in the province hospital, but I had to wait for the result so long, so I go out to test. But I don't know why I must test for it (KI#8)

Yeah, for HbA1C, truly saying, I rarely check. When I check it at home and I see it high, I go to hospital to check HbA1C. If normal, I do not go to test HbA1c any more.(KI#6)

Key informants generally reported that they do not regularly check their blood glucose level. Even patients who had their own gluco-meter machine at home reported testing their blood sugar once every 4–6 six weeks. Those who do not own the glucometer machine at home reportedly go to either a nearby private clinic or Lam Dong General hospital when they feel ill. About a third of the study key informants reported checking their blood sugar level only during their follow up visits to the hospital, which is every three to four months. These findings indicate blood sugar monitoring is irregular and the high risks to develop long term diabetes complication due to poor glycemic control.

Recently, doctors advice me to keep an eye on my blood glucose level, so I bought one machine to check it at home. But when I bought it, I felt annoyed. I had to use the needle to puncture my fingertip, I was scared of that. Therefore, I often go to have check up every month at the Commune Health Center of district 2. After tests, I get medicines and insulin to inject. (KI#4)

Blood sugar test, I do it twice a week. With a personal meter, I check it at home, twice a week.(KI#6)

Another patient described her experience of self-monitoring of her blood sugar as frustrating. She felt that controlling her blood sugar was beyond their capability.

My blood sugar fluctuates a great deal. No matter what I do to control it, nothing prevents it from shooting up high. It's out of my control. So I've left

it for the doctors to take care of it. All I can do is take the prescribed medications. (KI#11)

Many key informants were confident they could check themselves as their own internal monitor. They report that they can "sense" the glucose level if it becomes abnormal. For example, dizziness, tired, and sweat were an indicator for low glucose level. To relieve the symptoms of low glucose level, the key informants reported that they will eat a piece of candy or eat a piece of cake, drinking lemon juice or orange juice, and lying down. The key informants don't know when their glucose level was high. They also shared that if they get dizziness, and actually they don't know that is high glucose level or low glucose level, they must lie down, and drinking lemon juice, drinking traditional Vietnamese tea. These findings suggest that diabetes identified symptoms are idiosyncratic and based on knowledge structures from past experiences.

When my blood sugar does down, I sweat, I am dizzy. I eat candy and I sit down, lie down for about 30 minutes or an hour, it will be normal. (KI#16)

And some key informants shared that if their glucose level was high, they will get coma. But they said that they never get in this situation

When the blood sugar gets so high, we are tired and easy to fall into coma. But I have not been like that. (KI#11)

If the blood sugar is too high, it may sometimes be in coma. (KI#6)

3.2 Taking diabetes medication regularly

Most of the key informants consider their anti-diabetes medications as the most vital element of the diabetes management and their survival. The majority

reported they are complying most with instructions regarding medicines more than any of the other components of self-care practices.

The most important is taking medicines as I told you before. The medication must be taken regularly. If I don't take medicines in a day, the blood sugar will go up right away. (KI#1)

I never quit taking medicines, from the time I got disease until now, I never quit medicines. Meals, I may not have, but medicines, I always remember to take. (KI#16)

Now I have to take medicines regularly, about 3 times a day. How many medicines doctors give me, how many medicines I take. They give me to take 3 times a day, I take 3 times a day. Sometime, I heard that we may drink this or that leave tea, but I think it doesn't work. Maybe it can reduce, but not stop our illness. But it just makes it better, not stop. Most important is taking medicines. You can drink anything, but you have to take medicines. (KI#5)

I always take medicines, following doctors' instruction, I just take them, can't remember their labels. Two tablets in the morning, and two in the evening (KI#3)

All of the men key informants stated that they often forgot to take medicine in the evening because of drinking alcohol, beer, or when they take part in the wedding, party or in the Tet holidays

Since I got this disease, I take medicine regularly. But when I drink alcohol at 2 or 3 pm, so I forgot to take medicine at night. (KI#1)

When drinking, medicines don't work anymore. So I will not take medicines on that day. I will only take them on the following days. (KI#3)

Some of key informants indicated that they want to check their health and take the medicines in the private clinic because the medicines in there are more expensive. And they think that if the medicines are more expensive, it means that they could be better the medicines that they take in the hospitals for free with the health insurance or cheaper in the private clinic

I see that at in our hospital, for 3 years, I have taken the same medicines, not changed anything. Because they give me the medicines with the insurance, very cheap. So I do not know if it is good or not. If I visit the doctor in private clinic or go to Ho Chi Minh, the medicines are expensive, but I am quite sure that the medicines in there are better (KI#13)

3.3 Control eating but it is difficult

Diet is recognized as an essential component of self-care practice for people with diabetes by most of key informants in this study. The majority of the key informants attributed diet as eating too much white rice, which is a traditional staple among Vietnamese. White rice is a typical diet for nearly all Vietnamese key informants and it has more value than these other kind of rice (like brown rice or sticky rice). Most of them expressed that they preferred rice, vermicelli, or noodle soup as a main dish. This is common for people of Asian countries where rice was used as a main dish of any meal.

I have 3 meals a day. In the morning, two cups of rice, maybe with fish sauce or something, nearly two cups, not full. At noon, the same, two cups, the same to evening. I like eating rice, so every day I eat rice. (KI#10)

Because I work as a farmer, so I eat too much. Doctor told me that I shouldn't eat too much rice, but I cannot. I eat around 2 -3 bowl of rice,

vegetables and protein. “I am a big rice eater”. If I eat a little bit, I fell very hungry.(KI#1)

Some of informants attributed excess consumption of white rice and sugary food to the development and worsening of diabetes, so they thought that they had to avoid sugary foods and consume less white rice. And most of informants eat vermicelli, noodles, rice soup, bread, or sticky rice instead of rice in the morning. Some myths existed, and some key informants consumed less white rice but substituted other sources of carbohydrates such as vermicelli, noodles, rice soup, bread, or potatoes. This type of substitution indicated that the study informants had limited understanding about carbohydrates sources. They eat another kind of food instead rice, but they eat too much them. The informants expressed various degrees of changing their lifestyles as illustrated in the following:

Every morning I go to sell, I buy three or four loaves of bread and during lunch, or after taking nap in the afternoon, I eat. I eat bread with milk only, not with anything else. Bread, doctors say it has sugar. But I do not eat rice, I eat bread, no problem.(KI #8).

In the morning,. I eat what I see, if I see sticky rice, I eat sticky rice, if I see bread, I eat bread.(KI#9)

I like to eat bread, eat two loaves once, just with milk. After eating, I drink coffee, drink milk coffee. Or I like drinking milk coffee, drink every day, drink one a day.(KI#13)

Most of the key informants reported that it is difficult for them to give up the preference food such as “Chè” (sweet soup), milk coffee, black coffee with sugar, some kind of juice with sugar.

I love to eat “Chè”, I buy in the market about 5,000 Vietnam dong to eat. I eat it to reduce my craving.(KI#12)

When I check my blood glucose level, if it is about 110 or 120, I will buy a bowl of sweet soup in the market about 5,000 Vietnam dong to eat. I eat it to reduce my craving. When my blood glucose level is 110, 120, I eat a bowl, it will go up to 140, 150. It’s no problem (KI#9)

...But the problem is that when I make drinks, I like to put sugar into it. I can only drink sweet. About two bottles a day. I don’t like to drink water. I drink aloe vera only, not water. Making aloe vera, we have to add sugar into it. How can we drink it without sugar? We have to add sugar. Without sugar, it is flavorless, annoying. I have to put sugar into it, could not abstain from it.(KI#8)

In the morning, I also have to make a cup of coffee with milk. I do not dare drink with a lot of milk but I must put milk inside. If not, I cannot drink (KI15)

According to the key informants, consistent adherence to the diabetic diet is a challenge and a burden. The key informants expressed that the required strict self-discipline for maintaining the necessary dietary behaviours and curbing food cravings was difficult to achieve. All of the key informants stated that they followed the advice of their doctors by avoiding unhealthy foods in large portions, and they cut down on their intake of sweet foods. For this reason, some key informants stated they intentionally avoid gathering occasions where they knew they would be expected to eat a large amount of unhealthy foods. At times social isolation was used to avoid the intake of unhealthy foods. At other times, some key informants admitted they

occasionally failed the temptation and ate large quantities of unhealthy foods including sweet food. These key informants believed that there is no harm if they ingest such unhealthy food only occasionally:

Birthday cakes and ice-cream are said to make blood sugar go up quickly. But I cannot quit them, I eat them, but a little. But I cannot quit eating bananas. I do like bananas. When there are only a few bananas left, I phone my students to bring me some right away. It tasted so good and I can't stop – that's why my sugar went up (KI#13)

I eat U cake (sticky rice and green bean cake in cone shape and in a fist size). U cake, I eat two a day. I like food from sticky rice. Like in ancestor memorial days, we cook sweet soup with bean and sticky rice. I like to eat. I eat two bowls of sweet soup a day. Eating more, I'm tired, dizzy.”

All of the key informants stated that they can't follow the diet during the Tet holiday (traditional day of Vietnam). They often eat too much during the Tet holiday, especially Chung cake (Chung Cake is the Traditional Vietnamese sticky rice cake with green bean and fat pork) and some kind of jam like ginger jam and coconut jam

For Tet, it does not matter to me. I eat reasonably. But the problem is sticky rice cake, Chung cake. I don't eat meat much, like pork, I don't like. I usually eat homemade Chung cake. I like to eat Chung cake a lot. I eat the whole one during a day (KI#13).

