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**Medications, migration and the cultural texturing of  
familial healthcare**

A thesis  
submitted in fulfilment  
of the requirements for the degree  
of  
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at  
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by  
**STANLEY KAMUTINGONDO**



THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*

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## **DEDICATION**

*This thesis is dedicated to my dad back home and my late mom*

## **ABSTRACT**

Medications are a central part of health care systems, and are used to cure, halt or prevent diseases, and to ease symptoms. How medications are understood and used by people, including migrants in everyday life remains unclear. With globalisation on the increase, many people are no longer constrained to a single country. People often relocate to other countries where they may continue to maintain their cultural traditions and practices. Among the cultural traditions and practices maintained by migrants are their medication practices, customs and understandings. This thesis explores understandings, uses and social practices associated with medications in the everyday lives of three migrant groups. These groups are represented by three Zimbabwean, three Tongan and three Chinese households who have relocated to New Zealand. Householder experiences, medication practices and associated understandings were collated using a variety of methods. These included individual interviews with the households, household discussions, photographs, diaries, material objects, and media content to capture the complex and fluid nature of popular understandings and use of medications. This thesis provides insight into the cultural values and practices of these nine migrant households pertaining to how they acquire, use, share, and store their indigenous and biomedical medications. My focus on medications and the sourcing of these medicinal objects within New Zealand and from migrants' countries of origin sheds new light on hybrid healthcare practices in the present epoch of global relocation. The study takes into account different forms of medications. These include biomedical drugs, alternative medicines, traditional medicines and dietary supplements.

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## GLOSSARY

### **Zimbabwe**

*Hunhu-ubuntu*

*Rubatsiro*

*Rudo*

*Rukudzo*

*Tsika*

### **Tonga**

*Anga fakatonga*

*faka apa'apa'*

*Mahaki-faka-Palagi*

*Mana*

*Ofa'*

*Talangafua*

*Tauhi vaha'a*

*Tapu*

*Vaka*

*Humanity*

*Care for others*

*Love*

*Respect*

*Good manners or good behaviour*

*The Tongan way*

*Respect*

*European related diseases*

*Possession of power*

*Love and concern*

*Obedience*

*Vow to maintain family ties*

*Taboo*

*Vessels*

## **Chapter One: Introduction and background**

Over millennia, indigenous communities have developed distinct health care systems, practices and a range of traditional medications which they use in their daily lives. However, many of these traditions have been disrupted, delegitimized and changed through the processes of colonisation. Changes to medicative practices also occur for groups who move from their places of origin to new countries. When migrant groups move to countries like New Zealand, for example, they encounter a medical health care system dominated by biomedical model in terms of policy, funding and delivery (North, 2008). Due to its global reach, many migrants to New Zealand are already familiar with the Western medical tradition. This raises a series of interesting issues related to the hybridizing of their traditional beliefs and modern medical understandings. How are medical technologies, such as medications, from indigenous and Western traditions integrated into the healthcare practices of households?

This thesis is concerned with how the arrival of migrants from Zimbabwe, Tonga and China adds divergent health care belief systems and practices to the biomedically dominated New Zealand landscape. For example, Chinese migrants come from a country which has integrated both biomedicine and Traditional Chinese Medicine (TCM) within its health care system (Hesketh & Zhuwx, 1997; Ministry of Health, 2003). TCM is a traditional Chinese healing system that combines the use of herbs, acupuncture, dietary therapy, massage, and therapeutic exercise (Zhang & Vorhoef, 2002). Traditional medications are accepted in most Chinese hospitals with 95% of them having traditional medicine departments (United Nations Educational, Scientific and Cultural Organisation, 2012).

Central to this thesis are the ways in which medications are procured, prepared, shared and consumed by transnational immigrants from Zimbabwe, Tonga and China who have settled in New Zealand. Particular attention is given to the continued use of indigenous healthcare knowledge by these groups of immigrants to assign meaning and response to illness. I use the term medications to refer to bio-medicines, complementary and alternative medications (CAM), enhanced foods and dietary supplements. I explore how nine migrant households from the above mentioned countries rely, to varying degrees, on both their own indigenous understandings and medicative practices that have developed over millennia and on European

biomedical approaches to healthcare and associated medications. This thesis documents the meanings given to medications by migrants, how these objects enter and leave households, and migrant cultural practices associated with medications, including the handling and storage of medications and how medications use enacts householder relationships.

I chose to study these three particular groups of migrants because of their different ethnic, historical and cultural backgrounds. The three migrant groups were also chosen because no similar studies have been conducted in New Zealand with these groups. Specifically, I aim to explore:

- Household understandings and uses of medications
- How householders maintained – in part through the use of medications - a sense of connection, belonging and home that spans their countries of origin and settlement
- The broader cultural significance of some households imported medicinal substance from their home countries in terms of maintaining a transnational sense of community, ethnic identities, and culturally patterned relationships and obligations.
- The ways in which medications have become acculturated as familiar objects within the everyday lives, relationships and health-related practices of the nine immigrant households.

Understanding migrants' health care practices is of importance as this knowledge facilitates their adaptation and integration into the countries and societies they migrate to (Huang, 2013). My focus on medications and the sourcing of these medicinal objects within New Zealand and from migrants' countries of origin can shed new light on hybrid healthcare practices in the present epoch of global relocation. Gaining general knowledge about migrants' cultural norms, health care beliefs and values, and daily medicative practices can aid health care providers in better understanding clients whose cultural values differ from their own.

The remainder of the chapter is divided into different sections. I begin by exploring the place of migration and its effects on people and places. I then explore health care systems in the migrants' various countries of origin. This is followed by migrants' health care practices and their link to culture. The next section explores how medications are understood and used by the three different migrant groups. This will be followed by an exploration of how medications function within householder relationships of care. Lastly, I explore the importance of medication flow into and out of the households.

## **Place of migration and its effects on people and places**

Migration has been on the increase since the 1960s (Zlotnik, 1998). Up to 120 million people moved from one country to another between 1965 and 1990. By 2000 it was estimated that there were 150 million international migrants. Current figures of migrants are estimated at over 214 million and the numbers continue to increase (International Organisation for Migration, 2010) with figures projected to reach 230 million by 2050 (United Nations, 2004). International Organisation for Migration (2011) defined migration as the movement of a person or a group of persons, either across an international border, or within a state. It is a population movement, encompassing any kind of movement of people, whatever its length, composition and causes; it includes migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification. Migration has contributed to the richness in diversity of cultures, ethnicities and races particularly in the developed countries (Bhugra & Becker, 2005).

Although people migrate to other parts of the world, they do not give up who they are as cultured beings and often establish and maintain socio-cultural connections, identities and ways of life across geopolitical borders, a process called transnationalism (Glick Schiller, Basch, & Blanc-Szanton, 1992; Perruchoud & Redpath-Cross, 2011). The concept of transnationalism describes migrants who build, maintain and reinforce multiple and constant economic, social and emotional interconnections with more than one country (Green, Power, & Jang, 2008). Transnationalism enables trans-migrants to move easily between different countries and cultures. Portes (1997) argues that migrants frequently maintain homes in two different countries, and pursue economic, political and cultural interests that require their presence in both on a sustained basis.

Through transnationalism, migrant communities maintain multi-stranded social ties and interactions across the boundaries of nation states by supporting each other despite long distances travelled by migrants away from their original homes (Glick Schiller et al; Maastricht University, 2012; Vertovec, 1999). Close relationships are maintained through religion, politics, economy and social familial spheres. With technology these relationships can be facilitated more efficiently and within a short period of time (Vertovec, 1999).

It is important to mention that transnational migration involves more than the movement of physical bodies (Clifford, 1994; Faist, 2006; Messias, 2002). It also involves the movement

of immaterial objects namely ideas, knowledge, customary practices, cultures and feelings of solidarity across national boundaries that serve to form transnational identities. In this way, migrant groups remain anchored in their countries of origin whilst developing new lives in receiving countries. This brings in the argument that cultural identities of such migrants do not remain static. New identities are created and recreated as migrants come into contact with a diversity of other cultures (Tsai, 2011).

However, there are conflicting studies in relation to whether migrants maintain their cultures and identities or they adopt new ones or not when they settle in new countries. Trujano, (2008) argued that when transnational migrants move from their original countries to others, they maintain their identities and do not give them up. On the other hand, Suurmond (2010) expressed different perspective. He pointed out that migrants simultaneously incorporate themselves into their host society while negotiating multiple identities tied to their current realities, and their ties to their original homes. Further, Faist (2000) also argued that not all migrants live in transnational social lives. Migrants may adopt some of the practices they come across in their new countries while maintaining those they brought from their original homes. According to Faist, some immigrants live an exclusive lifestyle in their country of adoption where contacts with those left behind are minimal. Due to reduced social contacts with their relations back home, migrants may become less influenced in how they live their daily lives by those they left behind. It is not surprising that some immigrants may not experience transnationalism especially when the adaptation process takes place faster than expected. For those who maintain strong ties with relatives left behind, the relationships serve many purposes including the production of cultural resources to strengthen migrant cultures, identities, membership and maintenance of customs (Yescas, 2010).

With reference to health, migrant groups often engage with health care systems central to life in a new country, as well as maintaining health practices with which they are already familiar (Tsai, 2011). Often migrant groups draw on both their indigenous health care systems and the new global bio-medical traditions. For example, studies have found that most Chinese immigrants in the United States use a combination of both traditional and biomedical health care (Chang & Kemp, 2004; Ma, 1999). For maintaining their health, migrants also continue to use medications with which they are culturally familiar in their adoptive countries of settlement. Exploring the meanings of medications for migrant households in New Zealand raises a different set of issues for medication practices, invoking a different “slice of daily

life”, and issues of vulnerability and morality. They provide access to particular concerns around use, risk and care (Balakrishnan et al., 2006), and the meanings and practices of medications in the context of childhood and parenting (Conn et al., 2007). Medication use often involves other household members to care for others especially for those who are vulnerable, including young children and older relatives.

### **Health care systems in migrants’ countries of origin**

Health care systems differ from country to country and they are essential for promoting, improving and maintaining health of the country’s population (Kandelman et al., 2012). In most developed countries health care is provided to citizens through various familial and community systems, while in developing countries where the majority of people are poor, health care is provided by government in conjunction with the private sector (Thomas, 2009). Migrants have been socialized into the use of available healthcare in their country of origin and must adjust to the new structures in the new country. Below I consider the systems of origin for Zimbabwean, Tongan and Chinese migrants to New Zealand.

Zimbabwe has three different healthcare systems based on biomedical, indigenous healing methods and spiritual healing offered through prophets from various churches (Machinga, 2011). Choosing between these three health care systems is dependent on a number of factors (Kazembe, 2007). Cost of each type of treatment, accessibility, and knowledge of the probable effects of each kind of treatment are some of the factors that are considered before seeking treatment. Despite efforts by colonisers to despise of the indigenous health care systems in the country, Zimbabweans continue to use traditional alongside biomedical health care systems (Kazembe, 2007). Due to factors mentioned above, the poor majority of Zimbabweans consult traditional health practitioners (THP) for their health care needs (Ministry of Health and Child Welfare, n.d.). This suggests that traditional health care practice is still part of the Zimbabwean culture as well as being a component of the health care delivery system at both the individual and community level. In Zimbabwe public biomedical models of health which incorporate hospitals and clinics are fully recognised and funded by the government while the indigenous healing systems are not.

Health care in Tonga, like Zimbabwe, encompasses medical pluralism and incorporates both traditional and bio-medical practices (McGrath, 1999). This affords Tongans a choice of

healthcare options between indigenous and biomedical approaches. The indigenous approach is based on the concepts of traditional healing using *faito'o faka Tonga* (Tongan traditional medicine) (McGrath, 1999). Illnesses related to the world of spirituality could be treated through the use of *faito'o fakatonga* which is commonly used by Tongans (Whister, 1992). Tongan indigenous healthcare systems are based on holistic models of health where the whole body is looked at and treated. The models encompass the physical, mental and spiritual dimension and involve the family and the whole society at large (Bassett & Holt, 2002). Biomedical health care system is the other option common among Tongans. Tongans apply biomedical health care systems to treat *mahaki-faka-Palagi* (European diseases – believed to have been brought into Tonga by Europeans). Examples of *mahaki-faka-Palagi* include diabetes, heart problems, obesity, high blood pressure and cancer (McGrath, 1999; Whister, 1992). This belief is in line with other studies carried out by Alvord (1997) and Hendrix (1999) who both found out that first nations Americans used 'white man's medicine' to treat 'white man's diseases' like diabetes, cancer, gall bladder disease. First nations Americans used traditional medicines to treat indigenous problems of pain, spiritual sickness, mental illness and other related diseases.

