Self-care perspectives of Chinese immigrants with type 2 diabetes living in Victoria, Australia

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Submitted in fulfilment of the requirements for the degree of

Doctor of Philosophy

Deakin University
April, 2014
I am the author of the thesis entitled

**Self-care perspectives of Chinese immigrants with type 2 diabetes living in Victoria, Australia**

submitted for the degree of Doctor of Philosophy

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Like many others, undergoing a doctoral journey alone in a foreign country was a challenge, an academic achievement and part of my personal growth. Moreover, I suffered from the grief of the unexpected deaths of my beloved father and a close cousin and had to take an intermission from my candidature. Over the last several years, I experienced trepidation, frustration, self-doubt, loneliness, grief, and physical and intellectual inertia. The painstaking thesis journey, like mountain climbing, has been extremely hard for me; however it will be one of the best memories of my life.

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A list of publications

Conference Presentations:


Publications:


Abstract

Background

Diabetes is significant global burden. It affects all aspects of society, the economy, individuals with the disease and their families. Diabetes cannot be cured at present, but it can be kept under control with lifestyle management, medicines and appropriate self-care. Type 2 diabetes (T2DM) accounts for approximately 85 to 95% of all people with diabetes and there is a high prevalence of T2DM among Chinese populations. The Australian 2011 census showed Chinese Australians were the third most common cultural group in Australia and Mandarin was the second most common language spoken at home nationally. Migrant populations often experience dramatic cultural and environmental changes after they immigrate to a new country and many migrant groups, including Chinese, take their general and health beliefs, practices and traditions with them. However, there is less information about the diabetes self-care experiences of Chinese immigrants with T2DM living in Australia.

Aim

The study described how a group of Chinese immigrants with T2DM living in the state of Victoria, Australia managed diabetes self-care including the effort involved and the impact of the lifelong commitment to self-care on their lives and wellbeing.

Method

A qualitative descriptive design guided the study. Individual face-to-face semi-structured interviews lasting 60 to 120 minutes were conducted with nine Chinese immigrants with T2DM in the participants’ preferred language: eight in
Mandarin and one in English. Data saturation was achieved. All interviews were transcribed word-by-word, then the Chinese transcripts were translated sentence-by-sentence into English. Data were analysed using constant comparative analysis.

**Study Participants**

Five participants were female and four were male. Age range 37-70 years, median 61, mean 57±SD 11.6. They had lived with T2DM between two and ten years. All participants lived in different Melbourne suburbs and were first generation Chinese immigrants. Five participants were originally from Taiwan, two from the People’s Republic of China, one from Hong Kong and one from Singapore. All participants had lived in Australia at least 10 years.

**Findings**

‘Rebuild own liveable balance’ was the core theme that emerged from the data. There were three subthemes: ‘living with uncertainty,’ ‘negotiating and compromising,’ and ‘integrating previous experience.’ Moreover, several culture-related beliefs, attitudes and strategies applied for diabetes self-care were identified.

Participants took action to rebuild their psychological, spiritual, cultural, social, and physiological life balance after they were diagnosed with diabetes. They rebuilt and maintained their balance through an adaptation process that involved learning to live with T2DM. The findings show a number of influential factors contributed to participants’ rebuilding their life balance. These factors include participants’ beliefs about letting nature take its course, pursuing good fortune and avoiding bad luck.
An inter-related model was developed to explain the factors that influenced how the participants performed diabetes self-care in Australia. The process of adapting to diabetes self-care began with a sense of ‘living with uncertainty,’ which encompassed worrying about becoming a burden on their family. Participants negotiated and compromised to be able to undertake diabetes self-care, which involved managing emotional distress, trying to resist food temptations and engaging in self-care activities they thought could balance their daily lives. They integrated previous experience into their diabetes self-care. They learned self-care through self-directed learning and by monitoring the effects of the strategies they used, for example testing their blood glucose, to integrate previous experience into their self-care.

Conclusions

The findings describe how a group of Chinese immigrants with T2DM living in the state of Victoria, Australia managed their diabetes self-care. More specifically, the findings identify the participants’ diabetes self-care concerns and the factors that enhanced or hindered their ability to practice self-care. The findings may help Australian health professionals (HPs) and HPs in other countries understand how Chinese cultural beliefs affect self-care and enable them to work more effectively with Chinese immigrants with T2DM. Moreover, the findings could provide a basis for cultural integrity in health service design and delivery.
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Definitions of the terms used in the study

Chinese immigrants

Individuals from a Chinese background who leave their country of origin, and settle permanently in another country. In the findings chapter of the current study, Chinese immigrants refers to Chinese people from Hong Kong, Mainland China, Singapore, and Taiwan who migrated to Australia.

Diabetes self-care

There is no universally accepted definition of ‘self-care’ in nursing or in the healthcare field. In the study, self-care was defined originally from the definition used in Dorthea Orem’s self-care deficit theory of nursing. Baumann and Dang (2012, p 34) restated Orem’s definition of self-care as “learned behaviour that was purposeful, with patterned and sequenced actions, and suggested that individuals acquire the capacity for self-care during childhood, principally in the family, where cultural standards are learned and transmitted intergenerationally.”

For the purposes of the current study, diabetes self-care was defined as the behaviours and tasks individuals with type 2 diabetes undertake to manage their diabetes. Self-care is self-determined and multidimensional and is influenced by people’s life experiences, values, beliefs, personal characteristics and ability to maintain their holistic health balance in stressful situations.

Type 2 diabetes

Type 2 diabetes (T2DM) is the most common form of diabetes. It is characterised by a reduced production of insulin and an inability of the body tissues to respond fully to insulin. T2DM develops slowly and the symptoms may not be noticed or recognised. There is a high prevalence of T2DM among Chinese populations and migrant populations.
### Abbreviations used in the study

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>AADE</td>
<td>American Association of Diabetes Educators</td>
</tr>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>ADA</td>
<td>American Diabetes Association</td>
</tr>
<tr>
<td>ADEA</td>
<td>Australian Diabetes Educators Association</td>
</tr>
<tr>
<td>AIHW</td>
<td>Australian Institute of Health and Welfare</td>
</tr>
<tr>
<td>CAM</td>
<td>Complementary and alternative medicines and therapies</td>
</tr>
<tr>
<td>DE</td>
<td>Diabetes educator</td>
</tr>
<tr>
<td>DSME</td>
<td>Diabetes self-management education</td>
</tr>
<tr>
<td>GDM</td>
<td>Gestational diabetes mellitus</td>
</tr>
<tr>
<td>GLM</td>
<td>Glucose lowering medicines</td>
</tr>
<tr>
<td>GP</td>
<td>General practitioner</td>
</tr>
<tr>
<td>HbA1c</td>
<td>Glycosylated haemoglobin</td>
</tr>
<tr>
<td>HP</td>
<td>Health professional</td>
</tr>
<tr>
<td>HHS</td>
<td>Hyperosmolar hyperglycaemic state</td>
</tr>
<tr>
<td>IDF</td>
<td>International Diabetes Federation</td>
</tr>
<tr>
<td>IFG</td>
<td>Impaired fasting glucose</td>
</tr>
<tr>
<td>IGT</td>
<td>Impaired glucose tolerance</td>
</tr>
<tr>
<td>LADA</td>
<td>Latent autoimmune diabetes in adults</td>
</tr>
<tr>
<td>T2DM</td>
<td>Type 2 diabetes</td>
</tr>
<tr>
<td>TCM</td>
<td>Traditional medicine</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
</tbody>
</table>
Chapter 1

Background, Rationale and Significance of the Study
Chapter introduction

Chapter one presents a brief overview of the study. The chapter first outlines how the study originated, and provides a description of the rationale and significance of the study, following by a chapter summary.

The origin of the study

The section discusses the importance of diabetes self-care and the possible cultural effects on how people perform diabetes self-care that emerged from the researcher’s experience providing nursing care to people with type 2 diabetes (T2DM) in Taiwan. The researcher has worked as a nurse lecturer in Tzu Chi College of Technology in Taiwan for 11 years. During each semester the researcher worked as a clinical instructor in hospitals. While undertaking clinical teaching it became apparent that T2DM was becoming more prevalent in Taiwan and is a growing public health problem globally, for example, between 1987 and 2001 diabetes was the fifth leading cause of death in Taiwan. The Taiwan government implemented actions and policies, including diabetes self-care policies, in an attempt to reduce diabetes-related morbidity and mortality in Taiwan (Bureau of Health Promotion, Department of Health (Taiwan), 2006). However, the policies seemed not effective because by 2002 diabetes was ranked the fourth health priority in Taiwan and has remained in that position ever since (Department of Health (Taiwan), 2008).

Diabetes-related complications account for most of the diabetes-associated morbidity and mortality in most countries and place a huge financial burden on governments, societies, families and individuals (International Diabetes
The long-term complications of diabetes include cardiovascular, kidney, neuropathic, and retinopathy. Regular monitoring by health professionals and a significant amount of self-care by the person with diabetes is needed to prevent or delay the development of such complications, enable complications to be treated early, and for people with diabetes to keep their blood glucose within an appropriate target range.

Diabetic foot disease (see Figure 1.1 on next page) is one of the commonest long-term diabetes complications the researcher cared for during her years of clinical experience. Diabetic foot pathology results from a combination of peripheral neuropathy and vascular disease, that lead to such as ulcers, infection, and lower limb amputations and ultimately death (Apelqvist, Bakker, van Houtum, & Schaper, 2008; Boulton, Vileikyte, Ragnarson-Tennvall, & Apelqvist, 2005; Hinchliffe et al., 2008). Therefore, foot pathology accounts for a large proportion of the diabetes-related health budget (Borges & Ostwald, 2008; Edwards, 2008). Consequently, the clinical priority of managing diabetes struck the current researcher as being very important. The researcher began to ask why patients continued to be hospitalised because of foot problems and other diabetes complications when they can largely be prevented by appropriate monitoring and self-care.

Therefore, every time the researcher cared for people with T2DM with diabetic foot disease in the surgical ward where she worked she wondered whether they knew how to care for their diabetes and undertake foot care at home; and if they did, whether they performed daily self-care. In addition, the researcher
wondered whether diabetes education actually supported people in their efforts to achieve treatment targets and questioned the adequacy of diabetes education.

**Figure 1.1:** The diabetic foot picture is shown as an example of a foot problem the researcher confronted. The picture was downloaded from a web log (TRI, 2009) and cropped by the current researcher to show the severity of diabetic foot.

People with T2DM often need to make some behaviour changes such as healthy eating and performing self-care (Baumann & Dang, 2012; Burns & Skelly, 2005; Povey & Clark-Carter, 2007) in order to live with diabetes for the rest of their lives. However, there are barriers to performing diabetes self-care such as lack of knowledge (Nagelkerk, Reick, & Meengs, 2006). A second issue that interested the researcher was how important diabetes self-care and making behaviour changes is to people with T2DM. Consequently, the focus of the current research was on understanding people with type 2 diabetes’ experiences
of self-care, their views about the effort involved to perform self-care on a daily basis, and the impact of the lifelong commitment to self-care on their lives.

The researcher was given an opportunity to study in Australia and started to experience a different culture including a different language, health care delivery services, and social environment. When she had tried to accept the Australian culture as part of her life, she realised that some of her cultural beliefs, attitudes, and behaviours were difficult to change. Based on her personal experience of studying in Australia and her previous work experience in Taiwan, the researcher began to wonder what Chinese immigrants with T2DM experienced when they migrated to Australia. Questions included: How did Chinese immigrants with T2DM undertake diabetes self-care? Did Chinese cultural beliefs, attitudes, and behaviours continue to influence their perspectives of diabetes self-care even though they lived in a new country in a western culture?

**Rationale for the study**

While searching the literature, the researcher found that:

- There is a high prevalence of T2DM among Chinese migrant populations (Chan et al., 2009; International Diabetes Federation (IDF), 2013b; Misra & Ganda, 2007; Yang et al., 2010).

- Culture has long been recognised as an important factor that influences people’s health beliefs and health-related behaviours (Finucane & McMullen, 2008; Spector, 2013).

- The birthplaces of Australians in the 2006 census were listed as over 240 countries including Chinese countries (Department of Immigration and
Citizenship, 2008), which illustrates the diversity in the Australian population.

- Chinese Australians are the third most common cultural group in Australia after English and New Zealanders. At least 395,093 people from countries with a high proportion of people from Chinese backgrounds live in Australia, which accounts for 2\% of the Australian population, according to the 2006 Australian census (see Table 1.1 below). For example, there were 206,589 people from China in Australia, an increase of 44.7 per cent from the 2001 Census (Department of Immigration and Citizenship, 2008).

- The Chinese languages Mandarin and Cantonese are among the five most commonly spoken languages at home in Australia after English (Australian Bureau of Statistics, 2007).

**Table 1.1:** Australian census data from 2006 depicting the four main countries where people from Chinese backgrounds migrated from (Department of Immigration and Citizenship, 2008).

<table>
<thead>
<tr>
<th>Countries of birth</th>
<th>Number of people</th>
<th>Percent of the Australian population</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>206,589</td>
<td>1.0</td>
</tr>
<tr>
<td>Malaysia</td>
<td>92,333</td>
<td>0.5</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>71,803</td>
<td>0.4</td>
</tr>
<tr>
<td>Taiwan</td>
<td>24,368</td>
<td>0.1</td>
</tr>
</tbody>
</table>
Although there are many studies related to self-care experiences of immigrants of various nationalities; specific studies relating to Chinese immigrants living in Australia appear to be lacking, which is interesting considering the high prevalence of diabetes in Chinese people and the significant Chinese population in Australia. For example, the Diabetes Attitudes, Wishes, and Needs (DAWN) Study surveyed 13 countries from 11 regions in 2001 to identify a broad set of attitudes, wishes, and needs among people with diabetes and health professionals (Peyrot et al., 2005) but no countries with a Chinese population such as Hong Kong, Mainland China, Malaysia, and Taiwan, were included. Australia was involved in DAWN but the DAWN seemed not have undertaken a sub analysis to identify the perspectives of Chinese people with T2DM.

Therefore, the researcher conducted the study for:

- There is a high prevalence of T2DM among Chinese migrants in Australia.
- Diabetes self-care is essential to achieve optimal outcomes.
- The cultural traditions, values, beliefs and attitudes of people with T2DM are likely to impact on their perceptions of T2DM and diabetes self-care.
- Immigrants usually take their general and health beliefs, practices and traditions to their new countries, therefore, the culture they grow up in could have a significant influence on their diabetes self-care.
- It is possible Westerners’ diabetes self-care experiences are different from those of Chinese people.
- Fewer studies about the cultural influence on perspectives of diabetes self-care of Chinese immigrants with T2DM living in Australia were identified in a structured literature review.
Thus, the researcher conducted the study to address the apparent gap in the literature.

**Significance of the study**

The study aimed to describe perspectives of Chinese immigrants with T2DM concerning their experience of diabetes self-care; to better understand how interventions and health services should be delivered for this group of immigrants with T2DM. Inadequate self-care is associated with more hospital admissions and visits to emergency departments and increased need for community services (Clement, 1995; Department of Health (Western Australia), 2008; Funnell et al., 2009). The study will contribute important information about the meaning of self-care to a group of Chinese immigrants. The findings may help health professionals understand self-care from Chinese immigrants’ perspectives, and as a result provide more suitable, individualised diabetes education and management for Chinese people and reduce hospital admissions. The study will make a significant contribution to the extant knowledge about how Chinese immigrants in Victoria, Australia perform diabetes self-care and will form the basis for future research in the area.

**Chapter summary**

Chapter one started with a brief description about the origin of the study, which was located within the researcher’s experience as a nurse lecturer in Taiwan. When the researcher came to study in Australia and personally experienced the influence cultural differences had on her study and life in Australia, she became interested in the self-care experiences of people with T2DM from Chinese
speaking countries living in Australia. The rational and significance of the study were described. The following chapter provides a review and discussion of the literature.
Chapter introduction

Chapter two provides a review of the literature commencing with an overview of diabetes, self-care, diabetes education, and the self-care experiences of immigrants are explored. The gap in the literature concerning the perspectives of diabetes self-care of Chinese immigrants with type 2 diabetes (T2DM) living in Australian that the proposed study will address is outlined.

After defining what the topic and focus was, the researcher compiled a list of keywords and synonyms to use to undertake a literature search (up to the end of July 2013) of peer-reviewed and grey literature including policy documents and reports, government statistics, and electronic newspapers. The keywords and synonyms included: diabetes, type 2 diabetes, T2DM, diabetes care, diabetes management, self-care, self care, self-management, self management, Chinese, immigrant, Chinese people, immigrants in Australia, culture, ethnic, ethnic groups, chronic illness, chronic disease. Alone or in combination such as Chinese immigrant. In addition, Boolean words ‘and,’ ‘or’, and ‘not’ were used, for example, T2DM and Chinese people.

Two types of information sources were used: print information sources and electronic information sources. Print information sources included general textbooks, reference material, academic journals, popular journals, inter-library loans, theses, newspapers, and annual reports. Electronic information sources included databases that the Deakin library subscribes to (such as EBSCOHost), electronic journals and books, and the Internet (such as the Deakin Library Catalogue and Google Scholar).
Overview of diabetes

Diabetes mellitus (diabetes) is a group of metabolic diseases characterised by chronic hyperglycaemia resulting from defects in insulin action and/or insulin secretion (American Diabetes Association (ADA), 2013a; Baker IDI: Heart and Diabetes Institute, 2012). Thus, diabetes is not just a single disease entity. The classic symptoms of diabetes that include polyuria, polydipsia, polyphagia and weight loss are often absent in T2DM. Consequently, T2DM frequently goes undiagnosed for many years and complications develop sometime years before diagnosis (Baker IDI: Heart and Diabetes Institute, 2012; International Diabetes Federation (IDF), 2009). In Chinese migrant populations, T2DM could be often undiagnosed until advanced complications have developed. Chinese immigrants with T2DM might not realise they have it or realise the need for practice diabetes self-care because the lack of T2DM symptoms. They might not seek help until they have developed complications, which may be many years after T2DM actually began.

Classification of diabetes

The Expert Committee on the Diagnosis and Classification of Diabetes Mellitus revised the initial classification of diabetes in 1997 and the classification is based on disease aetiology because the different forms of diabetes can be present at any age. The terms type 1 and type 2 replaced insulin-dependent diabetes (IDDM) and non-insulin-dependent diabetes (NIDDM) (Alberti & Zimmet, 1998). There are three main types of diabetes:

- Type 1 diabetes (T1DM)
- Type 2 diabetes (T2DM)

- Gestational diabetes mellitus (GDM).

T1DM and T2DM are chronic and currently incurable (American Diabetes Association (ADA), 2013a; International Diabetes Federation (IDF), 2013c). Unlike T1DM and T2DM, GDM only occurs during pregnancy and usually resolves after delivery. However, women who had GDM are at increased risk of developing T2DM compared with those whose blood glucose remains normal during pregnancy (Bellamy, Casas, Hingorani, & Williams, 2009).

Moreover, it is apparent that there are some forms of the condition which do not fit comfortably into these categories. There is one form of diabetes which appears to straddle T1DM and T2DM. This form of diabetes was first described over 25 years ago. Groop, Bottazzo, and Doniach (1986) reported a subgroup of people with T2DM who, despite having islet autoantibodies, showed preserved pancreatic beta-cell function. The type of diabetes in these people was referred to as latent T1DM, showing clearly different features from classic T1DM and classic T2DM.

This form of the condition is known as 'latent autoimmune diabetes in adults' (LADA). Tuomi et al. (1993) and Zimmet et al. (1994) launched the eponym LADA for this slowly progressive form of autoimmune diabetes that develops in adults and initially managed with diet and glucose lowering medicines after diagnosis for some time before becoming insulin requiring.

Findings from the study of Zhou et al. (2013) that report on the prevalence and characteristics of LADA in China show that LADA are now prevalent in
China—in contrast to T1DM. The study also strongly implies that universal genetic and environmental factors may predispose to the development of T2DM and LADA. Therefore, some ethnic differences and cultural variations in the prevalence of diabetes are highlighted.

**Prevalence**

Diabetes is a significant and growing health concern worldwide and it also causes significant morbidity and mortality. The prevalence of diabetes is increasing worldwide rapidly and affects people from a wide range of ethnic groups and all economic and social levels (International Diabetes Federation (IDF), 2013a). In 2007-08, approximately 4.4% of Australians (an estimated one millions Australians) living with diabetes (Australian Institute of Health and Welfare (AIHW), 2011). Moreover, by the year 2025, over three million Australians are likely to have diabetes, most of whom have T2DM (Baker IDI: Heart and Diabetes Institute, 2012).

There is a high prevalence of T2DM among Chinese populations such as in China (International Diabetes Federation (IDF), 2013b; Yang et al., 2010; Zhou et al., 2013). Rapid economic development and lifestyle changes such as high fat diets and insufficient physical activity contribute to the prevalence of diabetes in Chinese populations. For example, China has a population of 1.34 billion and is rapidly urbanising and expanding economically.

As a consequence the prevalence of diabetes in China will increase rapidly. In 2011, approximately 90 million people live with diabetes with prevalence of 9% in China (International Diabetes Federation (IDF), 2013b). The high prevalence rate makes China as having the highest number of people with diabetes in the
world in 2011. Even when Chinese people start a new life in another country, they are still at increased risk of T2DM. Thus, the need to prevent or manage T2DM diabetes for Chinese immigrants remains.

Migrant populations who experienced lifestyle changes after they immigrate to their new country have high prevalence rates of T2DM (Abouzeid, Philpot, Janus, Coates, & Dunbar, 2013; Misra & Ganda, 2007; Thabit et al., 2009). Immigrants experience dramatic changes in both culture and environment when they move to another country but they take their general and health beliefs, practices and traditions with them. Immigrants from ethic groups such as Asians and African Americans, have high prevalence of T2DM and diabetes complications (Whiting, Guariguata, Weil, & Shaw, 2011).

**Overview of type 2 diabetes**

T2DM is the most common type of diabetes. It accounts for more than 85% of persons with diabetes in Australia. T2DM is characterised by a reduced production of insulin and an inability of the body tissues to respond fully to insulin (Baker IDI: Heart and Diabetes Institute, 2012; Guven, Matfin, & Kuenzi, 2009). However, the specific aetiology of T2DM is still being identified (American Diabetes Association (ADA), 2013a). Thus, the pathogenesis of T2DM differs from T1DM, in that insulin resistance is a significant underlying disturbance of glucose homeostasis in T2DM whereas there is actual insulin deficiency in T1DM.

T2DM develops slowly and the symptoms may not be noticed or recognised. The classic symptoms of diabetes such as excessive thirst and urination, unexplained weight changes are often not severe, may be subtle or even absent in
T2DM and the pathological functional changes caused by hyperglycaemia are often present for a long time before the diagnosis is made. Although T2DM usually affects adults over the age of 40 years, it is now increasingly occurring in young people, especially in ethnic groups known to have a high prevalence of T2DM such as Chinese peoples (International Diabetes Federation (IDF), 2013b; Yang et al., 2010).

**Risk factors for type 2 diabetes**

The major risk factors for T2DM fall into the following four groups:

- **Lifestyle factors** such as increased consumption of diets high in fat and sugar and declining levels of physical activity, which contributes to obesity, which in turn induces insulin resistance.

- **Sociodemographic factors** such as older age, increasing urbanisation, and rapid cultural and social changes.

- **Genetic factors** that occur in certain ethnic groups such as Asians, Hispanics, indigenous peoples and African Americans. Most of these groups have T2DM, which suggests T2DM has a genetic component.

- **Biomedical factors** such as previous gestational diabetes, impaired glucose tolerance, and hypertension and hyperlipidaemia, which is usually present with hyperglycaemia. (Australian Institute of Health and Welfare (AIHW), 2008; Diabetes Australia, 2011; Dunning, 2009; International Diabetes Federation (IDF), 2008; Polonsky, 2012).
People in high risk groups should be screened for undiagnosed T2DM. A three-step screening and diagnosis procedure is recommended for detecting undiagnosed T2DM (see Figure 2.1).

**Diagnostic criteria**

The diagnosis of diabetes is confirmed through measuring blood glucose levels (see Figure 2.2 on next page). Individuals presenting with the classic symptoms of diabetes and elevated blood glucose (random plasma glucose >11.1 mmol/L at any time of the day without regard to time since last meal) have diabetes.

**Figure 2.1:** A recommended three-step screening and diagnosis procedure for detecting T2DM (Diabetes Australia, 2013).
**Figure 2.2:** Criteria for diagnosing diabetes (Diabetes Australia, 2013).

Fasting or random plasma glucose levels: mmol/L.

People with T2DM are likely to have experienced diabetes-related emotional and psychological distress, and depression (Gask, Macdonald, & Bower, 2011; Hughes, Keith, Byars, & Wiginton, 2012; Peyrot et al., 2005; Snoek et al., 2012;
Snoek, Pouwer, Welch, & Polonsky, 2000). Depression and other psychological distress states are significant barriers to effective coping with having T2DM. A major cause of the distress is feeling uncertain and threatened because of the possibility of developing diabetes complications (Delahanty et al., 2007; Eriksson et al., 2008; Pan et al., 2010). People with T2DM are more likely to experience short term complications and develop long-term complications if they did not keep their diabetes under control.

**Short term complications**

The common short term complications are:

1) hypoglycaemia

2) hyperosmolar hyperglycaemic state (HHS), which is more common in older T2DM

3) diabetic ketoacidosis, which is more common in T1DM than T2DM

4) intercurrent infection such as urinary tract infection, cellulitis and dental disease (Guven et al., 2009).

Hypoglycaemia is associated with insulin, some glucose lowering medicines (GLM), inappropriate diet such as missing meals and increased exercise. Therefore, individuals’ inadequate behaviours could increase risk of hypoglycaemia. Hypoglycaemia happens quickly and its symptoms are important clues that people with diabetes are experiencing low blood glucose. Hypoglycaemia induces symptoms such as shakiness, sweating and clamminess, light-headedness or dizziness and tingling or numbness in the lips or tongue (American Diabetes Association (ADA), 2013b). Each person’s reaction to
hypoglycaemia is different; therefore, it is important that people with diabetes learn their own symptoms when their blood glucose is low.

Hyperglycemia induces symptoms such as nausea, vomiting, fatigue, and blurred vision. Common causes of HHS are intercurrent infection such as urinary tract infection. HHS contributes to confusion and hyperglycaemia symptoms. It often occurs in people over age 65 living in aged care facilities and needs to be treated with intravenous fluids and usually intravenous insulin. A medicines review is also warranted. It is essential to treat the underlying cause (Dunning, 2009; Kitabchi, Umpierrez, Miles, & Fisher, 2009; Stoner, 2005). Health professionals should consider how diabetes affects vision and how it affects people’s ability to perform self-care, when delivering diabetes education.

**Long-term complications**

The long-term complications of diabetes are associated with long standing hyperglycaemia and are often due to inadequate treatment (Inzucchi et al., 2012). The common long-term complications are:

1) Vascular complications: The vascular complications are further subdivided into:
   a. macrovascular: cardiovascular disease, stroke, and peripheral vascular disease
   b. microvascular: retinopathy and nephropathy, which often occur together.