I eat Chung cake, sometimes eat some jam by chance, not much, but I eat them more. We don't eat like that every day (KI#14)

For Chung Cake, I can eat a quarter.(KI#16)

Only on Tet, I ate ginger jam, because I like to eat something sweet and sugar. I craved for ginger jam so much. When people came to visit me, I invited them to eat and I ate some. Then, I drank tea and went to sleep until morning. I measured my blood sugar, it was 7.5. I felt tired, dizzy so I measured, and my eyes were dim. (KI#15)

All of the men stated that they felt tired after the Tet holiday because they must drink too much alcohol and beer they didn't take medicine as usual

During Tet holiday, everyone invites me to drink, I have to drink and I feel tired, my health gets worse.(KI#3)

During Tet, I only drink alcohol, not beer. If there are visitors, I drink some cups with them. After Tet, I often feel more tired than usual.(KI#15)

Actually, during Tet, I did not take medicines. I did not have time and forgot to take medicines. I went to my fatherland, and did not take medicines for a week. During Tet, I drank alcohol daily, and did not take medicines (KI#13)

For example, last Tet holiday, I drank different types of beer and alcohol, which everyone invited. When drinking, I had to eat more to get balanced (KI#10)

Key informants expressed that diabetes significantly affected their quality of life by restricting their social activities because they scared that if they go to the party, or wedding party, they will eat more and drinking alcohol, beer. Social isolation and avoidance of gatherings with family and friends were most frequently described as consequences of diabetes.

I also never go out or go travelling. I'm too tired to go anywhere. Last time, my children asked me to go to Nha Trang but I did not go. I did not go, so my husband did not, either. Because if I go, I don't eat and just sit there, they will be disappointed. (KI#6)

I limit going to parties because when I go to a party I eat too much. When we go to parties we must eat, we can't deny it, you understand. We just push each other to eat, drink beer and wine, and have fun - that's the reason why I don't go to parties. Later on any other invitations to parties I let my son go in my place. I don't go anymore. (KI#4)

3.4 Doing some physical activities to get sweat

Nearly all informants admitted that they do exercise not regularly. The most commonly mentioned reasons for not doing regular physical exercise were lack of interest, lack of motivation, and not convinced that exercise is important.

I do yoga, I do it one hour every afternoon, but since last 2 months, because it was raining so I did not do it. I'm lazy to do it when it rains. Doing or not doing it is the same. (KI#5)

I did not do any exercise at all. The bike is there, but I don't do it. (KI#8)

Some key informants think that if they do house work to get sweat, it means that exercise, for example the key informant 9 – a 73 female years old, although she said that her knee is so painful to do these exercise, but she also think that “ *For diabetes, it is said to be good to go jogging so that we sweat. But I think I needn't. Because when I stay home, turn around, then do housework, I also sweat. I clean my house, I also sweat. So I think I do not have to walk*”

And there are some of key informants think like the key informant 9, they think that they do gardening or some house working, and they got a lot of sweat, so they don't need to do exercises

I do gardening, I need not do exercise. I do gardening for about 3 hours a day. I clean weed or something. I work everyday, I sweat a lot. (KI#10)

I also do the garden working every day, it is too hard so I do not need to do exercise (KI#1)

I am not only walking but also do the garden working. I do it every day. I did too much every day so I don't need to do exercise

Now I do not exercise anymore, because I work. I put potatoes into bags and weigh them. It is hard so it is easy to low the blood sugar (KI#13)

Every day, I walk to the market to sell things. That's doing exercise, right?" (KI#8)

The key informant also report that they are too old, or pain in leg to do

I don't go jogging or anything, just stay at home. I'm old, don't go anywhere. (KI#14)

I can't walk, so I can't do exercise. When I walk, my knee is very painful.(KI#9)

There are only 4 key informants report that they do exercises frequently: case 3, 6, 15, 16. And 3 of them were in the army, or military before. So they use some of the exercise in the army and also jogging every day

“I do exercise twice a day, I jog in the morning. I get up at 5 o’clock and jog to 5:30, I go home. After that I clean the house, have breakfast and I go to work. In the afternoon, about at 4:30, I jog, and go home at 5 pm. I walk about 5 km a day, every day. I do quite regularly. If it rains, maybe I don’t go. Otherwise, I keep walking regularly for recent years.” (KI#6)

“I spend about 30 minutes every morning to water plants, burn incense and have a wash. After that, I do exercise of martial arts in the army for 30 minutes, and practice breathings and have a bath. I don’t jog. I heard that jogging is good, but I don’t. (KI#3)

Although the 4 key informants reported that they do exercise frequently, but they also shared that they don’t do exercise for 1 month before and after the Traditional day of Vietnam: *“During the Tet holidays, around 1 month, from 20 am lich to 15 am lich, I don’t do exercise, because before Tet I have many thing to prepare with my Family, in Tet and after Tet, I visit my family, my neighbor, my friends, so I don’t do exercise” (KI#3)*. Or they didn’t do the exercise if it rain *“If it rains, I don’t jogging” (KI#15)*

3.5 Caring for their foot

Foot care was least noticeable in self-care practice by the study key informants. Most of them have not even heard of what foot care is and how to take care of their foot, although many of them have reported foot injury as one of the common health problems. And they have not ever heard of what foot care is, they just heard that cleaning foot when they take a shower and not go barefoot

I take a bath every day, but I do not soak my feet. When I take a bath, I will change my socks, that's all, cleaning my feet while bathing my body. Taking care of feet means bathing daily. That's all. (KI#5)

I don't take care of them at all. I just take a bath every day, always wear socks. I clean them carefully, not use the brush and wear socks all day. My legs are okay. (KI#14)

I have not had foot ulcers yet. I wash my feet with cold water, not with anything else (KI#9). But with this case, the interviewer observed her legs: her skin breaks out, underneath of all 5 toes, the skin strips into pieces

Take care of my feet...Hummm. I take a bath daily (KI#10)

I have not heard about complication of feet ulcer or necrosis but I saw it. I never go barefoot. No one tells me how to take care of my feet. (KI#13)

I do not take care of them (foot). If it happens, it will happen, that's it. How can we know? So let it alone. But in the house or on the road, I always wear sandals, this pair of sandals (it is a pair of plastic slippers). Barefoot, sometimes, I go. But it's dirty. I don't often go barefoot on the ground. (KI#8)

Three of the key informants reported that they soak their foot in hot water and

salt: case 15, case 12, case 2

In the evening, I soaked my feet in hot water and salt for about 20 minutes. (KI#15)

The female informants more than male informants reported to have been caring about foot hygiene and give more attention to choosing appropriate footwear.

Firstly, doctors told me not to leave my feet cold. Secondly, we don't go barefoot. We always have to wear sandals, soft slippers. We should try to

avoid wounds or cuts because it is difficult to heal. I wash my legs daily carefully and dry them. After that, I wear socks and slippers, soft ones, not hard ones. (#KI 11)

3.6 Living with the disease

For the first time, when the key informants know that they got diabetes, they are very afraid of illness, they try everything that someone tell them. But after that, they accept of being diabetic patient and have positive thinking

At the beginning, I did not have or update much information of this disease. I worry much. I heard about this herb, or that herb and I drank them to cure it. And I watched TV or read newspaper about diabetes, I understood that there have not been medicines to cure diabetes. So I think I should relax to live with it all life. (KI#4)

At the beginning, I felt so scared. But I keep taking medicines and find that the blood sugar goes down. I do not worry too much any more.(KI#16)

When I knew I was sick, I was very upset. At first, I weighed 60 kg, but I was sad, so I dropped to 52 kg. I thought that I always had to bring this disease, like raising a child in my body. So I was bored all the time. Then time passes, so I defined to live with it....For 17 years, I have taken care of myself well; my blood glucose level was from 150 and down. It's normal. My feet are still beautiful, no ulcers. Now I have to live with the disease, it is called living with the flood, so eating is a bit hard. I am a little bit tired only. Now I think I have to go with this disease all life. (KI#5)

All of the key informants reported that they are very worry about the complication of diabetes although they didn't know exactly what the complication of

diabetes are or they just know some of the complications of this disease. The most important thing that they scare is to be bedridden

...People with sugar pee should keep their legs and hands from injury, because it is difficult to cure. If they are ulcerated, they have to remove the joints or saw legs. Limbs are numb and eyes are dim. I heard that on radio and television and I too much scared. (KI#16)

I'm scared of being bedridden. I'm so scared. Death is better than being bedridden. If god force me to be bedridden, I wish I can go to bed and die. I'm so scared. I pray that I don't fall into that situation. It's so frightening. (KI#5)

Living but being bedridden, causing children miserable is not good, I'm so scared. (KI#1)

Some of key informants also think about the death:

I pray now that if there is something wrong, or complication, I can die right away, not live but bedridden for long. I just wish so. If I die, die right away. Don't be ill and lie down one place for a long time, I don't like it. I just pray so. I don't want to lie down for long, too scary. (KI#8)

The ability to adapt and manage diabetes to prevent complications was mentioned frequently as an important form of coping behavior. These management behaviors included taking medications, eating right, and exercising. As one key informant described his coping strategy, “First, we have to pay attention to eating, drinking. Second, we should not drink alcohol, beer or sweet food. Third, we should do exercise daily and take medicines, following doctors’ instruction, something like that.” (KI#4). Another key informant chose to ignore his emotional feelings because

he expressed that focusing on emotional feelings serves no benefit to his health. Key informants shared these insights:

Yes, I'm sad and sorry about my illness. But being sad and sorry can't help anything. I just have to deal with it. Nobody can help me. (KI#12)

I deal with it by taking good care of my health. When I take care of my health, I'm the one that's benefiting, nobody else. (KI#3)

As an indicator of the success of their coping procedures, most key informants compared their diabetes with other people with diabetes that they knew. Comparison with other people who also had diabetes and downgrading the seriousness of their condition were ways to put their own diabetes into perspective and to reduce the perceived severity of their own disease. This appraisal occurred in the form of a downward comparison wherein the key informants would describe other people whose diabetes was worse than their own. Essentially reassuring themselves that their condition was not as serious and what they were doing for their diabetes was working. An 73 -year old woman compared herself with another woman she knew as follows:

I can do every thing for myself. I can cook, clean the house, wash the clothes. I can do everything in the house. I have a friend who also has diabetes, she lives over there. She can't do what I can, though. She sits a lot. (KI#9)

Many key informants were regular temple or church attenders. There were no differences in spiritual coping behaviors among the Buddhists or Christians in this sample. Both faith in God or Buddha played an important role in coping with their diabetes. Some key informants reported that they don't follow any religion but

actually, they believe in God - "Ông trời", and they often pray with "Ông trời". Believing in God, Buddha, "Ông trời" help the key informant to have the strength in their diabetes management. The key informants mentioned asking God, Buddha, "Ông trời" to help them control their diabetes and to keep them from developing diabetes complications.