A third option based on faith healing is practiced by Zimbabweans and Tongans. Religion remains an indispensable component of healthcare among some societies though this seems to be unnoticed (Oluwabamide & Umoh, 2011). Faith healing does not offer any medications and faith in God is an important factor in the healing process for those who subscribe to the system (Hjelm & Mufunda, 2010). Both Zimbabwe and Tonga have strong cultural influence of Christianity and prayers are regarded as powerful healing forces. Christianity was introduced along with colonisation in the 19<sup>th</sup> century in Zimbabwe and has displaced traditional religions whilst serving a similar function in terms of healthcare.

China, just like Zimbabwe and Tonga, also has a traditional and imported biomedical health care system. Traditional healing together with biomedical treatment methods are both used side by side in China. The Chinese government has invested large sums of money to support Traditional Chinese Medicine (TCM) development by increasing investment in its research and administration (Xu & Yang, 2009). TCM has been culturally rooted and practiced in China for thousands of years. Chinese prefer to use their traditional medications for the treatment of holistic problems as they believe that these objects prevent and determine the root causes of diseases once symptoms begin to show (Liu, 2004). This belief is in contrast to

the widely held view that bio-medications mainly focus on the ailing part of the body rather than on the root cause of the disease. Biomedical health care systems are favoured by Chinese for illnesses like heart problems, cancer, hepatitis and TB while preferring to treat minor ailments like colds using home based remedies (Chin, 2005; Liu, 2004; Ma, 1999). These researchers found that Chinese migrants preferred consulting health care providers of Chinese ethnical background who they culturally connected with.

What is clear is that migrants come to New Zealand from countries that encompass hybrid healthcare systems. They are familiar with indigenous approaches to health and illness as well as the global biomedical approach. In the follow section I explore the importance of migrant health beliefs and the role of culture in migrant understandings of health and responses to illness.

### **Health care beliefs and practices and their link to culture**

Health care beliefs and practices differ from one society to another (Sobo & Loustaunau, 2010). Every society has its own traditional beliefs and practices concerning health, disease, treatment, and healthcare providers which are influenced by its culture which is present in all aspects of life. All cultures have systems of health beliefs to explain causes of illness and how illness is treated (Hjelm & Mufunda, 2012; McKaughlin & Braun, 1998). Explanation of health and illness becomes a function of culture. For example, many indigenous communities hold fatalistic views about health and illness issues which they believe are caused by factors beyond human control (Hjelm & Mufunda, 2012). Most cultural beliefs and practices which have been in existence over millennia are learnt and passed on from one generation to the next through other family members, their communities or societies (McElroy & Jezewski, 2001; Nayak et al., 2012).

Jezewski defined culture “as a shared system of learned and shared codes or standards for perceiving, interpreting and interacting with others and with the environment” (cited in McElroy & Jezewski, 2001, p. 191). According to McElroy and Jezewski (2001) culture provides a normative standard for decisions and ways of behaving and is an important basis for defining and maintaining health as well as making treatment choices. Culture is multi-faceted and it goes beyond nationality, race and ethnicity and is related more to beliefs and practices and can be expressed in many forms (Vaughan et al., 2001). Until faced with a

different culture that challenges the dominant beliefs, values and identities, people take their own culture for granted and expect others to behave in the same manner (Sobo & Loustaunau, 2010). Culture guides and defines how people live, what they believe in and value. For example, some people believe that God has supernatural powers to heal while other societies have beliefs rooted in holy rituals, salvation, offerings and sacrifices which are all linked to their culture (Nayak et al., 2012).

Culture enables people to formulate ways of responding to and coming to terms with illness as a physical, social and cultural construct (Castillo, 1997; Helman, 2001; Ngubane, 1977). According to Helman (2001) culture acts as a 'lens' through which people perceive and interpret the worldview according to how they understand it. Like all groups, migrants understand the causes and treatments for ailments through their cultural lenses and related practices. Based on their cultural beliefs and practices, societies know who should be involved in the process of their treatment.

Different societies have varied beliefs about health and causes of illness which are rooted in cultural beliefs (McElroy & Jezewski, 2001). Health and illness can be understood as social constructions based on how individuals come to understand and live with their illness (Conrad & Barker, 2012; Dixit et al., 2008; Parsons, 1985). Socio-cultural constructions of health and illness often differ across groups as reflections of shared cosmologies, narratives, values and norms (Castillo, 1997; Kleinman, 2004; Ryder, Yang & Heini, 2002; Swartz, 1998). Beliefs about causes of illness also differ between communities who use either biomedical or indigenous health care systems. According to the Lay Theory Model of Illness Causation, based on biomedical practices, causes of illness are a result of nature and individual factors (Helman, 2007). This perspective assumes that indigenous societies believe that social and supernatural factors are responsible for illness (Helman, 2007; Hjelm & Mafunda, 2012). These views are based on the belief that most illnesses are beyond an individual's control and could be a result of fate or God's will.

Beliefs about health and causes of illness also differ between indigenous communities themselves. In this thesis the three ethnic migrant groups have different beliefs about health and causes of illness. Generally Africans are superstitious people who attribute most illnesses to supernatural forces. Many believe illness is caused by conflicts and tensions between good/evil and harmony/disharmony (Chipfakacha, 1994), and that spirits and application of magic cause some illness in individuals (Madge, 1998). A study carried out by Hjelm &

Mufunda (2012) among Zimbabweans found that some participants believed that illness resulted from bad spell cast upon an individual by other people. Illness was also singled out as resulting from bad behaviour or caused by avenging spirits of a dead person. The causes of illness are seen as being inherently relational. Emphasis on curing illness focuses on the whole person: (body, mind and soul) and contributing relationships.

Tongans also have their own health and illness beliefs. According to Tongan cultural beliefs, two concepts of *tapu* and *mana* are both central to understanding health and illness (McGrath, 1999). Acting against *tapu* (taboo) is believed in the Tongan society to be one cause of illness. Maintaining a healthy lifestyle requires an individual to safeguard oneself against violating what society regards as sacred. Tongans consider health to be a state of physical, mental, social and spiritual wellbeing. Breaking *tapu* may result in punishment and in most cases illness. Asking for forgiveness is considered to be the best option although there is no guarantee that the illness would go away (McGrath, 1999).

The concept of *mana* states that having *mana* means possessing power to protect one against sickness and bad luck. Healers are considered to possess powers to heal their patients. Without *mana* healers are not able to produce effective intervention methods to their patients. Among Tongans are Christians who believe that God is the provider of *mana* to individuals. Tongans believe that going against God's will results in lacking *mana* and exposing one to misfortune. Traditionally, Tongan explanation is centred on either secular or spiritual causes (McGrath, 1999).

Tongan beliefs regarding the causes of illness are at their core twofold. Illness is believed to result from either biological malfunction of the body or a breakdown of the holistic state of wellbeing (Bassett & Holt, 2002). Breakdown of the holistic state of wellbeing is attended to through traditional interventions. The traditional interventions involve a wide social network where the dead are considered part of the healing system (McGrath, 1999). The intervention models encompass the physical, mental and spiritual dimension and involve the family and the whole society at large (Bassett & Holt, 2002). Traditional healing processes are not the same among the healers as styles in practices differ. The social status of healers varies and as a result intervention methods will not be the same (McGrath, 1999). This is in contrast to biomedical intervention models which administer the same medication for the same diagnosed illness.

Chinese health and illness beliefs also differ from those of Zimbabweans and Tongans. Chinese beliefs on health and illness are centred on the balance between body, mind and spirit commonly expressed as *yin/yang* (Huang, 2013). According to Chinese yin represents negative energy, femaleness and coldness while yang represents positive energy, maleness and warmth (Huang, 2013). These beliefs state that there are general laws of opposing forces which may be internal and external, hot and cold, emptiness and excess (Chin, 2005; Liu, 2004). Yin and yang are complementary and they symbolise the principle that for every action there is an equal and opposite reaction (Ehling, 2001). One cannot exist without the other. In the absence of these two forces, an imbalance exists and a person becomes ill while good health is obtained if these forces balance (Chang & Kemp, 2004; Hopton, 2006; Maciocia, 1989; Spector, 1985).

However, Hopton (2006) argues that health and illness are better understood in Chinese culture through three concepts. Firstly, the concept of yin and yang as stated above describes how things function in relation to each other. Secondly, excess or depletion of earth, metal, water, wood or fire will result in one falling ill. Thirdly, many Chinese believe in the concept of Qi which is regarded as the vital energy that flows around the body and helps to maintain good health (Huang, 2013). Others believe that one could have good health if Qi is in harmony with the environment (Hopton, 2006). While yin and yang concepts are highly regarded in the Chinese culture, another equally important conceptual frame comes from Confucianism. Many Chinese believe that cultural health belief systems and practices are also influenced by Confucianism whose primary purpose is to achieve harmony which is the most important social value according to Chinese beliefs (Tom, n.d.). Confucianism plays an important role in forming Chinese character, behaviour and the way of living. Roles and how to treat another person are clearly defined within this belief system.

China with a population over 1.3b has many diverse cultural groups who share different views about health and illness (Chin, 2005). While the above are regarded as general beliefs about health and illness among Chinese, some societies within the Chinese believe that illness could be caused by fate or interference from ancestors or others in the spirit world. These forces may seek revenge for wrongful acts and for lack of self control (Chin, 2005; McLaughlin & Braun, 1998; Postgraduate Medical Council of New South Wales, n.d.). Among some Chinese societies, there are those who believe that consuming certain types of food or medicines may cause illness (Chang & Kemp, 2004; Lin, 2000). Those who believe

in this view point out that good health is maintained by having an appropriately balanced diet which includes five traditional flavours which are: sour, bitter, sweet, pungent and salty termed 'health through proper diet' (Liu, 2004). When Chinese fall sick, they usually treat themselves using specific foods, herbs or special soups before seeking treatment from biomedical systems if the illness persists. In order to restore balance a yang illness is often treated with yin foods or medications and the opposite is true for yin illness. Both food and illness can be classified as either hot (*yang*) or cold (*yin*) (Lin, 2004).

Transnational groups to New Zealand with different and distinct racial ethnicities as those of the three groups under study in this thesis share different beliefs and practices. Their beliefs and practices are also different from those of groups who have lived in New Zealand for much longer. There are other external factors that make some differences and impact on cultural beliefs and practices for these immigrants. Specifically, cultural differences also extend to understandings of medications, medication preferences, treatment methods and practices (Fleming & Towey, n.d.). All these health care beliefs are important for health providing services to understand how different cultures brought into this country by migrants impacts on their relationships with these immigrants.

The above three indigenous knowledges are in contrast with the western medical belief systems. Biomedical belief systems do not take the individual's social and cultural environments into account when compared with traditional belief systems. According to this model a person is viewed as a system of functioning organs which breaks down when pathology occurs (Finau, 1994; Sim, 1990). The model has been dominant in how health and illness are dealt with. It is assumed that the model provides the only truthful account of reality and is based on scientifically proven evidence. This makes any other methods which are not scientifically based to be regarded as irrelevant (Dutta, 2008).

### **Understandings and uses of medications**

Medications are a fundamental technology of treatment and self-care, with significant potential to impact on health. Medications play an important part in people's lives and are understood in many forms. They are objects used for preventing diseases and raising hope to those in distress or illness. They have symbolic and complex meanings which acquire meaning when they enter into the lives of people (van der Geest & Hardon, 2006; van der

Geest & Whyte, 1989). Clark, (2012) and Whyte et al., (2002) noted that medications are the most personal of material objects as they become part of the user when they are swallowed, dropped into body parts like eyes and ears, or inserted into or rubbed on bodies to control symptoms of disease and prevent adverse health outcomes. Medications are used to treat both minor and major ailments, as well as controlling behaviour and calming people. Medications are also objects used to alter human consciousness, control behaviour, and calm people (Hodgetts et al., 2010). Medications are substances used to alleviate pain. Medications are tangible objects found in many different forms including prescription drugs, pharmacist-only, pharmacy-only, over the counter, dietary supplements, traditional remedies, enhanced food or any therapeutic substances (Nikora et al., 2011). Medications are also understood as pharmaco-social objects which are used in people's daily lives for therapeutic interventions (Prout, 1996; van der Geest & Whyte, 1991; Whyte et al, 2002). Medications have power to transform bodies and are used for treating and preventing diseases. Further, being pharmaco-social objects, medications can help us stay healthy, cure many ailments, relieve symptoms of disease and ultimately improve the quality of people's lives (National Prescribing Services Limited, 2009).

There are other forms of medications which are intangible and are used to treat spiritual matters. These forms which include prayers, rest or exorcism also bring relief to those unwell. Such practices are believed to have therapeutic powers although they are not commodified as tangible medicines are (Whyte et al., 2002).