2) Neuropathic complications:
a. Peripheral: sensory dysfunction, particularly in the lower extremities. Paresthesias and lack of sensation in the feet, which lead to foot problems and potential consequences such as lower limb amputations.

b. Autonomic dysfunction: gastrointestinal disturbances, bladder dysfunction, tachycardia, postural hypotension, erectile dysfunction and hypoglycaemic unawareness (Guven et al., 2009).

These complications often need medication to prevent or control them, which increases the burden of diabetes self-care and health costs for people with diabetes. Furthermore, there is increasing recognition that diabetes is associated with other diseases such as some forms of cancer (Dunning, 2009; Travier et al., 2007), Alzheimer’s disease (Cranston, 2005), sleep apnoea (Reichmuth, Austin, Skatrud, & Young, 2005; West, Nicoll, & Stradling, 2006), hearing deficits (Dalton, Cruickshanks, Klein, Klein, & Wiley, 1998; Frisina, Mapes, Kim, Frisina, & Frisina, 2006), and a more likely impaired bioenergetic capacity of skeletal muscle mitochondria (Boushel et al., 2007; Kelley, He, Menshikova, & Ritov, 2002). Therefore, regular complication screening to detect complications early, and more importantly, prevent or delay their development, is essential.

**Morbidity, mortality and costs of diabetes**

The complications are so devastating that diabetes remains one of the leading causes of premature morbidity and mortality in most countries (Baker IDI: Heart and Diabetes Institute, 2012; International Diabetes Federation (IDF), 2009, 2013a). For instance, diabetes was the sixth leading underlying cause of death in Australia in 2011(Australian Bureau of Statistics (ABS), 2013). Moreover, diabetes is often underestimated because it is often not recorded on death
certificates: diabetes is associated with other leading causes of death such as cardiovascular disease, renal failure, lower limb amputation and blindness, in nearly every developed society.

The burden of diabetes includes the suffering it causes people with the disease and their families, reduced in national productivity, and high expenditure on health services. As a result, diabetes is associated with huge socioeconomic costs due to premature morbidity and mortality and significant costs to the individual with diabetes and in their families. However, human suffering is difficult to quantify and is not included in most cost estimates (Baker IDI: Heart and Diabetes Institute, 2012; International Diabetes Federation (IDF), 2013a). Diabetes became Australia's fifth National Health Priority Action (NHPA) area in 1996 because it is recognized as a major public health problem, and needing a strong focus on prevention and community-based care (Australian Institute of Health and Welfare (AIHW), 1997).

Disease-related costs are usually categorised into four broad groups:

1) direct health care costs
2) direct non-health-related costs
3) indirect costs
4) intangible costs (Australian Institute of Health and Welfare (AIHW), 2008).

The total diabetes-related financial expenditure on T2DM is estimated at $10.3 billion in Australia. Of the total costs, carer costs were estimated as $4.4 billion, productivity losses were $4.1 billion and health system costs were $1.1 billion (Diabetes Australia, 2012). Very little Australian information about the intangible diabetes-related costs is available (Australian Institute of Health and Welfare (AIHW), 2008; Baker IDI: Heart and Diabetes Institute, 2012) because
intangible costs such as the impact on quality of life is difficult to quantify and highly individual. As a result, the quality and evaluation of diabetes self-care by people with T2DM is complicated.

**Management of type 2 diabetes**

The costs and burden of T2DM could be reduced because many of diabetes-related complications are preventable. The usual diabetes management goals are to control blood glucose levels such as HbA1c < 7% (<53 mmol/mol) to prevent the short and long-term complications (American Diabetes Association (ADA), 2013c; Rohlfing et al., 2002). The goals of management are accomplished by undertaking diabetes self-care, regular health checks by health professionals, and diabetes education. Diabetes self-care includes eating a healthy diet, losing excess weight, and appropriate exercise, which reduces insulin resistance and blood glucose, and can delay the need for GLMs and/or insulin in T2DM. Hygiene practices such as daily foot care are also vital (Dawson, 2010; Deakin, Cade, Williams, & Greenwood, 2006; International Diabetes Federation, 2003). Each of these aspects of self-care usually involves lifestyle changes that are difficult to accomplish initially and challenging to maintain.

**Self-Care of type 2 diabetes**

**Defining self-care**

There is no ‘gold standard’ definition of self-care. The World Health Organisation (WHO) defined 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” (2009, p.17).

The WHO’s definition of self-care incorporates the notion of using preventative strategies to avoid disease onset. The inclusion is an interesting development that extends the domains of self-care from its typical focus on managing existing chronic conditions and disability (Barlow, 2013).

Self-care is a concept frequently referred to in both the clinical practice and the theory of nursing. Self-care is essential to health maintenance and disease prevention, especially when people have a chronic illness such as diabetes. In the 1990s, ‘self-care’ was distinguished from ‘self-management,’ as advocated by Clark et al. (Clark et al., 1991) (see Table 2.1).

Table 2.1: Distinction between ‘self-care’ and ‘self-management’ in healthcare literature in 1990s (Barlow, 2001; Clark et al. 1991).

<table>
<thead>
<tr>
<th></th>
<th>Self-care</th>
<th>Self-management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of strategies</td>
<td>Preventative</td>
<td>Strategies used to handle clinical aspects of the disease:</td>
</tr>
<tr>
<td></td>
<td>strategies</td>
<td>to control or reduce the impact of disease on physical health status</td>
</tr>
<tr>
<td>Daily tasks undertaken</td>
<td>Healthy individual</td>
<td>The individual with chronic conditions such as diabetes</td>
</tr>
<tr>
<td>by</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Setting</td>
<td></td>
<td>In any setting encountered in daily life</td>
</tr>
</tbody>
</table>
However, some researchers, particularly those interested in diabetes (Glasgow, McCaul, & Schafer, 1987; Jenny, 1984; Wilson et al., 1986) have employed the term ‘self-care’ when referring to tasks the people with chronic conditions must perform at home. Furthermore, over time the boundaries between the concepts of self-care and self-management have become blurred. Indeed, the terms ‘self-care,’ or ‘self-management’ have been used interchangeably in the literature.

Self-care becomes increasingly complicated as the management regimen intensifies or complications develop (Hertz, 2009). Orem first used the idea of self-care in her definition of nursing in 1956 when she defined self-care as person(s) in life situations managing and attending to self:

*The practice of activities that maturing and mature persons initiate and perform, within time frames, on their own behalf in the interests of maintaining life, healthful functioning, continuing personal development, and well-being, through meeting known requisites for functional and developmental regulations.* (Orem, Taylor, & Renpenning, 2001, p.521)

Baumann and Dang (2012, p.34) restated Orem’s definition of self-care as “learned behaviour that was purposeful, with patterned and sequenced actions, and suggested that individuals acquire the capacity for self-care during childhood, principally in the family, where cultural standards are learned and transmitted intergenerationally.” They suggest and address that the capacity for self-care people gain is influenced by the cultural standards people learned and transmitted since childhood.
Nevertheless, the concept of self-care and definitions of self-care vary in the literature and is discussed from different perspectives. Hertz (2009) summarised commonly used explanations of self-care in the literature as the following:

- Compliance or adherence with prescribed medical treatments for diseases.
- A personal belief in being capable of following disease treatment regimens.
- Functional abilities and independence to carry out daily activities.
- Self-determined behaviours that meet individual’s unique, personal basic human and self-actualisation needs.
- Multiple dimensions that prevent functional decline and prolong active life.

The definition of diabetes self-care differs among researchers and health providers. Moreover, ‘self-care’ is perceived differently by people with diabetes and health professionals. Spenceley and Williams (2006) reviewed 10 qualitative, four quantitative and two mixed method studies to examine the barriers to and facilitators of successful self-care from the perspective of adults living with diabetes. Different definitions of self-care were used in the studies reviewed, which made it difficult to compare the studies. The authors categorised four different definitions from the 16 studies they reviewed. These definitions of diabetes self-care were:

1) “Self-management of diabetes by self-administration of medical therapies; synonymous with symptom control and disease management” (Spenceley & Williams, 2006, p. 132) was synthesised from seven of the studies reviewed.
2) “An evolutionary process of developing knowledge by learning to live with the complexity of diabetes in a social context” (Spenceley & Williams, 2006, p. 133) synthesised from four studies.

3) “Decisions made to manage illness in a sociocultural context based upon sociocultural belief systems; balancing disease with fulfilling expected roles” (Spenceley & Williams, 2006, p. 133) synthesised from three studies.

4) “An individual’s responsibility and a result of lay decisions about appropriate behaviour to benefit health, prevent further illness, limit illness, restore health, and maintain independence; based on rules of adherence and on factors arising from a personal perspective” (Spenceley & Williams, 2006, p. 132) synthesised from two studies.

Most definitions of self-care are disease-centred and life-centred in the literature, despite the fact that self-care is integral to managing the disease. The individual’s ability to self-care is actually central to achieving optimal outcomes. Thus, when delivering diabetes self-care education, definitions of diabetes self-care should be the same for individuals with T2DM and health professionals to ensure meet the needs of people with T2DM.

**What does diabetes self-care encompass?**

WHO (2011, pp.65-66) defined self-care as including “activities that individuals, families, and communities undertake with the intention of enhancing health, preventing disease, limiting illness and restoring health”. In term of diabetes management, regardless of how diabetes self-care is defined, and the number of diabetes-related self-care issues discussed, diabetes self-care includes seven
aspects (steps) often studied in the literature (American Association of Diabetes Educators (AADE), 2009; Government of South Australia, 2010). These are:

1) choosing healthy diets
2) being physically active
3) monitoring blood glucose
4) taking medicines as prescribed
5) solving diabetes-related problems
6) coping with life issues
7) reducing the risk of complications.

These seven diabetes self-care behaviours (steps) were adopted by the Australian Diabetes Educators Association (ADEA) (2009) and included in the ADEA diabetes self-management education guidelines: ADEA includes an eighth goal: “Understand diabetes and make informed lifestyle and treatment choices.”

Additionally, the Joslin Diabetes Centre model of diabetes self-care domains used ‘Working With Your Health Care Team’ as the foundation for their model to emphasise a strong relationship among a multidisciplinary health care team of physicians, nurse educators, psychologists, dieticians, exercise physiologists and people with diabetes (Weinger & Leighton, 2009).

Although these seven aspects are essential and presented in various diabetes self-care literature, they are like a list of tasks and indeed simplify what self-care actually involves. However, the previous work done by the AADE and the ADEA in developing the seven aspects to success concept should be acknowledged.
Self-care is important to help people with diabetes live a normal life regardless of the fact that the disease is incurable. Self-care is individuals self-determined perform a variety of multidimensional activities based on their life experiences, values, beliefs, and personal characteristics and abilities to influence their holistic health (Hertz, 2009). In order to be able to undertake self-care, people with diabetes need to learn critical information and procedures. These include choosing healthy diets, being physical active, reducing the risk of complications.

The importance of diabetes self-care is widely recognised in the literature and clinical practice. There are various self-care definitions encompass similar concepts, but most appear to be from a health professional’s point of view. However, diabetes self-care is not a health professional activity, therefore, health professionals need to remember self-care requires the individual to undertake essential tasks several times a day, and recognise the relentless, ongoing nature of self-care for the individual’s lifetime (Utz et al., 2006).

**Factors impacting on diabetes self-care**

Many variables such as the client’s culture, learning style and health literacy level influence the individual with type 2 diabetes’ diabetes self-care practice and the success of educational interactions (Anderson & Funnell, 2005). Moreover, many theoretical models are used to explain or predict the process of how individuals learn diabetes self-care. For example, the chronic care model (Piatt et al., 2006), the Health Belief Model (Gillibrand & Stevenson, 2006), the empowerment model (Sigurdardottir & Jonsdottir, 2008), and self-efficacy (Aljasem, Peyrot, Wissow, & Rubin, 2001). However, no single educational
method is so effective that it can be adopted by diabetes educators around the world.

One reason could be that individual’s cultural background also impacts on their personal attributes such as attitudes and beliefs. It is well-established that culture influences peoples’ health beliefs and attitudes generally and about diabetes self-care. Swerissen et al. (2006) and Walker, Weeks, McAvoy, and Demetriou (2005) reported participants from Chinese, Italian, Vietnamese and Greek communities responded differently to chronic illnesses. Swerissen et al. and Walker et al’s findings suggest participants’ emotional responses to chronic illness is culturally-based. For example, Chinese participants indicated health could be influenced by state of mind, regardless of the outside circumstances and social conditions. They related their physical health to a state of internal harmony and harmony with the environment.

Thus, the cultural differences should be addressed, especially when caring for immigrants with T2DM. Chinese people, for example, may have different attitudes toward diabetes self-care than people growing up in Western cultures, therefore, it is important to individualise education and provide culturally relevant education based on a thorough assessment that encompasses physical, mental, spiritual, religion, culture, environment/social, and current knowledge.

**Brief of diabetes self-care experience**

There are many challenges associated with living with a chronic disease and the self-care involved; therefore, people with T2DM need to undertake a variety of tasks and develop appropriate attitudes to cope with the many multidimensional influences they encounter during their lifetime. Many people with T2DM feel
overwhelmed by the diabetes self-care tasks and regimens, which they often feel are rigid and burdensome (Spenceley & Williams, 2006). Not surprisingly, many people find it difficult to meet the demands of their diabetes, and experience complications.

For example, immigrants with minimal English language skills have difficulty understanding written and verbal communication in English. Moreover, out of respect the health professional and/or because they feel ashamed about their inability to speak English, they might not dare to interrupt health professional and ask them to discuss the diabetes self-care information in a simpler format (Mertig, 2007). Medical interpreters can facilitate the communication between people with diabetes and health professional; however, numerous difficulties still arise during consultations if interpreters are not aware of cultural differences and the possible misunderstandings because of three-way communication (Dysart-Gale, 2007).

More and more studies have been undertaken into immigrant behaviours of diabetes self-care. For example, some African Americans use a variety of teas, dietary products, and supplements to manage their diabetes as well as conventional care (Utz et al., 2006). Significant racial/ethnic differences in diet, physical activity, and foot care behaviours have been documented (Nwasuruba, Khan, & Egede, 2007). Therefore, the priorities or performance of diabetes self-care of immigrants with T2DM might be different than what health professionals expected.
Chinese immigrants in Australia

Increasingly, Chinese people from Mainland China are immigrating to Australia. They came from several Chinese cultural environments and religions such as Buddhism, Taoism, Confucianism, Christianity and some were atheists. China officially became an atheist state after the Cultural Revolution, which occurred between 1966 and 1976.

The Australian 2011 census showed Chinese Australians were the third most common cultural group in Australia and Mandarin was the second most common language spoken at home nationally (Australian Bureau of Statistics, 2012). The multicultural nature of Australian society has developed and grown significantly in Victoria. Victoria is the smallest mainland state in Australia. At the 2011 Census, according to the Victorian Multicultural Commission (2013):

- The general population of Victoria was about five million people.
- Migrants come from over 200 countries and 26.2% were born overseas, an increase from 23.8% in the 2006 Census.
- China was the third most common country of birth, 1.8% of people in Victoria was born in China. The other most common countries of birth were England (3.2%), India (2.1%), and New Zealand (1.5%). Malaysia was the ninth most common country of birth for Victorians in the 2011 census, Hong Kong was the 17th, Singapore was the 25th and Taiwan was ranked 47th. More details of the five Chinese-speaking target populations in the 2011 census are shown in Table 2.2.
Table 2.2: Data about the five Chinese-speaking countries from the target population living in Victoria according to the 2011 Census (Victorian Multicultural Commission, 2013).

<table>
<thead>
<tr>
<th>Countries of birth</th>
<th>Persons</th>
<th>Percent of the overseas born living in Victoria</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>93,896</td>
<td>6.7</td>
</tr>
<tr>
<td>Malaysia</td>
<td>39,791</td>
<td>2.8</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>18,205</td>
<td>1.3</td>
</tr>
<tr>
<td>Singapore</td>
<td>13,696</td>
<td>1.0</td>
</tr>
<tr>
<td>Taiwan</td>
<td>5,686</td>
<td>0.4</td>
</tr>
</tbody>
</table>

In terms of the language spoken at home, 23.1% of Victorians spoke a language other than English at home, an increase from 20.4% in 2006 (Victorian Multicultural Commission, 2013). Mandarin is the third most common language spoken at home; 1.9% of people spoke Mandarin at home and 1.4% spoke Cantonese (Australian Bureau of Statistics, 2013).

The growing diversity of the Australian population presents new challenges for health professionals. The ethnically mixed Australian population needs more than a ‘one size fits all’ health care system, generally, and diabetes care and education specifically. Health professionals need to learn and understand about Chinese peoples’ cultural, beliefs and values when delivering diabetes education and management to provide a good quality of care. For example, one Chinese cultural belief is that people with diabetes should take a passive role in the health-care relationship, so they are unlikely to ask for information about
self-care, which could inadvertently cause conflict within health-care relationships and create obstacles to their ability to comply with diabetes management recommendations. Of course, they might appear to comply but not actually comply. Culturally sensitive questions must be asked and health professionals need to become respectful, appreciative, and sensitive to peoples’ values, beliefs, and problem-solving strategies.

Moreover, people with diabetes’ views about social support influence their view about diabetes self-care. Kokanovic and Manderson (2006) interviewed 16 immigrant women living in Melbourne, Australia. Four participants were from each of four ethnic groups: Chinese, Greek, Indian, and Pacific Islander communities. Kokanovic and Manderson reported Chinese participants held health professionals in high regard in contrast to Greek participants, who, as a group, were the most critical of their doctors. Moreover, unlike Greek participants, Chinese participants emphasised that discussion about their diabetes only occurred between them and health professionals. It did not involve their family members because they want to protect their family from worry about their health status.

As previously emphasised, culture affects individuals’ values, attitudes and behaviour. Integrating a set of cultural behaviours and attitudes into services for immigrants from different cultures will help health professionals work effectively (Luna, 2005). If health professional lack cultural sensitivity, not only will it cause misunderstandings among health professionals and people with diabetes, it may also make it difficult for people with diabetes to access services. As a
consequence, if immigrants with T2DM do not manage their diabetes, the burden of the disease will increase on both the individuals themselves and society. Chinese populations are usually minority groups within the dominant culture. Culture has long been recognised as one of the most powerful factors influencing health beliefs and health-related behaviours (Spector, 2013). However, many studies related to Chinese immigrants with diabetes were conducted outside Australia. Thus, the findings may not be all relevant to the self-care experience of the Chinese immigrants in Australia. Hence, the purpose of the current study was to describe how a group of Chinese immigrants with T2DM living in Victoria, Australia manage diabetes self-care including the effort involved and the impact of the lifelong commitment to self-care on their lives, relationships and wellbeing.

**Chapter summary**

Chapter two presented a review of the literature commencing with an overview of diabetes, self-care, diabetes self-care, self-care experiences of immigrants and Chinese immigrants in Australia. The gap in the literature was outlined. Diabetes is the fastest growing chronic disease in the world and places a large burden on health-care systems and affected people. Total financial costs include carer costs, productivity losses, and health system costs as well as personal costs to the individual with diabetes, which are harder to quantify. T2DM is the most common type of diabetes and accounts for at least 85% of all types of diabetes. People with diabetes play the central role in determining their health outcomes but face many challenges adapting to and managing diabetes.
self-care. More importantly, T2DM cannot be cured at present, but it can be controlled, and self-care is essential to achieving good metabolic control. People with T2DM need to sustain diabetes self-care for a lifetime, which requires ongoing effort. Moreover, their culture beliefs, teaching and learning styles, health literacy level and many other variables influence their performance of diabetes self-care and the success of diabetes management educational interactions.

However, information about Chinese immigrants’ feelings about diabetes self-care practices is limited, especially those living in Australia. In order to contribute to the understanding of Chinese immigrants’ perception of the need for lifelong commitment to diabetes self-care and the impact of diabetes on their lifestyle, a descriptive study were undertaken and is described in the following chapter.
Chapter 3

Method
Chapter introduction

Chapter three provides an overview of the qualitative method used to collect data to describe and explain the personal meaning of self-care for a group of Chinese immigrants with type 2 diabetes (T2DM) living in Victoria, Australia. The chapter begins with a description of the sampling population and research setting, the study design, sampling process, data collection process and the method used to analyse the data. The second section describes the strategies used to ensure rigor in the study, and outlines the ethical considerations.

The concept of interest was diabetes self-care. It is essential to understand people with diabetes’ experiences of self-care in order to be able to personalise diabetes self-care relevant to Chinese immigrants living in Victoria, Australia. Interviews were likely to elicit the required information and were used as the main data collection method (Keegan, 2009; Marshall, Cardon, Poddar, & Fontenot, 2013; Silverman, 2011).

Sampling population and research setting

The researcher recruited participants in Melbourne, the State’s capital city where more than 70% of Victorians live (Live in Melbourne, 2013). The sampling population consisted of male and female Chinese immigrants with T2DM from Hong Kong, Mainland China, Malaysia, Singapore and Taiwan living in Melbourne metropolitan suburbs in Victoria, Australia. Data were collected from April 2010 to November 2010.
Study design

A descriptive study was conducted using individual face-to-face semi-structured interviews to collect the data (see Figure 3.1 on page 41). Qualitative descriptive design was the method of choice because the researcher desires straight description of a phenomenon about which little scientific knowledge is known and where data are too complex to be gathered using a survey method (Sandelowski, 2000). The descriptive method were used to uncover the study participants’ beliefs, values, and motivations that underlie their health behaviours in order to capture essential aspects of a phenomenon from their perspectives (Curry, Nembhard, & Bradley, 2009).

Sample selection

A combination of purposive sampling and snowball sampling was used to select participants from the five Chinese-speaking communities in Melbourne. Purposive sampling refers to a recruitment method where the sample is selected because they have experience of the topic under study (Leedy, 2013; Saks & Allsop, 2012). Purposive sampling is often used in qualitative research method because the type of sampling is most effective when studying a certain cultural domain with knowledgeable experts within. Purposive sampling groups participants such as individuals who have certain characteristics, detailed knowledge, or direct experience that provide the greatest insight into the phenomenon of interest, according to preselected criteria relevant to the research question (Pope & Mays, 1995; Tongco, 2007). For the current study, the characteristics of interest were Chinese immigrants having type 2 diabetes and performing diabetes self-care (see inclusion criteria on page 42).
Snowball sampling refers to a recruitment method that enables the researcher(s) to take advantage of the social networks of people who participate in the study (Noy, 2008; Sadler, Lee, Lim, & Fullerton, 2010). In this chain referral type of sampling, participants or informants use their social networks to refer the researcher to other people who could potentially participate in or contribute to the study. Snowball sampling is often used to find and recruit potential participants that are not easily accessible to researchers through other sampling strategies (Mack et al., 2005). Snowball sampling was used as well as purposive sampling in the current study because purposive sampling did not achieve the required number of participants. Possible reasons why purposive sampling was ineffective are discussed on page 44.
Figure 3.1: Flow chart depicting the study design/process. The study described the diabetes self-care experiences of a group of Chinese immigrants living in Victoria, Australia.
In addition, theoretical sampling refers to a method where extra participants are recruited based on concepts/themes that emerge during data analysis (Corbin & Strauss, 2008; Glaser & Strauss, 1967). Theoretical sampling is a responsive approach that makes sampling open and flexible to enable researchers to further explore relevant concepts/themes and their properties and dimensions.

Theoretical sampling was applied on one occasion in the current study: a wife who shared her perspectives of issues her husband (the participant) raised when he was interviewed (see pages 66, 67 and 125).

**Inclusion and exclusion criteria**

**Inclusion criteria**

People were included if they:

1) had type 2 diabetes for more than six months
2) were 30 years of age or older because most people with T2DM are older than age 30
3) were from a Chinese background: Hong Kong, Mainland China, Malaysia, Singapore, or Taiwan
4) could speak Mandarin or Cantonese because language is a major concept of being categorised in similar culture. Language is used to maintain and convey culture and culture ties, therefore language and culture cannot exist without each other. Moreover, Mandarin and Cantonese are the two types of most often spoken Chinese languages among Chinese people in Australia.
5) lived in Melbourne, Victoria, Australia.
Exclusion criteria

People were excluded if they:

1) had type 2 diabetes for less than six months
2) did not come from a Chinese background
3) could not speak Mandarin or Cantonese
4) were cognitively impaired (identified by the care giver in his/her family)
5) did not live in Melbourne, Victoria, Australia
6) did not consent to participate.

Recruitment strategies

Several practical methods were adopted to make initial contact with the potential participants. During the first two months of recruitment strategies included:

- Placing flyers, one in English (see Appendix A on page 168) and one in Traditional Chinese (see Appendix B on page 169) containing a brief description of the study and the researcher’s contact details in the centres of relevant institutions/organisations where Chinese immigrants regularly meet such as the Chinese Community Social Services Centre in Box Hill.
- Placing flyers on notice boards in Asian grocery stores, Deakin University, and a library in Box Hill that stocked Chinese books and a local Chinese newspaper section.
- Briefly introducing the study during the researcher’s social networking activities such as get-together parties for Chinese students, Taiwanese students, and international post-graduate students held in Melbourne.
- Discussing the study with key stakeholders, who could help the researcher gain access to the people she wished to interview, in Chinese
organisations such as the Taiwanese Association of Australia Melbourne, the Taipei Economic and Cultural Office in Melbourne, and the Buddhist Compassion Relief Tzu Chi Foundation in Melbourne.

- Providing the flyers, Plain Language Statement, Consent form and stamped return addressed envelopes to key stakeholders to give to potential participants in the organisations they serviced.
- Discussing the study with influential people in churches that provide services for Chinese Christians.
- Discussing the study with friends and other higher degree students and asking them to refer relevant people.
- Introducing the study while working as a volunteer in Chinese organisations such as the Taiwanese Association of Australia Melbourne.
- Negotiating with the Taiwanese Association of Australia Melbourne to have flyers included within a bimonthly Chinese magazine the Association distributed, which also published a two-page article about the study written by the researcher (see Appendix C on page170).
- Asking friends and housemates to distribute the flyers during relevant social activities.

However, very few people responded to this extensive recruitment strategy. The low response rate could be due to:

- The researcher did not offer any incentives or reimbursement to participate in the study which is common practice in the Chinese context.
• Placing, posting or mailing flyers are common but very passive recruitment methods. Therefore, these methods are less likely to arouse people’s interest in participating.

• The researcher relied on other people to distribute flyers but did not offer any incentives or reimbursement which is also preferred in the Chinese context to the people who helped the researcher recruit.

Several other recruiting methods were used to increase the response rate.

• Placing flyers in community health centres that provide services to immigrants from Asia such as the North Richmond Community Health Centre (NRCH). The centre has been providing quality community health services to the culturally and linguistically diverse community of North Richmond and to people across the City of Yarra, greater Melbourne and communities in rural and remote areas of Victoria.

• Describing the study and distributing flyers at a three-day Australian national multicultural health conference, *Diversity in Health 2010*, was held in Melbourne in June, 2010 (see the first orally presentation abstract of Appendix D on page 172). The conference was presented by the Centre for Culture, Ethnicity & Health. The target audience of the conference was practitioners, researchers and policy-makers who worked for health and wellbeing of Australian cultural diverse population.