Everything is in God's hands. God let us live one more day and we thank God for that day. There's nothing we can do. (KI#8)

If God - "Ông trời" force me to be bedridden, I wish I can go to bed and die. I'm so scared. I pray that I don't fall into that situation. It's so frightening. (KI#5)

If I can live, I have to live well. Living but being bedridden, causing children miserable is not good, I'm so scared. I keep praising "Ông trời", Buhda only that (KI#1)

3.7 Taking home remedies

All key informants took oral hypoglycemic Western medicines routinely but also relied on home remedies for keeping healthy. Most key informants had experience with medical plants, especially during the first years of having diabetes. A majority of the key informants reported they used home remedies that included various sources of natural plants to normalize their blood glucose. The home remedies described by the key informants were herbal products used as drinks including roots, stems, or leaves of certain plants. The home remedies most frequently used were bear bile, bitter melon, wild bitter melon, avocado, and Voi leaves (*Syzygium nervosum*). The principle underlying the use of medical plants to

treat diabetes is found in proverb: “Bitter taste is medicine”. Most of the medical plants used were said to be bitter.

The key informants reported that they were drinking the juice from boiled bitter leaves, they thought that “Bitter thing (plants) are medicine”. And they also tried to use various kind of herbal product: “*Whenever anyone recommended anything, I tried it*” (KI# 6). The goal of these behaviours was that the key informants think that they can relieve symptoms and they limiting economic costs and it is easy to find the herbal product in Vietnam.

My daughter boiled bear leaves in water and drink it like tea. I drink it every day instead of tea. I don't drink water (KI#3)

I hear that bitter melon is good, so I drink bitter melon. It is easy to find bitter melon leaves, here, we do not need to send them from the north. I have drunk this tea for a month, instead of drinking water. I think it is normal. (KI#15)

Mainly, I take medicines. Besides, I drink herbal tea, like dandelion, Voi buds, bear bile, bitter melon leaves. They are bitter, but bitter thing are medicine (lauht at). After drinking this leaf for a while about ten days, I change into other types (KI#15)

In contrast, some key informants expressed that they try to take any remedies that are not prescribed by the physician. But after using it, they quit off to use it.

Before I drank wild bitter melon leaves. After drinking, I felt normal. After drinking it for two or three months, I measure my blood sugar, it was the same. So I stopped. It was boring, waste of time. It does not taste good and it does not work, so I stop. (KI#13)

There is no one report that the effective of using the herbal products. However, one female reported that the usage of home remedies was successful in controlling her diabetes:

“Two months ago, it was 10.5. Then, I drink avocado leaves, it dropped to 5.6 only. I was scared; I did not drink it anymore. Otherwise, I was afraid that it kept going down. So for 1 month, I drink avocado leaves in the first week, Voi leaves(Syzygium nervosum) in the second week, avocado in the third week and Voi (Syzygium nervosum) in the fourth week. It is 8.4, not too high to be in a coma.”

Using complementary and alternative medicine (CAM) comprises a diverse set of healing philosophies, homeopathic products, yoga, nonvitamin, nonmineral, and natural products. It is traditional medicine that the key informants can easy to buy. The CAM used by the key informants included herbal medicine in natural forms, herbal medicine in pill forms. One of the key informants use CAM and home remedies as the first line of treatment to control her glucose. She stated:

Truly speaking, I am also taking traditional medicines. I take them in the morning, after getting up, 30 minutes before breakfast. I take three different medicines in different colors. I have a friend in Duc Trong, he took them and helps to treat 50 people. He took and he saw his blood sugar stable and gave medicines to 50 people free. He did not get money. He bought them for charity. He gives me, so I take them for a while, before Tet. Before Tet, my blood sugar was up to 14. Then, I took these medicines and it went down. My blood sugar goes down. I have drunk for more than 3 months. (KI#11)

Although key informants described using remedies for the purpose of lowering their blood glucose or curing their illness, equally important is the revelation that they did not know the ingredients of those products as reflected in the following:

I don't know what's in there. He says that "it's good for my body system. So I used it. (KI#11)

When the researcher asked whether the key informants informed their physicians about their use of traditional medicines or herbal, all of the key informants revealed their use of home remedies to their relative, neighbour or the other diabetic patient they know, they never share this with their physicians.



CHAPTER V

DISCUSSION & CONCLUSION

Discussion

This chapter presents a discussion of the findings reported in chapter four in relation to diabetes self-care among Vietnamese older adults within a sociocultural context according to the key informants' illness representations.

key informants' ability to be involved in the daily diabetes self-care seems to be based on their psychological, motivational factors and understanding about their disease (Gao et al., 2013). Because of misunderstanding about diabetes - they used the term "sugar pee", it means that have the sugar in the urine, so the daily glucose self-monitoring was perceived as unnecessary in this group. The majority of the key informants reported they could sense it when their blood glucose was elevated or lowered. Based on this belief, daily glucose self-monitoring was perceived as unnecessary. Clearly, more research is needed to elucidate factors that enhance glucose self-monitoring in this population

Diabetic patients experienced self-care as being responsible to take care of self for the whole life. So do deal and demand with this, the key informants will be independency to seek information about dietary modification, drug and exercise regimens. Understanding that diabetes will take for the whole life, the key informants will focus more on treatment by using medicine. Developing knowledge and awareness resulted in appropriate decision making the key informants to become empowered self-managers with this disease. They tried to be independent in managing

medications managing medications and nutritional intake, and seeking information to take good care of self to achieve optimal glycaemic control.

Successful self-care requires knowledge about the condition and what needs to be done (Schmidt et al., 2011). The key informants in this study understand that this disease will get for the whole life and they don't want burden to their family, so they try to seek information from many sources to take good care of self-such as doctor, TV, internet, friends, family, neighbour, and other diabetic patients, and chose which one is suit for them. Funnell and Anderson (2004) demonstrated the patients' need to learn about diabetes and how to safely care from it on a daily basis (Martha M Funnell & Anderson, 2004). They also need information about various treatment options, the benefits and costs of each of these strategies, how to make changes in their behaviours, and how to solve problems.

However, the information come from many unofficial sources that good or not good, sometimes it is wrong. Because this information may be come from unorthodox Internet, orally from the other people, or ask the other person are not health care provider. So, the role of health care provider plays an important role in educating diabetes. Besides, in this research, many key informants indicated that the doctors in hospital do not have enough time to educate them and patiently listen to their question, so the doctors spend 3-5 minutes with them and they just gave the medication and say general education for example: eat less rice and sweet food, do exercise, take medicine regularly and so on. The nurse plays an important role in educating diabetes patient. This is suitable with Peimani et al (2010), in the peer review, the result show that nurse should fulfil the leading role in diabetes treatment and care education (Peimani, Tabatabaei-Malazy, & Pajouhi, 2010). The benefiting

from nurses in the education programs can reduce not only the number of complication diabetes but also the disease of heavy burden cost of visits the hospital of diabetic patients

Self-monitoring of blood glucose is most irregularly among the group of older people in Vietnam, it is also the main shortcoming of diabetes self-management. This may happen due to the high cost and un-reimbursement of blood glucose monitor and strips. The results showed that although the key informants have the self-monitors machine at home, but most of key informants not use often. The key informants may scare to check their blood glucose at home. The present finding was consistent with Peel et al. (2007) who found little adherence to self-monitoring of blood glucose among Vietnamese patients (Peel, Douglas, & Lawton, 2007).

According to the International Diabetes Federation (2011), individuals with type 2 diabetes should incorporate self-monitoring of blood glucose to help them become involved in the treatment decision-making process and to help them modify their self-care behaviours accordingly (International Diabetes Federation, 2011). The International Diabetes Federation also added that the frequency of the blood glucose monitoring should be a shared decision making between physicians and their patients. If it is agreeable by both parties that daily testing is not needed, then testing every two to three days before and after meals would be beneficial. So the health provider should explain the important of follow the glucose level and explain carefully about the symptoms of low glucose level and high glucose level to the key informants and educate them how to deal with this

Adherence to anti-diabetes medication was better of all self-care practices. This could be due to either over reliance on medication or its free availability, or the

ease to practice it compared to the other components which require more commitment. However, the men in this study stated that they often forgot to take medicine in the evening because of drinking alcohol, beer, or when they take part in the wedding, party or in the Tet holidays. This is the problem, and they must be control by themselves, maybe with the support from their family. Some of the key informants thought that doctors in hospital tended to prescribe only common and cheap medicine for clients because they have the insurance and it was free, while doctors at the private clinic tended to prescribe good and expensive medicines. The lack of knowledge about the composition of the drugs made key informants misinterpret "good" and "bad" drugs with "expensive" and "expensive" drugs. Thus the composition of all medicines should be listed on the label in Vietnamese and explained in easy to understand language, and the health care providers provide adequate explanation to clients.