Medications are also understood as objects which have social lives as they are used to express love and care within households and intimately empower those who are in need of them (Hodgetts et al., 2011; Whyte et al., 2002). Love and care are expressed through gifting of medications to those in pain and suffering. Through these agents of pain reduction and suffering, families are brought closer to each other by gifting of medications. Medications are acculturated into people's daily lives and are understood through practices that take place within different households. Among such practices are those that relate to storage of medications, sharing and borrowing of medications, and understandings of 'proper' usage, and the use of both biomedicines and traditional medications simultaneously (Sorensen et al., 2006) and how households remind each other to take medications.

Understanding the nature of medications is good practice and an important determinant for storage of these objects which are stored in different places once they are brought into

households. Storage spaces compose an important part in medications practices within households. Medications are stored in appropriate storage spaces to ensure their safety, quality and efficacy (Hewson et al., 2013). Storage spaces also act as cue reminders for householders to take their medications when they are due. Placement of medications in certain areas is done to aid households in remembering to take medications or to administer to other family members at convenient times (Hodgetts et al., 2011). The storage of medications is influenced by many factors, including their accessibility to different family members, cultural assumptions regarding hygiene and the need to remember to consume these substances and to administer them to other householders (cf., Nikora et al., 2011). Households store medications in a variety of places for different reasons. In other studies medications are placed in spaces that have particular meaning and purpose. Some routines are associated with other activities for example medications that are taken at bed time are placed next to beds. Those that are to be taken at meal time are placed on kitchen or dining tables (Palen & Alokke, n.d.). Medications can be stored in different places ranging from refrigerators, cupboards, bedrooms, drawers, kitchens and shelves. A survey carried out in Oman revealed that 55% of respondents stored all their medications in refrigerators (Abdo et al., 2009). The number of people storing medications in refrigerators was because of the high temperatures in Oman, conditions that required medications to be stored in refrigerators.

Another form of understanding medications is through sharing and borrowing of these substances. Sharing and borrowing of medications are common practices within households as they enable relationships between households to be strengthened (Goulding et al., 2011). These practices are culturally learned behaviours and are features of household life today that allow family members to demonstrate care for one another and to tackle the issue of sickness together (cf., Hodgetts, Chamberlain et al., 2011; Hodgetts, Nikora, & Rua, 2011). Although a study by Mullan et al., (2010) found that only 5% of respondents admitted to borrowing and 6% to sharing of medications the practices were common. The study also found that sharing and borrowing were restricted to none prescribed medications. Another study carried out at an Irish College found that 26% of students reported that they had borrowed some prescribed medications in the past (Goulding et al., 2011). Half of the respondents had borrowed from their friends and relatives while 20% admitted to sharing prescribed medications. According to Goulding et al., several reasons for sharing and borrowing of medications were reported. Students preferred borrowing and sharing when they had run out of their own medications. Unaffordable high cost of purchasing medications was another reason for sharing and

borrowing these substances. Desire to easy pain through sharing and borrowing medications was the other reason pointed out by participants as the reason for the practices.

Proper usage of medications, which varies from people to people, is another reflection of how households understand these objects. In most cases people do not strictly follow medical instructions when using medications reflecting lack of understanding for these substances. Medications in some instances have been less valued as some people do not complete their course while other people stocked medications for future use. Abdo and colleagues (2009) found that 40% of respondents hoarded left-over medications once they had recovered from their illness so they could be used in the future in case of reoccurrence of illness. Checking for expiry dates is another practice associated with proper usage of medications. Some households have a tendency to use medications without checking expiry dates and this could lead to some adverse effects on those who take expired medications. Abdo and colleagues (2009) found that 17% of their respondent used medications without checking their expiry dates. Forty five percent of their participants reported discarding expired medications in waste bins while only 12% returned them to pharmacies. Fredriksen-Goldsen and colleagues (2011) found in their study that householders monitored regimens for those who they reminded to take medications.

It is becoming a common practice for households to understand medications through reminding each other to take these substances. The same study by Goldsen and colleagues (2011) found that householders played a crucial role in reminding other family members to take their medications. This practice was found to be more common with children than for adults who could remember to take medications without them being reminded to do so.

Finally, many societies throughout the world understand medications through the combination of traditional and bio-medications to treat certain diseases. For example traditional Chinese medicines are understood to work better when they are taken together with bio-medications. These medications are often used simultaneously in the treatment of certain diseases in Asian countries and this practice is spreading worldwide especially as the number of immigrants particularly from China increases (Bodeker & Kronenberg, 2002).

## **Medications within relationships of cultural care**

Medications are often viewed as therapeutic agents whose work goes beyond their medicinal purposes (Cohen et al., 2001; Hodgetts et al., 2011a, 2011b.). Medications are consumer goods and social objects that are acculturated into familial practices. Medications help reshape and build relationships of care giving since caring for others is an important cultural part of some societies (Lefebvre & Nicholson-Smith, 2007; Sointu, 2006; Yanchar, Gantt & Clay, 2005). Medications can also be viewed as gifts freely given to those that require them (Whyte et al., 2002). Medications are objects through which relationships of cultural care are expressed within households (Cohen et al., 2001).

Leininger (2002) defined cultural care as the subjectively and objectively learned and transmitted values, beliefs and patterned lifeways that assist, support, facilitate, or enable another individual or group to maintain health and well-being, improve their human condition or deal with illness. In a cultural context, medications become pharmaco-social objects (Hodgetts et al., 2011), which can be exchanged between social actors; they objectify meanings and move from one meaningful setting to another (Whyte et al., 2002). Exchanges can be considered the 'glue' of social relationships. They are increasingly symbolic expressions of interpersonal and social relationships (Simmel, 1996). By establishing these relationships trans-actors become part of each other and through these transactions facilitate recreation of relationships while fully committing to transact again in the future (Carrier, 1995).

Through care-giving practices which are affected by culture, medications enable people to express care and love for others around them. For example, medications enable Zimbabweans to express care for others through a kinship-based cultural that promotes collectivist or communal values (Bodibe & Sodi, 1997; Hickson, Christie, & Shmukler, 1990; Kunene, 1981). The African culture considers the interests of a social group which are more valued than those of an individual. African cultural values of care are centred on the constructions of *ubuntu* (*umuntu ngumuntu ngabantu – I am because we are*) in isiNdebele (*hunhu* in Shona) – a fundamental humanity and caring for the well being of others. *Ubuntu* (personhood) is an ancient African worldview based on the primary values of intense humanness, caring for self and others, sharing, mutual respect, self-restraint, compassion and associated values, ensuring a happy and qualitative human community life in the spirit of family. (Broodryk, 2002 p. 56)

The concept of *hunhu-ubuntu* explores how kinship relations are negotiated within the Zimbabwean domestic sphere through caring for those in ill health by sourcing and gifting of medications, food and transport. Within households and communities, the concept of *ubuntu* also emphasises love, relationships with others, justice, peace, harmony, balance and above all co-existence with nature (Nsamenang & Tshombe, 2011). *Hunhu-ubuntu* concept imbues in the individual a sense of responsibility to those around the individual and the community. *Hunhu-ubuntu* articulates vision of identity predicated upon moral relationships between the self and others and the interconnectedness of beings (Nsamenang & Tshombe, 2011). The concept requires that one knows the rules, customs and principles applicable within one's environment. *Hunhu-ubuntu* is expressed through the common formulation of "being a person among others" – (*kuva munhu pane vanhu*) (Chinouya & O'keefe, 2006; Cilliers, 2008 p. 1; Kyker, 2011).

Through the concept of *ubuntu/hunhu*, Zimbabweans show *rudo* (love), *rukudzo* (respect), and *rubatsiro* (care) for those who need care during illness within households. Zimbabweans as a community people, illness to a member of the family affects all immediate and extended family members including community members in general. This is shown in how those affected contribute financially or in kind and taking care of those in need including those in illness. Food and medications are sourced by other family members hoping that the affected member will soon recover from ill health.

The other important cultural concept of *tsika* (manners) is very important to Zimbabweans. The Shona term *tsika* refers to knowing or possessing and being able to use the rules, customs and traditions of society (Pearce, 1990). Among rules set out within the framework of *tsika* is taking care of those in ill-health. *Tsika* is shown in how one treats those who require assistance during illness for example. An individual with *tsika* is able to offer help to those around them. In cases where a household member requires help, *tsika* dictates that an ill person be helped through gifting of medications and food or any other form of assistance that could be offered. A good person is one who carries and practices *tsika* in their daily practices. *Tsika* is passed from generation to generation. *Tsika* is taught from all social institutions which include homes, schools and churches.

Medications also enable Tongans to express their own cultural values of caring for others. *Anga fakatonga* for example, is a term for Tongan customary practices and values which is a Tongan way of life that is based on love and generosity (Morton, 1996, 26). In relation to

medications, *anga fakatonga* defines how household members conduct themselves when caring for their immediate and extended family members or friends who need help. Another important cultural practice by Tongans is *tauhi vaha'a* which is a vow that holds Tongan families together. Family is of the utmost importance in the Tongan culture. It is through the family that its members are taught the values of love and concern (*ofa'*), respect (*faka apa'apa'*) and obedience (*talangafua*). Medications allow these values to be expressed within Tongan households and communities. These values enable Tongan kinship which includes nuclear and extended family members to unite in times of crisis including sickness, loss and celebrations and work together as a team (Morton, 1996, p. 26).

Medications enable relationships of cultural care to develop within Christian communities. Zimbabwe and Tonga have strong Christian beliefs which form part of their daily lives. The basic tenets of Christianity include love for God and one's neighbours (Treat, 1996). Through love, Christians have strong beliefs about care, honour, generosity, sharing and self sacrifice for the benefit of their family members and communities.

On the other hand, Chinese also uphold their cultural care relationships through xiao or filial piety which they strongly value. Filial piety is about duty and respectful love towards one's parents (Cheung, 1986; Ho, 1986; 1996). Filial piety requires that children take care of their parents especially when they are in poor health or are aged (Li, Hodgetts, Ho & Stolte, 2010, p. 2). Traditional Chinese families are vertical and hierarchical and age, gender, generation and birth order are determinants of status (Cheung, 1986; Ho, 1986; Vong, 2002). Vertical and hierarchical nature of Chinese families helps to maintain strong relationships within their families. Family members are expected to strictly adhere to these roles. Family is the centre and comes before individual. The father is the undisputed head of family. Children especially first sons have a duty of caring for their parents and showing respectful love (Cheung, 1986 & Ho, 1986). Filial piety is characterised by unquestioned loyalty, respect, obedience, devotion and dutifulness towards one's parents, elders and past ancestors (Kim et al., 2001). Chang and Kemp (2004) also found that family members play an important role when one of their relatives seeks health care services. Chinese may rely on the decisions of family members before seeking health care service. Decisions are made on what suits the family and these supersede the interest of an individual (Chang & Kemp, 2004). Indigenous groups tend to share the same practices of involving family members when decisions about important

issues are made within households. For example indigenous group members know where to seek medical help should one of them fall sick.

Medications enable relatives who are geographically separated to care for each other as they enable bonds to be negotiated between people (Schwartz, 1967). According to Li and Chong (2012), while migrants continue to seek health care familiar in their countries of migration, they continue maintaining connections and relationships of cultural care with their relations in countries and communities of origin. These connections and relationships facilitate cultural care practices by sourcing and transporting medications to where migrants have settled.

### **Role of households in medication use and flows**

The health care reforms in many so called ‘developed countries’ have led to a shift in the delivery of health care away from formal places like hospitals and other institutions back towards more informal settings such as households (Dyck, et al., 2005). This renders households as potential “therapeutic landscape” (Gesler, 1992) and places of care (Gleeson & Kearns, 2001). Households bring people together and relationships are enhanced. They provide privacy, respite and care (Mallett, 2004). Households involve practices of healing and recovery from sickness. Medication practices form a large and significant component of the care practices that take place within households. Households are therapeutic spaces for the care and maintenance of health and they constitute a place where medications are stored and used in day to day living. Households therefore become storage and safety nests for medications which become part of the household assets. Most medications that are obtained from various sources flow into households which become particularly significant places for medication storage and use (Sorensen, et al., 2005; Sorensen et al., 2006).

This study is informed by the notion that “everything we study is emplaced” (Gieryn, 2000, p. 468), and that the household, or more particularly the home, is “a particularly significant type of place” (Easthope, 2004, p. 128). Notions of home are complex (Mallett, 2004), covering not only the idea of a place to dwell (and associated dwelling), but also invoking a variety of meanings, such as personal identity, security and privacy. Households are integral part of how medications flow into, around and out of these spaces (Hodgetts et al., 2011). Everyday routines take place within households where people feel being in control of themselves and have the feeling of being free. Households are social and psychological

spaces which take both physical and social forms (Easthope, 2004; Saunders & Williams, 1988).