Moreover, in connection with the conference, the researcher was invited to introduce the study during a 10-minute interview on two radio programs; one in Mandarin and one in Cantonese.
Another snowball strategy was asking for help from diabetes educators and the researcher’s landlord, who had migrated to Australia over 15 years ago to distribute the flyers.

Introducing the study to Mandarin-speaking visitors while working as a volunteer in the 2010 Melbourne Taiwan festival held in Melbourne on October 10th, 2010 (see Appendix E on page 177).

Nine Chinese immigrants with T2DM living in metropolitan Melbourne agreed to participate as a result of the revised recruitment process.

**Data collection process**

Data were collected using individual face-to-face semi-structured interviews. Demographic and diabetes-related information were collected via a short self-completed questionnaire (see Appendix F on page 179) to gain basic information about the nine study participants. Participants completed the questionnaire after giving consent and before commencing the interview.

Assessing the impact of cultural and contextual influences on diabetes self-care requires both conceptual and methodological approaches that take into account the uniqueness of different ethnic groups, in this case Chinese people (Malterud, 2001). The uniqueness is likely to affect how researchers collect the empirical data and interpret the findings. Thus, the data collection process used in the current study emphasised language and cultural matching between the interviewer and the participants. The researcher is a Taiwanese national living in Melbourne where she completed her doctoral study.
Development of the interview schedule and questionnaire

Development of the interview schedule

1. The interview questions were derived from the researcher’s personal experience, a review of the self-care literature, information presented on diabetes organisations’ websites such as the Australian Diabetes Educators Association (ADEA), Diabetes Australia-Victoria and the Australian Bureau of Statistics.

2. The researcher ensured she asked relevant information about diabetes self-care by consulting one diabetes educator working at Diabetes Australia-Victoria. To ensure cultural competency and that health care issues were relevant to Chinese immigrants, the researcher consulted one social worker working in the Centre for Culture, Ethnicity and Health in Melbourne. The diabetes educator and the social worker the researcher consulted helped to increase credibility because their expertise working with Chinese immigrants in Australia (Curry, Nembhard, & Bradley, 2009).

3. The researcher refined the interview questions after discussing the conversations with the diabetes educator, social worker and the outcome of two trial interviews (see description on next page) with her supervisors. Both of her supervisors are diabetes experts with extensive clinical experience and research into diabetes.

Information about self-care behaviours was collected such as:

- personal meaning of having T2DM
• health behaviours including using complementary and alternative medicines and therapies (CAM)
• experiences of accessing health care in an English-speaking environment
• perceptions of how diabetes self-care affects their quality of life.

Development of the questionnaire

The researcher used the same three steps presented in Development of the interview schedule on the previous page to develop the questionnaire. The questionnaire was designed to collect the following data:

• standard demographic data such as gender, year of migration and educational level
• diabetes-related information such as duration of diabetes, diabetes treatment, and presence of diabetes complications.

Practice interviews

The researcher practiced conducting interviews with two volunteers from the Taiwanese Association of Australia Melbourne, who were Chinese immigrants and had a family history of diabetes, to check her interview skills and clarify questions to make sure the interviews would flow smoothly and that relevant questions were included on the interview schedule. The two trial interviews showed the questions were likely to elicit the required information about self-care so the formal interviews went ahead as planned. The two practice interviews were not included in the study findings.

In addition, all the questions on the questionnaire used to collect demographic data and diabetes-related information were reviewed by the two Chinese immigrants with regard to their clarity and ease of acquiring answers from them. Therefore, the researcher made sure that the self-completed questionnaire was
easy to understand and complete and collected the relevant demographic and diabetes-related information.

**Interviews**

Individual face-to-face interviews are widely used and the most appropriate method to capture and describe personal experiences and perspectives on a given set of issues (DiCicco-Bloom & Crabtree, 2006). The researcher arranged a mutually convenient time and place in which to conduct the interviews. The participants to be interviewed were living in different suburbs, and mostly having a family and working, so many were not available on day time on weekdays unless they were retired. Therefore, the interviews were conducted in places that suited each participant. Most chosen locations were where they felt comfortable such as in a café. The timing of the interviews was made as flexible as possible to fit in with the working, social and family lives of the participants.

Moreover, the participants chose where to sit during the interviews. Thus, each participant was more likely to feel the interview was more like a conversation than an interview to help participants relax and open up. In Chinese culture, people often communicate when they are dining together rather than in an office or other practice places. When interviews were conducted in public places, the participants and the researcher sat in a private section and spoke quietly during the interviews to protect the participant’s privacy. In addition, the researcher reminded these participants they might be overheard.

The researcher created an atmosphere that made the participants feel comfortable enough to express their perspectives such as greeting the participants in Chinese
and encouraging participants to use their preferred language. After explaining the purpose of the study and obtaining the written consent, participants were asked to complete the three-page questionnaire to collect the demographic and diabetes-related data. The questionnaire took five to ten minutes to complete.

Each participant was then interviewed face-to-face using the semi-structured interview guide (see Appendix G on page 182) tested in the practice interviews. The interview guide was used to help maintain the focus on the study aims, but the questions were modified according to the flow of the conversation and to clarify or probe for further information as the interview proceeded.

Interview questions were open-ended. Participants were invited to describe how things were going with their diabetes at the moment. They were encouraged to describe their beliefs and perceptions about living with T2DM using probing and/or clarifying questions such as:

- ‘Tell me more about the things that affect your diabetes self-care experiences.’
- ‘Can you tell me more about that?’
- ‘How did you feel when that happened?’

The researcher did not ask participants their religion and financial status to prevent participants feeling they were being judged. Religious and financial issues are sensitive issues for some Chinese immigrants. The researcher learned about these sensitive cultural issues during the two practice interviews, which helped her avoid asking inappropriate questions and possibly affecting the responses.
Any unclear information shared was clarified as needed during the interview and the researcher also obtained participants’ verbal permission to contact them after the interview if further clarification was needed. See Figure 3.2 on next page for a step-by-step description of the interview process.

The researcher conducted all the interviews to avoid inter-interviewer variability. She used two digital recorders simultaneously to enhance the quality of the recordings and to ensure no data were lost if one recorder accidentally stopped or the batteries ran out.

Moreover, the researcher noted key words during the interviews and compiled field notes immediately after leaving the site where each interview was conducted. The field notes aimed to capture the researcher’s impression of participants’ non-verbal language such as facial expressions and gestures, and her overall impression of the interview to supplement and enrich the interview data. The researcher also kept a reflective journal to record her reflection on relevant issues.
Figure 3.2: Step-by-step-description of the interview process.

**Prior to each interview**
- Practiced interview techniques
- Discussed each new interview with supervisors to determine what questions should be explored in more detail based on analysis of the previous interview(s), i.e. constant comparative data analysis was used

**During the interview**
- The interviewee signed the consent form
- The researcher helped the participant complete the demographic questionnaire if necessary and clarified any unclear information when needed

**Immediately after the interview**
- The researcher noted her impressions about the interview and summarised the interview in field notes

**After each interview**
- Reported a summary of the interview to the supervisors
- Recorded reflective journal when relevant
- The interview was transcribed word-by-word and the Chinese transcripts were translated into English sentence-by-stence
- The translated data was checked for accuracy and could be understood by the supervisors
- Discussed each interview transcript with supervisors to identify emerging and new information
- Compared the emerging themes the researcher and supervisors identified independently
- Discussed the important issues that needed to be presented in the discussion chapter
- Noted any further issues that need to be explored further in next interview
After the interview, the researcher transcribed each interview for data analysis by using Olympus DSS Player Version 7.1.0 dictation software. The researcher listened to the recording and then then processed word-by-word into written text into a Microsoft Word document. Interviews conducted in Mandarin were transcribed verbatim into Chinese first and then translated sentence-by-sentence into English by the researcher so her English-speaking supervisors could read the information. The researcher also consulted with a language group, which was three Chinese immigrants with in-depth knowledge in interpreting from Chinese language to English, to clarify the implications of some participants’ remarks (more on page 58).

The researcher also telephoned participants when she needed to clarify any points or unclear sections on the digital recordings. The researcher’s supervisors independently analysed each English transcript and then met with the student to discuss the findings.

**Data analysis**

Descriptive statistics such as mean, sum and standard deviation were used to analyse the questionnaire data. Constant comparative analysis was used to analyse the interview data. The researcher coded the data on the hard copy transcripts to manipulate qualitative data on paper and write codes in pen. Then the researcher deidentified all data on each transcript and entered each transcript into NVivo Version 9. NVivo 9 enabled ongoing editing and on-screen coding, and sequential and thematic analysis to be undertaken, and helped the researcher manage emerging categories (Bazeley & Jackson, 2013; Johnston, 2006). Memos were taken to document the analytic ideas and insights in the themes.
throughout the analysis process. To increase the validity of coding, all the transcripts and coding scheme were reviewed by the researcher’s supervisors.

The researcher used a cyclic process which allowed the refining of categories along the way to allow the identification of pertinent subjects as they emerged. The following constant comparative data analysis process was undertaken (Boeije, 2002; Heath & Cowley, 2004; Morse et al., 2009):

**Step one**

*Becoming immersed in the data*

The researcher read and reread each transcript to get an overall sense of the interview. The researcher identified repeatedly occurring categories, look for commonalities and differences including in behaviours, reasons, attitudes, perspectives. The researcher’s field notes, reflective journal, and interview summaries were used to help organise the categories.

**Step two**

*Initial coding and memo writing*

The researcher read each transcript line-by-line to identify meaningful statements. These statements were marked, and coded into tentative ‘nodes’ in NVivo for the detection of emerging patterns. The researcher also wrote memos within the transcript to capture her creative flashes of insight, hunches, abstractions and emerging hypotheses when they occurred.
Step three

Grouping nodes under higher-order categories

The researcher analysed each datum: an experience, value, belief, or an observation and compared it with the data in the existing categories to determine similarities and differences between new data and previous information and to reveal categories. Nodes that were similar in content were subsequently grouped and classified into various categories based on commonly shared participants’ perspectives. Dissimilar data were placed into a new category or subcategory and used as comparators in subsequent data analysis. Constant comparative analysis enabled the researcher to explore the diversity of experience within the categories and identify the links among categories.

Step four

Managing through the new list of categories and sub-headings

Repetitious or very similar headings in NVivo were either removed or merged together to produce a final list of categories and sub-headings.

Step five

Enhancing the validity and reducing researcher bias

Coding themes and categories were not determined in advance. The researcher and her supervisors used a consultative and flexible approach to data analysis. Initially, they independently read through each full transcript in English and generated a rough category system for each transcript and identified dominant themes and categories. The researcher and the supervisors then discussed their data analysis and the broad categories they identified and made necessary
adjustments to reach consensus by constantly comparing emerging categories and refining codes.

**Step six**

*Repeating steps one to five for each of all interview transcripts*

The nodes were repeatedly reviewed to ensure consistency of the coding across all the transcripts.

**Step seven**

*Re-reading the transcripts after all transcripts were discussed to complete focused coding*

The researcher used several ways to compare data among interviews such as:

- Comparing self-care behaviours undertaken within a single interview
- Comparing interviews with each other
- Comparing between interviews from different groups such as commonalities and differences between males and females
- Phone follow-up (with the participants’ agreement).

**Step eight**

*Using coloured selection bars in NVivo to highlight the categories and sub-headings*

Colours were used to link emerging findings into categories.

**Step nine**

*Coding each transcript according to the list of categories, sub-headings and memos*

The researcher ensured each transcript was coded according to the list of categories and sub-headings after discussing all transcripts and memos with her supervisors. Transcripts were not given to participants to comment about,
however, the researcher contacted participants by telephone (with their agreement) after themes were defined to conform the accuracy with the participants.

**Step ten**

*Maintaining the validity of the categorising process*

The researcher discussed the category system with her supervisors to check the appropriateness or otherwise of the category system and made necessary adjustments.

During the whole data analysis process, the researcher referred back to the original digital recordings and the copies of the interview transcripts in Chinese and in English when clarification was needed. Furthermore, the researcher drew diagrams, tables, and models that enabled her to generate concepts and conceptualise models by displaying connections and relationships among categories of data.

**Methods used to demonstrate rigor in the study**

Five techniques were used to enhance the accuracy of data and the credibility of the researcher’s interpretation of the data, and thus the rigor of the study: reflexivity (Hollway, 2013; Keso, Lehtimäki, & Pietiläinen, 2009), audit trail (Carcary, 2009; Houghton, Casey, Shaw, & Murphy, 2013), data saturation, consulting with a language group, and peer debriefing (Houghton et al., 2013; Silverman, 2011).
**Reflexivity**: Since researcher bias cannot be totally eliminated in qualitative studies, the researcher kept a personal research diary in which she recorded her personal feelings, moods, attitudes, assumptions and reactions in each step of the data collection and analysis process. The researcher used a reflective diary and memoing to help maintain objectivity and reduce researcher bias. The researcher’s personal biases and assumptions are discussed in Chapter 5, as well as how her assumptions could have influenced the outcome of the study.

**Audit Trail**: The researcher used a digital recorder and recorded field notes to track the research and analysis conducted as she proceeded to document her thoughts during the data collection process, data analysis, and writing the findings.

**Data saturation**: Data collection continued until the researcher and the supervisors could reasonably anticipate what the next participant would say because no new information or insights arose from the previous two interviews. After discussing the seventh transcript, the researcher and her supervisors felt data saturation was achieved. However, two further interviews were conducted to be sure no new information emerged.

**Consulting with a language group**: Most Chinese people are taught to communicate in an indirect communication style to avoid dealing directly with conflict. They do not believe everything needs to be said; therefore, not everything is said, but rather, much can be implied. The communication style makes the unspoken meaning is at least as important as what is actually said. Thus, the researcher was extremely careful about the correctness of the Chinese-English translation of the transcripts. One method the researcher used
was to consult three Chinese immigrants, who had lived in Australia for over 10 years and each with over five years’ working experience, to clarify any other possible meanings behind the Chinese language some participants, who could not fluently express their experiences in English, used.

**Peer Debriefing:** The researcher’s supervisors reviewed and evaluated the researcher’s audit trail, field notes and analysis of transcripts and emerging findings at different critical times during the analytical process. Peer debriefing provided an opportunity for the researcher to reflect on other possible interpretations of the data, which enhanced the legitimacy of the final interpretation.

For example, two days after an interview was conducted, the researcher discussed the main information gained from the interview with her supervisors in a face-to-face meeting, by telephone, or email. The researcher could pick up the main points or mutual agreed categories while the interview was still fresh in her memory. These discussions also prepared the researcher for the next interview, as already indicated.

Additionally, Lincoln and Guba’s (1985) insights in trustworthiness in conducting naturalistic inquiry have been taken into account to ensure the merit of qualitative research in the study. They posit that trustworthiness of a research study is important to ensure rigor without sacrificing the relevance of the qualitative research and credibility is one of most important factors in establishing trustworthiness (Lincoln & Guba, 1985; Sinkovics & Ghauri, 2008).

Credibility, similar to internal validity in quantitative research, is referred to the ‘fit’ between the worldview that are described by the participants and the findings
presented by the researcher (Cohen & Crabtree, 2008; Shenton, 2004; Thomas & Magilvy, 2011). Besides applying the current researcher’s background, qualifications and experience, the current researcher also used some other strategies to provide trustworthiness and credibility in the study such as:

- following-up with phone calls with participants
- frequent debriefing sessions with supervisors
- checking with literature
- peer scrutiny of the research project — presented at research school and conferences.

According to Lincoln and Guba (1985) reflexivity, and peer debriefing can help to achieve credibility of the representation of research outcomes in the study (Silverman, 2011; Sinkovics & Ghauri, 2008). Moreover, other possible provisions such as adaption of appropriate, well recognized research methods, debriefing sessions between researcher and superiors, and description of background, qualifications and experience of the researcher could be used to demonstrate credibility (Shenton, 2004).

**Ethical considerations**

Approval to conduct the study was obtained from the Human Research Ethics Committee of Deakin University, Australia (see Appendix H on page 184). The study described the self-care perspectives of Chinese immigrants with T2DM living in Australia and was independent of any care or treatment relationship participants had with their care providers. Moreover, the researcher did not have any relationship with any potential participant that could impair participants’ free and voluntary consent to participate the study.
The main ethical issues were:

**Informed consent**

The researcher provided a plain language statement in English (see Appendix I on page 185) or Traditional Chinese (see Appendix J on page 189), and explained the study verbally in Mandarin or English according to the potential participant’s stated preference.

**Individual consent form**

The following items were explained to each eligible participant before they signed the consent form:

- purpose of the interview
- type of questions
- confidentiality of the information.

The potential participants then were asked to read the plain language statement, given time to ask questions and to discuss participation with relevant other people before they signed the informed consent, in English (see Appendix K on page 193) or Traditional Chinese (see Appendix L on page 194). Written informed consent was obtained from all participants before the interviews are undertaken.

**Individual revocation of consent form**

The researcher explained participants were free to withdraw from the study at any time until the interview data were analysed. Participants were informed if they did withdraw, any information they provided would not be used. The revocation of consent form was available in English (see Appendix M on page 195) or in Traditional Chinese (see Appendix N on page 196).
Organisational consent form

The researcher gained permission from each organisation before placing or posting flyers in the organisation and mailed the flyer with their magazines to their members. The form (see Appendix O on page 197) was provided when a written informed consent was required.

Privacy

The researcher was responsible for collecting data so she had access to individual participants’ data. She applied appropriated methods to ensure the anonymity of the participants, including substituting references for names of participants and pseudonyms for other names used in the interviews. Her supervisors were able to read the deidentified transcripts. All information reported was aggregated and only themes or categories (group data) is reported in the thesis and will be published in non-identifiable form.

Data security

Paper copies such as written consents and questionnaires were stored in locked filing cabinets in the researcher’s office in Deakin University. Data in electronic form such as digital record files were kept on two password protected computers accessible only to the researcher. The information about participants and data from the study is securely stored and will be kept for the mandatory six years after completing the study and then destroyed or deleted according to Deakin University policy.
Chapter summary

Chapter three described the design of the descriptive study. The recruiting strategies, data collection and data analysis process were described. The strategies used to ensure rigor and ethical issues were discussed. The results of the questionnaires and interviews data are presented in next chapter.
Chapter 4

Findings
Chapter introduction

Chapter four reports the study findings about how a group of Chinese immigrants with T2DM (T2DM) living in Victoria, Australia managed diabetes self-care including the effort involved to and the impact of the lifelong commitment to self-care on their lives and wellbeing. One core theme with three associated subthemes emerged. The core theme was rebuilding own liveable balance. The three subthemes were:

- living with uncertainty
- negotiating and compromising
- integrating previous experience.

The findings were the basis for describing the adaptation process the participants used to integrate diabetes and self-care into their lives. Moreover, the results of recruitment are briefly described, the demographic and diabetes-related data are outlined, and one relative’s perspective is presented following by a chapter summary.

The results of applying recruitment strategies

The researcher applied the recruitment strategies described in Chapter 3 and 17 Chinese immigrants agreed to be contacted to receive further information about the study. The researcher explained the study and screened the suitability of the potential participants according to the inclusion and exclusion criteria of the study. Nine respondents met and eight did not meet the inclusion criteria. The later were excluded (see Table 4.1 on the next page).
Table 4.1: Reasons for excluding people from the study and number of respondents excluded.

<table>
<thead>
<tr>
<th>Reasons for exclusion from the study</th>
<th>Number of respondents excluded (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>had developed early stage of dementia</td>
<td>1</td>
</tr>
<tr>
<td>had been hospitalised for examination of the type of cancer</td>
<td>1</td>
</tr>
<tr>
<td>were pre-diabetes</td>
<td>2</td>
</tr>
<tr>
<td>was gestational diabetes</td>
<td>1</td>
</tr>
<tr>
<td>asked to be contacted three to six months later because they were going back their home country, but then when the time the researcher called again, the researcher lost contact with them after several phone calls</td>
<td>2</td>
</tr>
<tr>
<td>asked to be interviewed only when the researcher really could not find any other participants else</td>
<td>1</td>
</tr>
</tbody>
</table>

Therefore, nine Chinese immigrants from each of the four Chinese-speaking groups (Hong Kong, Mainland China, Singapore, and Taiwan) met the criteria and were included in the study. The majority of participants were recruited using snowball sampling: six of the nine participants. One wife participated during the interview but was not specifically recruited.
Ethical principles require researchers to be mindful of privacy when conducting interviews. Ideally, interviews should be conducted in private. However, the eight interviews for the current study occurred in public places such as a café at the participant’s request because in Chinese culture, people often communicate when they are dining together. Participants selected where they sat during the interview. One participant chose to be interviewed at home because of language and transportation difficulties. Eight interviews were conducted in Mandarin and one in English.

**Description of the participants**

The participants were nine Chinese immigrants with T2DM living in Melbourne, Victoria. Eight participants were interviewed individually and one participant and his wife were interviewed together. The wife signed the consent form to participate in the interview with her husband. She provided some information regarding her concerns about her husband’s diabetes self-care.

All participants lived in different Melbourne suburbs, came from various Chinese countries with a Chinese background, and were first generation migrants in their families. Each interview took between 60 and 120 minutes. The mean duration of the interviews was one and a half hours.

Five participants were female and four were male. Most participants were over 60 years of age: range 37-70 years: median 61, mean 57±SD 11.6. Most participants were originally from Taiwan, two were from the People’s Republic of China, one from Hong Kong and one from Singapore. Thus, most major Chinese countries were represented and most of the participants spoke Mandarin.
All participants had lived in Australia for more than 10 years, and two for over 40 years.

All participants were married and lived with their spouses; two had young children. Four participants worked and five participants were non-working: two were retired. All participants had completed high school or higher education. The two youngest participants, aged 37 and 38 years had Master’s degrees. The other four participants attended university.

Participants had lived with T2DM between two and ten years; which means most were diagnosed approximately 10 years after they migrated to Australia. Eight were diagnosed with T2DM in Australia and one was diagnosed while she was on holidays in her home country. One participant was previously diagnosed with T2DM and had practiced self-care for at least eight years. She was told the type of diabetes she has is latent autoimmune diabetes in adults (LADA) two years ago.

All the participants used diet management as one method to control their blood glucose levels (BGLs). Seven participants were also using glucose lowering medicine (GLM), but one participant said she only needed the tablets when she anticipated having dessert after a western meal.

One participant was prescribed GLM two to three years after she was diagnosed with T2DM. She commenced insulin during her first pregnancy in 2007 and continued using insulin after the baby was born because she planned to have a second child. She was pregnant with her second child at the time the interview was conducted. Self-reported diabetes-related characteristics of the nine participants are shown in Table 4.2. on next page.
**Table 4.2:** Self-reported diabetes-related characteristics of the nine study participants.

<table>
<thead>
<tr>
<th>Diabetes-related characteristics</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes duration (in years)</td>
<td></td>
</tr>
<tr>
<td>1-3</td>
<td>2</td>
</tr>
<tr>
<td>4-6</td>
<td>1</td>
</tr>
<tr>
<td>7-9</td>
<td>1</td>
</tr>
<tr>
<td>9-12</td>
<td>5</td>
</tr>
<tr>
<td>Self-reported diabetes treatments</td>
<td></td>
</tr>
<tr>
<td>Diet + regular physical activity</td>
<td>1</td>
</tr>
<tr>
<td>Diet + GLM</td>
<td>3</td>
</tr>
<tr>
<td>Diet + GLM + regular physical activity</td>
<td>1</td>
</tr>
<tr>
<td>Diet + GLM + CAM</td>
<td>1</td>
</tr>
<tr>
<td>Diet + GLM + regular physical activity + CAM</td>
<td>2</td>
</tr>
<tr>
<td>Diet + Insulin injection</td>
<td>1</td>
</tr>
<tr>
<td>Participated in small group diabetes education programs in Australia</td>
<td>5</td>
</tr>
<tr>
<td>Consulted a diabetes educator</td>
<td>3</td>
</tr>
<tr>
<td>Attended regular diabetes health check by doctors</td>
<td>8</td>
</tr>
<tr>
<td>No diabetes-related long-term complications</td>
<td>8</td>
</tr>
<tr>
<td>Family history of T2DM</td>
<td>5</td>
</tr>
</tbody>
</table>

GLM: Glucose lowering medicines.

CAM: Complementary and alternative medicines and therapies.
As well as undertaking appropriate self-care, eight participants attended regular health and diabetes complication screening checks to detect complications early (see Table 4.3). Importantly, five of the nine participants had not had their feet checked, and six never had an annual eye check for diabetes complication prevention.

Table 4.3: Self-reported health checks. One participant reported he did not attended regular diabetes health checks so he did not provide related information.

<table>
<thead>
<tr>
<th>Health Check</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood glucose and/or HbA1c</td>
<td>8</td>
</tr>
<tr>
<td>Cardiovascular system (such as blood pressure and Lipids)</td>
<td>8</td>
</tr>
<tr>
<td>Kidney function</td>
<td>3</td>
</tr>
<tr>
<td>(not sure)</td>
<td></td>
</tr>
<tr>
<td>Feet</td>
<td>4</td>
</tr>
<tr>
<td>Eyes</td>
<td>5</td>
</tr>
</tbody>
</table>

Only two participants reported they had renal complication checks and another participant said her annual renal check was for a renal problem unrelated to diabetes. Five participants did not know whether they have renal health checks because they did not have enough information to know whether their doctors actually checked their renal function annually.

Participants underwent an inter-related circular process to achieve or maintain a state of balance (see Figure 4.1 on the next page). The process, the core theme emerged from the data, was labelled rebuilding own liveable balance. The circular process and the strategies participants used to cope and live with T2DM were influenced by their beliefs and attitudes (see Figure 4.2 on page 72).
For example, the circle of rebuilding own liveable balance was influenced by the following three cultural beliefs:

- Letting nature take its course: developing diabetes, life and death.
- Maintaining good mental health.
- Pursuing good fortune and avoiding bad luck.

![Diagram](image)

**Figure 4.1:** The circle of rebuilding own liveable balance, which represents an adaptation process a group of Chinese immigrants with T2DM living in Victoria, Australia went through to accept and live with T2DM.

In the circular process, the subthemes: living with uncertainty, negotiating and compromising, and integrating previous experience, represent the three interconnected subprocesses involved.
CAM: Complementary and alternative medicines and therapies.

Figure 4.2: The inter-related relationship among the core theme, three subthemes, and combination of participants’ beliefs and strategies participants applied to their diabetes self-care. The core adaptive process is a circle of rebuilding own liveable balance depicted by the Yin-Yang symbol. The Eight Trigrams or Bagua (Pa Kua), a set of symbolic signs surrounding the Yin-Yang symbol, are representations of naturally occurring processes—movement and change (Nations Online, 2013) and represent various ways of achieving balance.
For the purpose of clarity, the main theme, each subtheme and its related beliefs, attitudes and strategies are presented separately in the following sections. Deidentified direct quotes extracted from the data are identified using a code name and their gender for the participant.

**Rebuilding own liveable balance**

Rebuilding own liveable balance was defined as a process of discovering and attempting to balance diabetes self-care and daily life in the internal and external environment. Key issues emerging from the participants’ experiences reflect their endeavours to balance their blood glucose levels and life. These endeavours included how they adjusted to their diabetes management regimen, which was influenced by their personal philosophies and sense of what constituted life before they were diagnosed with T2DM.