The key informants frequently attributed cultural lifestyles which included high consumption of white rice in their daily diet is the main cause of diabetes but it is hard to eat less rice. In this study, all of key informants indicated that it is very hard for them to control diet during the Lunar new year festival in Vietnam (calling Tet Holiday). During Tet, people enjoyed their life with family and friends very much at least two week. People prepare a lot of foods and drinks which are usually sweet to welcome guests. In this culture, it is hard to refuse the invitation of others in a happy new year. Therefore, this affect the eating behaviour of key informants. Participation in social gatherings and food related socio-cultural norms could pose serious impediments to effective diabetic control. So, health care provider should give the information to the clients about the food that have higher carbohydrate intake and

higher blood sugar level to their clients and let them and their family understand about it and decide what they want to do. They may not need to give up preference food completely, but may try it one a week. So the health care provider should explain and educate the patients about the carbohydrates sources and the amount of food that they can eat for each day. Food habits in the family and personal food preferences were among the serious challenges which made dietary adjustment difficult for people with diabetes.

Health care providers usually suggested that persons with diabetes start exercising. A majority of the key informants had been advised by their health care givers to get low level of exercise daily such as jogging or walking. This is consistent with the common health goal to achieve at least 150 minutes of physical activity every week (International Diabetes Federation, 2011). However, exercise seemed to be a very difficult thing to do for the elderly with diabetes. Most key informants did not exercise although doctors suggested that they should exercise. They lack of interest, lack of motivation, and not convinced that exercise is important. Instead they did housework, did light work they said that it get sweat so they do not need to do exercise. And for those who did farm work, they really thought that they already worked harder than doing exercise. Some key informants couldn't work or exercise due to their illness. Only four key informants exercised regularly, but they also didn't exercise when it rains or during the traditional days

Physical exercise is critical to effectively control blood sugar level and in reducing persistent hyperglycaemia. Lack of interest, lack of motivation, and lack of appropriate information to engage in a regular physical exercise are common shortcomings of diabetes self-care practices. This can be explained by (Cockram, 2000)

who found that people in Vietnam and other Asian countries have become more inactive due to urbanization, westernization and changing of life style. It is important to adopt a healthy lifestyle to lower the mortality rates and to improve the body's insulin sensitivity and glycemc control (International Diabetes Federation, 2011). Therefore the authors consider that more information should be given to the patients about the importance of exercise. The patients did seldom participate in a specific exercise session and they did neither get advised to engage in a specific amount, time, duration and level of exercise. For aged and ill individuals going to a gym regularly may not be feasible due to either cost or physical distance. Thus, appropriate guidance needs to be given for the kind of exercise that can be done at home so that can suitable for the older people.

Foot care was least noticeable in self-care practice by the study key informants. This happen because the key informants lack of proper understanding how is importance or the consequences by persons with diabetes. To most of key informants, foot care means that they must wash their feet every day. They often wash their feet when they take a bath. However, besides washing the feet, they don't mention about make them dry and dry between the toes. The International Diabetes Federation recommend that patients need to wash the feet daily and dry the feet carefully, especially between the toes (International Diabetes Federation, 2011). This means that the patients have not fulfilled these recommendations since they did not wash or dry their feet daily. Besides, the female study key informants more than male study key informants reported to have been caring about foot hygiene, make them dry and give more attention to choosing appropriate footwear.

There are 3 key informants soaked their foot in hot water and salt. Using the hot water for soaking the foot is not good for diabetic patient, many researcher recommended that if they want to soak their foot, they must soak in the warm water, not hot water. Unless the diabetic patient are experiencing short-term pain from excessive exercise or an injury, soaking will only make problems worse. But it is better for treatment of painful feet is moisturizing with a lotion or ointment. And using lotion or ointment is not used by any key informant. There is 1 key informant also do exercise with bare feet by jogging and he think that it could be good for yin and yang harmony. They do like this because of lacking information and don't know how to take care of their feet.

Addition, foot complications are the most common cause of hospitalization in the person with diabetes in Vietnam. If the foot care is not optimal it can lead, in worst cases, to amputations and loss of quality of life, physical loss and economical burden in terms of industrial disability and health care loss (Prompers et al., 2008). This complication can be solved if the patients take care of their feet as well as they can. Therefore the health-care givers in Vietnam should improve the diabetic patients' foot care. A proper diabetes education must be training more for improvement on foot self-care practice in Vietnam.

It is not easy when the people know that they got diabetes. They felt very shocked and scared at the first time they got diabetes. They too much afraid of the complications of diabetes although they didn't know exactly what the complication of diabetes are or they just know some of the complication of this disease. The most important thing that they scare is to be bedridden. So they try everything that people around them told them. This is sometimes good and sometimes is not good for the key

informants. The key informants identified that their families played an important role in their diabetes management especially with the emotional support. This is expected in the Vietnamese culture, where the family remains an important source of support throughout life. However, those behaviours may put them at higher risk for complications because downgrading of seriousness may lead to increased delay in seeking care.

A majority of key informants coped by maintaining self-control of their diabetes and adhering with the treatment, and others key informants coped by praying. Because many coped by adapting their self-care behaviours, culturally appropriate diabetes education is essential. Praying and accepting the disease were the coping mechanisms used by many key informants and indicated that spiritual coping played an important role in managing their health and their diabetes.

In this study, many of the key informants reported the use of herbal products for themselves, and by their families, neighbours or the other diabetic. The key informants manage diabetes by working to achieve a balance to create harmony between the two belief systems: Western treatment and Eastern treatment. The strategies ranged from glucose self-monitoring, and taking Western medicines which was perceived as an extreme Western management strategy. The selection of herbal as a strategy represented the Eastern extreme of the continuum.

Many researchers suggested that many Vietnamese believed in the principle of yin and yang to achieve harmony with nature. Beliefs "Bitter taste is medicine" were found to be principles underpinning herbal and traditional medicines used to treat diabetes. The principle of yin and yang explained the reason for the use of leaf to balance the high glucose in the blood. These natural products were used as the first

line of action to lower blood glucose. The predominance of resorting to their use bitter and natural products to normalize blood glucose level was common among the key informants. Results indicated that the use of herbal products by the key informants was not related with age or length of time the key informants lived with diabetes. The emphasis on drinking a substance that is bitter will balance the blood echoes were found in the literature (Chang, Wallis, & Tiralongo, 2007). Some of these remedies of lowering blood glucose were easily accessible and easy to prepare. But the effectiveness of bitter drinks was unknown. And they may lead to acute complications of diabetes, such as hyperosmolar hyperglycemic nonketotic syndrome as these individuals with diabetes may have a false sense of control of their hyperglycemic, particularly when they do not self-monitor their glucose as recommended.

The implications for this belief suggested that healthcare services need to be patient-centred and holistically care. Health care providers usually warned clients not to try traditional medicines, because self-experiment by people usually not reliable enough to produce valid results. Thus, the results sometimes worked and other times did not. It is necessary to further explore the uses of herbal product in scientific ways to produce valid and reliable results.

Conclusion

This study was designed to describe the meaning of “self-care” from the perspectives of older persons living with diabetes and will explore the self-care practices of diabetes older person in Vietnamese culture. The informants in this study stated the meaning of the disease as diabetes is a disease of sugar pee and the

“lifelong” and “forever” disease. The first objective in this study is that “Meaning self-care” which including 2 themes 1) Self-responsibility to take care of self for the lifelong, and 2) Seeking information to take good care of self. And the second objective is “Self-care practices” with including 7 themes: 1) Self-monitoring of blood sugar level, 2) Taking diabetes medication regularly, 3) Control eating but it is difficult, 4) Doing some physical activities to get sweat, 5) Caring for their foot, 6) Living with the disease, 7) Taking home remedies. These emphasize a point of “self-care” with components that reflect the meaning of self-care and self-care practices of older people with type 2 diabetes in Vietnam. In this study, the meaning self-care and self-care practice with the illness representation created by Vietnamese individuals were based on their past and present experiences with diabetes as well as their cultural beliefs.

The understanding of the key informants ‘self-care practices about diabetes may enhance the development of interventions that address faulty illness representation and decrease diabetes related complications. People living with diabetes can hold very different views of their illnesses and different method in practice diabetes self-care. Findings from this study lead to several implications for research and practice. Greater attention needs to be given to improve patient education and support in diabetes clinics to ensure better self-care practices and avoid early development of complications.

Limitations of the study

The limitation of the study is that the location, which was a medium size metropolitan area in the Southern part of Vietnam.

Implications

Implication for nursing practice

Results from this study revealed that many people with diabetes do not get the care and support needed to successfully manage their diabetes. The results of this study recommended that all hospitals should have nurse responsible for diabetes self-management education. Therefore, nurses should be trained to have adequate competency to provide diabetes self-management program for key informants with type 2 diabetes. And nurses should focus on each person with Type 2 diabetes and evaluate the patients to facilitate greater understanding of the patients' knowledge structures to have the plan for health education in accordance with their individual conditions, circumstances and culture. Their interventions would be focused and targeted. Education for older people with type 2 diabetes should be recommended.

Diabetes interventions could be coordinated through education by Vietnamese men and women. The researcher think that it could be useful to make a video for including messages from healthcare providers about how to manage diabetes. The method of education through films may be useful for older people because they allow for visual display, it is easy for them to remember.

Implications for nursing education

In Vietnam, many people with diabetes do not get the care and support needed to successfully manage their diabetes. The results of this study recommended that all hospitals should have specialized nurse responsible for diabetes self-management education who has adequate competency to provide diabetes self-management program for key informants with type 2 diabetes. Curriculum of diabetes self-care should be developed for training advanced nurse in caring diabetes patients. A tailor program should be developed for Type 2 diabetes patient in accordance with their individual conditions, circumstances and culture. The program on promote self-care and behavioural change; medical knowledge about diabetes mellitus, diabetes care, diabetes medications; practical skills, foot care, exercise, food management, self-monitoring and problem solving skills must be in the curriculum of training nurse in hospital

Implications for Research

Future research studies are warranted to explore illness representation among Vietnamese who are able to effectively control their diabetes as evidenced by their glycosylated hemoglobin (HbA1c) level. More research is need to identify interventions that successfully modify inadequate diabetes representation structures within this population. Furthermore, future research should incorporate a larger and more representative sample and explore differences within group.

Further research may recruit family members to attend the interview to understand more about self-care of older persons with type 2 diabetes.