Households become social organisations in which everyday practices are carried out and they play an important role of maintaining each family member's health through medications which are enabled and enacted within these spaces (Cupuis & Thorn, 1996; Saunders & Williams, 1988). They are the main places where medications are either administered or consumed. Those who are healthy will take care of their sick relations through the administration of medications within households. Beside households being places in which people dwell, they also related to personal identity, security, privacy, respite, trust, routine and care (Mallett, 2004).

Homes are equally important places of care for the nine migrant participants for this thesis. In the case of my Zimbabwean participants for example, the African conceptualisation of a home (house) is inspired by the view of the universe as the 'dome of existence'. A typical African house as shown in Figure 1 is circular resembling the universe and earth (Kunene, 1981). Inside the house are divisions of four curvatures just like the cardinal points of the universe and earth. Umsamo (western part of the house) is the altar which is used for appeasing one's ancestors. The altar also serves as a storage area for food and water. The eastern section of the house signifies the direction where the sun rises from. The southern part of the house is the female region while the northern area is the male region.



*Figure 1: Tradition African house (hut) in Botswana*

The centre of the house is the fireplace where people inside the house get the comfort of warmth. It is also a place for cooking. It is a place that some medications are boiled or cooked before they are administered to the needy. The centre resembles the navel or placenta. The main beam inside the house represents the umbilical cord connecting the living to the universe as the source of life. The same principle applies as when the baby is connected to their mother while inside the womb for sustenance through the umbilical cord (Kunene, 1981; Chivaura, n.d.). Homescapes like the one above in figure 2 bring families together and relationships are maintained. Medications are sourced from different places and flow into, around and out of such households. A family member who is unwell is attended to within such households as shown above. In times of need those seeking help may be attended to by any members of the family.

Medications are sourced from various places before they enter into households. Currently very little is known about the meanings and social practices in everyday life of medications especially on how medications flow into, around and out of homes. Medications flow into households through a variety of ways. They can be bought locally from supermarkets,

pharmacies or obtained from hospitals,



Figure 2: A herbal garden in Zimbabwe (Courtesy of The Zimbabwean)

friends and neighbours. Some people grow medicinal products in their home gardens as shown above in Figure 2. The Nharira Community in Zimbabwe established a garden where herbs and other nutritious food are grown. Other products grown in this garden include moringa, nyemba, soya beans and sweet potatoes. All these products add value to the communities' food supplements especially for those from underprivileged households (Gweshe, 2013).

Medications also flow to and from other countries. A study carried out by Cao (2011) found that Chinese migrants to Finland brought medications from China. Over-the-counter and Chinese medications were the most common substances brought into Finland. Other studies have shown that once some migrants move to other countries they continue to seek health care through engaging with transnational health systems back in their countries of origin. As an example, Mexican and other residents in the United States travelled between the two countries to seek health care and medications in Mexico (Chavez, 1984). Health care facilities and medications were reportedly cheaper in Mexico when compared to the United States. Those who sought medical health care brought back prescribed medications and other substances back to the United States.

Wang (2011) in a study found out that Chinese immigrants in New Zealand travelled to and from China and brought back some medications. Reasons for bringing back medications from China varied between individuals. Some migrants pointed out that there was less choice of medications in New Zealand while others suggested that medications were expensive here. Other migrants brought TCM which were reported to have better results when compared to bio-medicines. For others importing TCM which they used simultaneously with bio-medicines produced better results. Lastly antibiotics were not easily available in New Zealand. One had to have a doctor's prescription to access them whereas in China it was easy to buy antibiotics without a prescription (Wang, 2011).

Another way in which medications flow into households is through the media. Households are exposed to medication advertisements. Media messages about medical products, risks and uses are engaged in the home as a primary locale for audiencing (Ang, 1996). Although media is an important source of information about health and medications, and where we can source our medication needs, there is great concern about the quality of medical reporting in newspapers, televisions, magazines and internet (Moynihan et al, 1999). Cultural knowledge and information are brought into households via media through various forms including electronic gadgets which have become part of our day to day lives. The gadgets now define and shape our everyday reality and dictate what medications are best for us. Advertisers invest large sums of money on commercials particularly television due to its popularity. Constantly barraging homes with commercials becomes a reminder to households that taking medications is an acceptable and normal way of living (Moynihan et al., 1999). Advertising therefore reaffirms the belief that medications are necessary when taken for a real or an imagined symptom (Hanson et al., 2006).

### **Chapter summary and thesis structure**

Medications are an important part of all societies and remain so for people who migrate from one place to another country. Medications are material objects that are used to cure, treat and prevent some medical conditions. They bring hope and relief to those in ill health. Medications are understood from different worldviews which are based on cultural values that are learnt within family or community environments. Through daily interactions, experiences and practices medications are understood and given meaning by households. Daily medication practices within households include the following among others – different

storage places for medications; when and how medications are administered; and cues that are used to remind people to take their medications. Medications flow into, around and out of households and are procured both locally and internationally. They also flow out of households to other countries.

Medications enable relationships to be built and maintained between household members, friends and relatives through gifting and receiving these substances. They enable people to maintain their cultural identities by continuously using familiar substances. Medications also enable relationships to flourish between those family members who have settled in new countries and those who remained behind. Constant contacts are maintained as relatives in sending countries source and send medications to those who have migrated to new places.

Households are also an important part of medication practices. Households are the main places where medications are mostly administered and consumed. Medications are enabled and enacted within these spaces.

With such functions in mind, this thesis is presented in four chapters. This chapter provides an introduction and background to the study of medications, migration and the cultural texturing of familial healthcare. Here, we have explored issues of migration; cultural beliefs about health and illness; understanding medications; medications within relationships of cultural care; and role of households in administering medications. Chapter two outlines the methodology that was used to gather information from immigrant households on what constitutes medications and how these objects are applied in daily lives of migrants. Chapter three presents an analysis of what was gathered from migrant households on daily cultural practices associated with medications. The chapter analyses the flow of medications in, around and out of households. It also analyses how medications in some cases flow between New Zealand, China and Tonga. Chapter four discusses the key findings from discussions held with the nine migrant households now resident in New Zealand. The findings, related to migrants' daily medication practices will be compared to other relevant literature from past studies on similar subject.

In pursuit of the aims and objectives of this thesis, the following chapter focuses on research methodology and discusses the research design, household recruitment and composition, data collection and data analysis methods used in this study. The chapter sheds light into how data was obtained as we seek to understand medication practices of migrants who are settling in

New Zealand.

## **Chapter Two: Research Methodology**

### **Introduction**

Medications are an important part of everyday life for Zimbabwean, Tongan and Chinese transnational migrants settled in New Zealand. Very little is known about migrants' medication practices and this includes how migrants acquire, store and administer medications within their households. While medications play a valuable role in the treatment of illness, there are also potential side effects and adverse reactions associated with medications especially when they are not properly handled. Medications are one of the most widely used medical technologies, both for treating illness and for sustaining health. They also carry an important cost to the health care system. PHARMAC reports the community drug bill for the year to June 2006 at \$563 million, and estimates this would be more than \$1 billion higher without their regulatory interventions (PHARMAC, 2007). Further, medications are the frequent focus of comment and debate in New Zealand. This study is important because knowledge gained from it helps understand meanings and daily practices associated with medications in the lives of migrants as they settle in New Zealand. Meanings of medications are complex and understanding them is important as these may vary due to different cultural backgrounds of migrant participants. Contemporary processes of commoditisation and consumption are influential in shaping local understandings and practices concerning medications (Applbaum, 2006; Henderson & Petersen, 2002).

Considering the aims of this thesis as outlined in the opening chapter, I begin my second chapter by briefly exploring the role of households both as places for storing medications and for caring for those in need of these objects. The next section is an overview of the participants' recruitment processes used and the composition of the households involved in the study. This is followed by research methods used to gather the required information while the last section explains the analysis process.

### **Households and their roles**

Households played an important role in this study. Households, apart from being places of residence, they shape and enable us to develop a sense of who we are (Perkins et al., 2002).

With all changes taking place worldwide including family structures, use of households are also changing and taking new meanings. New opportunities and challenges are developing as households are increasingly becoming places of caring for those in ill health and where healing and recovery are taking place (Sahlberg-Blom, Ternstedt & Johansson, 1998). Households are places closely connected to identity and culture and where medications flow into, around and out of. According to Dupuis & Thorns (1996) households are places that provide material support for habits and meaningful memories. The authors further argued that households are zones of control over one's life which others have limited access to.

### **Household recruitment and composition**

The research explores how nine transnational migrant households understand what medications are and how their diverse cultural backgrounds influence their daily medications practices. The thesis further explores how medications are acquired, treated, stored and administered within these immigrant households. Through the conduct of family discussions, application of diary exercises, photo-elicitation projects and in-depth interviews valuable information regarding medications' flow into, around and out of households and how relationships are cemented within these spaces, valuable information was gathered. Using these research techniques, I took a broadly ethnographic approach to this research. This method enabled me to capture some of the complexities and fluidity of the use of various forms of medications within the lives of the nine households (Hodgetts et al., 2011). A qualitative ethnographic approach provided a detailed in-depth description of everyday life, practices and experiences of medication uses within households.

This study is based on semi-structured and non-standardised interviewing techniques which are commonly used in qualitative analysis (David & Sutton, 2004). The semi-interviewing process allows an interviewer to use an interview guide with additional questions being asked as and when necessary. The method allows flexibility because the interviewer does not have to follow the wording or order in which questions are written on the interview guide. Questions are asked in any form and can be followed up for further explanations unlike in structured interviews (Corbetta, 2003; Kajornboon, 2004, p. 75). The interview technique allows the interviewer to follow up on any issues of interest and gives the respondent opportunities to explain matters of concern in detail. The interviewer has the opportunity to also ask for clarification on matters that are not clear. Semi-structured interviews allow the

researcher to prompt and probe deeper into or for views and opinions of the interviewee on any subject of interest during the process. This interviewing technique allows a researcher to probe the participant while allowing the interview to explore new paths which were not initially considered on the interview guide (Gray, 2004, p. 217).

This study was conducted in a way that sought to enrich our understandings of transnational migrants' medication and health care practices. Multiple methods were employed in conducting interviews. These included group discussions with household members, individual interviews, photo and diary elicitation and household mapping. Narratives and experiences of participants gave an opportunity to the researchers who listened and learnt how migrants respond to illness and engage in health care practices. The empirical research was conducted in the comfort of the participants' households. Households provided a warm welcome which minimised disturbances during our engagements. This study is informed by the notion that households are a therapeutic space for care and maintenance of health, and constitute a significant place for medication storage and use in everyday life. Households with a chronically ill member provide situations where medications are in frequent use. Households with children raise additional issues for medication use around vulnerability and care, childhood and parenting. Data from people within the migrant community provides general contextual understandings of medications, acquisitions, storage, and use, and contrast with data from the other domains.

A snowball technique was used by my supervisors to a diverse convenience sample of Tongan and Chinese households in Hamilton and Auckland. Households were selected on the basis that each contained a person with a diagnosed chronic illness. These households were chosen as they provided sites where medication use was likely to be frequent, important, and involved other household members. Approval for the study was gained from the Massey University Human Ethics committee. All participants are identified using pseudonyms. The recruitment process for Zimbabwean began by approaching migrant households who were all known to the researcher through social contacts.

Zimbabwean participants comprised of three females and two males and their ages varied between 34 and 48. All participants reside in Hamilton and none of them has been in New Zealand for more than 8 years. Participants were informed of their rights to withdraw from the interview before, during or after the process if they wished to for any reason. Assurance was guaranteed to the participants that no harm including emotional, physical or otherwise

would be done to them. Pseudonyms were used in reporting the results to protect the dignity and privacy of the participants and to ensure confidentiality. Further ethical approval was obtained from the University of Waikato's Psychological Research and Ethics Committee before initiating the studies.

The following materials were used during participant recruitment and the data collection phases of this research:

- a) Appendix A: Medications in Everyday Life Consent Form
- b) Appendix B: Photo Elicitation Information Sheet
- c) Appendix C: Medications in Everyday Life Consent Form
- d) Appendix D: Medications in everyday life - Household Data Sheet
- e) Appendix E: Medications in everyday life - Household researcher checklist
- f) Appendix F: Medications in everyday life General Medications Diary Information Sheet
- g) Appendix G: Topics for household discussions
- h) Appendix H: Photo Information Sheet
- i) Appendix I: Example of a Household Mapping Exercise

Besides the above, other materials used during the interviews included graph pads for participants to map their households. Each household was given a disposable camera to photograph medications both within and outside places of residence. Some households preferred using their own cameras.

All three Tongan households were related. The first to take part in the study was the Nonu household, which was comprised of three members. Peni (29) is male and married to Tori (35). Tori is Samoan. Both were born in New Zealand and work for New Zealand Police as Detective Constable and Constable respectively. They have a child named Vienna. Peni has no health issues whereas both Tori and their child have eczema. Tori uses Locoid cream to treat skin inflammation whereas *lolo tonga* (Tongan coconut oil) is used to treat Vienna's condition and to keep her warm. Nonu household also keeps some Ibuprofen and Panadol in their home. These medications are readily available in case they are required.