Participants described how their lives changed when they were diagnosed with T2DM. Life with T2DM is complex and impacted in various ways on participants’ daily lives. They struggled to reconstruct their lives and cope with the increasing demands associated with and the intrusion of diabetes in their lives and relationships.

**Balancing the constitution**

Stabilising blood glucose to control diabetes is the most important goal of diabetes management from a medical view. All nine participants followed the Western medical care their doctors recommended to control blood glucose. In addition, they sought balance using various other strategies they thought would
benefit their diabetes management. The strategies used were often based on their body constitution, beliefs and culture.

For example, some participants believed Traditional Chinese medicine (TCM) helped them achieve a balanced state of overall health. One participant claimed TCM regulated his internal hormone secretions and improved his whole body constitution and regained/maintained balance. He used four scientifically processed Chinese herbal capsules prescribed by his Chinese medical doctor in his home country twice per day, in addition to all his prescribed western medicines. He tolerated the burden of taking eight more capsules every day and seeing a Chinese medical doctor each time he visited his home country to rebuild his overall liveable balance. The following quote illustrates his concern about regulating his body balance:

*Traditional Chinese medicine can regulate your internal hormonal secretion to modulate [treat] every disease in your whole body. It could maximise the result of diabetes control such as not only control your diabetes, but also keep your present or potential blood pressure problem or heart disease controlled in a certain state. So you balance your diabetes and health by diet and exercise. Then you use traditional Chinese medicine to stabilise your health, to regulate it into a balance state.* (Ch5mc—male)

All participants changed their dietary habits when they were diagnosed with diabetes. They tried to eat healthy food and choose food that suited their constitution. One participant, who self-monitored his blood glucose every morning, said:
There may be a relation with the individual’s constitution. Sometimes what I ate yesterday, I thought it’s quite healthy, quite nutritional, and quite normal thing. But my blood glucose is still very high next day. Sometimes what I ate yesterday might not be normal, but it [blood glucose] is normal when I check it today. (Ch8mt—male)

Thus, participants defined a balanced diet as a diet that could help control their blood glucose by balancing their individual constitution. The diet involved mixing different flavours and hot/cold foods according to the individual’s needs (Yin-Yang balance).

Moreover, all participants stated they paid great attention to their diet. They also adjusted their food choices or reduced the amount of food they ate to balance their diet and hot/cold foods according to changes in their blood glucose. For example:

*I am paying attention to what foods I eat every day. If the level of my blood glucose becomes higher I would recall what I had eaten yesterday. Then make a balance by trying hard not to eat the food I ate yesterday in the future.* (Ch8mt—male)

Participants’ descriptions of a balanced diet for controlling blood glucose included eating more vegetables than red meat, restricting intake of rice, sweet foods and greasy foods; eating smaller amounts such as only 80 per cent of what they are capable of eating, and having meals at regular times every day. One participant said:
Just eat until you are 80% full, that means you must not eat to being too full [don’t eat too much]. Eat more times but smaller amounts.

(Ch5mc—male)

Most participants believed eating specific foods in different seasons according to their constitution would supply essential nutrients, promote health and prevent illness. For instance, during the summer, when the temperature is high, Chinese people consume ‘Yin’ (cold) food such as mung beans to reduce pathogenic internal fire and help balance their internal fire with the high temperature outside. One participant said:

It [eating mung beans] gets rid of the heat from the body [reduces pathogenic fire].

(Ch8mt—male)

Most participants did not know how Chinese nutritional therapies actually balanced the body’s constitution: they just followed cultural or word-of-mouth information from other people. Uncontrolled diabetes is considered to be a ‘hot state’ caused by an excess of Yang (Chan, 1995). Hence, people with diabetes may be advised by their relatives and/or friends to avoid ‘Yang’ foods such as alcohol, meat, fries and spices and to consume ‘Yin’ foods such as vegetables and mung beans. Four participants had tried or heard that drinking the boiled water mung beans had been soaked in helped control their blood glucose level. For example:

Recently, a friend of mine told me a folk prescription: drink the boiled water mung beans had been soaked in. She said her classmate’s husband [who had type 2 diabetes] was cured by doing the method for two months.

(Ch1ft—female)
All nine participants tried foods commonly regarded as ‘good for diabetes’ according to their cultural health-related beliefs, even though most participants could not describe the exact theory behind most of the food choices they made. Some participants ate bitter melon, another Chinese nutritional therapy, to regulate their blood glucose. Bitter melon is ‘Yin’ (cold) food with some scientific evidence to support its blood glucose lowering properties. One woman said:

*The bitter melon is very good for diabetes too. So at home, I often eat the bitter melon. Whether fry it, or make it into juice. I also drink the teas made of bitter melons.* (Ch9ft—female)

All participants had other health and life issues to consider besides diabetes, for example, arthritis and taking prescribed medicine. They constantly assessed and weighed the pros and cons of each life/diabetes issue they encountered, and the coping strategies they used.

**Balancing pros and cons**

The researcher perceived the pros or advantages described by the participants as ‘Yang’ forces or positive energy; the cons or disadvantages that described by the participants ‘Yin’ forces or negative energy. Participants’ decision to undertake diabetes self-care activities enabled them to develop their own way of living with diabetes and balance the pros and cons.

The life balance participants achieved encompassed undertaking self-care tasks and listened to advice, which they considered based on their personal situations, capability, resources, and goals and their beliefs about what kind of life suited
them. The findings suggest participants adjusted their self-care to achieve Yin and Yang balance, but the adjustments they made might not be the same as health professionals (HPs) recommend or expect. One man said:

*Now I do what I need to do well such as training [exercise] myself first and take medicine as prescribed once a day. It [my diabetes management] would be fine as long as my blood glucose level is controlled at a certain level. It is impossible for me to be that strict way as you [health professionals] think a person with diabetes should be — don’t eat certain food at all or have to follow some other requirements.*  (Ch3mc—male)

All participants believed people are different and think differently and different thinking leads to different behaviours. Participants’ self-care performance depended on their individual values; therefore, each participant rebuilt their life balance differently to suit their personal situations. The following quote reveals that individualised self-care is important because each person’s condition is different:

*I have diabetes for so long. I think it [diabetes self-care] all depends on your own feelings no matter what. …Now everything [about diabetes self-care] all requires you to know your own feelings [body cues] by yourself. In fact anything isn’t a hundred per cent. It is all about what you feel. Because each person is not 100% the same, each person needs to adjust by themself.* (Ch8mt—male)

The following section presents three beliefs of participants associated with rebuilding liveable balance. These three beliefs were all related to participants’ perceptions about developing T2DM, life and death.
Beliefs associated with rebuilding liveable balance: developing diabetes, life and death

Participants shared their views about developing diabetes, life and death when they discussed what it was like having T2DM. Participants believed it is important to ‘let nature take its course,’ and ‘maintaining good mental health.’ Moreover, most participants felt ‘pursuing good fortune and avoiding bad luck’ was essential. These quotes reflect common Chinese cultural beliefs. One of the important roles these beliefs play in an individual’s life is helping them deal with situations such as developing diabetes, life and death. Thus, cultural beliefs play an important role in individual’s life course and fortune.

Letting nature take its course

Participants believed there are supreme beings who are powerful and control all the things and events that happen to them. Most participants implied that the ‘law of nature’ controls everything in the universe. Thus, participants felt letting nature take its course and following the law of nature was important to balancing the physical and sociocultural environment in which they lived, to enable them to live in harmony with the environment. The following three quotations illustrate participants’ different perspectives on the fact that death is inevitable according to the law of nature:

It is impossible that I must be alive forever. Otherwise, I will violate the law of nature. (Ch3mc—male)
All participants knew they would still die even if they did not have T2DM. One man said:

_People will die eventually. It is impossible that someone will not die. Even the healthiest person in the world will die too_ [laughs]. (Ch5mc—male)

Another participant felt death was a natural way of making space for the next generation. She said:

_You shouldn’t think that I want to really live for hundreds years because what could our next generation do when they are born if you don’t leave the world? This earth will explode. So I think this [death] is a very natural matter. You need to leave [die] when your time is up._ (Ch1ft—female)

The law of nature is a generalisation based on Chinese people’s empirical observation of natural phenomena over thousands of years (Fan, 2000; Kaltenmark, 1969; Yuan & Fengjun, 2013). Participants believed natural phenomena have their own rhythms and most participants used the rhythms of nature to describe the series of changes from birth to old age to sickness to death. One lady stated:

_I was diagnosed with it [T2DM] so I just live with it. Everyone will be sick anyway. The matter of birth, aging, sickness and death of life is very natural and normal._ (Ch1ft—female)

In the previous quote, the lady used the old Chinese saying: ‘The matter of birth, aging, sickness and death of life is very natural and normal,’ to explain that, in the same way most participants believed sickness and death are part of the natural
life cycle, T2DM is part of some people’s natural life cycle, despite the fact that heredity and not taking good care of oneself plays a role in the development of T2DM. The lady went to describe T2DM as being like a car that broke down and diabetes management as similar to maintaining and repairing the car:

A human being is just like a car, which will break down after being used for a long time. And some things cannot be repaired when they are broken. You need to think having diabetes with this kind of attitude. ...After you use your body for a long time, it [your body/health] would be broken down too and also require maintenance and repair. (Ch1ft—female)

‘Letting nature take its course’ also played a crucial role in people’s decision-making and health-seeking behaviours. Several participants expressed their desire to live a normal life and to die a natural death. For example:

I hope I can ‘die a natural death,’ not die due to diabetes complications. I do not want to end up like being amputated, and have to lie on a bed. Although I have diabetes, I still hope I die because my time’s up [die]. (Ch4ft—female)

As stated, participants knew death was inevitable; one reason they undertook diabetes self-care was to have ‘a better way of dying.’ Participants wanted to die in their old age without suffering, which they believed was the best way to die. They did not want to suffer and die before their time from diabetes complications. The following quote shows how participants’ wish for a better dying facilitated their self-care:

This disease [diabetes] is incurable but at least you can achieve a goal of getting some relief. You can decrease the threat to your health, and won’t
end up lying on the bed, not able to move.  …You can live a bit happier, a bit more comfortable if you control your diabetes.  (Ch5mc—male)

All participants felt they had a responsibility to do their best to take care of themselves even though they could not against the law of nature.  They believed they should do their best to maintain life balance and health by practicing self-care, which was their duty.

**Maintaining good mental health**

Good mental health included dealing with daily events with an open and positive attitude, being resilient and adopting healthy coping strategies to deal with life crisis such as diabetes and its complications.  Most participants repeatedly said it was important to try not to worry about having diabetes.  They felt managing the psychological stress associated with diabetes was the first self-care priority.

A typical description of diabetes self-care was:

*First of all, the psychological pressure [burden of having T2DM] should be put down.  If you don’t put down the psychological pressure, it will cause problems itself.  …If later on your condition is not good, then just take some medication to control it.  As for exercise and the other [diet control] is just a method of trying to lengthen your life.*  (Ch5mc—male)

Participants knew T2DM is incurable but thought people with T2DM should not create tension for themselves and become pessimistic.  They emphasised the importance of maintaining good mental health and being able to live their life at their own pace and to enjoy life.  One participant said:
People with type 2 diabetes need to face diabetes with good mental health. Do not scare yourself. ...If you’re too nervous and put too much emphasis on this [having diabetes], you would mess up your own pace of daily life. (Ch1ft—female)

Participants knew if their worries increased their diabetes and/or other health problems would be aggravated and lead to life and blood glucose imbalances. This is one reason that all participants took action to manage their diabetes instead of being pessimistic and worrying about their diabetes, as the following quotes illustrates:

What’s the point to sit there and worry [about my diabetes]? You go and experiment what you can eat. I can eat this if that is all right, I eat that. [If that is all right] okay, I won’t eat that. You just have to remember what you can eat and what you can’t eat. (Ch2ms—male)

Participants believed that, if people with T2DM are afraid of T2DM, it could affect their ability to manage their T2DM. They emphasised on good mental health rather than on the risk of severe complications and the imperative of strict adherence to self-care recommendations. All participants felt catastrophic instruction of T2DM could cause them considerable anxiety. One participant pointed out:

I read a report, it said that people who committed suicide by jumping out of the building, were not killed because of the fall. They did not die at the time they reached the ground. But they already scared themself to death before reaching the ground. (Ch3mc—male)
The participant used the suicide example to emphasise the importance of good mental health when dealing with a crisis. He said that, in many cases the individual frightens themselves rather than the crisis itself causing the fear. He felt fear could cloud the individual’s judgement and coping, and the way people see or think about things can be unreasonable.

Therefore, participants believed that once they coped with the psychological pressure by having T2DM, T2DM would ‘not be that serious a matter.’ Moreover, participants’ perceptions of their T2DM were mainly affected by the associated symptoms and the degree to which it disturbed their daily lives rather than T2DM per se. Thus, their view of diabetes is relative and depends on how they compare T2DM with other things.

Most participants thought their diabetes was ‘not that serious’ mainly because the symptoms of T2DM were not always obvious compared to other diseases. T2DM symptoms such as increased thirst and hunger, frequent urination, weight loss, fatigue, and blurred vision, develop very slowly or may not be present at all, so called ‘silent’ diabetes. Thus, some participants felt having T2DM was not as serious as having cancer. One participant said:

'It's no big deal to have this disease [T2DM]. Truly speaking, so long as I do not get a cancer, or something else, then it doesn’t matter. Everybody will die anyway. ...Don’t take it [having T2DM] too seriously.' (Ch5mc—male)

Another participants also said ‘it [T2DM] is no big deal.’ For example:

'Diabetes is not a disease actually. It is because that your diet habits or living habits are not good, or your genetic factor is not good. This is why
you get diabetes. It [having T2DM] is no big deal either, no need to be too anxious. (Ch1ft—female)

One woman felt she was lucky compared to people with type 1 diabetes (T1DM) who required insulin injections and needed to test their blood glucose multiple times per day for the rest of their lives. The woman only needed insulin injections and frequent blood glucose self-monitoring during her pregnancy and when she was breast feeding. She said:

_I am already quite lucky compared to others [people with T1DM]. So I shouldn’t complain about it [the inconvenience caused by insulin injection]. And I need it [insulin injection] just because of giving birth to the child. That means, logically, after giving birth to this baby and finishing breast-feeding, I am able to, theoretically speaking, switch back to [oral] medicines, and do not need inject insulin again._ (Ch4ft—female)

Living with T2DM was a challenge for most participants but they also regarded it as an opportunity to develop a healthier lifestyle. Some participants suggested the diagnosis of T2DM was a turning point. They thought if they accepted they have diabetes, make changes and move on after they accept the diagnosis and undertake appropriate self-care to control blood glucose and lipids, they could live a healthier lifestyle than before the diagnosis. One participant said:

_Because of your diabetes, your diet, your life actually will all be [healthier]. You’ll tell yourself: ‘I need to be healthier.’ It means you will not ‘burn’ your body [exhausted] and not waste yourself either. Instead, you will push yourself towards a good direction. And you will not let yourself to do some things that you shouldn’t do either._ (Ch4ft—female)
Religion also helped participants maintain a positive and hopeful attitude. Five participants stated their Christian belief helped them adapt to life in Australia and to having diabetes. One participant said:

_I think the faith is very helpful to us. It helps me keep a very good mental health. Anything happens and I feel grateful very much. ...It is just like what has been said in the Bible: ‘I can do all things through Christ who strengthens me.’ I have no damage and lack nothing, including my ability, energy, health, family, income, all aspects of mine. I have felt comfortable and happy to achieve what I am today. ...I have been totally living by my faith. So I think I wouldn’t become a person who will feel it is very serious once he is sick._ (Ch3mc—male)

Interestingly, although only some participants said they believed good fortune and bad luck both influenced their diabetes self-care, the other participants also pursued good fortune and avoided bad luck subconsciously.

**Pursuing good fortune and avoiding bad luck**

Fortune refers to destiny or fate or whatever happens by chance and can be good or bad luck (Rueyling, 2011; Smith, 1991). All participants avoided saying the words ‘die or death’ because such words are inauspicious and can lead to uncomfortable feelings and misfortune. Instead, participants used synonyms for death such as ‘leave,’ ‘when time’s up,’ or referred to a Chinese proverb: ‘dying a natural death.’

Participants used several self-care strategies to pursue good fortune and avoid bad luck including obeying taboos such as avoiding visiting the hospital or taking medicines during Chinese New Year, not obeying taboos is regarded as
inauspicious. For example, one participant who had lived with T2DM for 10 years emphasised the fact that she complied with her general practitioner’s diabetes self-care recommendations by taking her glucose lowering medicines most of the time. However, she did not take her medicines on the first day of Chinese New Year to ensure an auspicious beginning to the new year. She said:

*Taking glucose lowering medicines daily for me is very natural. I am very obedient. During a whole year, 365 days, I only don’t take medicines on the first day of Chinese Lunar New Year. Because [Chinese] people say don’t take medicines on the first day of the Lunar New Year. Otherwise, I would take my medicines every day. We should always seek for an auspicious beginning in a New Year.*  (Ch1ft—female)

In contrast, four participants thought they should take their medicines as prescribed, even on Chinese New Year. Two of the four took their medicines and risked bad luck because most people eat a lot more than usual during Chinese New Year and need medicines to control their blood glucose and reduce their risk of developing complications. One participant said:

*Because the first day of Chinese New Year is the time that you will be extravagant in eating and drinking. Generally speaking, you must take it [diabetic tablet] when you have a bountiful feast [nosh-up].*  (Ch9ft—female)

The other two of the four participants were Christians and argued that taking medicines on the first day of the Chinese New Year would not bring bad luck in the coming year and regarded the custom as superstition. One participant felt that it would be bad luck if her diabetes became worse because she did not take medicines during Chinese New Year. She said:
Well, this [not taking medicine] is superstition. Maybe a lot of friends would behave like this way. But if you happen to be very uncomfortable on that day, your condition is very serious, if you don’t go to see a doctor immediately, but wait for a bit later, your condition get more serious, that is bad luck!

(Ch7fh—female)

The participant went on to describe how she placed a higher priority on feeling well and being comfortable than on superstition. She said:

My view is, if you need to recover quickly, want to be comfortable quicker, I will go to see a doctor at once; no matter if it is the first day or the 15th day of the Chinese New Year. (Ch7fh—female)

One participant who was pregnant with her second child had taken glucose lowering medicines for several years but started insulin during her first pregnancy three years previously. She described how she weighed the pros and cons of taking medicine on the first day of Chinese New Year considering her pregnancy. She said:

It [Obeying taboos] depends on what is most important at the moment according to your values. Perhaps if I was not pregnant now, I would also think avoiding bad luck was more important, then I would not take my medicine for one day, it doesn't matter. But I am pregnant. Now I think my child is the most important, and I will put my child in the first priority.

(Ch4ft—female)

One participant said she liked to eat Zongzi [Chinese food made of glutinous rice stuffed with various fillings] but controlled the amount of Zongzi she ate to control her diabetes because she did not want to encounter bad luck [develop diabetes complications]:

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If you do not control [your diabetes], you would be out of luck [put yourself in bad luck]. It is not that he [doctor] objects to your culture [custom], but it is the condition of your body. We cannot eat those made of glutinous rice. Like ‘Zongzi,’ we shall not eat, need to be careful. I like to eat those things, but for my own health, should be careful. (Ch6ft—female)

Some participants pursued good fortune by practicing religious rituals. They believed God would arrange their life and free them from misfortune if they put themselves totally in God’s hands. Thus, their religious faith helped them feel deeply grateful even when they needed to deal with unanticipated events such as accidents or illness. They obtained comfort, support, and hope from their religion when they encountered life disasters. They emphasised believing in God could protect them from harm and give them strength in their difficulties. Worshipping God would be a way of pursuing good fortune and avoiding bad luck. For example, one participant prayed for a year of good luck by visiting a temple to pray and burn incense offerings to the Gods and Goddess in the temple on the first day of Chinese New Year.

Another Christian participant said:

Of course, even if I will not be helped absolutely, at least I know by depending on these things [faith], the worst situation wouldn’t happen to me. Even if the worst situation really happens to me, according to my faith, there are God’s kindnesses in His arrangements. Even if He is going to kill me, then He must have His arrangements for me too. (Ch3mc—male)
Strategy participants used to rebuild own liveable balance: Doing one’s level best to cope with diabetes and leaving the rest to fate

Participants understood they could not control their future because there is a time for everything and ‘things that are meant to happen will happen.’ However, an old Chinese saying: ‘Do one’s level best and leave the rest to fate’ enlightens people to accept things as they are when unexpected things happen and to try their best to fulfil their duty and be positive or optimistic. One participant said:

*There is time for bloom and there is time for flower falls. There is time to be born and there is time to die, so it would be enough that you do well on what you need to do.* (Ch3mc—male)

Participants undertook diabetes self-care because they realised they had a responsibility to take care of themselves. They believed as long as they did their best to manage their diabetes by adhering to their medicine regimen, they were fulfilling their duty. Many coping strategies participants applied to manage their diabetes were related to doing what they could before letting the mercy of nature to take its course.

A participant described life as a play on which the curtain will drop when the time comes. She said she was not afraid of her diabetes or death but she needed to do her best to perform her life role. She said:

*Life is like a play on the stage. When the performing is finished, you need to get off the stage, and need to lower the curtain. So what is there to be afraid of? You do your best as much as possible to perform your role well while you are performing this play.* (Ch1ft—female)
Participants’ three beliefs and one strategy associated with their rebuilding liveable balance influenced their achieving/maintaining balance, and certainly influenced the three subthemes the core theme encompassed. The following section describes the three subthemes and associated beliefs, attitudes, and coping strategies participants used.

**Living with uncertainty**

All participants experienced or were told diabetes was incurable and they could develop complications. Consequently they felt they were facing an uncertain future. One cause of uncertainty was that fact that people cannot actually see their blood glucose. Participants thought, even if they felt healthy, their blood glucose could change and cause complications in the future. One participant said:

*I wonder it [my health] will have some sudden changes one day in the future. ...Just on which day I don’t know. For example, high blood glucose will cause me to have other problems, and I don’t know on which day this will happen.* (Ch8mt—male)

People with T2DM might not feel uncomfortable even when their blood glucose levels were high. Eight participants reported they did not have any diabetes-related complications and one participant was not sure whether he had any long-term complications. All participants hoped their self-care practices could keep their diabetes under control and prevent diabetes complications. One participant said:
First of all, you need to know that this disorder [diabetes] is incurable. You have to take medication to control it [diabetes]. Exercising, diet control and medication can prevent your diabetes from turning into complications; this is my reason [for doing self-care to manage my diabetes]. (Ch5me—male)

Participants found self-care was hard, relentless work they needed to do for the rest of their lives. Despite undertaking appropriate self-care and having regular complication checks participants knew there was no guarantee they would not develop complications, which engendered uncertainty. For example:

* I wonder if I control my diabetes well now will it mean that everything would be under good control in the future? …I am afraid that you are [I am] all right now, but can you [I] maintain always all right like this way [under good control all the time] in the future? I really do not know. (Ch7fh—female)

Eight participants were concerned about developing diabetes-related complications. Their fear of complications was partly due to the associated uncertainty. All participants learned about the catastrophic nature of diabetes complications from the media and watching famous people with diabetes on the television news, pictures on diabetes education materials, from their relatives, friends and other people they knew. One participant described how she felt when she learned diabetes could lead to amputations from a newspaper article about a famous person in her home country. She said:

*I read about a person in the newspaper. That person, I know who he is [a public figure she often saw] on the TV programs in my home country, and one of his legs is cut off [amputated] now [reported in the newspaper]. He has diabetes, but he seems not very old, if I remember it correctly. He may*
be around 51 or 52 years old. His diabetes has already caused his leg to be cut off. (Ch7fh—female)

Most participants were afraid of having an amputation because they felt amputations made people ‘ugly’ and/or ‘dependent.’ A common Chinese saying: ‘loving beautiful appearances because everybody admires beauty,’ highlights the importance people place on having a pleasing appearance. For example, one participant worried about amputations and other complications because she needed to look normal and attractive on the outside despite having diabetes on the inside.

I dislike very much that I would look very ugly when I leave [die] [laughs]. We should just let people see our beautiful side only [when people come to see the body]. I didn’t want to visit a friend of mine as soon as I knew she was at the end stage of cancer. ...Actually I didn’t want to visit her because I wanted to remember her beautiful appearance in my mind. (Ch1ft—female)

Eight participants worried diabetes would damage their body image and that they would become disabled and be a burden to their families, especially their children, in the future. They worried about becoming dependent through amputation or other diabetes complications. For example:

I hope the inside of the unhealthy body can be more normal [I hope I can look like normal and no complications even I have T2DM], and do not bother my kids too much when I leave [die], such as need to look after you every day. That would distress the kids. Also, no amputation. You would need someone to push the wheelchair for you after an amputation. It is very troublesome. (Ch1ft—female)
The participant worried that she would be a huge burden on her family if she
developed diabetes complications. The burden would be stressful to her and her
children because their belief of family value. All participants lived with their
spouses and their spouses helped them make diabetes self-care decisions.
Participants wanted to reduce the burden of diabetes on their families because
their families, especially their children, would be expected to take care of them
when they were sick or old [filial piety]. Thus, reducing the burden of diabetes
was another way for parents to take responsibility of their grown-up children
because Chinese parents’ responsibility extends to their grown-up children.

**Belief associated with living with uncertainty: Valuing strong family
relationship**

Throughout history, family has been considered to be the base of Chinese society.
Although western lifestyles have been adopted and traditional Chinese family
structure has changed in recent decades, the traditional family structure and
values still hold a prominent position (DeFrain & Asay, 2007; Li & Wang, 2012;
Liu, 2005). Most Chinese people view their family as the centre of their lives
and respect family virtue such as filial piety. Put simply, children are obliged to
obey and take care of their parents (Cong, 2004; De Vos & Slote, 1998). One
mother said and gave a hearty laugh:

*If my son is not filial, I’ll pinch him to death [laughs]. …When there was
something wrong with my parents, I cannot require my good friends to take
care of them! But I can require my younger brother to take care of, because
they are our parents, and he is my blood relation younger brother.*

(Ch4ft—female)
Traditionally, Chinese people must have a son to carry on the family name and be the main care giver when his parents become old. One participant, who was diagnosed with diabetes in her twenties before she got married, said being diagnosed with T2DM impacted on her decision to marry. She said her parents worried about her health and did not want her to become pregnant and be exposed to the danger of giving birth. However, she needed to consider that her husband’s family wanted require her to have a son to carry on the family name if she planned to marry a Taiwanese man. She said:

*There are quite a lot of only sons now in Taiwan. If you really married one, it will be very difficult for you not wanting to have a child. So they [parents] worried the husband’s family would complain [if I do not have a son]. And my husband would be able to and perfectly justified to have an affair because he wants to have a son to carry on the family name.* (Ch4ft—female)

Some participants who had children thought parents often make sacrifices for their children because of their natural love and/or expected responsibilities for their children. The pregnant participant said her natural motherhood instincts meant she did her best to undertake diabetes self-care to avoid potential adverse events to her baby and herself. She said:

*At present, I think children are the most important. Since I am going to sacrifice [go through all dangers and troubles such as insulin injections], I might try to do well [care for my diabetes]. ...I hope my child will be healthy. If he is unhealthy, I would find it even more painful. I already decided to have insulin injections so I want to accomplish it [have a safe pregnancy and healthy baby] well.* (Ch4ft—female)
The woman used the term ‘sacrifice’ because she felt she suffered because of the troublesome insulin injections and the dangers of pregnancy. She had to do the hard work required to stay healthy and have a healthy child. Moreover, she needed to live longer to be able to care for her children. She said:

*My feeling was fine at that time [when diagnosed with T2DM]. But I start to feel a little stress now. Because now I feel I need to live longer, otherwise my son would be left without anyone to look after.* (Ch4ft—female)

Thus, remaining healthy was the only way this participant could carry out her role as a mother. She felt no one could replace her or care for her children as well as she could. If she was unhealthy or died early, she felt her children would suffer from having no one to rely on. Therefore, self-care became much more important to this woman than when she was originally diagnosed.