Research on the effectiveness of medicinal plants used by key informants should be conducted in order to help clients find alternative methods that are helpful and safe for them.

In conclusion, this qualitative research methodology expands the understanding of the context in which finding the meaning of self-care, diabetes self-care occurred and how they used to manage their diabetes. Vietnamese individuals diagnosed with diabetes face several challenges to adopting effective self-care behaviours. Developing interventions for Vietnamese older persons with diabetes could help them to manage their diabetes mellitus and prevent or delay diabetes related complications. So, the nurses should focus on each person with Type 2 diabetes and evaluate the patients to facilitate greater understanding of the patients' knowledge structures to have the plan for health education in accordance with their individual conditions, circumstances and culture.

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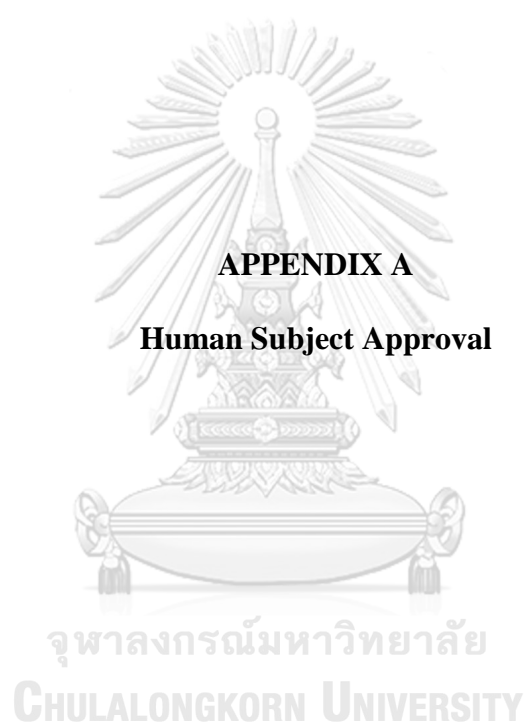
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APPENDIX

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY




 TRƯỜNG ĐẠI HỌC Y TẾ CÔNG CỘNG
HỘI ĐỒNG ĐẠO ĐỨC TRONG NCYSH
 Số: 251/2017/YTCC-HD3
V/v chấp thuận các vấn đề đạo đức NCYSH

CỘNG HÒA XÃ HỘI CHỦ NGHĨA VIỆT NAM
Độc lập – Tự do – Hạnh phúc

Hà Nội, ngày 03 tháng 4 năm 2017

**CHẤP THUẬN (CHO PHÉP) CỦA HỘI ĐỒNG ĐẠO ĐỨC TRONG
NGHIÊN CỨU Y SINH HỌC TRƯỜNG ĐẠI HỌC Y TẾ CÔNG CỘNG**

- Căn cứ Quyết định số 560/QĐ-ĐHYTCC ngày 16 tháng 05 năm 2016 của Hiệu trưởng Trường Đại học Y tế công cộng về việc bổ nhiệm Hội đồng đạo đức trong nghiên cứu y sinh học nhiệm kỳ IV (Gọi tắt là Hội đồng đạo đức - HĐDD) xét duyệt các vấn đề đạo đức trong nghiên cứu y sinh học của các đề tài/ dự án;
- Căn cứ Quyết định số 651/QĐ-ĐHYTCC ngày 26 tháng 6 năm 2015 của Hiệu trưởng Trường Đại học Y tế công cộng về việc ban hành Quy chế Tổ chức và hoạt động của Hội đồng đạo đức Trường đại học Y tế công cộng;
- Căn cứ xem xét của Hội đồng Đạo Đức ngày 31/03/2017

Nay Hội đồng đạo đức **chấp thuận (cho phép)** về các khía cạnh đạo đức trong nghiên cứu đối với nghiên cứu:

- Tên nghiên cứu: **TỰ CHĂM SÓC CỦA NGƯỜI GIÀ MẮC BỆNH TIỂU ĐƯỜNG Ở VIỆT NAM: MỘT NGHIÊN CỨU ĐỊNH TÍNH**
- Mã số: **017-251/DD -YTCC**
- Nghiên cứu viên chính: **Trương Thị Mai Quyên**- Giảng viên Khoa Điều dưỡng, Trường Cao đẳng Y tế Lâm Đồng; học viên cao học, Khoa Điều dưỡng, Đại học Chulalongkorn, Băng Kốc, Thái Lan.
- Giảng viên hướng dẫn: **PGS.TS. Jiraporn Kespichayawattana**- Khoa Điều dưỡng, Đại học Chulalongkorn, Băng Kốc, Thái Lan.
- Đơn vị tài trợ: Đại học Chulalongkorn, Băng Kốc, Thái Lan.
- Địa điểm tiến hành nghiên cứu: tỉnh Lâm Đồng
- Thời gian thực hiện nghiên cứu: 01/10/2016 đến 31/08/2017
- Thời gian thử nghiệm và thu thập số liệu: từ 05/04/2017 đến 31/08/2017
- Quy trình xét duyệt: nghiên cứu được xem xét theo quy trình rút gọn
- Nghiên cứu viên chính phải báo cáo tiến độ nghiên cứu định kỳ 1 lần/năm và khi kết thúc nghiên cứu.
- **Thời gian được chấp thuận (cho phép):** Từ **05/04/2017** đến **31/08/2017**

Lưu ý: HĐDD có thể kiểm tra ngẫu nhiên trong thời gian tiến hành nghiên cứu!

CHỦ TỊCH HỘI ĐỒNG

(Ký và ghi rõ họ tên)



Hà Văn Như

THƯ KÝ HỘI ĐỒNG

(Ký và ghi rõ họ tên)



Nguyễn Thị Minh Thành

MINISTRY OF HEALTH
HANOI UNIVERSITY
OF PUBLIC HEALTH

No.: 251/2017/YTCC-HĐ3
Subject: Ethical Approval

SOCIALIST REPUBLIC OF VIETNAM
Independence – Freedom - Happiness

Ha Noi, April 03, 2017

DECISION

On Ethical approval for research involving human subject participation

THE CHAIR OF THE ETHICAL REVIEW BOARD FOR BIOMEDICAL RESEARCH
HANOI UNIVERSITY OF PUBLIC HEALTH

- Based on Decision No. 560/QĐ-ĐHYTCC by the Dean of Hanoi School of Public Health on Establishment of The Institutional Ethical Review Board of Hanoi School of Public Health; 16 May 2016 ;
- Based on decision No. 651/QĐ-ĐHYTCC by the Dean of Hanoi School of Public Health on the Issuing Regulation of the Institutional Ethical Review Board of Hanoi School of Public Health; 26 June 2015;
- After reviewing research ethics application No. **017-251/DD-YTCC** dated March 31, 2017,

DECIDED:

Article 1. Grant ethical approval for ethnographic study project:

- Project Title: **SELF-CARE OF OLDER PERSONS LIVING WITH DIABETES IN VIETNAM: A QUALITATIVE STUDY**
- Principal Investigator: **Truong Thi Mai Quyen** -Master student in Faculty of Nursing, Chulalongkorn University, Thailand.
- Supervisors: **Associate Prof. Jiraporn Kespichayawattana**-Faculty of Nursing, Chulalongkorn University, Thailand.
- Sponsor: Chulalongkorn University, Thailand.
- Research site: Lam Dong province, Vietnam.
- Project time: from 01/10/2016 to 31/08/2017
- Pilot and data collection time: from 05/04/2017 to 31/08/2017
- Review type: Expedited review

Article 2. This decision is effective from **05/04/2017** to **31/08/2017**

Article 3. Principal Investigator has to send progress report once each year and a final report upon the study completion to the Institutional Ethical Review Board of Hanoi University of Public Health (IRB of HUPH).

Article 4. Principle Investigator should notify (IRB of HUPH) immediately of any adverse effects arising from this study (e.g. unexpected adverse outcomes, unexpected community/subject risk factors or complaints, etc.). Active research projects are subject to random audit by the IRB of HUPH.

CHAIR OF HUPH IRB
(Signature and full name)



Ha Van Nhu

SECRETARY
(Signature and full name)



Nguyen Thi Minh Thanh



APPENDIX B
Consent Form and Participation Information Sheet (English)

จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

Chulalongkorn University
Thailand

Lam Dong Medical College
Vietnam

Da Lat, .../.../2017

Dear

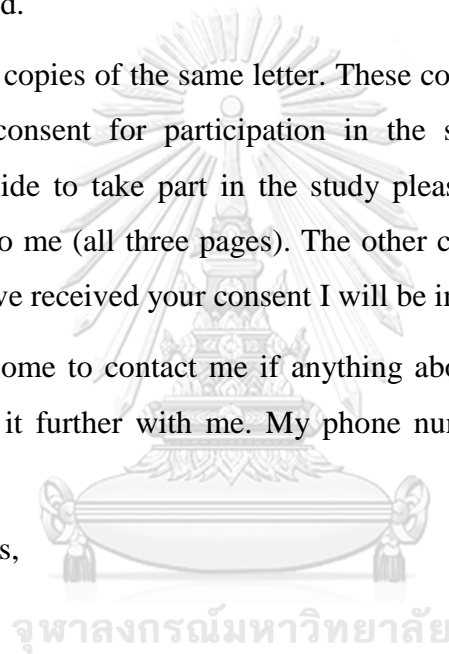
Thank you for taking an interest in my research project on the experience of living with diabetes and self-care behaviors of diabetes older person.

I am studying for a Master of science degree in nursing at Chulalongkorn University in Thailand.

I enclose two copies of the same letter. These comprise two parts: information on the study, and consent for participation in the study. Please read the letter carefully. If you decide to take part in the study please sign and date the letter of consent and send it to me (all three pages). The other copy of the letter is for you to keep. Soon after I have received your consent I will be in touch with you.

You are welcome to contact me if anything about the study is unclear, or if you wish to discuss it further with me. My phone number, e-mail and address are shown below.