The Mohokoi Household is comprised of ten people. Four of the family members are adults. Lesieli (47) is the mother and breadwinner and is the only member of the family born in Tonga. Lesieli separated from her husband who lives in Tonga. The ages of householders

range from two to forty seven years. Generally the Mohokoi household is in a healthy state. Otile (22) suffers from hay fever during spring time and she takes some medication during that time of each year. She also administers some medication to treat oral ulcers and the traditional *vai angoango* is the most commonly used substance for the condition. Tiffany (20) is a female student at a local university and she took part in the study. Sione (21) a male warehouse worker also participated in the study. Among medications the family stocks include Panadol, Vicks and Lemsip for cold and flu. The Mohokoi householders store and use a lot of traditional Tongan medication with *kihikihi* used to treat different illnesses associated with children. For adults *vai angoango* is the most common medication used among adults. The Mohokoi household is very knowledgeable on traditional Tongan medications despite the fact that only Lesieli was Tongan born with the rest of the family having been born and brought up in New Zealand.

The Heilala household is made up of four members. Tu'ipulotu (46) is Tongan born and is an Accountant by profession. He is married to Ana, a Tongan born Early Childhood Caregiver. The couple has two daughters Asilika (11) and Melina (18). Both girls were born in New Zealand. Asilika attends primary school while Melina is receiving tertiary education. The Heilala Household have in their possession a variety of Tongan traditional medications, which include *vai tale* (cough medicine), *vai kete* (medicine for upset stomach), *vai kita* (used for general unwell feeling), *vai kahi* (used to detoxify the body), and *fo'i 'akau niuonia* (used for general unwell feeling). Besides these traditional substances, the Heilala Household also have in their possession Panadol, Synflex and Vicks. None of the four have any major ailments.

Three migrant Chinese households took part in the study. The Yangliu Household is comprised of five members. Joanna is a computer technician and is married to Tony who is self-employed. Both Joanna and Tony are in their late 30s and have a son whose name is John. The Yangliu Household also lives with Joanna's elderly parents who are in their 70s. Joanna and Tony arrived in New Zealand as permanent residents in the late 1990s. Two years after their arrival they were joined by Joanne's parents who came to New Zealand to take care of their grandson. All household members have good health except for Joanna's parents who have high blood pressure and are on medications for age related conditions. All family members take vitamins regularly. The household has considerable experience with the use of Chinese medicine. The household sources traditional Chinese medicines which are then

brought into the country on their return from holiday. At least twice a year a family member visits China and brings back Chinese medicines to New Zealand.

The Wang household is made up of three members. Brenda is aged 57 and is married to Charlie aged 60. Their daughter Sharon is 21 and is at University. The household has in its possession a wide variety of both biomedicines and traditional Chinese medications, which are primarily imported directly from China. Most of the medications stockpiled by the household include those used to treat cold and abdominal pains. Charlie is the only member of the household on long term treatment for high blood pressure and heart problem. Whenever any member of the household goes back to China for holiday purposes they bring back which are stockpiled and used in the future.

The Lin household is made up of three members. James (62) is married to Debbie (55). Ray (23) their son is employed and lives with his parents. They have been in New Zealand for six years and came from mainland China. The household have a range of both local and imported medications. Among the medications found in the household are Glucosamine used by Debbie to treat her joints, a variety of Chinese herbs including herbal teas which they take often and use to treat sore throat. Other medications stocked by the household include oil for treating sore knees, nasal spray for Ray, anti-diarrhoea tablets and some antibiotics for James who has high blood pressure. James also suffers from gout.

The first Zimbabwean household is that of the Sibanda which is comprised of four members and these include Themba (50) a male who is married to Ruth (40). Professionally Themba is an Occupational Therapist while Ruth is a Laboratory Scientist. The couple has two sons, Rob (18) and Jack (14), who are at university and high school respectively. All four members of the Sibanda household migrated from Zimbabwe six years ago.

Rugare household is made up of four members who also migrated from Zimbabwe to New Zealand six years ago. Joe (45) is married to Ann (41). Both are nurses by profession. They have two children, a girl Rungano (19) who is at university and a boy Tim (15) who is at highschool.

The Gumbo household is comprised of Mark (44) who is married to Edith (36). Due to work commitments Mark who is employed as an electrician could not take part in the interview. Edith is a lawyer. The couple has two children. Tongai a boy (17) is at university while Thembe a girl (8) attends primary school. The family has been in New Zealand for 6 years.

The three households communicate in both English and at least one of the indigenous languages spoken in Zimbabwe.

Having come from middle class and urbanised backgrounds in Zimbabwe, all three households were more familiar with the biomedical pharmaceuticals. At the time of the interviews, all three households had some form of bio-medications within their homes, including prescription drugs, dietary supplements and enhanced foods. They were also aware of their own indigenous traditions, but these no longer hold centre stage in their daily lives. The householders reported using traditional medicines when these substances were available. It is difficult to obtain these substances in New Zealand.

## **Research Methods**

This project was carried out in two parts. The first part which was carried out in 2009 involved Tongan and Chinese migrant households as part of a large Marsden and Health Research Council funded project (see Hodgetts et al., 2011). Using the same research design, in 2011 I carried out empirical research with a further three Zimbabwean households. The research process as was the case in the first study was carried out in four stages over a two week period: pre-data collection, initial household discussions, tasks and individual interviews and the exit interview (see Hodgetts et al., 2011). Work with all nine migrant households included digital-recorded discussions and interviews, and observational, mapping, photographic and diary methods.

In *phase 1* an initial meeting was held with members of each household to introduce the research topic, gain informed consent, and identify key participants for the various forms of data collection. This was followed by a general discussion about medication sources, uses and meanings. Initial and other discussions were conducted in English and in some cases indigenous languages were used and later translated into English. During the initial household discussion stage a general conversation about medications, their meanings and uses took place. Contact was made frequently either through telephone calls, household visits or mobile phone texting. Participants were given the option to consider the various forms of medications they consumed and came in contact with in their daily lives.

*Phase 2* involved engagements with households and informing them on how to fill in household diaries, draw household maps and apply photo-elicitation methods. Diaries, maps

and photographs provided the focus for subsequent interviews, where the meaning of entries, noted practices and images were discussed. During this phase, one member of the household was asked to record daily encounters relating to the everyday use of medications in their diaries. Where appropriate, another family member produced a different diary recording instances in which medications came to their attention from advertisements, billboards, internet content, and interactions with others. Participants diarised their daily encounters with medications both within and outside of their homes. In practice, these two forms of diaries were often merged and completed by one person. Below is one such diary that was filled in by Ruth between 24<sup>th</sup> and 29<sup>th</sup> of December, 2011 as shown in Figure 3. Ruth has high blood pressure and she takes Nifedipine Ta, Accuretic and Accuprin daily. Ruth wrote down the dosages and times she administered her medications. She did the same for her two children who have other conditions which need medications.

Participant 1			
Date	Medication	Dosage	Time
24/12/11	Nifedipine Ta	20mg	10:15 am
	Accuretic	12.5mg	10:15 am
	Accuprin	10mg	8:00 pm
25/12/11	Nifedipine Ta	20mg	8:00 am
	Accuretic	12.5mg	8:00 am
	Accuprin	10mg	9:10 pm
26/12/11	Nifedipine Ta	20mg	9:30 am
	Accuretic	12.5mg	9:30 am
	Accuprin	10mg	8:30 pm
27/12/11	Nifedipine Ta	20mg	7:30 am
	Accuretic	12.5mg	7:30 am
	Accuprin	10mg	8:00 pm
28/12/11	Nifedipine Ta	20mg	7:30 am
	Accuretic	12mg	7:30 am
	Accuprin	10mg	8:00 pm
29/12/11	Nifedipine Ta	20mg	10:00 am
	Accuretic	12.5mg	10:00 am
	Accuprin	10mg	8:00 pm

Figure 3: Part of the Diary used to record medications administered by Ruth

The diary entries were to be used during subsequent interviews. Diaries provided richer, deeper and contextual understanding of the documented experiences of households. Diaries were important for recording daily lives and experiences of administering medications and for personal recollection (Kenten, 2010). Diaries allowed ‘participants a different media within which to express themselves’ (Elliott, 1997, p.5) and are empowering tools for participants (Meth, 2003), especially in cases where participants are both observers and

informants (Zimmerman & Weider, 1977). Dairies are a good form of capturing sensitive data which might not be easily accessed by other methods (Kenten, 2010). Dairies also highlight issues important to the participants whose focus is on their lives and the roles they play during the period these diaries are in use (Valimaki et al., 2007).

Another important feature of Phase 2 involved asking households to draw maps of their homes as shown below.

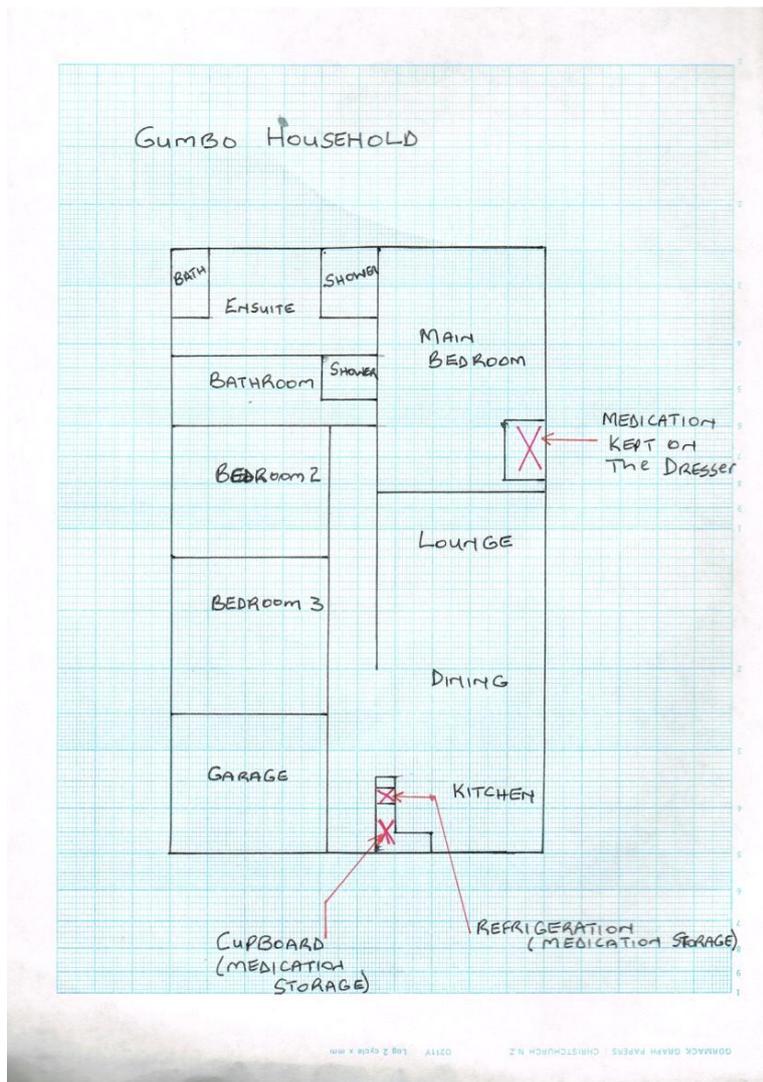


Figure 4: House plan for Gumbo household and medication storage places

Household maps as shown above in Figure 4 were important because they were used as tools for documenting medication storage places for each household. Rather than using the traditional narratives of their daily medication practices, maps facilitate more detailed and in-depth reflections of experience in participants' daily lives (Hathaway & Atkinson, 2003). Maps provide an opportunity for entry point into unadulterated views of participants

(Wheeldon, 2011). Wheeldon further argued that maps are used to represent words, ideas and other concepts arranged around a central word or idea. Constructing and discussing maps helped the householders to recall different places where medications were sourced from and stored within their homes. The mapping exercises carried out by participants added depth to information within each household and provided a particularly useful way of rupturing the taken-for-granted, opening up experiences of medications and producing representations that were to be discussed. Mapping exercises enabled households to better recall, organise and frame their reflections of past experiences (Wheeldon, 2011). Maps offer a rich and insightful research method to explore how people make sense of their world. They also help recapture participants' experiences rather than through words alone. Maps help share experiences by going beyond problems that could arise from linguistic barriers. They may also allow for a means to share experience less mitigated by culturally grounded understandings and mutual accommodations (Habermas, 1976). Maps offer better research methods and are very useful especially when conducting cross-cultural studies in which open communication may be complicated by cultural, linguistic or social misunderstandings (Wheeldon, 2011). Using maps provide a means to prompt participants to consider their past experiences in more detail and depth (Legard, Keegan and Ward, 2003). In this study household maps were also used to further explore the meaning of medications to participants.