Taking care of the family could consume a lot of time and energy, which could affect women’s self-care because taking care of the family was a huge physical burden that left little time for self-care. One participant said:

*My situation is relatively special. Those who get type 2 diabetes are all usually at older age, perhaps 50, or 60. They do not have the issue of taking care of children, just wife and husband, two of them, just remember the time to take medicine, and that will be enough. ...My life comparatively is more active, because my son will run around, here and there, every day, I have to chase him. That is a physical labour.* (Ch4ft—female)

In order to perform their family roles, participants applied several strategies simultaneously to deal with uncertainty. The following section presents two
strategies: seeking information, and using natural complementary and alternative medicines and therapies (CAM), in self-care.

**Strategies participants used to live with uncertainty: Seeking information**

Participants sought answers to questions such as the cause of their diabetes and other health problems and the specific self-care tasks they needed to perform. Seeking information is a common response to the diagnosis of other chronic diseases and is part of the process of adapting to the disease. Thus the strategy, seeking information, helped participants rebuild their life balance.

Five participants had a family history of T2DM and their general practitioners explained their diabetes was caused by heredity when they were first diagnosed. However, these participants believed some other personal risk factors might also have contributed to their diabetes such as aging, having bad dietary habits, living an irregular lifestyle, being overweight, or having gastrointestinal problems. The five participants learned about T2DM from watching their family members managing T2DM before they were diagnosed. Moreover, they recovered from the impact of the diagnosis faster than people who had no previous knowledge about diabetes.

In comparison, four participants had no family history of diabetes. One of the four participants thought her diabetes was caused by being old and overweight. The other three participants continued to seek explanations for why they developed diabetes because they did not have the common diabetes risk factors their general practitioners described. These participants emphasised they needed to know the cause of their diabetes, especially the two youngest
participants who were diagnosed with T2DM; one in her twenties and the other in his thirties.

The two youngest participants, who had no family history of diabetes, said the psychological impact of the diagnosis was much greater for their parents than for them, especially the cause of their diabetes was unknown. One of the two participants thought her mother felt guilty because she thought she caused her daughter’s diabetes. She said:

My mother thinks it is her fault that I have diabetes. ...So, she has a great deal of stress. She feels extraordinarily nervous. All [diabetes education] courses, all of everything, she has attended more than I have. Then all my family members nearly change to take the diabetic diet. (Ch4ft—female)

Strategies participants used to live with uncertainty:

Using natural complementary and alternative medicines and therapies in self-care

Another strategy participants used to manage their diabetes was using natural complementary and alternative medicines and therapies (CAM). Participants used several terms to refer to CAM: ‘folk remedies,’ ‘folk prescription,’ ‘alternative medicine,’ ‘traditional medicine,’ or ‘complementary medicine.’ Significantly, participants used CAM in their daily self-care because they thought Western medicine only treats symptoms and does not really cure the problem. Participants wanted a permanent cure for their diabetes preferably by using natural products.
All participants gained information about CAM from parental/cultural norms and Chinese sources such as books and Chinese peers. Eight of the nine participants reported they used some form of CAM in their diabetes self-care without a prescription from their general partitioners and/or diabetes specialists. The most common reasons participants used CAM were because it is ‘natural’ and/or causes less harm than western medicine. Participants thought the ingredients in natural CAM products were all from herbs, vegetables, or fruits and would not cause harm. For example:

“As long as it [CAM] is natural, I will try it. As for those have been made into drugs, I won’t try.” (Ch8mt—male)

Traditional Chinese medicine (TCM) is one form of CAM. Although only two participants said they used TCM: one used Chinese herbal medicines and one used acupuncture point massage, most participants actually used TCM. There are many types of TCM modalities including Chinese herbal medicines which are prepared scientifically, nutritional therapy, restorative physical exercise, meditation, acupuncture, and remedial massage (Chen et al., 2007). Seven participants applied TCM concepts consciously or subconsciously, in their daily self-care. They drank herbal teas, selected and prepared food according to TCM concepts [nutritional therapy], and took diet supplements.

Most participants knew TCM might not be as effective as Western medicine in treating diabetes. The types of TCM participants were using to help lower blood glucose included mung beans, bitter melon, Chinese yams, guava teas, sweet potatoes, sweet potato leaves, acupuncture point massage, soaking feet in warm
water, kedondong (ambarella; *Spondias dulcis*), or fenugreek (*Trigonella foenum-graecum*) powder.

All participants preferred not to take any medicines or chemical products if they could avoid it because they thought chemicals, including medicines prescribed by their doctors, would damage their health. One male participant took Chinese herbal capsules every day to treat his diabetes and maintain overall health and did not want to continue his conventional lipid-lowering medicine once his lipids level was in an acceptable range. He said:

> I don’t want to take that lipid-lowering medicine [my GP prescribed]. Since [I think] I don’t have to take that many medicines [once my lipids level backs to normal]. Drugs all contain 30% of toxin anyway. Drugs are all toxic. She [GP] said: ‘No, you still have to take it. It will be getting high soon once you stop taking it.’ (Ch5mc—male)

The man used a common Chinese saying: ‘all drugs contain 30% of toxin,’ to indicate that Chinese people believe all medicines are toxic because of the side effects of medicines. Therefore, using nutritional therapy to promote health was common among participants. Some participants selected foods according to TCM concepts such as ‘Four Qi’ or the four basic properties: cold, hot, warm, and cool, to maintain their health balance [Chinese nutritional therapy]. Most participants said they selected foods that were ‘good for diabetes’ and health according to the western view of the nutrition [western nutritional therapy]. For example, one participant learnt from a Chinese book that banana contains nutrients that can lower blood pressure and control blood glucose. He said:
This information of bananas on the book is not specially written for me [who has T2DM] to contrast but for promoting health in general for all people. All of the information on the book is written according to the proved nutrition of foods. (Ch5mc—male)

Most participants believed taking nutrients that are regarded as being ‘good for diabetes’ such as Zinc and Chromium, and good for generally enhanced their health balance. One reason most participants self-prescribed dietary supplements was to purposefully consume nutrients that might otherwise not be consumed in sufficient quantities.

Furthermore, some participants self-adjusted their prescribed doses of glucose lowering medicines when they used CAM. One participant did not take his glucose lowering medicines as regularly as prescribed because he was using a fruit called kedondong, which is traditionally used to treat diabetes in Malaysia:

The Malay name is called kedondong. After you finish one meal you eat two fruit, cut the sugar level down. You take the fruit. Don’t take the Diabex. If you take Diabex don’t take the fruit. (Ch2ms—male)

The quote suggests the participant thought about the action of both types of medicines and took what he regarded as appropriate action: in other words he did not mix CAM and conventional medicine to avoid side effects. His behaviour reflects proactive problem-solving, which is an essential self-care strategy.

However, participants were unlikely to reveal their CAM use to their doctors because they worried that disclosing their CAM use might affect their relationship with their doctors. One person said:
There are some contradictions. If I tell her [GP] that I take Chinese medicine, it seems I do not believe her [western medicine professional]. So I didn’t tell her. (Ch5mc—male)

The common reason people used CAM was to improve their diabetes. The criterion participants used to determine improvement was stabilisation of their blood glucose level. Some participants were easily persuaded to try CAM remedies on the advice of/or as gifts from relatives and friends.

Most participants felt CAM was easier to access, prepare or use in their home countries than in Australia. One man said Chinese medical treatment is not covered by his Australian health insurance and is very expensive in Australia. Thus, most participants used more CAM or bought CAM products when they visited their home countries. Five participants used CAM, that they did not use in Australia, when they visited their home countries. One participant said:

Using CAM from my home country is actually very troublesome in Australia [difficult to get CAM suggested by people in her home country]. My mother prepared the materials of folk remedies for me to bring back to Australia and I said: it is not allowed to bring those into Australia. [So I did not bring it to use in Australia.] (Ch4ft—female)

Some participants used CAM to reassure their families. One participant said she felt her relatives or friends prepared or purchased CAM products for her because they were concern about her health. She said:

Your family and friends are very concerned about you. They hope you are good, if you do not take [CAM they suggested] they will be very worried. It’s like having a cancer. If you had a cancer today, everybody tells you: ‘Try
this folk prescription, your cancer would be sure to be cured.’ Sometimes it is not your own hope or what else, but it is you would want to reassure them.

(Ch4ft—female)

**Negotiating and compromising**

Negotiating and compromising is second emerged subtheme. Participants attempted to negotiate a mutually agreed diabetes self-care plan with their care providers to reach agreement. They negotiated but not sure how to proceed from changing their previous health behaviours and lifestyle to adopting healthy behaviours and a healthy lifestyle. The issues participants negotiated with health professionals (HPs) consisted of recognising the need to change their health behaviours, seeking ways to address their needs, and adopting effective health care behaviours. One participant said:

*You are a Chinese, you should not eat too much rice [if you have diabetes]. If you are not a Chinese, you are a foreigner [Western people], then you need to eat less potatoes, it’s the same. …If you usually ate 2 bowls of rice before, and now you have the problem of blood glucose, then you just reduce it by half, eat a bowl of rice. It is not because the doctor told you that you shouldn’t eat a lot of rice. You have to know by yourself that you could only take a bowl or half a bowl now even you ate 2 bowls in the past.* (Ch6ft—female)

The preceding quote shows that the participant recognised the need to change her eating habits and adopted effective behaviours to address her needs and follow her doctor’s advices. It seems that the negotiation between the participant and the doctor made an effective result. However, participants often realised their
difficulties to change their behaviours to get a better result that was suggested by the HPs. Significantly, negotiation involved compromising.

For the participants, compromising meant reaching an agreement about their self-care plan in which they or their care providers revised their goals. All participants made compromises between diabetes care advice and their individual situations. They agreed to perform some diabetes self-care tasks although they might not undertake all the recommended self-care tasks.

One participant argued that he agreed to undertake self-care tasks, although he was unable to undertake all the recommended behaviours. In his circumstances, he was concerned with the alternative solutions to maintain the balance between demands of working and self-care. The following quote shows the participant compared his own self-care behaviours with his brother’s. He felt that he compromised the time that was needed to care for himself. He stated:

_I am unable to do the way he [one of his retired brothers who had T2DM too] does with my time. He has free time but I have no free time. I have work to do, but he doesn’t need to work now. Now every day when he wants to sleep, he can just take an afternoon nap. And get up to exercise every morning around five or six o’clock. How can I have that time?! I am different from him. I have no way to do this. If I was like him, of course I can do [diabetes self-care] very well too. Then I can accomplish everything as normally required [for diabetes self-care]. (Ch8mt—male)_

All participants stated they knew regular physical activity was important. The types of exercise participants usually undertook were gentle physical activities such as walking, gardening, and housework. Only two participants said they
exercised regularly, mainly because most participants did not make time for consistent regular physical activity. One participant said:

_You need to persist. You persist, and then you will exercise more naturally. If you don’t persist, don’t want to move after you eat something, then you just won’t move._ (Ch5mc—male)

Importantly, exercising with another person encouraged participants to exercise regularly. The other was because of the natural deterioration of body and mind as they got older. For example, some participants were unable to undertake recommended exercise because of physical disabilities such as knee problems and the normal aging process in older participants. A 70 year old lady said:

_Later on my knees have a few problems, so I do not dare to dance and not exercise enough either. ...Everybody all told me: ‘You walk more, walk more.’ Walking injures the knees too._ (Ch6ft—female)

**Attitudes associated with negotiating and compromising**

Many challenges affected participants’ ability to implement their diabetes self-care plans and medication regimens. There are two main identified attitudes associated with negotiating and compromising: ‘The desire for good food’ and ‘easier said than done.’

**The desire for good food**

Many diabetes self-care concerns were related to diet. All participants admitted they desired for good food. Participants regarded their favourite foods or delicious foods that tempted them to eat as ‘good foods,’ but these foods were
likely to cause high blood glucose or not recommended by dietitians. Thus, all participants felt their desire for good food made it difficult to follow a diabetes diet. All participants admitted that ‘I would still sneak my favourites a little too.’ For example:

“My husband often laughs at me and said: ‘When she likes to eat this, she will forget she has diabetes.’” (Ch6ft—female)

Food is a major part of many occasions in Chinese society. Events such as family reunions, social gatherings and festive occasions make it difficult for people to control their diet because of the conviviality, hospitality, friendship, and the meaning of certain foods associated with such occasions. Participants had more chance to dine out in their home countries, which made it more difficult to control their diabetes when they returned home country than in Australia. One participant said:

“When I go back to Hong Kong, I would stay for five or six weeks. But in that period of time, I would all eat out [have meals outside], then it would relatively be a little bit more difficult to control [my diet].” (Ch7fh—female)

Another participant described an episode about Chinese hospitality in social gathering:

“When I went to friends’ or relatives’ houses in China, they all said: “Eat, eat, it doesn’t matter,” and so on. Then my blood glucose level [HbA1C] would be higher. This is definite.” (Ch5mc—male)
Many traditional Chinese holiday foods might affect diabetes control. However, some participants chose to enjoy the foods regardless of their diabetes control. One participant said:

_I like eating that kind of ‘Mung bean and meat pastry’ [a kind of moon cake]. When it is the time for the Mid-autumn Festival, I must eat that food [laughs]._ (Ch9ft—female)

Other participants said some of the recommended foods do not taste ‘right’ to them. For instance, most participants were told to eat basmati rice instead of the traditional Chinese short and/or medium grain rice; however, rice-lovers found it difficult to accept basmati rice which goes better with Indian food. Even when they ate basmati rice they still ate a large portion of rice. One participant said:

_The doctor suggested: eat basmati rice. But I would eat two bowls of basmati rice. So the basmati rice is not OK for me either. Actually the basmati is very rough, very old rice. We all would not eat this kind of rice before in China. Our family doctor told me to buy the basmati rice. The basmati rice is expensive here [Australia], tasted terrible, and the nutrition which can be absorbed is bad too._ (Ch5mc—male)

Despite the difficulty following a healthy diet, all participants realised the importance of diet to diabetes control. Most said they ‘try hard’ to eat healthy balanced food. Some participants felt having diabetes made them feel different from other people because they needed to eat differently. One participant who maintained a healthy weight range said:
I feel very troubled when I eat because there are many [food restrictions for people with diabetes]. It is that I actually quite like to eat sweets so I felt it quite annoying. (Ch4ft—female)

Easier said than done

Participants’ daily self-care experiences made them realise that ‘diabetes control’ was easy to say but hard to achieve. These experiences such as their stories of diet control and exercise were presented in previous sections. Moreover, most participants used the term ‘feel lazy’ to explain why they did not undertake some diabetes self-care tasks. The reasons participants felt lazy were:

- the actions required such as breaking a diabetes tablet in half was troublesome
- not motivated
- not interested
- did it [such as exercise] alone
- too tired.

For example, one participant said she could not follow her medication regimen because she was too lazy to divide a tablet in half, and forgot to take her medicines. She was prescribed Diabex (metformin) 1000 mg and her prescribed daily dose was 1500mg: 1000mg in the morning and 500mg at night. The metformin comes in 1000mg/tablet so she needed to take one tablet in the morning and half a tablet at night. She had to break a tablet in half to take the correct night time dose, so she sometimes did not take medicine at night. She said:

I dislike the trouble of the need to divide it [Diabex 1000mg] each time.
And sometimes I felt lazy too and didn’t take it seriously either. Sometimes I
didn’t eat the dinner at night, then I would forget [to take the half a tablet], waited until I go to sleep then remembered that: Well, I did not take the half a tablet today, but it was already passed the time to take. [So] I just take one tablet daily. That result of just taking one tablet [daily] is not very good. It [blood glucose] is a little more than 7 now each time I check.

(Ch9ft—female)

Although people with T2DM can learn how to live with diabetes by attending diabetes education programs, four participants had not attended any diabetes education events in Australia for various reasons such as ‘had no time,’ ‘every individual has his own personal views,’ ‘it’s unnecessary,’ ‘language difficulties,’ or because of ‘transportation difficulties.’

One participant from Hong Kong emphasised that learning about self-care by attending diabetes education activities depended on personal motivation and interest. Her interest in the topics related to her diabetes was greater than the difficulty of communicating in English and transportation. She said:

This [attending diabetes education events] all depends on whether you personally have the interest or not. If you have the interest, even you don’t [cannot] drive, you would still find a way to get there. (Ch7fh—female)

Strategy participants used to negotiate and compromise:

Taking a holiday from diabetes self-care by visiting the home country

Participants applied many strategies to negotiate their self-care plan and compromise their diabetes control between their needs and diabetes self-care recommendations. One significant strategy was to visit their home countries.
Most participants used the phrase ‘taking a holiday from diabetes’ when they did not follow their diabetes self-care regimen while they were away from Australia. The constant pressure of practicing and thinking about diabetes self-care was stressful and tiring while they were away; thus most participants regarded visiting their home country as a ‘holiday from diabetes.’ When they were on holiday they wanted to relax instead of constantly being reminded they had diabetes. One participant said:

*When I am back to Taiwan, I just relax, like on holiday. I would be not so strict [with practicing self-care]. Because if I have been thinking about that thing [self-care] every day, I’ll be very tired.*  
(Ch4ft—female)

Participants believed if people with T2DM could reduce psychological stress [maintain good mental health], they would be happier. Seven participants visited their home country at least once a year and stayed for one to three months. Visiting their home countries helped participants maintain good mental health because of the familiarities they felt in their home country and social gatherings. One man said:

*Why do I go back [visit my home country] for three months every year? I go back and see friends, to relax myself.*  
(Ch5mc—male)

Another participant who consulted a Chinese general practitioner (GP), said:

*She [GP] also said that: ‘When you go back [to Taiwan], just relax. Wait until you come back to adjust it [blood glucose] again.’ Of course I cannot eat arbitrarily, just eat as I like once in a while. Otherwise why do I go back for?*  
(Ch8mt—male)
The preceding quote indicates the participant’s GP actually gave her ‘permission’ for him to ‘have a holiday’ from self-care. However, the consequences of taking a holiday from diabetes self-care could be higher HbA1c and increased risk of complications.

**Integrating previous experience**

The third emerged subtheme is integrating previous experience into self-care. People with T2DM have to acquire specific knowledge and learn specific diabetes self-care skills. Seven participants reported Chinese books were the most accessible self-care resource. All participants used their previous experience to balance their blood glucose by recognising body cues and how the cues to know whether their blood glucose is high or low and feel sick.

The other important way participants learned about metabolic control was from monitoring their blood glucose. Participants monitored their blood glucose, listened to body cues and recalled what activities they had performed that might affect their blood glucose and determine what they should do to rebalance their blood glucose. Through constant observation and listening to body cues, participants learned to understand the connection between their blood glucose and the self-care activities they practiced. One participant used a common Chinese saying, ‘long illness makes the patient a good doctor,’ to explain how she learned diabetes self-care:

*Actually ‘long illness makes the patient a good doctor’ because you probably know all about what you should know about your diabetes by now [after years of living with T2DM] You know the condition of your blood glucose, and*
for example how many [units of insulin] you need to inject, and so on.

(Ch4ft—female)

The pregnant participant needed to self-monitor blood glucose seven times every day and inject insulin four times per day during her first pregnancy in 2007. Gradually, she accumulated knowledge and experience about these essential self-care activities and became familiar with observing the relationship between her blood glucose, feelings and physical condition. She was interviewed during her second pregnancy. The participant compared her blood glucose self-monitoring and insulin injecting proficiency between her two pregnancies:

From when I was confirmed being pregnant till I gave birth, I had need [to finger prick] so many times [in 2007]. Then my specialist is also very good this time [in 2010], he said, it seemed that I am ‘an old bird’ [veteran] now, it doesn’t matter, pricking once each day would be enough, he does not require me too much, just prick after meal. (Ch4ft—female)

Obtaining self-care information was a demanding part of participants’ adaptation process and influenced participants’ self-care. All participants sought information about diabetes management: seven from Chinese-speaking GPs. Only three of the nine participants had been referred to a diabetes educator (DE). One of the three was from Taiwan and was referred to a DE because she needed to commence insulin therapy during pregnancy.

Participants from China and Taiwan were mostly unaware of the DE’s role than participants from Hong Kong and Singapore. At least two participants confused DEs with diabetes medical specialists. One participant had not been referred to a DE even though she did not keep her blood glucose under control. She often
did not comply with diet, medicines, and blood glucose self-monitor. She felt her GP did not refer her might be because the GP assumed she would not know about DEs:

*Probably she thinks I am a Chinese so I would not know the role of a diabetes educator is. So she didn’t refer me to see a diabetes educator.*

(Ch9ft—female)

As a result of fewer referrals, participants were most likely to have contact with their GPs as the only type of health professional advisor and consequently could have lacked diabetes education. All participants said their GPs focused on medical treatment and often just gave them information to read. Therefore, participants felt they were personally responsible for caring for their diabetes. One participant said:

*The body is your own, how you take care of, that is your own business. It is just based on his [doctor] moral values of being a doctor, he [doctor] recommends you to do. If you don’t do — We are all adults — He cannot take a rod following at your back, saying: ‘You must take medicine,’ or ‘you must check blood glucose.’*  

(Ch4ft—female)

Furthermore, all participants indicated they needed clear guidance about their diabetes self-care tasks. People newly diagnosed with T2DM often felt overwhelmed by the excessive amount of general information they received and felt most of it did not suit their needs. Their stories revealed that unclear guidance from health professionals impacted on their adherence to their self-care regimen. Some participants had misconceptions about blood glucose self-monitoring and taking glucose lowering medicines. One participant
reported he did not take his glucose lowering medicine as prescribed and seldom checked his blood glucose:

_Every time I poke my finger, it is very painful. But the meter isn’t supposed to tell you how much medicine you need to take. You can’t guess how much you need and then if you take too much your blood glucose levels go down._

(Ch2ms—male)

The preceding quote shows the participant’s previous experiences had caused a negative perception regarding monitoring blood glucose. The participant thought monitoring blood glucose was no use to him because it did not help him decide the medicine dose he needed so he did not self-monitor his blood glucose either. The following section presents two identified attitudes associated with how participants integrated their previous experience into diabetes self-care.

**Attitudes associated with integrating previous experience into self-care**

The two attitudes associated with integrating previous experience identified in the study were respecting authority, and personal habits interact with cultural customs.

**Communication is important to maintain relationships**

The Australian healthcare system is different from the systems in participants’ home countries. All participants were quite satisfied with the Australian healthcare system and felt the Australian government paid more attention to diabetes management than the governments in their home countries. Likewise, they felt the Australian national health insurance scheme (Medicare) was better than the national health insurance policies in their home countries.
All participants’ first health care provider was their general practitioner and most participants built a long-term relationship with their doctors. Some participants said they felt their doctors had good judgement and could correctly care for them. Participants’ perception of their general practitioners (GPs) fulfilling their role was one factor that enhanced relationships between participants and GPs. One participant said:

The doctors [GPs] in Australia are very responsible. Unlike the family doctors in China now, they are very responsible. Actually, it is very good that my family doctor is responsible. So I keep going to see her even after she changed to work at another hospital. (Ch5mc—male)

Seven participants’ GPs were from Chinese backgrounds and six participants communicated with their GPs in Mandarin, and one in Cantonese. Thus, being from a Chinese background and being able to communicate in the same language also enhanced relationships. For instance:

I think we need to communicate with the doctor, and it is the most important that we can understand each other. Just the same as when you go to the bank, you would look for a Chinese. If you talk to foreigners [who cannot speak Chinese], sometimes you will get it [money issue] wrong. The issue of money is very important. So all [such as doctors, bank clerks] I have seen are Malaysians [who can speak Mandarin and English]. (Ch8mt—male)

Another participant did not want to go to the diabetes specialist his GP referred him to was because he had trouble communicating in English with the specialist even though the participant was a well-educated and a successful business man in
his home country. The participant chose to only receive regular health care
from his GP because they could communicate in the Mandarin.

Some participants said they did not find the advice they received from dietitians
very helpful. One participant said:

_I do not know whether he [dietitian] knows [our diet habits of Chinese people]
or not, but perhaps this is not a big issue. Such as you eat less carbohydrates,
eat more meat, eat more vegetables. It is actually just some general
information. It is not much help._ (Ch6ft—female)

Interestingly, some participants felt health professionals were knowledgeable
about diabetes but most lacked personal experience of actually living with
diabetes and what self-care really involved. One participant said:

_No matter today you are talking to your doctor, or you are talking to your
diabetes educator, because they are persons with knowledge, but they are not
really the person who has the problem._ (Ch4ft—female)

They suggested ‘experts are all empty’ or ‘experts all appear better than they
really are.’ For example:

_They [GPs] know nothing; even the diabetic nurses know nothing. They’re
only guessing. — Everybody different — Guessing! They [GP and diabetic
nurse] are playing with people’s lives. Even the specialists know
nothing! …[Specialist said:] ‘I don’t know, maybe this, maybe that.’ Make
me go take all sort of blood tests and all the rubbish and then try this pill, try
that pill, try that, try this. …Get lost, I’m not doing like this for all this
bullshit._ (Ch2ms—male)
Participants felt uncertain about their self-care actions and they were looking for clear direction. They longed for specific advice about how to care for their diabetes in daily lives to enable them to undertake practical individualised self-care. Because of their feelings of uncertainty caused by T2DM, they demanded health care that met their needs to reduce uncertainty. Thus, participants often felt frustrated by the lack of suitable information health professionals provided.