Warm Regards,



Truong Thi Mai Quyen, Researcher

Lam Dong Medical College, 16B Ngo Quyen Street, Ward 6, Dalat, Viet Nam

Tel: (+84) 982075597, Email: truongmaiquyen@gmail.com

Associate Professor Dr. Jiraporn Kespichayawattana

Research supervisor

Faculty of Nursing, Chulalongkorn University, Thailand

Tel: (+66) 816296785, Email: wattanaj@yahoo.com

INFORMATION

Title of Study: Self-care of older persons living with diabetes in Vietnam

: A Qualitative Study

Researcher

Truong Thi Mai Quyen

BSc Nurse, MSc candidate

Faculty of Nursing

Lam Dong Medical College, 16B Ngo Quyen Street, Ward 6, Dalat, Viet Nam

Tel: (+84) 982075597, Email: truongmaiquyen@gmail.com

Researcher Supervisor

Associate Professor Dr. Jiraporn Kespichayawattana

Faculty of Nursing, Chulalongkorn University

Pratumwan, Bangkok, Thailand

Tel: (+66) 816296785, Email: wattanaj@yahoo.com

Description of study: Diabetes is a chronic non communicable disease that is a major health problem around the world. Diabetes mellitus is now recognized as the disease “epidemic” of the 21st century and type 2 diabetes is now considered one of the greatest health challenges facing healthcare providers in the 21st century.

Understanding how diabetes mellitus is explained to people and how their self-care behaviors are essential for nurses to develop proper nursing care to support and maintain continuing illness management. Health care services which are based on this understanding is likely to enhance more participation and cooperation of clients which ensures a better quality of life for older people living with diabetes mellitus. Because of the significance of understanding clients’ perspectives, this study will conduct to describe the meaning of “self-care” from the perspectives of older persons living with diabetes and explore the self-care behaviors of diabetes older person.

The key informants in the study will be the older persons who diagnosed diabetes. Both male and female key informants who are diagnosed to have Type 2

diabetes at least 6 months with no psychiatric disorders, no have diabetes-related complications (end stage renal disease, heart failure, lower extremity amputation), or other serious illness will be chosen to be the key informants with their written informed consent. The minimum age of eligibility is 60 years and participation was limited to the informants who agreed to be interviewed in Vietnamese.

Method: This study use a qualitative design to explore the personal perceptions of type 2 diabetes older patients towards self-care, from the key informants' perspective of diabetic patients

This qualitative study employed face-to-face, in-depth interviews to study the meaning and experience of older persons with diabetes. The method sees the key informants as co-researchers, and the key informants and the researcher, you and I, will explore together what 'self-care' really means. Data collection will take place between us two. The dialogues will be audiotaped, and then transcribed onto computer by me as the researcher.

What does participation entail? As a key informants in the study, you must be ready to discuss your experience in living with diabetes. One dialogue is expected to be sufficient for data collection, but I may request another interview if necessary. The dialogue will take about 45-60 minutes, and can take place wherever you wish, for instance in your home or at my office.

Taking part in the study can be beneficial, as discussion of one's own experience can improve one's understanding of one's circumstances. Participation does not entail any perceptible risk, although it is possible that discussing your experience could be upsetting for you.

Consent and permits: This research project must be approved by the Ethics Review Committee for Research Involving Human Researches Subjects of the Hanoi School of Public Health and the approval from the director of Lam Dong General Hospital as required by law.

Chulalongkorn University, Thailand

Lam Dong Medical College, Vietnam

CONSENT FORM

I have been given information about research title and discussed the research project with Ms Truong Thi Mai Quyen who is conducting this research as part of a master degree in nursing science at Faculty of Nursing, Chulalongkorn University. I understand that:

- I am participating in this research of my own free will
- I can withdraw from participation without any explanation at any stage, without any consequences for other treatment.
- All information I give about myself or audio-taped about me during my participation will be used only for the purposes of the study.
- All information I give about myself or audio-taped about me during my participation is confidential and will be kept in a secure place.
- I may refuse to answer questions, and I may also request that information on tape be erased.
- A summary from a dialogue and direct quotations may be included in the thesis, but only in such a manner that I cannot be identified.
- Audiotapes from the dialogue will be labeled with a pseudonym. They will be destroyed by the researcher when the study has been concluded.

I understand that the data collected from my participation will be used for purpose of the thesis, and I consent for it to be used in that manner. I agree to participate in this study

Signature : _____ Date : ____/____/____

Co- researcher:_____

*If you have any questions about questions about this research please contact me, **Truong Thi Mai Quyen**, on +84 982075597 at Faculty of Nursing - Lam Dong Medical College, Vietnam or Assoc. **Jiraporn Kespichayawattana** on +66 816296785 at Faculty of Nursing, Chulalongkorn University, Thailand*

ông/bà. Dù vậy, trước khi quyết định có tham gia nghiên cứu hay không, xin ông/bà dành đôi phút đọc các thông tin dưới đây. Chúng tôi xin được cung cấp thêm thông tin về nghiên cứu này.

Những ai được mời tham gia nghiên cứu này?

Những người tham gia trong nghiên cứu này sẽ là những người lớn tuổi được chẩn đoán mắc bệnh đái tháo đường. Cả nam giới hoặc nữ được chẩn đoán mắc bệnh tiểu đường loại 2 ít nhất 6 tháng không có rối loạn tâm thần, không có biến chứng tiểu đường (suy thận giai đoạn cuối, suy tim, cắt cụt chi), hoặc không có bệnh tật nghiêm trọng khác sẽ được lựa chọn là người tham gia, và phải có sự đồng ý bằng văn bản của người bệnh. Tuổi tối thiểu đủ điều kiện để tham gia vào nghiên cứu là 60 và người tham gia đồng ý trả lời phỏng vấn bằng tiếng Việt.

Người tham gia nghiên cứu sẽ phải làm gì?

Là một người tham gia trong nghiên cứu này, ông/bà phải sẵn sàng để thảo luận về kinh nghiệm của mình khi sống với bệnh tiểu đường. Một cuộc phỏng vấn được kỳ vọng sẽ có đầy đủ dữ liệu cần thiết, nhưng có thể tôi sẽ yêu cầu một cuộc phỏng vấn khác nếu cần thiết. Cuộc đối thoại sẽ kéo dài khoảng 45-60 phút, và có thể phỏng vấn tại bất cứ nơi nào ông/bà muốn, ví dụ như tại nhà của ông/bà hoặc tại văn phòng của tôi.

Tham gia nghiên cứu có thể mang lại lợi ích cho ông/bà, như thảo luận về kinh nghiệm của ông/bà với bệnh tiểu đường có thể cải thiện tình trạng của ông/bà. Sự tham gia vào cuộc phỏng vấn này sẽ không gây bất kỳ yếu tố nguy cơ nào cho ông/bà, có thể sẽ có thảo luận một chút về kinh nghiệm của ông/bà về bệnh, điều này có thể làm cho bạn không hài lòng một chút

Hiển nhiên, ông/bà sẽ không phải trả thêm bất cứ khoản tiền nào khi tham gia nghiên cứu này.

Tham gia nghiên cứu này có bị nguy cơ gì không?

Chúng tôi nhận thấy không có bất kỳ nguy cơ gì đến sức khỏe của ông/bà khi tham gia nghiên cứu này.

Liệu người được mời có nhất thiết phải nhận lời tham gia nghiên cứu?

Sự tham gia của ông/bà là hoàn toàn tự nguyện. Ông/bà hoàn toàn có thể thoái mái từ chối tham gia nếu không mong muốn. Dù ông/bà có tham gia vào nghiên cứu này hay không, các hoạt động chăm sóc, điều trị khác của ông/bà vẫn diễn ra bình thường và không bị ảnh hưởng.

Liệu người tham gia nghiên cứu có thể dừng tham gia giữa chừng?

Ông/bà có toàn quyền dừng trả lời các câu hỏi bất kỳ khi nào mà không cần phải giải thích lý do.

Thông tin thu thập từ người bệnh sẽ được sử dụng như thế nào?

Tất cả các bộ câu hỏi và câu trả lời sẽ được nghiên cứu viên giữ an toàn. Các thông tin liên quan đến nhận diện cá nhân người bệnh đều không được để lộ trong kết quả nghiên cứu. Các thông tin chỉ được dùng cho mục đích của nghiên cứu này.

Giấy phép để nghiên cứu:

Nghiên cứu này phải được sự chấp thuận của Ủy ban đánh giá đạo đức nghiên cứu của Trường Đại học Y tế công cộng và sự chấp thuận của Giám đốc Bệnh viện đa khoa tỉnh Lâm Đồng (hoặc sự giới thiệu của trạm Y tế phường, xã) theo đúng quy định của pháp luật.

Người tham gia nghiên cứu có thể liên lạc với ai khi cần thiết?