Household photographs were either taken by one person within each household or became shared responsibility of at least two family members. One or two participants in each household took part in photo elicitation interviews. Photographs just like maps mentioned above were used to further explore the meanings of medications to participants. Photo elicitation helped to clarify issues raised from other data sources (Klitzing, 2004) and enabled participants to visualise mundane events which occur in their daily lives that are take for granted (Radley & Taylor, 2003). Photo elicitation is not only about making photographs of people, objects or places, rather it transcends to providing information, feelings, memories and uniqueness particular to the photograph's representation (Harper, 2002). One participant from each household was involved in a photo-production exercise where they were given a disposable camera and asked to "photograph the world of medications". Photographs of the medications, their storage areas and anything of interest including other household objects were photographed. Photographs were uploaded and viewed on the participants' computers.

Visual images of medications and their storage places were used in conjunction with the interviews as has been the case in other qualitative studies carried out by several researchers

(Harrison, 2002). Visual image is an important feature of qualitative research as it has been used to describe what is most important to human beings throughout history (Hodges et al., 2000). Photo elicitation, which was first mentioned by Collier (1957) who was a researcher and a photographer, enables emotions to be evoked and past experiences shared. Collier went on to say more information was elicited from interviews when photographs were used. Collier also suggested that respondents did not feel fatigued during the interviews when photographs were being discussed.

Photographs were also seen as story telling tools which explored narratives of respondents and they provided insight into memory and identity construction during interviews (Harrison, 2002). Paulo Freire in his “coded situations” used photographs and sketches to stimulate respondents to analyse their own situations (Banks, 2001). According to Banks, photographs enable people to remember things they could have forgotten or see them in a different way. Photo elicitation helped to clarify data (Klitzing, 2004) and capture and visualise what may seem unclear (Mitchell, et al., 2005) such as those mundane events which occur in our daily lives that we take for granted (Radley & Taylor, 2003). Photo elicitation is not only about making photographs of people, objects or places, rather it transcends to providing information, feelings, memories and uniqueness particular to the photograph’s representation (Harper, 2002).

*Phase 3* involved meeting and conducting the actual interviews with households. The stage involved the use of filled in diaries, photographs and household maps. Photographs were uploaded and viewed on the participants’ computers. Photographs, diaries and maps were used to further explore the meanings of medications and what they meant to participants. The stage also included taking photographs of the households’ medications which had not been photographed. Each interview took on average 50 minutes. The multifaceted approach allowed us to look at which medications were available, their locations within households, and over the homes in terms of participants’ reflections on the meaning and use of medications.

A particular challenge for research into domestic settings is that participant understandings and uses of medications can become highly routinised and taken-for-granted. In response, a multi-method approach aimed at revealing these domestic routines was developed, which could be adapted to the composition of each household. The diary, mapping and photo-elicitation exercises comprised a kind of breaching experiment in the ethnomethodological

sense (Garfinkel, 1967), which renders the unnoticed noticeable and considerations of medication placement and use intelligible. Engagements with the nine households across the three phases produced a large and complex data set which comprised of 18 household interviews (including introductory and exit), 9 household maps, 12 diaries and over 40 photographs. This corpus offered multiple forms of overlapping data regarding the placement, meaning and everyday practices surrounding the use of medications in domestic settings.

*Phase 4* was the final stage of the interview process. The process involved exit interviews with all nine participating households. A review of the whole interview process took place and reflected on what had happened before, during and after the interviews. Participants were asked to give their comments and thoughts on the interviews. They were further asked for any after thoughts which may not have been discussed in the initial interviews. This enabled researchers to gather reactions and further comments from participants about their experiences during and after the interviews. This phase also enabled participants to reflect on the research process. In cases where further contacts between researchers and participants were conducted, notes were taken reflecting the nature of the discussions and if any issues needed attention they were dealt with.

## **Analysis**

A thematic analysis, which is a qualitative analytic method, was used to identify, analyse and report data for this research. The method focused on recognising emerging themes and patterns from a qualitative data set with information gathered on how medications flowed into, around and outside households (Hodgetts et al., 2011). Rather than hypothesizing or controlling the variables involved in the research, qualitative research focuses on understanding and the making of what the participants have to say (Nikora, 2007). The analysis procedure involved a number of imperative steps including transforming, coding, collating, determining and organising empirical materials. The procedure enabled me to concentrate on exploring the socio-cultural life of medications and how these substances were obtained from various sources and integrated into home life, often taking on taken-for-granted status as things that belonged and which were implicated in personal histories of illness. The analysis also looked at households use, placement and understanding of medications in their day-to-day experiences of medications. It became clear in the study that

more specific themes emerged which centred around identity, memory, care giving and daily routines. Specific examples of the emerging themes were identified and analysed after which a draft analysis was produced for further deliberation. The data was analysed according to the ways in which medications were integrated into relationships. Under this section, the researcher looked at how medications as they were sourced from outside and brought into homes acquired the taken-for-granted status and implicated in personal histories of illness (Hodgetts, et al., 2011).

My analysis process was guided by the overall thesis aims which were to explore processes surrounding the meaning, procurement, use, and placement of medications in domestic settings. The analysis on medications helped understand how these objects become social objects which are associated with processes of identity, home-making, and caring for other members of the families. For example, empirical materials generated by the families were analysed according to the ways in which medications were integrated into relationships and domestic spaces. As I explored materials collected with the householders, more specific themes began to emerge around meaning of medications, their uses, identity, memory, care-giving, and daily routines. These complex issues required me to act as a bricoleur (Kincheloe, 2005) in the analytic process by working inter-disciplinarily to generate insights into the materials collected with the households. Phase 1 data provided a way into the corpus and for confirming the relevance of themes central to the intent of the research as well as for inductively identifying additional themes to be developed into a coherent analysis. The centrality of medications as social objects associated with processes of emplacement, identity, home- making, re-remembering and caring was confirmed as a striking feature of the data. Specific themes were considered in relation to phase 2 and 3 data from participating households engaged with. Extracts were then collated and used to orientate analytic work on the entire corpus (phases 1 to 3). Further extracts were coded under the important themes of the sourcing and emplacement of medications, daily routine, meaning, memory, identity, care, and their social lives. Throughout the process, I took notes reflecting the nature of the discussions and emerging themes.

### **Chapter 3: Household understandings and uses of medications**

Medications, like other domestic objects, play an important role in the everyday lives of households. I will illustrate how medications can evoke positive feeling of familiarity and a sense of stability to migrants. This helps to counter feelings of disruptions as migrants are dislocated from their former homes and continue using the same system and objects they are familiar with (Kerhen, 2002; Petridou, 2001). Medications take on important meanings for users at home, enabling people to respond to illness and engage in the management of health (Hodgetts et al., 2011). They provide a meaningful way of achieving personal treatment objectives in daily living (Leontowitsch, Higgs, Stevenson & Jones, 2010).

In considering such issues, this chapter presents findings from the engagements with the nine participating migrant households. A total of nine central themes evident from across the participating households and closely linked to the research aims were identified through analytic process. These themes are all linked to how households understand and use both bio-medical and indigenous medications within their familial environments. Sub-themes that emerged from the main themes are also covered below. As a result, this chapter is structured into the following sections: understandings of medications; sourcing and sharing medications; taking responsibilities through medications; medication preferences; simultaneous use of different medicative forms; medications, prayers and spirituality; medication storage within households; and medications and the media.

#### **Understandings of medications**

Understandings of medications became one of the most important themes to emerge from the nine households. Medications are understood in many different ways. Peni from the Nonu Household gave an account of his understanding of medications as follows:

*Medication is a preventative or reactive form of a substance for wellbeing or to ensure your wellbeing. That's what I think it is. So if you're sick you take medication to get better or you take medication so you don't get sick.*

Peni associates medication with both wellness and sickness. His understanding of medication is that of a substance which is taken to improve one's health or in reaction to an ailment when

not feeling well. Medications can also be taken to prevent sickness. He considers medication as an object that is both curative and preventive. Ruth's understanding of medication was in line with Peni's view that it is an object which is both curative and preventative: "*For us medication is any drug, root or leaf that can be used to cure a disease or prevent symptoms of a disease*".

Although both Peni and Ruth associate medications with sickness, two aspects are brought up from their narratives. Both Peni and Ruth conceptualise medications in an orthodox manner and as substances that are used to cure or prevent an illness. This is in line with a study by Jana (2006) who also found out that medications were described as either curative or preventative substances. Jana described curative medicines as those substances used for restoration of the diseased person to normal health or as preventative substances used to eliminate the causes of illnesses that may afflict a community. For example, during winter some people in New Zealand are often immunised against flu. Immunisation is one way medications are used for preventative purposes in order to keep healthy. In view of the above, Ruth goes further to draw on two worldviews in her understanding of medications. Ruth views medications as both biomedical (drug) and indigenous (root or leaf) substances that are curative and preventative in nature as they treat diseases and alleviate symptoms of a disease. Ruth understands biomedical substances and traditional plant matter as part of the same general category - medications. The roots mentioned by Ruth are part of many traditional communities whose indigenous healing systems encompass knowledge and practices used for diagnosis, prevention and cure of disease (Sindiga, 1995).

In communicating understandings of medications, participants often made reference to medicinal objects and advertisements. Otile from Mohokoi household described how she understood medications with reference to a photograph of chap sticks she had taken earlier on as shown below in Figure 5:



Figure 5: A photograph of chap sticks used by Otile

*Yeah. This photo is of chap sticks, like, Blistex, Nivea and those kind of things. They treat chapped lips like, if your lips are really, really sore and that's a type of, I see that as medication because anything that helps, I mean, improves your body or whatever is medication. Anything that helps relieve pain.*

Through the photograph, Otile is able to narrate her experiences of using the chap sticks for her pains. The photograph enables Otile to provide an insight into her past experiences and memories of the medicative substances she uses to alleviate pain. Harrison (2002, p. 104) observed that photographs can evoke and ground emotions, abstract ideas and shared human experiences. Harrison went on to say that photographs function to anchor people with past associations and they go beyond what is being presented and that it is under or beyond the photograph that the person's story lies buried.

Meanings assigned to medications tend to be shared as general understandings that are socially negotiated. In one instance, Tu'ipulotu initially proposed that Panadol was not a medication. In the resulting family discussion we see how the meaning of medications can be negotiated with reference to the observed actions of a family member that may differ from their stated opinion:

*Tu'ipulotu: No, because Panadol is not prescribed, you just buy it from the shop....*

*Ana: But when you get pain in any part of your body you will take the Panadol.*

*Melina: I reckon.*

*Tu'ipulotu: Is it medication?*

*Ana: Yes.*

*Tu'ipulotu: Ok.*

Reflecting the taken-for-granted and routine nature of many medications in contemporary households, initially, Tu'ipulotu proposes that Panadol is not a form of medication. The discussion becomes a family affair as siblings convince Tu'ipulotu that Panadol is a form of medication that is used to treat pain. Lying behind this exchange is the tendency of participants to consider substances prescribed by a doctor as definitely comprising medications. There is less certainty regarding medicative substances one might obtain from a convenience store or supermarket, or grow in one's garden. The later are included in the list of medications by participants according to their use in preventing, treating illness or relieving pain, but remain somewhat more ambiguous.

To recap, meanings given to medications differ from people to people. They are viewed as necessary substances and are often unquestioned aspects of day-to-day life (Holroyd, et al., 2012). As presented above, most participants view medications as curative and preventative substances which are both life-sustaining and prolonging. Some participants understand medications as substances that help relieve pain and suffering (Hughes & Blegen, 2008). People associate medications with sickness as they are believed to give hope to the sick. Medications take on important meanings for users at home, enabling people to respond to illness and engage in the management of health (Hodgetts et al., 2011). Participants understand medications as part of their daily lives and are used to treat infectious diseases and manage symptoms of chronic disease. Medications are substances that give hope to those who are physically in need of them.

### **Understanding medications and spirituality in responses to illness**

Within the nine households religious belief systems influenced understandings of medication and responses to illness. With a divergent population, there are some who believe that prayer helps them cope with illness the same way medications do and that it contributes to their physical and spiritual healing (Saliman, 2010). Subthemes which dominated in the discussions with the three ethnic migrant groups include: faith as part of medications, medications are tangible objects; doctors as vessels; and yin and yang.