In addition, participants selected their GPs based on their accessibility and experience in managing diabetes. One participant, who worked full-time, changed GPs because his previous GP’s office hours did not suit him. He had a relative who was a GP with flexible office hours and years of experience. He started to consult his relative on a professional basis. He said:

*She originally didn’t want me to be her patient. She said it’s better not treat patients who are relatives. But I said: ‘Well, it does not matter. I regard you as a doctor anyway, and you just regard me as a guest. You don’t have to think me as your relative.’ And she accepts. So when I go to see her [at the GP office], I do not dare to behave casually. I will wait to get in when my name is called.* (Ch8mt—male)

The participant knew there would be a conflict for his GP relative to treat him, but he still chose to do so. An explanation for his decision could be a Chinese concept of ‘guanxi.’ Guanxi has more meanings than the word ‘relationship,’ which will be discussed in the discussion chapter. The participant might expect his GP would provide better and accurate care for him because he had ‘guanxi’ with the GP.
Respecting authority

Most participants tended to obey their doctors because they respected their authority, because their doctors were professionals and because they had built a long-term relationship with their doctors. In Chinese culture doctors are held in higher regard than other health professionals because doctors are positioned at a higher level in the hierarchy of the health care system (Bond, 1986; Cong, 2004; Shuang, 2011). Most participants tended to follow their doctors’ recommendations because they thought what the doctor said was all they need to know. One participant said:

*Because he [the diabetes specialist] is the doctor, you are the patient. He reads your results, tells you, and then you know, then it is enough. He certainly has time to answer your question. But we do not have any questions to ask. Because you do not know medical science, you just listen to him.* (Ch6ft—female)

Participants used the word ‘doctor’ to refer to all doctors including GPs and specialists. They could consult any doctor they choose without a referral from a GP in their home countries, unlike in Australia where participants cannot consult specialists without being referred by a GP. Participants believed that doctors had professional knowledge which gave them power in the relationship, which might impact on their treatment.

For example, a 70-year-old participant who had lived in Australia for over 40 years said her diabetes specialist told her that she only needed glucose lowering medicines (GLMs) when she had big meals. Her GP did not agree with the
specialist’s advice but felt he could not object to the specialist’s advice because
the specialist held higher rank in the professional hierarchy. She said:

_You must listen to the specialist. You cannot listen to the GP because a GP needs to follow the instruction of a specialist._ …_Because [the diabetes treatment] needs to be under specialist. The specialist tells you what to do, you have to obey. This also is what a GP’s attitude is. Unless you go to look for a second opinion, go to another specialist. Two specialists they can discuss with each other. But a GP is in a lower position [than a specialist in professional hierarchy], they [a GP] never argue with a specialist._

(Ch6ft—female)

This lady felt her GP could not change the specialist’s orders. Her idea of hierarchy affected her self-care because she obeyed whatever the specialist suggested, even his advice for her about how to take GLMs differently from her GP. The lady thought she was under the care of a diabetes specialist and she consulted her GP only when she needed a prescription or a health check.

_Habitual practice_

Participants brought their cultural and personal beliefs and attitudes to Australia with them. Their reactions to the diagnosis of diabetes were influenced by their attitudes to diabetes and culture. Habitual practice refers to practices people belonging to a particular group or region follow. Participants’ health care habits developed in their home countries and were strongly influenced by Chinese culture.

One man quoted an old Chinese saying, ‘localised cultures and climates set one group of people apart from another,’ by which he meant the climate and soil in
different regions influences people’s health and wellbeing. He also believed there is a relationship between personal health and the condition of the soil where the person lives. He said:

‘Localised cultures and climates set one group of people apart from another.’

I have heard that Chinese people coming to Australia have a higher frequency of having diabetes because of the lack of a certain element [Zinc]. ...The amount of sugar I consumed in China was several times higher than now, but I was Ok, had not been diagnosed with diabetes previously in China.

(Ch3mc—male)

The participant believed the local culture and the climate he grew up in (his home country) was like a ‘protective umbrella’ that protected people from some diseases including diabetes. He wondered whether people who absorbed various minerals in the body while they were in their home country might develop some protective factors, but if they are unable to include these minerals in the environment such as water and soil after they migrated to Australia, they could lose the trace elements in their body, which could increase their risk of developing diabetes. The participant thought this theory could explain why diabetes is not as prevalent in his home country as it is in Australia, even though there is a larger population in his home country.

Participants adapted to their new environment after they immigrated to Australia and to adapt again after they were diagnosed with T2DM. They felt adaptation was a ‘step-by-step’ process of becoming familiar with Australian life and customs. One participant said:
New migrants have a lot of their own ideas. But we have already been here [Australia] for a long time, so all the culture things that people are talking about have nothing to do with me. (Ch6ft—female)

The lady pointed out that some influence of the old Chinese customs on her might change over the more years she living in Australia. Overall, participants enjoyed living in Australia more than living in their home countries. They thought their life was simple in Australia, which helped them adapt to living with their T2DM. The reasons included fewer food temptations, a more exercise-friendly environment, and less distraction for exercising. A typical description was:

We [people with T2DM] need diet control and exercise control, in this regard, I think living in Australia is relatively easy. Because there is nothing delicious in Australia, I won’t have a special desire. I think it’s not that difficult for me to control my blood glucose since there is nothing to eat, just only those [foods here] anyway. Then regarding exercise, Australians love exercising very much, so exercising is very easy [in Australia]. Moreover, there are less other distractions because there is nothing worth to watch on the TV either, so you might just go to have a walk in the park instead. (Ch4ft—female)

Strategy participants used to integrate previous experience into self-care:

Consulting Chinese language speaking health professionals

The Australian healthcare system is different from the systems in participants’ home countries. All participants were quite satisfied with the Australian health care system and felt the Australian government paid more attention to diabetes management than the governments in their home countries. Likewise, they felt
the Australian national health insurance scheme (Medicare) was better than the national health insurance policies in their home countries.

All participants’ first health care provider was their general practitioner and most participants built a long-term relationship with their doctors. Some participants said they felt their doctors had good judgement and could correctly care for them. Participants’ perception of their general practitioners (GPs) fulfilling their role was one factor that enhanced relationships between participants and GPs. One participant said:

*The doctors [GPs] in Australia are very responsible. Unlike the family doctors in China now, they are very responsible. Actually, it is very good that my family doctor is responsible. So I keep going to see her even after she changed to work at another hospital.* (Ch5me—male)

Seven participants’ GPs were from Chinese backgrounds and six participants communicated with their GPs in Mandarin, and one in Cantonese. Thus, being from a Chinese background and being able to communicate in the same language also enhanced relationships. For instance:

*I think we need to communicate with the doctor, and it is the most important that we can understand each other. Just the same as when you go to the bank, you would look for a Chinese. If you talk to foreigners [who cannot speak Chinese], sometimes you will get it [money issue] wrong. The issue of money is very important. So all [such as doctors, bank clerks] I have seen are Malaysians [who can speak Mandarin and English].* (Ch8mt—male)

Another participant did not want to go to the diabetes specialist his GP referred him to was because he had trouble communicating in English with the specialist
even though the participant was a well-educated and a successful business man in his home country. The participant chose to only receive regular health care from his GP because they could communicate in the Mandarin.

Some participants said they did not find the advice they received from dietitians very helpful. One participant said:

*I do not know whether he [dietitian] knows [our diet habits of Chinese people] or not, but perhaps this is not a big issue. Such as you eat less carbohydrates, eat more meat, eat more vegetables. It is actually just some general information. It is not much help.* (Ch6ft—female)

Interestingly, some participants felt health professionals were knowledgeable about diabetes but most lacked personal experience of actually living with diabetes and what self-care really involved. One participant said:

*No matter today you are talking to your doctor, or you are talking to your diabetes educator, because they are persons with knowledge, but they are not really the person who has the problem.* (Ch4ft—female)

They suggested ‘experts are all empty’ or ‘experts all appear better than they really are.’ For example:

*They [GPs] know nothing; even the diabetic nurses know nothing. They’re only guessing. — Everybody different — Guessing! They [GP and diabetic nurse] are playing with people’s lives. Even the specialists know nothing! ...[Specialist said:] ‘I don’t know, maybe this, maybe that.’ Make me go take all sort of blood tests and all the rubbish and then try this pill, try that pill, try that, try this. ...Get lost, I’m not doing like this for all this bullshit.* (Ch2ms—male)
Participants felt uncertain about their self-care actions and they were looking for clear direction. They longed for specific advice about how to care for their diabetes in daily lives to enable them to undertake practical individualised self-care. Because of their feelings of uncertainty caused by T2DM, they demanded health care that met their needs to reduce uncertainty. Thus, participants often felt frustrated by the lack of suitable information health professionals provided.

In addition, participants selected their GPs based on their accessibility and experience in managing diabetes. One participant, who worked full-time, changed GPs because his previous GP’s office hours did not suit him. He had a relative who was a GP with flexible office hours and years of experience. He started to consult his relative on a professional basis. He said:

_She originally didn’t want me to be her patient. She said it’s better not treat patients who are relatives. But I said: ‘Well, it does not matter. I regard you as a doctor anyway, and you just regard me as a guest. You don’t have to think me as your relative.’ And she accepts. So when I go to see her [at the GP office], I do not dare to behave casually. I will wait to get in when my name is called._ (Ch8mt—male)

The participant knew there would be a conflict for his GP relative to treat him, but he still chose to do so. An explanation for his decision could be a Chinese concept of ‘guanxi.’ Guanxi has more meanings than the word ‘relationship,’ which will be discussed in the discussion chapter. The participant might expect his GP would provide better and accurate care for him because he had ‘guanxi’ with the GP.
Together, with the interview data from nine participants, one interview was conducted with one participant’s wife and has data analysed separately. The opportunity for data collection arose when a participant’s wife, with rich experience in caring for her husband’s T2DM, voluntarily participated in the interview. The opportunistic theoretical sampling expanded sampling by adding a wife’s perspectives of diabetes self-care add information to support the study findings.

A relative’s perspective

The section is presented to portray one relative’s perspectives of diabetes self-care. One participant regarded his wife as the person who cared for his diabetes because she was a nurse. The wife agreed to share her perspective and she was also interviewed. She was a nurse in her home country and was her husband’s main health caregiver at the time of the study. Therefore, her perspective of diabetes self-care significantly influenced her husband’s self-care behaviours.

Illustration of the main theme: rebuilding own liveable balance

The participant wanted to rebuild her husband’s liveable balance so she sought the middle way to manage her husband’s diabetes by applying traditional Chinese medicine (TCM) concepts such as acupuncture point massage to care for her husband. She said:

*These [TCM] are what we do now in our family. Because I do not especially rely on one party. That is to say I am not relying on the medicine of Western medicine very much, and then I do not rely on Chinese medicine very much*
either. I am looking for a way, the middle way. And combining things from both sides [Western and Chinese medicine] together. (Ch3mcw—female)

Illustration of the belief: pursuing good fortune

The wife and her husband believed God can cure a person from any disease if the person has great faith in Him. Like her husband, she felt having God’s blessing kept her away from misfortune. She said:

You don't need to care what kind of diseases you are dealing with, just like what it is said as in the Holy Bible: you can pray to God for blessing to cure you [your diabetes]. (Ch3mcw—female)

Illustration of the subtheme: living with uncertainty

The wife was more worried about diabetes complications than her husband. She felt her husband was not afraid of complications because he did not realise complications such as foot problems were a serious threat. She shared her experience of caring for a patient with a diabetes foot problem in a hospital in Australia. In the following quote she used a common Chinese saying, ‘what you cannot see will not hurt you,’ to explain her husband’s behaviour.

That kind of pain [caused by diabetes foot] is unimaginable for someone doesn’t suffer from diabetes foot. I told him [her husband] it is because you have not seen it [diabetes foot] so you [were not afraid of complication]. It is “what you cannot see will not hurt you” because you do not know, you don’t feel any terror. ...Because your body allows you to move, to walk, or do anything else, you don’t care [about the risk of developing complications]. Wait until one day you were like that [being amputated], well, that [having diabetes complication] is not just “nothing” at all. (Ch3mcw—female)
Illustration of the strategy: using natural CAM

The wife applied the concept ‘food cures more than doctor’ by using mung beans to protect her husband’s liver function. She said:

*I am helping him to recuperate his liver with diet according to Chinese medicine now. For example, having mung bean soup every day because the mung beans can emolliate the liver.*  (Ch3mcw—female)

She said they brought antibiotics [western medicine] from their home country to use when they needed them because it is inconvenient to visit doctors in Australia. She used these antibiotics to treat her husband’s high fever once, without seeking medical attention. Later, when they consulted their GP for a health check, her husband’s liver function was abnormal. The GP said her husband’s liver function declined because he used self-prescribed antibiotics. After she learned her husband had liver failure she started to prepare mung bean soups for him.

Her story highlights the fact that people self-prescribe and immigrants bring medicines into Australia without prescriptions from their home countries and self-prescribe when they think it is indicated without seeking medical attention. Although the medicines they self-prescribed in the story was western medicine, the issue of immigrants’ medicine safety, either self-prescribing CAMs or western medicines, needs to be carefully considered on all levels including individual, health professional and government services.
Illustration of the attitude: desire for good food

The wife thought delicious things are all unhealthy so made diet control difficult for people with diabetes. She believed people with diabetes should not eat fruit and did not allow her husband to eat fruits. She said:

It [idea of controlling diet] is still different relatively to Chinese people. When talking about the diabetes: ‘Oh, OK, don’t eat any fruits. Only eat cucumbers, tomatoes and so on.’ You would feel very painful too by just looking at that [you cannot eat]. Because delicious things are all unhealthy.

(Ch3mcw—female)

Her role in her family is the wife, the mother, and the main caregiver. Therefore, her misconceptions about diabetes diet influenced her husband’s diet behaviour in the family.

Illustration of the attitude: easier said than done

Her husband said he enjoyed eating so he told his doctors that he tried to exercise instead of controlling his diet. However, the wife thought the exercise he did was not enough to control his diabetes. She regarded such behaviour as ‘lazy.’ She said:

He [my husband] said: ‘I love to eat. I don’t smoke, and I don’t drink. The only hobby is eating.’ So, the doctor said: your weight, you should control it. I said at that time: ‘If you exercising yourself, running every day, then you can eat all you want.’ But he is lazy. The way he runs and exercises [is not enough].

(Ch3mcw—female)
She also felt Australians consume more sugar than people in her home country because Australians cannot control their eating habits. She said:

*Even though diabetes is not a cancer, it is a kind of cancer actually. You see the amount of sugar they [Australians] consume is a lot more, to tell the truth, you cannot control either.* (Ch3mcw—female)

The lady’s view of sugar consumption increasing the risk of developing and worsening diabetes was also same as most of the study participants.

**Chapter summary**

Chapter four began with briefly description of the recruitment results, and the relevant information collected from self-report questionnaire. All participants had lived with T2DM for more than two years. They migrated from Taiwan, Mainland China, Hong Kong or Singapore, and had lived in Australia for 10 years at least. Their age ranged between 37 to 70 years and all of them were married and lived with their spouses.

Next, the main findings of the interview data analysis were presented starting with a preview to catch an overall description about what influence participants’ culture had on their beliefs, attitudes and self-care strategies applied in their diabetes self-care. An interactive model was developed to reflect the adaptation process of rebuilding a life balance (see Figure 4.2 on page 72).

The last section of the chapter illustrated perspectives of diabetes self-care from one participant’s wife to provide relevant support to the main study findings. In the next chapter, the researcher discusses the main findings based on her interpretation of the data.
Chapter 5

Discussion
Chapter five discusses the main study findings and the Chinese immigrant participants’ diabetes self-care experiences in the context of the current literature and the cultural influences on their diabetes self-care practices. The discussion aims to capture the substance and scope of the issues that emerged in the study. The chapter also outlines the limitations and strengths of the study and makes some recommendations for practice and for further research, finally the conclusion is stated.

To the researcher’s and her supervisors’ knowledge, this is the first study to describe the perspectives of diabetes self-care in a sample of Chinese immigrants with T2DM living in Australia. The study is unique in that it addresses a paucity in the literature, hence it is challenging to compare the findings with previous Australian studies. The significant and original contribution the current study makes to the existing literature is a rich description of the personal meaning of how the Chinese immigrants who participated in the study managed their diabetes and rebuilt their life balance. The link between participants’ cultural beliefs, attitudes and the strategies they used to manage their diabetes was a significant finding. Health professionals (HPs) need to be aware of the cultural context of diabetes self-care to provide effective person-centred diabetes management (Lupton, 2012; Walker et al., 2005), hence the findings could make a contribution to the extant knowledge about how a group of Chinese immigrants in Victoria, Australia perform diabetes self-care and form the basis for future research in the area.
**Balance: a metaphor of the experience of diabetes**

The participants felt their life became unbalanced when they were diagnosed with T2DM and developed strategies to rebuild balance between their preferred life and life with diabetes. Participants believed in the importance of body balance and balance within the sociocultural environment. Their way of achieving balance is similar to the literature (Anderson & Funnell, 2008; Bramberg, Dahlborg-Lyckhage, & Maatta, 2012; Chesla, Chun, & Kwan, 2009; Jeon et al., 2010; Paterson, Thorne, & Dewis, 1998) and suggests people with diabetes learn to balance their life with diabetes through personal experiences and by experimenting with different strategies. The findings of these literature were similar to the current study in that finding balance was the dominant metaphor that described participants’ experience of diabetes. People with diabetes rebuilt balance by finding a way to cope with changes associated with diabetes, made sense of living with diabetes and communicated with HPs.

Jeon et al. (2010) suggested people with chronic illnesses struggle with the ongoing tasks of balancing their lives with the increasing self-care demands and the intrusion of chronic illness into their lives. The current participants’ management of diabetes self-care tasks was influenced by traditional Chinese medicine (TCM) theory. For example, one major tenet of TCM theory is the emphasis on balancing an individual’s body constitution (Eng, 2012; Kastner, 2004). The study finding suggests Chinese participants might use TCM teaching about constitutional body types to select their diet and/or daily nutrient needs and to reconstruct their life.
The body constitution is regarded as a biological environment that encompasses genetic, biochemical, and physiological function (Jiang, 2005). If people encounter factors that are not appropriate for their body constitution, the balance between the biological environment and their normal body functions will be disturbed and they will become unbalanced or sick. TCM practitioners treat the human being as a whole person instead of a disease or a symptom and the goal of TCM is to achieve/maintain Yin-Yang balance (Chen, 2001; Fang, 2012; Qiu, 2007).

Yin-Yang philosophy was the underlying philosophy the current participants used to rebuild their liveable balance. Everything has both Yin; feminine, cold, darkness, slow, nurture, and passive; and Yang; masculine, hot, light, fast, change, and aggressive (Liu, 2006). The Yin and Yang forces complement each other and form a united whole when they are balanced. The Yin-Yang united whole concept is similar to the holistic individual functioning optimally within their internal and external environments in Western philosophy (Fang, 2012). The internal environment includes the person’s constitution body type, biological environment and the psychological and spiritual environments. The external environment includes the person’s physical, and sociocultural environment; and in the current study, the law of nature, which influence the person’s capacity to maintain balance by adapting to changes.

Chinese people believe qi or vital energy flows throughout the body and interacts with the body’s external environment (Kohn, 2007). They believe qi regulates their emotional, mental, spiritual, and physical balance under the influence of the opposing forces of Yin and Yang. Thus, many Chinese people believe food and
drink have ‘hot’ and ‘cold’ properties, influence different body parts, cause different symptoms, and believe that eating certain foods will cure or ease specific conditions (Lupton, 2012). Chen (1996) reported the strategies the older Chinese-American participants in her study used to stabilise their blood glucose and balance their body’s constitution included consuming appropriate ‘Yin’ (cold) and/or ‘Yang’ (hot) foods and performing regular physical activity.

The current participants gradually learned to accept that diabetes is incurable and adapted to and rebuilt their life balance to encompass diabetes and the necessary self-care tasks. The finding suggest that the rebuilt liveable Yin and Yang balance included many aspects of balance such as balance for individual constitutional body type, balance between their preferred lifestyle and a healthy lifestyle, balance between their internal and external environments, and balance between their positive and negative perceptions towards the changes caused by being diagnosed with diabetes.

Accordingly, participants described beliefs that were related to their perceptions of life, diabetes complications and death. All participants agreed that birth-aging-sickness-death is a natural process that people should accept instead of being afraid of the process. Their expression ‘letting nature take its course’ is similar to the perspectives of Chen’s participants who felt they had to conform with nature. (1996). Chen developed a theory, ‘conformity with nature’ to describe older Chinese-Americans health promotion and illness prevention processes. The word ‘nature’ has many meanings for Chinese people such as safe, a life process, and balance. Chinese people believe fate or God controls
most aspects of human beings’ health and life and eventually realised diabetes is incurable and they would have to live with it.

The practice of following nature could be regarded as a form of fatalism. However, the attitudes of Chinese participants in the current study towards diabetes and death were not all fatalistic because the participants also felt they had an obligation to look after their bodies by performing self-care to rebuild their balance. Participants believed they were responsible for keeping healthy and preventing illness, even though they felt they only had limited control over their health and life. Their view of ‘doing one’s level best and leaving the rest to fate’ is similar to the belief in ‘God’s will,’ which is evident in other cultures, for example, Iranian participants with diabetes indicated it was God’s will that they had diabetes; they also believed their body was a divine gift from God and that they had a responsibility to take care of themselves (Abdoli, Ashktorab, Ahmadi, Parvizy, & Dunning, 2011).

Likewise, Dalal (2000) found patients in Indian hospitals also attributed their illness to karma and God’s will. These findings suggest there are cultural similarities as well as differences. The Chinese participants in the current study felt they could influence their diabetes management and they did what they could to care for themselves; at the same time they respected their natural life stages.

Modern diabetes care emphasises people with diabetes should actively participate in their care, rather than obeying rules and encourages people with diabetes to set goals (American Diabetes Association, 2013c). The current participants undertook self-care according to their self-care beliefs and experiences such as maintaining good mental health and pursuing good fortune or avoiding a bad
luck. It is essential that participants feel in control to use their experiences to balance their diabetes self-care tasks with other life tasks and take advice from health professionals. Therefore, rebuilding liveable balance involved health professionals and people with diabetes developing goals that ‘fit’ with the individual’s needs and daily life routines, which is consistent with current teaching that diabetes goals and targets should be developed with the individual (American Diabetes Association, 2013c).

**Main diabetes self-care strategies**

The seven main strategies participants said they used to undertake diabetes self-care were:

- maintaining good mental health
- eating a balanced diet
- using CAM
- seeking information about self-care
- taking medicines as prescribed
- self-monitoring blood glucose
- exercising within their capacity.

These strategies are similar to diabetes self-care advocated in Australia and other Western societies (American Association of Diabetes Educators (AADE), 2014; Nettles & Belton, 2010). For example, the strategies the participants used and the seven AADE self-care steps focus on healthy coping, eating a healthy balanced diet, taking medicines and monitoring blood glucose. The similarity in self-care strategies is not surprising because the participants would have been taught these things by HPs in Australia after they were diagnosed with diabetes,
and Australian Diabetes Educators Association self-care steps were derived from AADE self-care steps.

However, as discussed in the previous section, the current participants used TCM concepts about constitutional body types to choose foods to control their diabetes and promote good health, even though most could not explain the theories behind their food choices. The balanced diets most participants described were selected according to their nutritional needs and to balance their constitutional body type. The different concept about balanced diet between western philosophy and Chinese philosophy could partly explain why some participants who thought they followed a healthy lifestyle found, that, even when they consumed a western so-called ‘healthy balanced diet’ their blood glucose levels were higher than they expected.

Another example of the different philosophies that underpin self-care tasks was using CAM. The National Center for Complementary and Alternative Medicine (NCCAM) (2013) defined CAM as ‘a group of diverse medical and health care systems, practices, and products that are not generally considered part of conventional medicine.’ Using CAM was a significant self-care strategy the current participants used to manage their diabetes. Interestingly, they only used CAM therapies they thought would not harm their health. Chinese participants in Chen’s study (1996) and those in the current study decided to use CAM because they believed CAM is natural and that natural products are safe. Chinese participants in both studies did not want to violate the natural law and preferred to use a natural way to manage their diabetes rather than chemicals.
Moreover, the current participants were less likely to disclose self-care behaviours their doctors did not recommend such as using CAM, because they felt not follow doctors’ order was disrespectful and did not want to damage their relationship with or disappoint their doctors. Most participants held their doctors in high regard, therefore some participants were afraid of judgemental responses from their doctors if they disclosed their CAM use. Not disclosing the CAM use is a common finding in the literature (Cheung, Wyman, & Halcon, 2007; Puataweepong, Sutheechet, & Ratanamongkol, 2012). The most common reason people do not disclose CAM use is because health professionals do not ask (Chang, Wallis, & Tiralongo, 2010; Manya, Champion, & Dunning, 2012).

All participants modified the self-care regimen HPs recommended in accordance with their own views of what was best for their specific situation but they did not always disclose their modifications, especially CAM use, to their HPs. In addition to using CAM, some participants reduced their prescribed blood-glucose lowering medicine dosages or changed the dose frequency. Most glucose lowering medicines are more effective when they are taken consistently as directed by the doctors who prescribe them, although people with diabetes are taught to adjust insulin doses as part of self-care. Health professionals need to be aware that people self-prescribe medicines and change doses and ask about behaviours of medicine taking and CAM use, especially when they are setting care goals together with Chinese immigrants.

Normalisation to live with diabetes

Participants in the current study believed their diabetes as mild. Most participants thought T2DM was not as serious as Type 1 diabetes and other fatal
diseases such as cancer. One reason they thought T2DM was not serious was because they wanted to maintain good mental health. Participants described taking a holiday from diabetes by visiting their home countries as one strategy they used to maintain mental health.

Manderson and Kokanovic (2009) reported Chinese, Greek, Indian and Pacific Islander immigrants living in Melbourne felt diabetes interrupted their ability to carry out everyday tasks, which made them feel inadequate, distressed about the losses they felt diabetes caused, which made them feel socially isolated and that their identity changed (Manderson & Kokanovic, 2009). The different emotional responses from the current participants’ might be partly due to the fact Manderson and Kokanovic recruited their Chinese participants from two Chinese general practices that predominantly cared for people from Chinese backgrounds. Whereas the current researcher recruited participants from communities and each participant lived in a different suburb. All participants in the current study knew there was no relationship between the researcher and their doctors so the participants were more likely to share their perspectives.

The other reason participants in the current study did not think diabetes was very serious could be the impression they got from their doctors who often emphasised the commonness and manageability of diabetes. From the participants’ descriptions it appeared that their doctors tried to help people with diabetes feel ‘normal’ (normalisation) by using phrases such as ‘T2DM is manageable,’ and ‘old people have T2DM.’ Normalising diabetes is common among people with T2DM. For example, Kokanovic and Manderson (2007) also found doctors “normalised” diabetes and self-care to people with diabetes. In normalising
discourse, doctors often downplay the risk of complications by emphasising the fact that diabetes is manageable if people adhere to dietary recommendations, undertake regular exercise, and take their medicines. Doctors used normalisation to reassure people with T2DM and reduce distress; consequently, some people with T2DM might not regard diabetes as a serious disease. However, normalising diabetes could be counterproductive to establishing and sustaining appropriate self-care.

All participants in the current study got the impression that diabetes complications are extremely harmful from the media, books, and family members who were suffering from long-term diabetes complications. These information sources emphasised the risk of severe complications and the imperative to strictly adhere to health professionals’ recommendations. Most participants motivated themselves to adhere to diabetes care recommendations because they were afraid of the possibility of developing diabetes complications. However, they recognised that catastrophising could cause considerable anxiety and impact negatively on their life balance.