Ông/bà có thể liên lạc với nghiên cứu viên bất kỳ khi nào cần thiết theo địa chỉ:

Tên: Trương Thị Mai Quyên

Địa chỉ: Khoa Điều dưỡng – Kỹ thuật Y học

Trường Cao đẳng Y tế Lâm Đồng, 16 Ngô Quyền, Phường 6, Đà Lạt,

Lâm Đồng

Điện thoại: 0982075597

Thư điện tử:

truongmaiquyen@gmail.com

Ông bà sẽ được nhận một bản copy của phiếu thông tin này



PHIẾU ĐỒNG Ý THAM GIA NGHIÊN CỨU

Tên nghiên cứu: TỰ CHĂM SÓC CỦA NGƯỜI GIÀ MẮC BỆNH TIỂU ĐƯỜNG Ở VIỆT NAM: MỘT NGHIÊN CỨU ĐỊNH TÍNH

Mã bệnh nhân: _

Phần dành cho bệnh nhân

Tôi đã được cung cấp thông tin về tiêu đề nghiên cứu cũng như thảo luận về dự án nghiên cứu này với bà Trương Thị Mai Quyên, người đang thực hiện nghiên cứu này trong chương trình học thạc sĩ về khoa học điều dưỡng tại Khoa Điều dưỡng, trường Đại học Chulalongkorn, Thái lan. Tôi cũng có cơ hội trao đổi với nghiên cứu viên về các thông tin liên quan tới nghiên cứu và hài lòng với câu trả lời nhận được. Tôi hiểu rõ mục đích, quá trình nghiên cứu và các nguy cơ khi tham gia nghiên cứu. Tôi đã hiểu là:

- Tôi hoàn toàn tự nguyện khi tham gia vào nghiên cứu này
- Tôi có toàn quyền dừng trả lời các câu hỏi bất kỳ khi nào mà không cần phải giải thích lý do.
- Tất cả các thông tin mà tôi cung cấp về bản thân mình hoặc băng ghi âm về tôi trong suốt thời gian tham gia phỏng vấn sẽ chỉ được sử dụng cho các mục đích nghiên cứu.
- Tất cả các thông tin mà tôi cung cấp về bản thân mình hoặc băng ghi âm về tôi trong suốt thời gian tham gia phỏng vấn sẽ được bảo mật và lưu giữ ở một nơi an toàn.
- Tôi có thể từ chối trả lời các câu hỏi, và tôi cũng có thể yêu cầu xóa băng ghi âm.
- Một bản tóm tắt từ cuộc đối thoại và những trích dẫn trực tiếp có thể được trích dẫn trong luận văn Thạc sĩ, nhưng khuyết danh (không nêu danh tính).

- Bảng ghi âm từ các cuộc đối thoại sẽ được dán nhãn với một bút danh.
Chúng sẽ bị phá hủy bởi các nhà nghiên cứu khi nghiên cứu đã hoàn thành.

Tôi đã hiểu rằng thông tin mà tôi cung cấp chỉ sử dụng cho mục đích của nghiên cứu, tôi sẵn sàng tham gia nghiên cứu này với các điều kiện kể trên.

Người tham gia: _____ Chữ ký: _____

Địa điểm: _____ Ngày: _____

Người làm chứng: _____ Chữ ký: _____

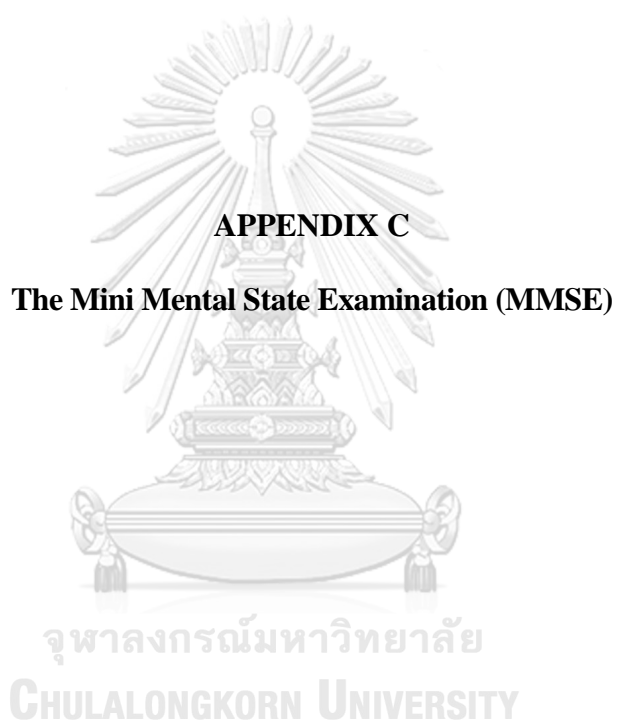
Phần dành cho nghiên cứu viên

Tôi đã giải thích cho người bệnh về các thông tin liên quan đến nghiên cứu, quá trình thu thập số liệu và các nguy cơ có thể có. Tôi tin rằng người bệnh hiểu những thông tin được đưa ra.

Nghiên cứu viên: _____ Chữ ký: _____

Địa điểm: _____ Ngày: _____

Nếu ông/ bà có bất kì câu hỏi nào về nghiên cứu này, ông/bà có thể liên hệ với tôi, Trương Thị Mai Quyên, sdt +84 982075597 tại khoa Điều dưỡng- KTYH trường Cao đẳng Y tế Lâm Đồng, Vietnam hoặc PGS.TS Jiraporn Kespichayawattana, sdt +66 816296785, thuộc khoa Điều dưỡng, trường Đại học Chulalongkorn, Thái lan.





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The Mini Mental State Examination (MMSE)

By: Lenore Kurlowicz, PhD, RN, CS and Meredith Wallace, PhD, RN, MSN

WHY: Cognitive impairment is no longer considered a normal and inevitable change of aging. Although older adults are at higher risk than the rest of the population, changes in cognitive function often call for prompt and aggressive action. In older patients, cognitive functioning is especially likely to decline during illness or injury. The nurses' assessment of an older adult's cognitive status is instrumental in identifying early changes in physiological status, ability to learn, and evaluating responses to treatment.

BEST TOOL: The Mini Mental State Examination (MMSE) is a tool that can be used to systematically and thoroughly assess mental status. It is an 11-question measure that tests five areas of cognitive function: orientation, registration, attention and calculation, recall, and language. The maximum score is 30. A score of 23 or lower is indicative of cognitive impairment. The MMSE takes only 5-10 minutes to administer and is therefore practical to use repeatedly and routinely.

TARGET POPULATION: The MMSE is effective as a screening tool for cognitive impairment with older, community dwelling, hospitalized and institutionalized adults. Assessment of an older adult's cognitive function is best achieved when it is done routinely, systematically and thoroughly.

VALIDITY/RELIABILITY: Since its creation in 1975, the MMSE has been validated and extensively used in both clinical practice and research.

STRENGTHS AND LIMITATIONS: The MMSE is effective as a screening instrument to separate patients with cognitive impairment from those without it. In addition, when used repeatedly the instrument is able to measure changes in cognitive status that may benefit from intervention. However, the tool is not able to diagnose the cause for changes in cognitive function and should not replace a complete clinical assessment of mental status. In addition, the instrument relies heavily on verbal response and reading and writing. Therefore, patients that are hearing and visually impaired, intubated, have low English literacy, or those with other communication disorders may perform poorly even when cognitively intact.

MORE ON THE TOPIC:


- Folstein, M., Folstein, S.E., McHugh, P.R. (1975). "Mini-Mental State" a Practical Method for Grading the Cognitive State of Patients for the Clinician. *Journal of Psychiatric Research*, 12(3); 189-198.
- Foreman, M.D., Grabowski, R. (1992). Diagnostic Dilemma: Cognitive Impairment in the Elderly. *Journal of Gerontological Nursing*, 18; 5-12.
- Foreman, M.D., Fletcher, K., Mion, L.C., & Simon, L. (1996). Assessing Cognitive Function. *Geriatric Nursing*, 17; 228-233.

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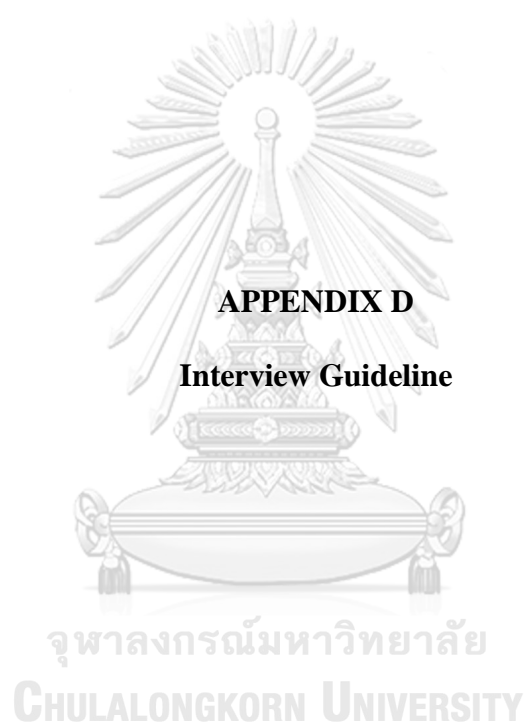
Mini-Mental State Examination (MMSE)

Patient's Name: _____ Date: _____

Instructions: Ask the questions in the order listed. Score one point for each correct response within each question or activity.

Maximum Score	Patient's Score	Questions
5		"What is the year? Season? Date? Day of the week? Month?"
5		"Where are we now: State? County? Town/city? Hospital? Floor?"
3		The examiner names three unrelated objects clearly and slowly, then asks the patient to name all three of them. The patient's response is used for scoring. The examiner repeats them until patient learns all of them, if possible. Number of trials: _____
5		"I would like you to count backward from 100 by sevens." (93, 86, 79, 72, 65, ...) Stop after five answers. Alternative: "Spell WORLD backwards." (D-L-R-O-W)
3		"Earlier I told you the names of three things. Can you tell me what those were?"
2		Show the patient two simple objects, such as a wristwatch and a pencil, and ask the patient to name them.
1		"Repeat the phrase: 'No ifs, ands, or buts.'"
3		"Take the paper in your right hand, fold it in half, and put it on the floor." (The examiner gives the patient a piece of blank paper.)
1		"Please read this and do what it says." (Written instruction is "Close your eyes.")
1		"Make up and write a sentence about anything." (This sentence must contain a noun and a verb.)
1		"Please copy this picture." (The examiner gives the patient a blank piece of paper and asks him/her to draw the symbol below. All 10 angles must be present and two must intersect.) 
30		TOTAL

(Adapted from Rovner & Folstein, 1987)



Interview Guideline

Screening Questions:

- Have you been diagnosed with type 2 diabetes, non-insulin dependent diabetes?
- When were you diagnosed?
- How old are you?

Demographic Information: The following information will be obtained from the key informants's health records, and/or interview

1. Personal Data

Age _____ Years _____

Sex Female Male

Marital status:

Ethnicity:

Educational level:.....