Joe and Ann were asked about the relationship between medications, spirituality and faith and this was their response:

- Joe: I would like to think faith is part of medication depending on which one you believe in. If you believe in spiritual healing and it helps, that's even better. Most of the time you see things happening spiritually and someone is healed. I would like to think that's part of medication.*
- Interviewer: Would praying fit under the definition of medication as well?*
- Ann: I wouldn't say so because that is spiritual healing, your own belief.*
- Interviewer: I thought religion could be a healing system as well. People who go to church could be experiencing some problems, they go there and someone prays for them and they are healed. Wouldn't you consider that to be a medicative system?*
- Ann: I would like to consider medication as something which one takes like injections or pills. And if we are talking of spiritual healing we will be talking about healing without medication. I don't think it's a medical thing.*
- Joe: I would like to think that spiritual healing also fits in. Because once you believe in it, it also helps just like when you are taking your medication, when you believe that it will treat an ailment it will. Just like when those religious people pray for each other, if you believe it happens, but when you go there to see what happens it will happen. So I think that spiritual healing goes hand in hand with medication even though you cannot touch it.*

From the above discussion Ann and Joe hold two contrasting views about prayers and spiritual healing and their relationship with medications. Joe is convinced that spirituality is part of medications. Joe suggests that having faith in spirituality leads to healing. Believing and having faith are important in Christianity and this is quoted in Matthew 21 v 22 in the Holy Bible. The verse says that "*whatever you ask in prayer, you will receive, if you have faith*" (de Nijs, 2013). This supports the suggestions put forward by Joe who proposes that for one to be healed they should have faith. His conviction is based on testimonies by believers who have been healed through prayers and their spiritual beliefs. Although prayers to and beliefs in God are non tangible objects, Joe regards them as part of a healing system and

therefore forming part of medications. People desire to find treatments that are more compatible with their personal beliefs and life styles and prayers are options that many people resort to as alternatives to tangible substances (Ameling, 2000). Saliman (2010) argues that many people around the world believe that prayers contribute to physical and spiritual healing. Saliman also pointed out that prayers have few adverse side effects, their costs are less and could be provided safely in multiple doses.

Ann sees medications as comprising tangible objects which are injected, inserted into bodies or swallowed. However Ann's opinion is in contrast with both Joe's views and those found in a study by Ameling (2000). According to Ameling, prayer is an ancient healing practice that has existed for centuries although it is not available in the bio-medical health care system.

Tongan participants believe that a relationship between medications and religious faith exists as revealed in the following conversation about the role of faith:

*Melina: That it works.*

*Interviewer: That it cures them but they think that they can't just take medicine that cures them they have to have strong faith as well, strong religious faith. Do you put the two together or nah?*

*Tu'ipulotu: It can be. I do think of it that way cause, being a doctor is a talent given by God. God created the world; he made doctors for a purpose to help those who are ill, those who are sick. Along those lines it is the same.*

*Ana: Yes because God gave the doctors the wisdom and ability. So we rely on doctors and what God has given them, they say that Panadol and what other medication you need to take so you have faith in that.*

Tu'ipulotu and Ana have strong beliefs that everything on earth is a creation of God and that the capabilities possessed by doctors to heal people is a gift from him. According to Tongan spiritual beliefs, doctors are viewed as *vaka* (vessels) through which the healing power of God is practiced (McGrath, 1999). Tu'ipulotu and Ana view doctors as vessels who have been thrust with wisdom and ability to heal people. They also believe that God acts in different ways and having faith in Him enables those in ill health to be healed. They believe that having faith in God enables medications and spiritual intervention methods to work

positively in the healing process of the affected member and their relatives (Bloomfield, 2002).

Tu'ipulotu, Ana and Joe hold the common view that Christians believe in the power of prayer, a point also shared by Ameling (2000). Ameling also suggested that prayer offers a positive impact on a patient's healing or care. There is strong evidence suggesting that certain spiritual beliefs and the practice of prayer are associated with improved coping and better health outcomes (Koenig, 2003) and this supports Tu'ipulotu, Anna and Joe's views.

For Chinese migrants spirituality was invoked in discussions of yin-yang. Their beliefs and application of medications were based on their traditional medication knowledge systems which have been running continuously for centuries without any interruptions:

*Janet: Yeah, took some traditional pills every night before sleeping, yeah, just black ones. This is traditional one... Made of some plants.*

*Interviewer: Oh, ok. So, they're like herbal ...*

*Janet: Yeah, herbal things, yes, yes.*

*Interviewer: Ok. And what are they for, again?*

*Janet: For just balance, you know, yin and yang and try to balance him (Charlie, Janet's husband) to keep him healthy.*

Janet in the discussion considers the important spiritual role played by traditional medications which are framed as bringing balance of hot and cold elements. The concept of balance is important in Chinese tradition and is embedded in traditional Chinese medicine. These natural substances help Charlie and others in similar situations to maintain their balance. Chinese food and medications are based on the yin-yang concept as it is believed all food and herbs are naturally embedded with five fundamental elements of metal, wood, fire, water and earth. TCM provides holistic care that covers physical, emotional and spiritual healing (Wu, 2013). Traditional Chinese health beliefs adopt a holistic or macrocosmic view and emphasises the importance of environmental factors in increasing the risk of disease (Fuller & Toon, 1988). It is believed among the Chinese that these factors influence the balance of body humour, yin and yang. Without balancing yin and yang the two opposing but complementary forces, the body becomes weak and illness may result (Feng, 2002; Kwan & Holmes, 1999). Balance could be restored by applying traditional remedial practices for

example excess, 'hot' energy can be counter-balanced by cooling herbal tea (Kwan & Holmes, 1999). The balancing concept whose equivalence is homeostasis in biomedical terms considers an individual's physiological levels as well as lifestyle choices one makes. Briefly, both Zimbabweans and Tongans have a long history of Christianity and colonisation which influences their health care choices. There is a suggestion especially among those who follow Christian beliefs that medications work with the power of God and with faith the objects are able to heal those who are unwell. Some participants also believe that prayers on their own are medications and from biblical times, prayers have been used in healing practices. Participants' views on the relationship between medications on one hand and spiritual, faith and prayer on the other differ. One participant was of the opinion that medications are tangible objects and this rules out prayers which cannot be seen or taken by people as medicines are. Chinese have applied traditional medications for thousands of years and these substances are believed to play spiritual roles which are invoked in the concept of yin-yang. Traditional medications are culturally framed as bringing balance of hot and cold elements. Failure to maintain balance results in an individual experiencing illness.

### **Sources, flows and the sharing of medications**

All participants referred to a range of sources of medications and how these substances flowed in, around and out from their households. Several also spoke of the flow of medications between their countries of origin and New Zealand in both directions. Sharing of medications especially of over the counter and traditional medicines was common within some households. A number of sub-themes are explored in this section from discussions conducted with participants and these included: sources of medications; medication flows within households; medication flows between households; medication flows in and out of the country; and sharing of medications.

Households obtained their local medications from various sources ranging from nearby supermarkets, pharmacies, doctors, hospitals, herbal shops to household gardens. Once medications were brought home it was common for these objects to flow from one place of storage to another. Janet revealed how such flow of medications took place every day in her home:

*Janet: Oh, there are many activities regarding the medicine.*

*Interviewer: Yeah. So this is the main?*

*Janet: Yeah.*

*Interviewer: And does he (Charles) usually take it in the kitchen here or does he take it...*

*Janet: Yeah, in the kitchen.*

*Interviewer: Ok, so, brings it from the bedroom, takes it in the kitchen and then puts it back in the bedroom.*

*Janet: Yeah.*

Janet describes the flow of Charlie's medications between their bedroom and the kitchen. The kitchen is a convenient place for Charlie to take his medications there simply because that is where he could take them with water. Both the kitchen and bedroom are important places for Charlie. Besides using the bedroom for sleeping, it also plays a role of safely storing medicines which he takes to the kitchen. The kitchen becomes a place for taking medications. The two places complement each other as medications ritually flow between the bedroom and kitchen on a daily basis.

Over the counter and traditional medications flowed easily between the three Tongan households which are all related to each other and sharing medications within the families is a cultural practice which has been the norm for Tongans as indicated in the following narrative:

*Otile: Sometimes Panadol we pass that around. Like, if one household is out of Panadol, they ring here and we've got some then take some over. And I've seen them share... Like, they'll halve it – give half to them and because my aunty's got younger kids, too, and sometimes we share Pamol. So, if her kids' got a fever they'll ring us and then because we've always got Pamol for the little ones.*

Otile points out that in times of need, the little that they have within a household is shared as a gesture of care between householders. In this case, medications flow between related households and in the process enact relationships within these families.

Medications also flow internationally among Tongans and Chinese migrant households. Medications flow between their countries of origin and New Zealand and vice versa. For

example, Debbie sourced traditional medications from China: “*You’ve to go to China and bring some supplies to New Zealand... You have to trust and you believe that it works*”. Sourcing medications from China and bringing these to New Zealand evoke feelings of familiarity, continuity and safety and help migrants like Debbie gain a sense of being home away from home in their new environment. This is a common practice with most migrants when they move to new countries where they always associate themselves with objects from their departed places (Kershen, 2002; Petridou, 2001). Specifically, medications are brought into New Zealand when the participants, their family members, friends or relatives return or come in as visitors:

*Ana: It depends, whenever someone goes to Tonga, they can go to the doctor and ask for some medication and they can come back with it and that’s like twice a year or something. It’s brought over by someone travelling from Tonga. Someone asks the doctor to prescribe or the nurse to give some (medication).*

*Tu’ipulotu: It is brought in from Tonga. Just ask friends and relatives to bring the medications in or they send them over when someone is coming here.*

Maintaining relations with those remaining in Tonga is important to Tongans settled in New Zealand. New Zealand settlers depend on those in Tonga who source medications on their behalf. Friends and relatives in Tonga negotiate with local doctors on behalf of those in New Zealand for certain medications which are then transported to this country. Ana and other Tongans in New Zealand do not need to be physically present in Tonga for them to source some medications. Through extended social networks, medications flow between geographically separated relatives and friends in support of each other. The same networks are used to keep in touch and help in knowing who is going to and coming from Tonga.

Sourcing and bringing in medications from China was best illustrated by Joanna from the Yungliu household who lives with her parents both of whom suffer from high blood pressure. Her parents primarily use imported Chinese traditional medications for their conditions. Joanna discussed how she accesses and brings medications for her parents from China:

*Joanna: Because they were basically the Chinese traditional medicine... Although they are pills so we can just buy from the pharmacy in China and bring them over.*

*Interviewer: So you bring it over or you just do it over the internet?*

*Joanna: When we go back to China. We just bring some medicine for them (her parents).*

Joanna's actions in sourcing medications from China reflect a sense of filial duty of care for her elderly parents. A journey to China has some expenses associated with travelling apart from availing time to go and source these lifesaving objects. The narrative by Joanna highlights some differences on medications sourcing practices between China and New Zealand. In New Zealand most of the medications bought from pharmacies require a doctor's prescription while in China they are bought from pharmacies without a doctor's prescription. Joanna finds it easier to source medications in China because she can access them without going through the doctors.

As pointed above, Chinese and Tongan participants confirmed that flow of medications is not restricted to those destined for New Zealand only. Medications also flow from New Zealand to China or Tonga. Flow of medications in both directions between countries of origin and those of resettlement is not new. A study carried out by Krause (2008a) among Ghanaians settled in Europe found that medications are sent between Ghana and Europe, within Europe and from Europe to Ghana. The flow of medications from one country to another consolidates and renews social relations between those who send and those who receive (van der Geest et al., 1996).

Joanna talked about purchasing medications in Auckland which are then taken or sent to China.

*Interviewer: Ok. Because people have talked about bringing stuff from China but you also take stuff from here to China?*

*Joanna: Yeah, many people do this because they trust the quality in New Zealand.*

Flow of medications from New Zealand to China is encouraged because of the trust and quality associated with locally manufactured substances. Most medications sold in New Zealand are Medsafe approved. They have to meet recognised New Zealand and international standards for quality, safety and efficacy before they are sold (Medsafe, 2012).

In contrast, no medications flowed across borders among the three Zimbabwean households. There are a number of reasons why no medications flow between New Zealand and

Zimbabwe. Firstly, Zimbabweans based in New Zealand can easily access any of the prescribed medications within New Zealand for much cheaper than they could in Zimbabwe. Secondly, most of traditional medications in Zimbabwe are neither processed nor registered and importing them is a difficult task. Besides that none of the Zimbabwean participants were familiar with traditional medications and bringing some into the country would make no differences in their preferred type of medicines. Buying and sending medications to Zimbabwe is also difficult due to transport costs. Once the medications arrive in Zimbabwe one has to pay high customs duty on them rendering the effort worthless. Thirdly, these households do not return home on a regular basis. Therefore, transnational flows in medications appear to occur when access is easy across states. What was noticed however was the flow of money between New Zealand and Zimbabwe. Migrant Zimbabweans send money to those left behind for their upkeep including consulting health care providers and buying medications.

Sharing medications among family members, relatives and friends was a common practice. All the nine households shared some form of medications and it became an important sub-theme during the discussions. Medications sharing was however restricted to over-the-counter and traditional medications. The practice enabled medications to flow within and between households. Sharing of traditional medications was a popular practice among Tongan and Chinese households.