**Avoiding uncertainty**

Living with uncertainty is a common finding in studies that explore how people live with chronic illnesses (Anderson et al., 1995; Callaghan & Williams, 1994; Honkasalo, 2008). Culture could influence how people deal with uncertainty, for example, Hofstede, Hofstede, and Minkov (1991) developed a framework to enhance cross-cultural communication, the cultural dimensions theory; and uncertainty is one of the five aspects of culture these authors used to compare the
differences among culture practices of many countries (Minkov & Hofstede, 2012).

One way people cope with uncertainty is avoidance and/or denial depending on the extent to which they feel threatened by ambiguous or unknown situations (Livneh & Antonak, 2005; Lubkin & Larsen, 2013). For example, Chinese people think it is bad luck to talk about disease or death because talking about it could cause disease or death to happen (McLaughlin & Braun, 1998). In the current study participants avoided using the word ‘death’ by using euphemisms such as ‘leave.’

Most participants pursued good fortune when they could. One participant stated one way she pursued good fortune was not taking medicines on the first day of Chinese New Year. The first day of Chinese New Year was the only day she did not obey her doctor’s prescription. Although her behaviour could be regarded as superstitious and could affect her diabetes control, traditionally, Chinese people are expected to obey the taboos of Chinese New Year until the 15th day of January of the lunar calendar (Hinsbergh, 2014). Not taking medicines on the first day of Chinese New Year to pursue good fortune is a deep seated belief for most Chinese people because taking medicines is one taboo passed from generation-to-generation.

**Power in relationships with health professionals**

Participants respected authority and a power hierarchy emerged in the findings. Hierarchy is part of traditional Chinese social structures and relationships. Hierarchical relationships exist in the Chinese family and society generally and occur in relationships between doctors and patients (Purnell, 2013).
example, Chinese cancer participants in Mok, Martinson, and Wong’s study (2004) in Hong Kong commented that doctors were professional people, so they put their care in the hands of their doctors. Moreover, immigrants with T2DM in Kokanovic and Manderson’s study (2007) in Melbourne ‘sought approval from their doctors when they were compliant and feared reproach when they deviated from advice’ (p. 461). Kokanovic and Manderson (2006) found Chinese female immigrants held healthcare providers in high regard.

Therefore, the relationship and interactions between doctors and immigrants with T2DM could be affected by immigrants’ thoughts about the doctor’s status and their power over their diabetes treatment, which in turn could affect their self-care behaviours positively or negatively. Moreover, in Chinese culture, hierarchical relationships usually underpin guanxi. The concepts guanxi and hierarchy explain the issue of power in relationships.

The Chinese word ‘guanxi’ encompasses several concepts: the depth of feeling within interpersonal relationships, the moral obligation to maintain the relationship (renqing) and social status and prestige, the concept of ‘face’ (Buttery & Leung, 1998; Chan, Cheng, & Szeto, 2002; Gold, Guthrie, & Wank, 2002; Park & Luo, 2001; Warren, Dunfee, & Li, 2004; Wong & Tam, 2000). The concept of ‘guanxi’ is deeply embedded in Chinese culture and influences personal relationships in Chinese society (Gold, Guthrie, & Wank, 2002).

Guanxi in a family such as filial piety is very important in Chinese families and was one reason some of the current participants feared diabetes complications and the prospect that they might become a burden to their children if they developed a complication. Wu study (2008) also found participants perceived
threat of complications and the effect on family dynamics were important determinants of how Chinese people with T2DM made decisions about self-care. Therefore, when advising and caring Chinese people, HPs should offer support to the family members as well as include support from the family members in the care plan.

Participants in the current study tried to build guanxi with their doctors by respecting their doctors and/or obeying their doctors’ recommendations. Participants felt if they had guanxi with their doctors, the health services they received would improve because doctors’ behaviours might be more friendly and helpful. For example, one participant chose to consult a relative who was a GP. The participant might believe his GP would provide better health care because they are relatives and being related is one form of guanxi. However, providing health services for relatives represents a conflict of interest for the doctor and it is not recommended by most regulatory authorities (The Royal Australian College of General Practitioners, 2013).

All participants indicated the discussion they had with their doctors during routine consultations usually focused on controlling diabetes, especially controlling blood glucose levels, and did not address other relevant topics they wanted to discuss. The level and detail of the information participants said doctors provided varied considerably. Significantly, some of the information some participants recalled during the interview was incorrect such as what they recalled their doctors said about how to take glucose lowering medicines. Thus, like Kokanovic and Manderson’s (2007) findings, the current study suggests patients’ ‘report’ being dissatisfied with the information they receive from health
professionals, which could reflect a communication problem, especially when health professionals and people with diabetes speak different languages. Therefore, health professionals need to take particular care to ensure cultural factors and individual differences are addressed in personal communication and health service polices.

**Limitations and strengths of the study**

The goal of the study was to describe how a group of Chinese immigrants with T2DM living in Victoria, Australia managed diabetes self-care including the effort involved and the impact of the lifelong commitment to self-care on their lives and wellbeing. The findings have some limitations. The sample size was small and the study only involved participants from communities living in Melbourne, Victoria, Australia, and may not apply to people in other parts of Australia. Moreover, Chinese immigrants in Melbourne do not represent a random sample of the population from the countries of origin.

However, the current participants were selected because they could describe their experiences of diabetes self-care. The value of the study lies in the participants’ ‘truths’, which is an important consideration in qualitative studies. The researcher was able to collect rich data and thick descriptions that enabled her to identify common emergent themes among the participants and describe the participants’ ‘truths’ as accurately as possible.

Another limitation was the study design. For example, acculturation can influence migrants’ beliefs and behaviours. It was not possible to compare various levels of acculturation in the current study because it was not designed to do so. However, the language spoken, years of living in Australia, and other
demographic characteristics were collected and could explain some differences in diabetes self-care practices among Chinese people migrating from the four different countries represented in the study.

Despite the limitations, the data were saturated and several important themes emerged: some were original and specific to Chinese culture and/or immigrants. The findings provide an in-depth understanding of how the Chinese immigrants with T2DM who participated in the study managed diabetes self-care and integrated diabetes into their lives.

**Recruitment issues**

The early stage of recruitment was slow even though the researcher applied many strategies to recruit participants (see Chapter 3). Several cultural issues arose that could have affected the effectiveness of the recruitment process.

First, as indicated, hierarchy is important in Chinese culture. Chinese people value professionals in a higher position in the hierarchy and are more willing to obey people whom they perceive to be famous or ‘high ranking’ health professionals. The researcher is an international student undertaking a doctoral degree in Australia. Chinese immigrants in the sampling population did not know the researcher except through the limited amount of information they received in the flyer, plain language statement, and word of mouth (snowball sampling). Therefore, they could have been less likely to make an initial contact with the researcher.

Second, there was no guanxi between the researcher and the study population because she was unknown to the sampling population. Building guanxi takes
time, requires hard work and a well-developed network of contacts. To try to build guanxi, the researcher undertook volunteer work in several Chinese organisations, mostly Taiwanese, to get to know the sample population, which could explain why most participants were from Taiwan.

Third, the language on flyers might be unfamiliar to potential participants. The recruitment flyers were written in both Chinese and English to accommodate the language potential participants were likely understand. However, the Chinese characters the researcher used in the flyers were Traditional Chinese, which is used in Taiwan and Hong Kong; but might not be easily understood by people from China, Malaysia and Singapore, who now use simplified Chinese characters.

Fourth, flyers are a passive recruitment strategy, especially when recruiting Chinese participants. Therefore, flyers should be used with other strategies to attract more respondents.

**Recommendations for practice**

The findings of the study have far-reaching implications for many people and organisations interested in applying cultural competency to diabetes management. The study described several perspectives of Chinese immigrants with T2DM living in Victoria, Australia about diabetes self-care. People interested in diabetes self-care, health policy, and research will find these perspectives useful.

The study provides some insight into the diabetes self-care beliefs and attitudes of the Chinese immigrants who participated in the study and the strategies they apply to maintain life and diabetes balance, which can be applied into health
professional education programs. Health professionals play a critical role in delivering diabetes care to people with T2DM. Health professionals’ ability to deliver health care depends on their knowledge about diabetes and their ability to understand people with diabetes personal and social context, values, and beliefs. Moreover, the study implies that avoiding uncertainty and building guanxi could affect Chinese immigrants’ self-care behaviours and their relationships with the multidisciplinary health care team.

The information could also help HPs understand some Chinese immigrants’ health behaviours and be useful to people interested in research about immigrants’ diabetes self-care and policy development. The findings are applicable to HPs working in all areas of practice. HPs and health policy makers:

- Need to emphasise the importance of sociocultural and psychological issues associated with pursuing good fortune and avoiding bad luck and the likelihood Chinese immigrants will use CAM therapy.
- Be aware of the impact of cultural beliefs and attitudes on Chinese immigrants with T2DM’ self-care behaviours.
- Provide accurate and up-to-date information to Chinese immigrants with T2DM. The complexity of Chinese language is an important consideration because people from different countries with Chinese backgrounds might communicate in different forms of Chinese.
- Assess medicine safety issues such as the use of CAM therapy and stopping medicines on the first day of Chinese New Year.
- Take advantage of diabetes appointments with general practitioners and/or diabetes specialists to effectively communicate how to practice appropriate diabetes self-care according to individual needs because Chinese immigrants with T2DM might only rely on their general practitioners and/or diabetes specialists for diabetes care and are less likely to use other health services.

- Consider the effect of judgemental language and/or attitudes on Chinese immigrants’ health behaviours and evaluate their communication strategies and be flexible in the way they communicate with Chinese immigrants with T2DM.

- Implement shared decision-making about diabetes management that develops an equal, respectful and productive relationship with Chinese immigrants with T2DM to ensure self-care recommendations to meet individual needs.

- Highlight the influence cultural beliefs have on self-care behaviours in education programs.

- Deliver education programs that encompass Chinese immigrants with T2DM specific needs and provide support to increase their interest in attending and participating in diabetes education.

**Recommendations for further research**

Further studies are needed to determine the applicability of the findings to other Chinese immigrants with T2DM. Further research could use a variety of data collection methods. Quantitative analysis can identify relationships between different variables such as acculturation and diabetes self-care behaviours and
self-care performance. Qualitative studies can be used to map specific examples of relationships among the variables. Some areas that require further research became apparent during the current study.

- Further exploration and application of the study findings in other contexts. For example, develop and evaluate an education program that encompasses Chinese cultural and religious beliefs for health professionals.
- Further explore and describe the practice of uncertainty avoidance on self-care behaviours such as pursuing good fortune and avoiding bad luck.
- Further explore and describe the influence of guanxi and how it applies to recruiting Chinese immigrants to participate in research because guanxi could affect their interactions with health professionals recruitment to research projects.
- Further describe the importance of how life balance and letting nature take its course affects diabetes self-care.
- Further describe the impact of ‘taking a vacation’ from diabetes by visiting the home country on self-care.
- Further describe the use of CAM by immigrants with T2DM in Australia.

**Suggestions for recruiting Chinese immigrants**

Recruiting has been and will always be an involved process because the truthfulness and relevance of the data depends on the methods researchers use to elicit participants with rich experience (Best practices for recruiting the right participants in a digital world, 2012). The study provided important information that could help future researchers. A recruiting process for studies involving
Chinese immigrants could be more effective if the following sequential strategies are used:

1. **Determine whether suitable participants are available.**

   Once researchers determine their research objectives and identify the ideal participants, they need to determine whether suitable participants are available. Almost every Chinese immigrant joins groups relevant to their ethnic background and interests; once researchers identify those groups, they can be almost certain they will find some people who will meet the inclusion criteria.

2. **Cater to the Chinese immigrants.**

   To attract Chinese immigrants, researchers must cater to their needs. Engaging Chinese immigrants in a way that is relevant to them and clearly stating what is involved in participating the research. For example, telling them that they could be part of something meaningful that could help others. In every interaction, researchers should keep in mind *who* they are talking with.

   Some respondents in the current study contacted the researcher to express their interest in participating in the study, but they had already planned to visit their home countries for a couple months to avoid hay-fever attacks and/or to celebrate Mid-Autumn festival (a Chinese holiday that Chinese people regard as a holiday for reunion).

   Due to the differences in cultures, seasons, times of day, and holidays across the globe, researchers need to make sure they plan first-time
interactions at a time that works best for the sampling population. For example, do not try to recruit Chinese immigrants during the Chinese New Year. Chinese immigrants who are not working full-time are more likely to visit their home countries for weeks such as mid-March to mid-April (for Tomb Sweeping), or September to October (Chinese immigrants regard this time as season of hay fever in Australia). These times are less likely for them to participate in a study.

3. Use hierarchy/guanxi in a positive way to assist recruitment.

Hierarchy and guanxi were discussed in detail on pages 142-143 and 145. For example, when conducting research about education issues at schools in Taiwan, having official document(s) sent to the sample population from government department(s) together with a letter of invitation to the study could assist the recruiting process.

4. Empower Chinese immigrants by using the ‘right’ research method.

Chinese immigrants are less likely to participate in a study that is inconvenient and interrupts their daily lives. Thus, researchers must encourage people to participate by making it easy for them to do so. For example, enable them to respond in their own time, in a place they choose, and participate whenever and wherever is convenient for them. When Chinese immigrants feel empowered to participate in ways they are used to and comfortable with they are more likely to participate in the study.
5. Offer creative incentives

Few Chinese immigrants will participate and engage in a study without some kind of tangible benefit. To keep them engaged for the duration of the study researchers need to offer creative and inspiring incentives. The current researcher did not offer money, prizes, reimbursement or gifts, which could be one reason recruitment was difficult. However, the researcher tried to be as patient and polite as possible when she contacted respondents and interviewed participants. The respondents who met the inclusion criteria all agreed to participate and none of them withdraw from the study.

Conclusions

The overall aim of the study was to describe the self-care perspectives of a group of Chinese immigrants with T2DM living in Victoria, Australia. The findings provide an in-depth understanding of the self-care beliefs and behaviours of the nine participants in the context of both Australia and their home countries.

The core theme that described participants’ personal meaning of diabetes self-care was rebuilding liveable balance. Three inter-related subthemes explained the core theme:

- Living with uncertainty.
- Negotiating and compromising.
- Integrating previous experience into self-care.

The current study findings expand the work of previous researchers in the area of diabetes self-care and cultural influences on immigrants’ health behaviours.
The investigation revealed that culture influences Chinese immigrants with type 2 diabetes’ beliefs, attitudes and the self-care strategies they undertake.

Diabetes self-care consists of a complex series of decisions about their self-care goals, self-care behaviours, how to manage the regimen including managing their medicines. Many different circumstances influence the way Chinese immigrants with T2DM rebuild their life balance. The current study contributes to the literature by describing the impact of Chinese cultural beliefs on self-care in Australia and specifically by describing how cultural beliefs influenced Chinese immigrants’ diabetes self-care behaviours.

The findings provide health professionals with an insider’s view of the Chinese study participants’ cultural beliefs, attitudes and diabetes self-care practice. Therefore, health professionals would benefit from understanding how they manage their diabetes, the circle of rebuilding own liveable balance that emerged as a core aspect of adaptation on the current study.

**Chapter summary**

Chapter five presented a discussion of the main study findings. The limitations and strengths of the study were discussed and some recommendations for practice and for further research were made, and the conclusion was stated.
References


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**Best practices for recruiting the right participants in a digital world.** (2012). Retrieved from https://www.qualvu.com/the-right-participants/best-practices-for-recruiting-the-right-participants-in-a-digital-world/


Appendices
Appendix A: Advertisement for participating to the study

DEAKIN UNIVERSITY AUSTRALIA

Are You a Chinese Immigrant?
Do You Have Type 2 Diabetes?
Would You Like to Share Your Experiences?

I am a PhD student in the School of Nursing at Deakin University.
I am interested in talking to you about how you manage your diabetes.
I would like to contact you and explain more about the research if you:

1) Have had type 2 diabetes for more than six months
2) Are 30 years of age or older
3) Are Chinese come from Hong Kong, Mainland China, Malaysia, Singapore, or Taiwan
4) Speak Mandarin or Cantonese
5) Live in Victoria.

If you are interested or want more details, please contact
Ms Yen Yang, School of Nursing, Deakin University,
by phone on (03) 9244 6305; 0411589212
or e-mail yenyang@deakin.edu.au
or yenyang@tecn.edu.tw (can email in Chinese).

The project is being supervised by Professor Trisha Dunning, Deakin University and Dr Bodil Rasmussen, Deakin University.
Appendix B: Advertisement for participating to the study

(Traditional Chinese)

您是移居澳洲的華人嗎？
您被診斷有二型糖尿病的情況嗎？
您願意分享您的經驗
來幫助其他和您有相同情況的華人嗎？

我是一位來自台灣，目前就讀於迪肯大學的護理博士生。
我希望能了解您處理二型糖尿病的日常生活經驗。

如果您是:
1) 被診斷有二型糖尿病已經6個月以上
2) 30歲以上
3) 出生地為香港，中國，馬來西亞，新加坡，或台灣
4) 會說中文
5) 住在維多利亞州。

請和我連絡，我將為您針對本研究做更進一步的說明。
請聯絡楊嬿女士, School of Nursing, Deakin University,
電話: (03) 9244 6305 ; 0411589212

e-mail: vencyang@deakin.edu.au
or vencyang@tecn.edu.tw (可寫中文)

本研究的指導教授是 Professor Trisha Dunning, Deakin University
以及 Dr Bodil Rasmussen, Deakin University。
Appendix C: Publication for the purpose of recruitment

(Traditional Chinese)

糖尿病自我照護的項目包括健康飲食，適當運動，監測血糖，注意併發症等等，為了幫助民眾持續自我控制糖尿病情形，台灣行政院衛生署國民健康局還發行了「糖尿病護照」（見附圖）供有需要的民眾使用。

最後，我也會跟朋友們解釋到我目前進行的研究的觀點是，如果從二型糖尿病得病的危險因素來考量，那麼在移居澳洲的華人就比當地的澳洲人多了幾項危險因素，例如生活型態的改變，華人種族，移民的文化習俗和社會環境改變的壓力等等。再深入到糖尿病治療護理方面，在不同生活習慣和語言溝通的影響下，目前澳洲華人是否以及如何能進到適合的糖尿病照護？

因此如果有澳洲二型糖尿病個案，願意跟大家分享他們與二型糖尿病共生活的經驗談，相信將能幫助有相同狀況的華人面對二型糖尿病的自我照護。
Appendix D: Presentations and publications arising from the thesis

Self-care is essential to health maintenance, and disease prevention, especially when people have a chronic illness such as T2DM. Self-care definitions are various and encompass similar concepts, but most appear to be from health professional’s point of view. However, diabetes self-care is not a health professional activity. Therefore, health professionals need to keep in mind the fact that self-care requires the individual to undertake essential tasks several times a day, and recognise the relentless, ongoing nature of self-care for the individual’s lifetime (Utz, et al., 2006).

References


Chinese people's experiences of diabetes

The 2006 Australian Census showed 206,589 people born in China, now live in Australia, an increase of 44.7 percent from the 2001 Census. This represented one percent of the 2006 Australian population.

TYPE 2 DIABETES SELF-CARE AND CHINESE IMMIGRANTS

People with diabetes play a central role in managing their diabetes but face many challenges, especially when they move to another country. Cultural, religious, belief systems, and lifestyle factors all contribute to the success in managing diabetes.

Some ethnic groups are known to have high risks of type 2 diabetes - e.g., Chinese people. Migrants often experience dramatic lifestyle and cultural changes after they emigrate to a new country.

CHINESE IMMIGRANTS IN AUSTRALIA

Interestingly, Chinese people from Mainland China are emigrating to Australia. The 2006 Australian Census showed 206,589 people born in China, now live in Australia, an increase of 44.7 percent from the 2001 Census. This represented one percent of the 2006 Australian population. When Chinese people from Hong Kong and Taiwan are included in the population figures, at least 1.5% of the Australian population is Chinese; a further 0.3% was born in Malaysia. Chinese populations are usually minority groups within the dominant culture. However, the birthplaces of Australians in the 2006 census were listed as over 240 countries, which illustrates the diversity of the Australian population. It also shows that Chinese Australians are the third most common cultural group in Australia after the English and New Zealand-origin people.

Chinese people experience lifestyle changes as well as dramatic cultural and environmental changes when they move to Australia. They bring their beliefs, cultural practices, and traditions with them, for example, traditional festivals and celebratory foods.

Culture influences individuals' values, attitudes, and behaviors in a subtle way. Four examples of Chinese culture are:

1. Traditional celebratory foods: Some traditional foods are high in salt, fat, and sugar for example - moon-cakes for Mid-Autumn Festival and steamed rice dumplings for the Dragon Boat Festival. Overweight or obesity and unhealthy diets are well-known risk factors for diabetes. Chinese immigrants have difficulty accepting a diagnosis of type 2 diabetes because they think that they are not obese and that their diet is far healthier than western food.

2. Obeying authority: Chinese people unconsciously tend to obey authority, possibly because they have a long-term tradition of obedience. Thus, Chinese people generally hold health professionals, especially their doctors, in high regard. As a result, they are more likely to take a passive role in their health care, especially when English is not their first language. They are unlikely to ask for information about self-care, which could affect their ability to adhere to health professionals' recommendations. However, this changes as the younger generation becomes more acculturated to Australian ways.

3. Strong family ethics: Chinese people have strong family ethics. Parents care for their children out of love and responsibility. In turn, the children are expected to respect and take care of their parents when their parents grow old, which is known as filial piety. Out of concern for their family members, Chinese people may want to avoid moulding or worrying each other. Therefore, they are more likely to fear discussion about their diabetes should only occur between themselves and their health professionals, to protect their family from worry.

4. Avoiding bad luck: There are many kinds of taboos in Chinese culture.
betes self-care in Australia

Misunderstandings between Chinese people with diabetes and health professionals may make it difficult for people with diabetes to access health services and affect their diabetes management.

Example: Chinese people might avoid visiting a doctor or being hospitalised during certain days, such as Chinese New Year, a very important time to Chinese people. It begins on the first day of the first month on the Chinese lunar calendar and continues for 15 days. Many Chinese believe visiting a doctor or being hospitalised in the beginning of a year will bring bad luck in the coming year.

Misunderstandings between Chinese people with diabetes and health professionals may make it difficult for people with diabetes to access health services and affect their diabetes management. More studies on how Chinese immigrants with diabetes manage their disease were conducted outside Australia and the experience of Chinese immigrants in Australia may be different. Thus, researchers at the School of Nursing, Deakin University, are conducting interviews with Victorian Chinese immigrants with type 2 diabetes from Hong Kong, Mainland China and Malaysia. The aim is to explore their diabetes self-management experiences including the effort involved and the impact of the lifelong commitment to self-care in their home country and in Australia.

Written by Yee Yong, Trisha Dunning AM and Boadi Rammour.

Chinese people bring their beliefs, cultural practices and traditions with them to Australia.

**Abstract Content:**

**Background:** Diabetes is a huge burden in all countries and in all aspects of society for the economy and for individuals. Type 2 diabetes (T2DM) accounts for approximately 85 to 95% of all people with diabetes, and there is a high prevalence of T2DM among Chinese populations. The Australian 2011 census showed Chinese Australians were the third most common cultural group in Australia. Migrant populations that experience dramatic cultural and environmental changes after they immigrate to a new country also have high prevalence rates of T2DM.

**Aim:** The study described how Chinese people with T2DM manage diabetes self-care in Australia.

**Method:** Nine Chinese immigrants from various Chinese backgrounds were interviewed. All participants were first generation of Chinese-Australian and lived in different Melbourne suburbs, Australia. Data were analysed using constant comparative method from a holistic view.

**Main findings:** Fourteen themes emerged from the study in relation to six main individual domains, including Chinese culture, social, spiritual, psychological, physiological and the core domain. Significantly cultural issues have impacts on participants’ self-care. For examples, not taking medicine at Chinese New Year to pursue good fortune, using complementary and alternative medicines and therapies (CAM) in self-care, and taking a vacation from diabetes when they visited the home country. Moreover, most participants used the term ‘being lazy to’ simply just to express that they felt less motive to do something. The results of the study may provide a basis for cultural integrity in health service delivery.

**Conclusion:** The study elucidates how participants managed diabetes self-care in Australia, and outlines possibilities for further research.

**Key words:** Type 2 diabetes, Chinese immigrants, Self-care, Qualitative study
Appendix E: A festival the researcher working as a volunteer for introducing the study
2010 TAIWAN FESTIVAL PROGRAM

12:00 Lion Dance by CYSM
12:10 Welcome to Taiwan Festival
12:25 Ten Ren's Tea Ceremony by Ten Ren's Tea Group
12:45 A Clean Earth by TzuChi Melbourne
13:55 Lucky Draw #1
13:00 Formosa Dances by Sabrina Dance Troupe
13:20 Hakka song & Sabrina Dance Troupe "Tea & Love from Hakka"
13:35 HYS Drummers
13:50 Lotus Dragon dance by CYSM Lotus and Dragon team
14:00 Opening Ceremony & VIP Speech
14:25 Ribbon Cutting Ceremony
14:30 The Blessing of Taiwan
   (hand drums, hopping drums and Giant puppet's dance)
14:45 Fashion Dance by Ya Hui Performing Arts Group
15:55 Lucky Draw #2
15:00 Taiwan Aboriginal dances by TAAM
15:10 Aboriginal/Taiwanese songs by TAAM
15:20 Song Dynasty Poem Singing "Thinking of You"
15:30 Children's Songs by QunYing Chinese School
15:45 Traditional Taiwan Dance by Sabrina Dance Troupe
15:55 Lucky Draw #3
16:00 Fan Dance by Ya Hui Performing Arts Group
16:15 TenRen's Tea Ceremony by TenRen Tea Group
16:30 The Charm of Taiwan by Sabrina Dance Troupe
16:45 A Clean Earth by TzuChi Melbourne
16:55 Lucky Draw #4
17:00 When Mountain meet Sea
17:15 Formosa Dances by Sabrina Dance Troupe
17:30 Hakka song & Sabrina Dance Troupe "Tea & Love from Hakka"
17:45 Lion Dance Performance by CYSM Lion Dance Group
18:00 Event closes

Free entry Lucky Draw when you collect 5 stamps on the stamp spots; Visit the indicated stall you will get one stamp.

NAME: _______________________ MOBILE: _______________________ POSTCODE: ____________

The organizer reserves the right of Lucky Draw rule.
Please see the Lucky Draw Billboard in front of Reception Desk for details to enter the Lucky Draw.
Appendix F: The information questionnaire used in the study

Demographic Questionnaire for Chinese People with Type 2 Diabetes

Please complete the following section by complicating or crossing the box (☒).

Part A: General Information:

1) Are you: Male ☐ Female ☐

2) Country of Origin:
   • Hong Kong ☐ Mainland China ☐ Malaysia ☐ Singapore ☐ Taiwan ☐

3) How long have you lived in Australia? _______ Years

4) Post code: ________

5) How old are you? ______ Years

6) What is your marital status?
   • Married living with partner/family ☐
   • Widowed/Divorced /Single living with family ☐
   • Widowed/Divorced /Single living with partner ☐
   • Widowed/Divorced/Single living alone ☐
   • Other, please specify ________

7) Are you working now? Yes ☐ No ☐ Retired ☒
   If yes, what is your occupation? ______________________
   what is your working status?
   • Full-time ☐ Part-time ☐ or working hours per week: _____ hours .