Religion:

Occupation:

 Before retire:

 After retire:

Income/year:

Address:

.....

Who live with you at home?

 Family member:

 Others:

2. Diabetes Profile

Type of diabetes:

Durations:

Complications:

Multiple disabilities:

Medical Diagnosis (es):

Medication:

Other treatment:

Diabetes Education:

Hospitalization experience:

Recent blood glucose levels: Date:

3. Available Health Care Resources in community:

Health clinics/ Drug store/ Hospital/ Folk healers/ etc

.....

.....

.....

.....

.....

Interview Guideline

- 1 How did you find out you have diabetes? Did the doctor tell you? Can you tell me about your experience of that?
- 2 What do you call your illness?
- 3 What has diabetes meant for you in your life (Meaning)
- 4 When you are sharing your condition with others, what do you call it?
- 5 Please tell me what happens inside of the body of a person with diabetes?
- 6 Tell me the story about the time when you had a problem with diabetes?
- 7 What do you think caused your diabetes? What are some of the reasons that people get diabetes?
- 8 Can you tell me what you do for treating your diabetes?
- 9 How long do you think your diabetes will last?
10. What do you think can happen if your diabetes is not controlled?
11. What happens to people who don't take care of their diabetes? How about you?
12. What happens when your blood sugar gets too high?
13. What happens to people who do not take their medications or compliance with the diet?
14. How about those who don't exercise or monitor their blood glucose?
15. How do you take care of yourself in your daily life?
 - Treatment regimen and cues to performing activities
 - Glucose monitoring
 - Medication
 - Diet
 - Exercise
 - General care
 - Alternative
 - Use of folk healers
 - Use of herbal medicine
 - Use of home remedies
 - Other treatment
16. What is your understanding of how diabetes affects your daily routine? Probe for how diabetes affects usual activities

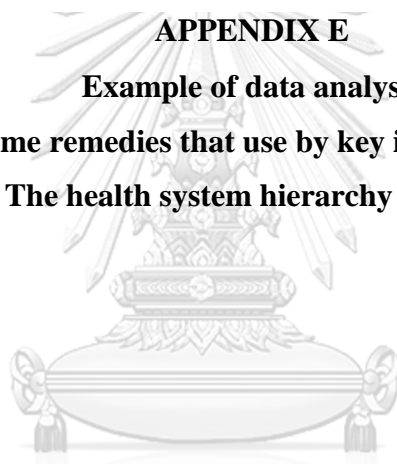
17. Can you tell me a story or give me an example of a time that you didn't take care of yourself?
18. How about times that you do take good care of yourself?
19. What motivates you to practice self-care for your disease?
20. What situations affect the way you behave or take care of yourself?
21. What are the most important things you want me to remember about living with diabetes?
22. What was hardest for you and your family — emotionally? Or financially?
23. Meaning and attitude about diabetes in your life?
24. What do you think about the barriers for you in practicing self-care for diabetes?
25. Who helps you with your diabetes? In what ways?
Significant others/ family members/ neighbors/ friends/ professionals
26. If I ask your family about your self-care, what will they say?



APPENDIX E



Example of data analysis



**Home remedies that use by key informants
and The health system hierarchy in Vietnam**



จุฬาลงกรณ์มหาวิทยาลัย
CHULALONGKORN UNIVERSITY

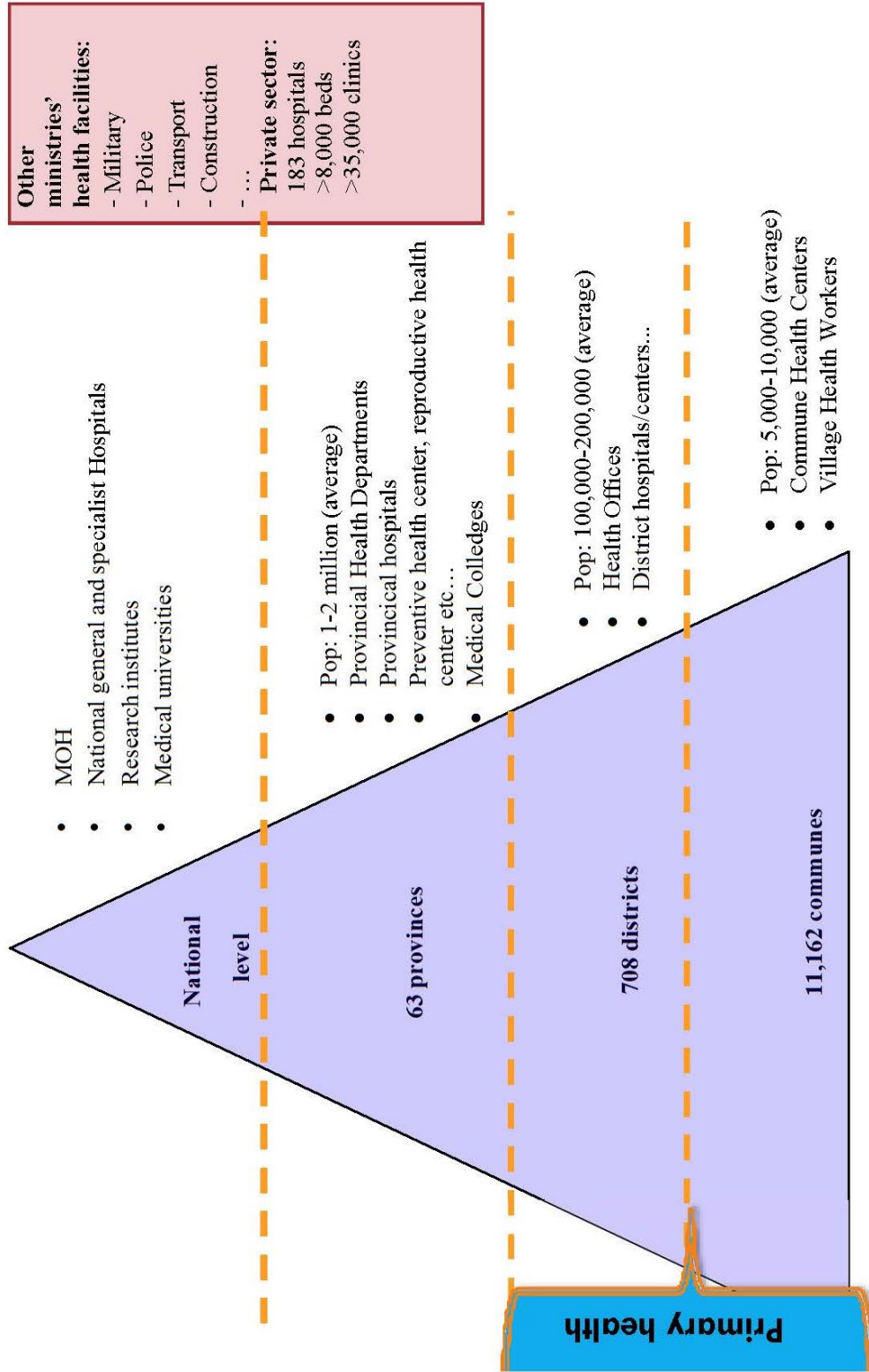
Home remedies that use by key informants

Name	Picture	Scientific Pharmacology
<p>Bear bile (<i>Vernonia amygdalina</i> Del)</p>		<ul style="list-style-type: none"> • <i>Vernonia amygdalina</i> Del is very popular in Indian, Chinese, Vietnam. • The researcher try to search the relevant about Pharmacology in Vietnam, but the researcher hasn't found yet. • In the world, there is 1 research show that <i>Vernonia amygdalina</i> has been shown to have antioxidant activity, and is also expected to have hepatoprotective activity. (Iwo, Sjahlim, & Rahmawati, 2017)
<p>Bitter melon (<i>Momordica charantia</i>)</p>		<ul style="list-style-type: none"> • Bitter melon has been the focus of well over 100 clinical and observational studies. It's best known for its hypoglycemic affects (the ability to lower blood sugar), and research shows that the melon's juice, fruit and dried powder can all be used to mimic insulin's effects and treat diabetes. Researchers state that further studies are required to recommend its use for certain conditions (Joseph & Jini, 2013)

Name	Picture	Scientific Pharmacology
Wild bitter melon		<ul style="list-style-type: none"> • Wild bitter gourd in diets facilitates lipid metabolism, reducing blood lipid concentration and body weight (Ciou, Hsu, Kuo, & Chao, 2014). Wild bitter gourd (<i>Momordica charantia</i> L.) is a common tropical vegetable that has been used in traditional or folk medicine to treat diabetes (Tsai, Chen, Tsay, & Huang, 2012).
Avocado		<ul style="list-style-type: none"> • Avocado leaf has more protein, fiber, minerals, and phytochemicals like flavonoids and phenols than the fruit • Avocado leaves have hypoglycemic or blood glucose-lowering effects. In a scientific study on rats with artificially induced diabetes, it was found that aqueous leaf extract of avocado possessed hypoglycemic effects depending on the strength of the dose.

Name	Picture	Scientific Pharmacology
Voi leaves (<i>Syzygium nervosum</i>)		<ul style="list-style-type: none">• The researcher try to search the relevant about Pharmacology in Vietnam, but the researcher hasn't found yet.

The health system hierarchy in Vietnam



VITA

Truong Thi Mai Quyen was born in 1986 in Da Lat city, Lam Dong province, Vietnam. She received the Bachelor degree in Nursing Science at Tay Nguyen. She had worked as a nurse instructor at Yersin University of Da Lat from 2009 – 2014. Since 2014 until now, she has been worked as a nurse instructor at Lam Dong medical College. She had studied Master of Nursing Science Program in Nursing Science at Faculty of Nursing, Chulalongkorn University from September, 2015 to 2017. She had received research grant support from Graduated School, Chulalongkon Unviersity.