8) What is your highest completed education level?
   • Nil ☐
   • Primary School ☐
   • Secondary School ☐
   • TAFE Tech/ High School / Some College ☐
   • University ☐
   • Other, please specify ________________

Participant ID: C ________

Page 1 of 3
Part B: Diabetes-related Information:

1) How long have you had type 2 diabetes? _______ Years

2) How do you control your diabetes? (please cross as many of the following options that are relevant)
   - Diet □
   - Exercise □
   - Diabetes tablets □
   - Insulin □
   - Other, please specify__________

3) Do you have problems communicating with doctors about your diabetes in English?
   - Yes□  No □  I use Mandarin□  I use Cantonese□  I use an interpreter□

   If yes, please cross as many of the following options that are relevant:
   - I do not understand what they say   □
   - They do not understand what I say   □
   - I do not understand the terms they use   □
   - Other, please specify__________

4) Do you think your doctor knows what it is like managing diabetes? Yes□  No □

5) Do you have problems communicating with diabetes educators about your diabetes in English?
   - Yes□  No □  I use Mandarin□  I use Cantonese□  I use an interpreter□

   If yes, please cross as many of the following options that are relevant:
   - I do not understand what they say   □
   - They do not understand what I say   □
   - I do not understand the terms they use   □
   - Other, please specify__________
6) Have you ever received diabetes education?  Yes☐  No☐  Do not know☐
   If yes: How long since your last received any diabetes education? _____ Years
   Where did you receive diabetes education: __________________________
   Briefly outline the content of the session: __________________________

7) Do you have any diabetes complications?  Yes☐  No☐
   If yes, please cross as many of the following options that are relevant:
      Heart problems ☐
      Stroke ☐
      Eye problems ☐
      Kidney problems ☐
      Problems with your feet ☐
      Other, please specify__________

8) Do you regularly check (by your doctor): Please cross as many of the following options that are relevant:
      Blood glucose ☐
      Blood pressure ☐
      Blood fat ☐
      Heart ☐
      Kidney ☐
      Feet ☐
      Other, please specify__________

9) Does anyone in your family also have diabetes?  Yes☐  No☐  Do not know☐
   If yes, what type do they have: Type 1☐  Type 2☐  Do not know☐

---Thank you for your time and cooperation

Page 3 of 3
Appendix G: Guide questions for individual interview

Interview guide for semi-structured individual interview

Scene One: Greeting and Setting In

How are you today? How has your day been?

Thank you for agreeing to talk to me today. Your knowledge and experience will help me and others to understand the diabetes self-care experiences of Chinese people with type 2 diabetes. As I have discussed this on the phone, I will ask you a few questions about being a Chinese person with type 2 diabetes in Australia. You can tell me whatever you like and as much as you like to. Your answers will not be judged as right or wrong, as I would like to hear your story. You are an expert on the issue I will be asking in this conversation.

I also would like to ask your permission if I can tape our conversation. You will tell me your story and it is difficult for me to write everything down in the conversation. The tape will be transcribed so that I can make sense of your story. If you want to have a look at a summary of our interview, I can send you a copy before I start doing my data analysis. Is this OK with you?

Scene Two: Commencing the Interview

1. How are things going with your diabetes at the moment?
   - How do you feel about having diabetes?
   - What do you understand by the ‘diabetes self-care’?
   - Please describe how you manage your diabetes in Australia.
   - Could you describe how you take care of your diabetes on a typical day?
   - How did you learn to take care of your diabetes?
   - What is your daily diet like?
   - What difficulties has your diabetes caused you at home?
   - What difficulties has your diabetes caused you at work?

2. Comparing to your self-care experience in country of origin, please describe your self-care experience which you would like to share with others who will deal with the situation as you?
   - Was your diabetes diagnosed in ___ (Hong Kong, Mainland China, Malaysia, Singapore, or Taiwan)?
   - How did you manage your diabetes in ___ (Hong Kong, Mainland China, Malaysia, Singapore, or Taiwan)?
• What is different about the way diabetes is managed in Australia and ___ (Hong Kong, Mainland China, Malaysia, Singapore, or Taiwan)?

• What make managing diabetes difficult for you in Australia?

• What make managing diabetes easier for you in Australia?

3. How do you think your diabetes should be treated or managed?

• What are you afraid of most about your diabetes?

• What are the most important results you hope for from your diabetes treatment?

4. Is there anything you like to see in order to make the life of Chinese people with type 2 diabetes easier/better in Australia?

Scene Three: Finishing off and Leaving

Is there anything else that I have not asked you but you would like to tell me?

I'm seeing a lot of Chinese people with type 2 diabetes, do you have any suggestions for them?

What would be your advice regarding the issue we have just discussed today to others who are in the same situation as you?

Thank you so much for your time and knowledge. It has been a privilege for me to share this with you.

Do you want me to help you with anything today?

Good bye.
Appendix H: Ethics approval to conduct the study

DEAKIN UNIVERSITY

Human Ethics Advisory Group – Faculty of Health,
Medicine, Nursing and Behavioural Sciences
221 Burwood Highway,
Burwood Victoria 3125 Australia
Telephone +61 3 2517174
Facsimile +61 3 9251 7425
hmnbs-research@deakin.edu.au

Memorandum

To
Prof Trisha Dunning
Inaugural Chair in School of Nursing

Date
10 February 2010

From
Secretary – HEAG-H
Faculty of Health, Medicine, Nursing, and Behavioral Sciences

Subject
HEAG-H 186/09: The personal meaning of self-care: perspectives of Chinese people with type 2 diabetes living in Australia

Approval has been given for Prof Trisha Dunning, Inaugural Chair in School of Nursing, to undertake this project for a period of 2 years from 10 February 2010.

The approval given by the Deakin University HEAG-H is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Secretary immediately should any of the following occur:

• Serious or unexpected adverse effects on the participants
• Any proposed changes in the protocol, including extensions of time
• Any events which might affect the continuing ethical acceptability of the project
• The project is discontinued before the expected date of completion
• Modifications that have been requested by other Human Research Ethics Committees

In addition you will be required to report on the progress of your project at least once every year and at the conclusion of the project. Failure to report as required will result in suspension of your approval to proceed with the project.

HEAG-H may need to audit this project as part of the requirements for monitoring set out in the National Statement on Ethical Conduct in Human Research (2007). An Annual Project Report Form can be found at http://www.deakin.edu.au/research/admin/ethics/human/forms/ which you will be required to complete in relation to this research. This should be completed and returned to the Administrative Officer to the HEAG-H, Dean’s office, Health, Medicine, Nursing & Behavioural Sciences, Burwood campus by Tuesday 23rd November, 2010 and when the project is completed.

Good luck with the project!

Steven Sawyer
Secretary
HEAG-H

Cc Dr Bodil Rasamussen, Ms Yen Yang

Signature Redacted by Library
Appendix I: Plain language statement

DEAKIN UNIVERSITY
PLAIN LANGUAGE STATEMENT

TO: Participants (Chinese Immigrants with Type 2 Diabetes)

Plain Language Statement

Date: 23/03/2010

Full Project Title: The Personal Meaning of Self-care: Perspectives of Chinese People with Type 2 Diabetes Living in Australia

Principal Researcher: Professor Trisha Dunning
Student Researcher: Ms Yen Yang
Associate Researcher(s): Dr Bodil Rasmussen

This Plain Language Statement is 4 pages long. Please make sure you have all the pages.

1. Your Consent
You are invited to take part in this research project. This Plain Language Statement contains detailed information about the research project. Its purpose is to explain to you as openly and clearly as possible all the procedures involved in this project so that you can make a fully informed decision whether you are going to participate.

Please read this Plain Language Statement carefully. Feel free to ask questions about any information in the document. You may also wish to discuss the project with a relative or friend or your local health worker. Feel free to do this.

Once you understand what the project is about and if you agree to take part in it, you will be asked to sign the Consent Form. By signing the Consent Form, you indicate that you understand the information and that you give your consent to participate in the research project.

You will be given a copy of the Plain Language Statement and Consent Form to keep as a record.

2. Purpose and Background
The purpose of this project is to find out how Chinese people with type 2 diabetes manage diabetes self-care in Australia. It aims:

1) To describe the way you care for your diabetes in Australia.
2) To explore the impact diabetes self-care has on your daily life.

A total of twenty-two to forty-four people will participate in the project.

Previous experience shows diabetes is a huge burden in all countries and in all aspects of society for the economy and for the individual. However, the actual personal costs and
individual efforts involved in managing diabetes are complicated to measure. Moreover, there is less information about the self-care experiences of Chinese immigrants with type 2 diabetes living in Australia.

Culture affects individuals’ values, attitudes and behaviours. Health professionals’ work will be more effective if they are aware of the way people from other countries feel about having diabetes and the self-care needed to control the disease. Misunderstanding among people with diabetes and health professionals may make it difficult for people with diabetes to access health services. If immigrants with type 2 diabetes do not manage their diabetes, the burden on them and society will increase.

You are invited to participate in this research project because you have valuable experience of living with diabetes that will help us understand how Chinese immigrants cope with type 2 diabetes in Australia. The results of the research will be used to help researcher Ms Yen Yang to obtain a Doctor of Philosophy degree.

3. Funding
This research is partially funded by the School of Nursing, Deakin University.

4. Procedures
If you agree to participate, you will be asked to take part in an interview, which will take between 60 to 90 minutes. The interview will be conducted at a mutually convenient public place and time. The interview will be conducted in Mandarin or English to suit your preference.

The interview will be audio-taped and then transcribed and analysed. During the interview you will be asked fill out a short questionnaire about your age, how long you have had diabetes that will take about 5 to 10 minutes to complete.

The example questions of the interview are “How are things going with your diabetes at the moment?” and “What is different about the way diabetes is managed in Australia and _____ (Hong Kong, Mainland China, Malaysia, Singapore, or Taiwan)?”

Once you agree to participate in the study by returning the consent from, Ms Yen Yang will contact with you to arrange a time and place to conduct the interview.

Some people will also be invited to take part in a focus group discussion. If you agree to participate in the focus group, we will meet at Deakin University or another mutually convenient public place at time to be decided.

The group discussion will take between 90 to 120 minutes. Six to ten people will take part in the focus group. We will discuss some of the information people discussed during individual interviews to check the researchers have interpreted participants’ stories correctly when we report the findings.
5. Possible Benefits
There may be no benefit to you from participating in the study. However, sharing your experiences about managing diabetes may help other people in the future.

6. Possible Risks
The study is low risk. However, there is a remote possibility that some participants could become distressed by recalling difficulties coping with diabetes. If this happens you will be offered counselling or the opportunity to discuss your diabetes related concerns with Professor Dunning who is a very experienced diabetes educator.

7. Privacy, Confidentiality and Disclosure of Information
The information collected during the study will be stored at Deakin University in a locked filing cabinet and on password protected computers. Only the researchers will have access to the information. All the information will be de-identified and your name will not appear on any information or any papers or reports published as a result of the study.

Any information obtained in connection with this project and that can identify you will remain confidential. It will only be disclosed with your permission, subject to legal requirements. If you give us your permission by signing the Consent Form, we plan to publish the results with Ms Yang’s doctoral dissertation, peer review journals for publication, and conference presentations.

Publications and presentations will provide information in such a way that you cannot be identified.

Confidentiality in focus group discussions cannot be guaranteed, however, focus group members will be asked to respect the confidentiality of other members in the group.

8. Results of Project
At the end of the study you will be provided with a summary of the result by the researcher, Ms Yang.

9. Participation is Voluntary
Participation in any research project is voluntary. If you do not wish to take part you are not obliged to. If you decide to take part in individual interview and later change your mind, you are free to withdraw from the project at any stage until the data is processed. If you do withdraw any information you provide will not be used and will be destroyed. Group discussion will involve group interaction, thus, if you participate in a focus group discussion, it is not possible to withdraw your data.

If you agree to participate and then decide to withdraw from individual interview, please notify a member of the research team to complete and return the Revocation of Consent Form provided by the team.

Your decision whether to take part or not to take part, or to take part and then withdraw, will not affect your diabetes management or your relationship with Deakin University.

Before you decide to participate, Ms Yan Yang will be available to answer any questions you have about the research project. You can ask for any information you want. Sign the
Consent Form only after you have had a chance to ask your questions and have received satisfactory answers.

10. Ethical Guidelines
This project will be carried out according to the National Statement on Ethical Conduct in Human Research (2007) produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies. The research project has been approved by the Human Research Ethics Committee of Deakin University.

11. Complaints
If you have any complaints about any aspect of the project, the way it is being conducted or any questions about your rights as a research participant, you can contact:

Should you have any concern about the conduct of this research project, please contact the Secretary HEAG-H, Dean’s Office, Faculty of Health, Medicine, Nursing and Behavioural Sciences, 221 Burwood Hwy, Burwood, VIC, 3125. Telephone: (03) 9251 7174, Email: hmnbs-research@deakin.edu.au”

Please quote project number HEAG-H [186/09].

12. Reimbursement for your costs
You will not be paid for participating in the project.

13. Further Information, Queries or Any Problems
If you require further information, wish to withdraw from the study or if you have any problems concerning this project (for example, any side effects), you can contact the principal researcher, student researcher or associate researcher.

The researchers responsible for this project are:
Professor Trisha Dunning: phone 03 5246 5113
Dr Bodil Rasmussen: phone 03 9244 6425
Ms Yen Yang: phone 03 9244 6305

School of Nursing
Faculty of Health, Medicine, Nursing and Behavioural Sciences
Deakin University
221 Burwood Highway
Burwood, Vic, 3125

Note: The study was originally designed to conduct individual interviews and one focus group as indicated in the plain language statement and the consent form. However less than three participants could attend a same focus group, thereby the report presented data from individual interviews only. Since the research question of the study was answered, the panel had no objection to amendment.
迪肯大學
研究計畫書

致：受訪者(澳洲二型糖尿病華人)


研究計畫書

日期: 23/03/2010

研究主題: 二型糖尿病華人在澳洲的自我照護經驗與觀點
(The Personal Meaning of Self-care: Perspectives of Chinese People with Type 2 Diabetes Living in Australia)

主要研究負責人: Professor Trisha Dunning
博士研究生: 楊穎 女士
副研究負責人: Dr Bodil Rasmussen

這份研究計畫書共計 4 頁。請先確定您持有所有頁數。

1. 您的同意
您受邀參加本研究，此研究計畫書說明本研究的相關細節。主要目的是要盡可能地向您解釋清楚本研究中，您可能會參與的研究步驟，以便您決定是否要參加本研究。請詳讀本計畫書，並提出任何相關的疑問。如果您有需要，您也可以和您的親友或當地醫療工作人員討論是否參與此研究計畫。

當您了解本研究計畫的內容，並且願意參加此研究計畫，您需要簽一份受訪者同意書，以表示您了解這份研究計畫書的內容，並同意參加這個研究。

我們會提供您一份研究計畫書和受訪者同意書的副本，您可自行保留。

2. 研究目的和研究背景
本研究係探討二型糖尿病華人如何在澳洲進行糖尿病自我照護。主要目的有二:

1) 描述您在澳洲如何針對您的二型糖尿病狀況進行自我照護。
2) 探討糖尿病自我照護對您日常生活的影响。

這項研究將有22位至44位受訪者參與。

糖尿病對全世界各國，個人和不同的社會經濟層面都造成很大的影響。但是二型糖尿病人個案實際上的花費和處理糖尿病的付出卻是很難計算的。而且，目前在澳洲，對二型糖尿病華人相關的自我照護經驗的訊息仍尚不足。
文化差異會影響個人的價值觀、態度和行為。糖尿病患者和醫護人員之間的誤解可能會造成患者在尋求醫療幫助時的困難。如果外來的移民有二型糖尿病病史，卻無法妥當地處理他們的糖尿病狀況，將會增加個人和社會的負擔。所以如果醫護人員能更了解來自不同國家的二型糖尿病個案的自我照護的需要，將會更有效地控制糖尿病的疾病進展。

因為您擁有幫助我們了解華人如何在澳洲處理二型糖尿病的寶貴經驗，故我們的研究團隊誠切地邀請您參與本研究。

本研究所得到的成果與發表，將會提交迪肯大學作為楊煒女士的博士學位論文。

3. 研究資助

本研究由 School of Nursing, Deakin University (迪肯大學的護理學院)提供部分的資助。

4. 研究步驟

如果您同意參與本研究，楊煒女士將會訪問您個人約60至90分鐘。個人訪問的時間和地點可依雙方的方便情況而定。您可依個人的喜好以中文或英文進行訪問。訪問內容需要錄音以便之後整理成文字進行文字分析。

在訪問的過程中，楊煒女士會先請您花費5至10分鐘的時間填寫一份簡單的相關基本資料(例如您的年齡、被診斷有二型糖尿病多久了)問卷。

訪問的例子有：『您目前的糖尿病情況如何？』、「在澳洲和在______ (香港、中國、馬來西亞、新加坡或台灣)的糖尿病照護方式有何不同？」。

當您同意參與本研究並回覆訪問者同意書後，楊煒女士將會和您聯絡，安排訪問的時間和地點。

部分接受個人訪問的受訪者也會被邀請參與一次團體討論(焦點團體)。如果您同意出席團體討論，團體討論的場所會安排在迪肯大學或者其他合適的場所。

團體討論約有6至10個受訪者，進行90至120分鐘的討論。討論的內容主要為本研究團隊從個人訪談文字資料分析中，所獲得的發現，以藉此確認本研究團隊正確地解讀每位受訪者的經驗。
5. 參與此研究的可能益處
我們不能也無法保證或承諾您可以從本研究中獲得利益。但是，您所分享的寶貴經驗
在將來極可能幫助其他類似情況的人有更好的自我照護。

6. 參與此研究可能之風險、不便與不適
這是須低風險的研究，參與本研究並不會造成您可以預見之風險、不便與不適。
雖然少數的受訪者在訪談的過程中，有極微的可能性因回憶起以前的困難經驗，而
感到難過，但我們可以安排本研究的主要負責人Dunning 教授為有需要的受訪者提供
諮詢。Dunning 教授同時也是位非常有經驗的糖尿病護理師。

7. 此研究的機密性和資料的處理
本研究所有的相關資料，都將會被存放在迪肯大學校園的櫃子中加以上鎖或儲存在以
密碼保護的電腦檔案中。只有本研究團隊的成員可以接觸到這些資料。您在研究中提
供的所有資料，我們都會以匿名的方式保密處理。您的名字也不會被公開在任何發表
本研究結果的文章或報告上。
除非有您的同意，任何會讓您被辨識的有關訊息，都會保密。
本研究所得到的相關成果與發現，將會提交迪肯大學作為楊詠女士的博士學位論文，
並且會在期刊或研討會上發表。
在所有本研究相關的發表中，所提供的訊息也不會讓您被他人辨識 (研究結果如需引用
部分對話，所有足以辨識您個人身份的資料將被隱蔽或變造)。
雖然我們不能確保您在團隊討論過程中的個人資料保密，但是所有團隊討論的受訪者都
會被要求尊重並保護其他團隊成員的隱私。

8. 研究的結果
楊詠女士很樂意在研究完成後，寄送研究結果摘要給您。

9. 研究均屬自願性參與
任何研究的參加都是自願的，您可自由決定是否參加本研究。如果您同意參加個人訪
談，但之後您改變心意，在訪談文字稿分析完成之前，您都可以撤銷同意，退出研
究。如果您退出研究，您提供的所有資料將會被銷毀，並且不會被使用在本研究
中。關於團隊討論的部分，因主要是團隊成員互動的情形，所以如果您參加團隊討
論，但之後決定退出此項研究，我們將無法撤銷您在團隊互動中的對話紀錄。
如果您同意參加個人訪談，但之後決定要退出研究時，請通知本研究團隊，填寫並寄
回撤銷受訪者同意書。

Deakin University 研究計劃說明書
不論您最後的決定如何，都不會影響您的糖尿病自我照護或者您與迪肯大學的關係。

在您決定參加本研究之前，您可以向揭敏女士詢問您對本研究的任何相關疑問。請等到您已無疑問後，再填寫受訪者同意書。

10. 研究的倫理審覈

這項研究將依照澳洲國家健康和醫學研究中心(National Health and Medical Research Council of Australia)所制定的National Statement on Ethical Conduct in Human Research (2007)的法規進行。這項法規是為了要保護參加研究者的權益。迪肯大學的人類研究倫理委員會已經審閱過本研究。

11. 研究的申訴

如果配偶本研究受訪者的您，對研究的進行方式有疑慮或申訴，可以致電至(03) 9251 7174, Email: hmnbs-research@deakin.edu.au與迪肯大學的倫理幹事聯絡。

Should you have any concern about the conduct of this research project, please contact the Secretary HEAG-H, Dean's Office, Faculty of Health, Medicine, Nursing and Behavioural Sciences, 221 Burwood Hwy, Burwood, VIC, 3125. Telephone: (03) 9251 7174, Email: hmnbs-research@deakin.edu.au

請附上本研究的審查案件編號HEAG-H [186/09]。

12. 研究的債務

參與本項研究是無償的。

13. 其它相關資訊

如果您需要進一步的說明，想要退出本研究，或者如果您有任何與本研究相關的疑慮，歡迎隨時與本研究團隊聯繫。本研究團隊的研究成員如下：

Professor Trisha Dunning: 電話 03 5246 5113
Dr Bodil Rasmussen: 電話 03 9244 6425

揭敏 女士 電話 03 9244 6305; 0411589212

School of Nursing
Faculty of Health, Medicine, Nursing and Behavioural Sciences
Deakin University
221 Burwood Highway
Burwood, Vic, 3125

Deakin University 研究計畫說明書
Appendix K: Participant consent form

DEAKIN UNIVERSITY
CONSENT FORM

TO: Participants (Chinese Immigrants with Type 2 Diabetes)

Consent Form for Participating in Individual Interview

Date: 23/03/2010

Full Project Title: The Personal Meaning of Self-care: Perspectives of Chinese People with Type 2 Diabetes Living in Australia

I have read in my first language, and I understand the attached Plain Language Statement.

I freely agree to participate in the individual interview according to the conditions in the Plain Language Statement.

I have been given a copy of the Plain Language Statement and Consent Form to keep.

I give the permission to audio-tape the interview. Yes ☐ No ☐

I also agree to be contacted again at a later time and invited to become involved participate in a focus group. I understand I will be informed about the focus group further at that time and I am not consenting to take part in the focus group at this stage. Yes ☐ No ☐

I also understand that even if I agree to be contact again for focus group, I may not be contacted again, depending on how many participants indicate their interest and how many are required to participate in the focus group. Yes ☐ No ☐

The researcher has agreed not to reveal my identity and personal details, including where information about this project is published, or presented in any public form.

Participant’s Name (printed) ..........................................................

Contact details Address______________________________________

Telephone number__ Email______________________ Date ____________

Signature ___________________________________________________ Date ____________

Please fax or mail this form in the reply paid envelope supplied to:

Ms Yan Yang  PhD Candidate
School of Nursing
Faculty of Health, Medicine, Nursing and Behavioural Sciences
Deakin University
221 Burwood Highway  Burwood, Vic, 3125
Phone: 03 9244 6305 ; 0411586212  Fax: 03 9244 6159
Email: yenyang@deakin.edu.au Or yenyang@tccn.edu.tw

Consent Form to Chinese Immigrants – individual interview
Appendix L: Participant consent form (Traditional Chinese)
Appendix M: Revocation of consent form

DEAKIN UNIVERSITY
CONSENT FORM

TO: Participants (Chinese Immigrants with Type 2 Diabetes)

Revocation of Consent Form

(To be used for participants who wish to withdraw from the project)

Date: 23/03/2010

Full Project Title: The Personal Meaning of Self-care: Perspectives of Chinese People with Type 2 Diabetes Living in Australia

I hereby wish to WITHDRAW my consent to participate in the above research project and understand that such withdrawal WILL NOT jeopardise my relationship with Deakin University.

Participant’s Name (printed) ..............................................................
Signature .......................................................................................
Date ..................................................

Please mail or fax this form to:

Ms Yen Yang
PhD Candidate
School of Nursing
Faculty of Health, Medicine, Nursing and Behavioural Sciences
Deakin University
221 Burwood Highway
Burwood, Vic, 3125

Phone: 03 9244 6305; 0411589212 Fax: 03 9244 6159
Email: yenyang@deakin.edu.au Or yenyang@fcmn.edu.tw
Appendix N: Revocation of consent form (Traditional Chinese)

致：受訪者(稱譜為病患華人)

撤銷受訪者同意書

(由決定要退出本研究的受訪者填寫)

日期：23/03/2010

研究主題：二型糖尿病華人在澳洲的自我照護經驗與觀點
(The Personal Meaning of Self-care: Perspectives of Chinese People with Type 2 Diabetes Living in Australia)

我要撤銷我之前參加上列研究的受訪者同意書，並且了解我要退出此研究的決定並不會影響我與迪肯大學的關係。

受訪者姓名(printed) ..........................................................

受訪者簽名 ........................................... 日期 .................

請以傳真或以附之郵封信郵寄至：

Ms Yen Yang  PhD Candidate
School of Nursing
Faculty of Health, Medicine, Nursing and Behavioural Sciences
Deakin University
221 Burwood Highway  Burwood, Vic. 3125
電話: 03 9244 6305 ; 0411586212  传真: 03 9244 6159
電子郵件: veryang@deakin.edu.au 或 veryang@ttcc.edu.tw
Appendix O: Organisational consent form

DEAKIN UNIVERSITY
PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Organisations

Organisational Consent Form

(To be signed by a responsible officer)

Date: 19/11/2009

Full Project Title: The Personal Meaning of Self-care: Perspectives of Chinese People with Type 2 Diabetes Living in Australia

I understand the purpose of this project is to find out how Chinese people with type 2 diabetes manage diabetes self-care in Australia. It aims:

1) To describe the way Chinese people care for their diabetes in Australia.
2) To explore the impact diabetes self-care has on Chinese people with type 2 diabetes' daily life.

I understand that involvement for the institution/organisation means the following. In order to assist the researcher, Ms Yan Yang, PhD candidate in School of Nursing at Deakin University, to recruit potential participants,

I give my permission for the institution/organisation to:

A. Place flyers with a brief description of the study and the researcher's contact details in the centre of the institution/organisation, such as posting up on notice boards
   Yes  No
B. Display the flyer on the website of the institution/organisation
   Yes  No
C. Mail the flyers and/or Plain Language Statement/Consent form to members of the institution/organisation in stamped envelopes provided by the researcher
   Yes  No
D. Email the flyers to members of the institution/organisation.
   Yes  No

The researcher has agreed not to reveal the participants' identities and personal details if information about this project is published or presented in any public form.

Name of person giving consent (printed) .................................................................

Signature .............................................................. Date .................................

Please fax, email or mail this form in the reply paid envelope supplied to:

Ms Yan Yang  PhD Candidate
School of Nursing
Faculty of Health, Medicine, Nursing and Behavioural Sciences
Deakin University
221 Bunwood Highway  Bunwood, Vic, 3125

Phone: 03 9244 6305  Fax: 03 9244 6159  Email: yanyang@deakin.edu.au