*Debbie: Depends on what type of medicine. If it's the spray, if we go to the doctor for a certain problem and the person who gets that from the doctor he uses it. But if, like, calcium you share all the Vitamins...  
Or like that you can share. We do share. Yeah.*

Debbie gave an example of a spray as one object that was not shared. A spray was viewed as a prescription which was prescribed to only one person and therefore did not need to be shared.

As already pointed out sharing Panadol was common within all households whilst the sharing of traditional medications was a common practice among Tongans and Chinese. Tongan and Chinese households which accessed and used traditional medications shared these substances more often. Through sharing such medications social relationships among householders were

sustained and nurtured (*cf.*, Kershen, 2002; Petridou, 2001). Panadol and paracetamol as well as traditional medications were common medications that were shared among all the nine migrant family members. Sharing such medications allowed participants to demonstrate care for one another and to tackle the issue of sickness as a unit (Hodgetts et al., 2011 – Maori men's paper). In cases where family members suffered from the same ailment, it was pointed out that those members consulted doctors who would prescribe either the same or different medications.

The Heilala household was one such family that shared both Panadol and traditional medications. When asked if they shared medications with other households Tu'ipulotu said: "Yes". Melina interjected and said: "*Vai kita*". Tu'ipulotu added: "*Like the vai kita and Panadol. You ask from other households if they have any medications for use*". Sharing of medications enables households to rely on each other in times of need. By sharing, people build strong relationships within and across households. Sharing symbolises the trust households have for each other. Medications especially those that are consumed can be toxic especially if coming from those whose trust is in doubt.

Low cost and easy-to-access Panadol and traditional medications were the most commonly shared substances. They were viewed as low risk and people do not pay much attention on them. People realise that once Panadol runs out of stock they could easily be replenished from the nearest supermarket at an affordable cost. Traditional medications could be obtained at no cost from other relatives and friends. There is a strong belief among people that Panadol and traditional medications are low risk substances and sharing them does not affect anyone's health. Panadol and traditional medications are believed to have minimal side-effects hence the reason why people share them.

Medications were only shared among those close to each other and that reaffirmed friendships and bonds with each other.

*Facilitator:* So, for example, if you or a friend goes to China and gets stuff and then gives you some is that in a sense reaffirming your friendships and your bonds with each other?

*Brenda:* Of course. At least we are acquaintance. Yeah. Or maybe we are close. Otherwise they will give other people, they don't give me.

*Facilitator:* So, you wouldn't just give stuff to just anyone?

*Brenda: No, no. Just to friends or close friends.*

Medications flow and are shared between those closer to each other. This is more to do with the trust that exists between those who give and those who receive medications. Medications cannot be trusted in the hands of those that are unknown to us.

None of the participants reported sharing prescribed medications. Themba and Edith provided some rationale for the practice:

*Themba: Unless it's been advised by the doctor. Medications like Paracetamol or Panadol which are just plain painkillers yes, but not specific medications (those prescribed by doctors). After assessing you the doctor gives you maybe an antibiotic. As an example if I have say tonsillitis, I can go to the doctor who prescribes me a particular antibiotic and my wife contracts tonsillitis and she also goes to consult a doctor, it doesn't necessarily mean she'll get the same antibiotic that I was given. So for that reason, wisdom will tell us no, you go and get your own. Chances are you might be given the same, chances are you will get it in different doses, so we don't share, we don't unless it's over the counter medication like Paracetamol where you just walk in and buy it.*

People associate prescribed medications with certain illnesses or individuals. Themba is aware that each disease is treated differently from the other and therefore requires its own specific prescription. Themba is also aware that different diseases may have similar symptoms but may require that they be treated differently as what works for one person may not work for the other. Before doctors prescribe any medications, there are procedures which are conducted before coming up with particular prescriptions. Doctors look at the medical history of each patient. They also consider the patient's age, weight, allergies, side effects, existing diseases and possibilities of interactions with other medications and potential reactions to certain medications may not find the benefits of sharing medications especially if

they are prescribed for particular individuals and under certain conditions. However, the ease with which people acquire over-the-counter medications gives an impression that they are sharable hence the practice continues. A study by Petersen and colleagues (2008) found that sharing of prescription medications was a common practice among those who took part in their research. This view is not shared by Themba who suggested that he does not share any of his prescription medications.

*Edith: No one in my family has the same condition that I have, so I wouldn't share the medications because my condition is specific, so it is definitely a no. My son has his own specified medications; he wouldn't share with anyone as well. But possibly the over the counter medications, can be used by anybody for the minor ailments.*

As noted by Edith, each condition is perceived as being specific to an individual and hence there is no reason why people should share prescribed medications. Edith and others in her position realise that sharing medications can place peoples' lives at risk. Treatment becomes less effective as a result of under-or-over-dosing or if the prescribed course of treatment is not correct for a particular individual. Sharing of medications increases the risks of side effects and decreases the effectiveness of medications as wrong dosages are taken (Goldsworthy & Schwartz, 2008). People need to take full course of their prescribed medications if the medications were to be effective. Consultation fees paid to doctors for each visit discourages some people from sharing their medications. It is costly to go and consult a doctor every now and then when the medications run out.

Briefly, although none of my participants admitted to sharing of prescribed medications the findings are in contrast with previous research conducted by Petersen and colleagues (2008). The study found that among their participants, 28.8% of women and 26% of men shared prescription medications. Reasons for sharing ranged from high cost of prescribed medications, running out of own medications to lack of time to consult a doctor and issues of risk.

## Medication preferences

Medication preferences differ from one household to another. Most preferences for medications emerge from interactions they make with their environment. From different household narratives, the following sub-themes emerged: trust; availability; accessibility; affordability; nature of ailment; safety; familiarity and upbringing. These factors shape preferences people make before sourcing any medications, which flow into, around and out from their households.

Trust plays an important role in the decisions people make on their preferences for either bio-medications or traditional substances. The three Zimbabwean households preferred biomedicines over indigenous medications and each of them had different reasons for their preferences. Because of the trust she had in biomedical medications, Edith was very precise on her preference:

*Edith: I trust more the medication given to me by the doctor.*

*Interviewer: So you would have more faith in the western medication?*

*Edith: Yes because that is something that I have grown up knowing that it is there. I trust it more than the other things that I have heard of. The doctors offer services that have been proved scientifically unlike our traditional medications that some people use. Going to the doctor is my first point of call so I would always still go to the doctors first because the traditional practices are different. If you go to a medical doctor they actually do some tests and you can see what is happening. I have more faith in what I can see through tangible results.*

Growing up in an environment where she experienced biomedical system influenced Edith to develop trust of the system. Also important to Edith were medical tests carried out by doctors. Diagnostic tests enable doctors to make informed decisions which guide them in how they treat their patients. Edith's trust is further enhanced because biomedical systems are scientifically proven and the medicines used within these systems are evidence based. This is in contrast to traditional healers' practices which are associated more with guess work, based on trial and error and shrouded in superstitious beliefs where tests are not carried out on patients (Nguyen, 2006).

Ruth also prefers bio-medications to traditional medicines because of the trust she has in them and this is what she said:

*We have got a lot of faith in western medicines, maybe because from back home we have been introduced to this type of medications over a long period. We have been taught about dosages, about how uncontrolled dosages can be dangerous to body parts like kidneys. So we trust more the drugs where there is known dosages rather than our own where it's just how does it taste? Is it bitter enough?*

To Ruth dosages are important hence her trust in bio-medications. Ruth is aware that taking bio-medications which are properly dosed ensures her safety. Taking less or more than the stipulated dosages of any medications does not benefit her and this could be detrimental to her health. Most traditional medications are not administered in dosages hence putting peoples' lives at risk. The trust that is placed on bio-medications by Ruth could also be attributed to the positive results that she has endured and witnessed over a long time of using the medicines.

From such accounts it would appear that biomedical substances are now central in the traditions of health care such participants are socialized into. In the process Zimbabwean indigenous traditions have been displaced and seem somewhat distant and unreliable to these participants. The three Tongan households also prefer bio-medications over traditional substances although their reasons vary between the families. Tori (Nonu Household) expressed trust in biomedicines. Tori said of her preferences:

*For me it's because I was brought up with the western way of dealing with sickness and so I am used to going to a doctor. I trust them because they have got degrees. Whereas to get traditional medicine that I'm not used to, that I have not dealt with and all that.....*

Tori's preferences for bio-medications are influenced by her upbringing. Exposure to life and health care systems in New Zealand where she grew up impacts on what decisions Tori takes to maintain her health. Biomedical health care system dominates in New Zealand and Tori has been exposed to this system from childhood and therefore depends on it for her health care issues. Tori views doctors who hold degrees and are trained in medicines as specialists and as people who were knowledgeable and worth trusting.

Peni of the same household also prefers bio-medications to Tongan traditional medicines because they are easily available. When asked where he would go if he got sick, Peni responded: *“I’d go to the doctor... I think it just depends on your circumstances. It’s readily available and it’s, like, down the road. You know exactly where to go”*.

Availability of medications within Peni’s environment is a contributing factor for his preference of bio-medications over Tongan traditional medicines. Peni find it easier to go across the road and access his medications where he knows they are always available for him. His preferred medications are always available for him at the nearest source. Going to the nearest source of his medications is convenient to Peni. Peni saves time by going to the nearest source to purchase his bio-medicines. Peni is likely not familiar with where to obtain Tongan traditional medications and does not need to go around looking for traditional medications he is not sure where to get them from and at the same time wasting his time. Without such knowledge Peni’s preferences are limited hence his choice for bio-medications which are readily available and easily accessible.

Tori also gave an account of why she preferred bio-medicines over Tongan traditional substances:

*Tori: I think it’s like, for me it’s like because I was brought up with the western way of dealing with being sick so I’m used to going to a doctor, I trust the doctors have got degrees and stuff. Whereas to get traditional medicine and that I’m not, I haven’t had many dealings with getting remedies and stuff from Tonga.*

*Peni: You stick to what you know and ...*

*Tori: Yeah. So, that’s why I’d be a bit hesitant. But that’s not to say I don’t believe that it works because for some people it does. Like, for my Mum and Dad and that they’ll swear by certain things, you know, traditional medicines and that. It depends. If it starts getting all spiritual then I get a bit iffy about it. Like, traditional massage and that – I reckon that’s, that can be really good because firsthand experience with, like, for example, when I was playing volleyball and I sort of went over on my ankle and it just, I knew straight away that that type of injury I’ve had before that my ankle has gone. I knew it would be weeks to get better and stuff but then*

*there's this guy from our church was there and he's known to be,  
like, tradition, you know ...*

From the above narrative by Tori, her preference for bio-medications over traditional medicines is due to two factors. Firstly her upbringing in New Zealand, a developed country where bio-medical health care system is dominant, influenced Tori's preferences for bio-medicines over Tongan traditional healing methods and medications. Growing up in New Zealand exposed Tori to the dominant bio-medical health care system and medications. Secondly Tori trusts biomedical trained doctors and views them as people with more knowledge when compared to Tongan traditional healers. Through their training, Tori is convinced that doctors have acquired enough knowledge and experience to make informed decisions in treating and prescribing medications to her patients.

Tori also speaks of her parents' preferences for traditional approaches to health care issues. Having migrated from Tonga where they grew up and used to traditional medications, Tori's parents' preferences for indigenous substances was influenced by their desire to maintain Tongan culture and identity. Familiarity with traditional medications which they used in Tonga before migrating to New Zealand is one of the factors that encourage Tori's parents to continue using the substances.

In considering the use of medications within their families, householders highlighted the importance of consuming substances they were familiar with. Some groups have used particular medications over several generations. In the case of Chinese households, they preferred traditional substances to biomedicines for alleviating most of their ailments because they were familiar with those substances. Joanna gave an account of why both her parents preferred traditional Chinese medications to biomedical substances for treatment of blood pressure:

*They both have high blood pressure so, they use traditional medicine from China because they have been using it for a long time. Our family doctor here suggested them to try some New Zealand medicine. They tried it but they found it's very different. So, their bodies reacted and then they went back to their old Chinese medicine. One reason for preferring our Chinese medications is that we are familiar with the medicine we use. We use it in China all the time.*

Joanna went on and added that:

*One reason is because we're familiar with the medicine we use because we use it in China all the time. Here a lot of the medicine we are not quite familiar with it so each time, actually, until quite recently I knew there are some medicines - I used to go to the doctor to get them - I can buy them from the pharmacies. So, we still just, yeah, get some from China and have it in the house whenever we need it.*

Familiarity with Chinese traditional medications is seen as an important factor for preferring the substances. Traditional medications are familiar with my Chinese households who have used them in China before coming to New Zealand. People get attached to objects they are familiar with and stick to what they know. More broadly, having familiar Chinese medications for Chinese bodies also reinforces an ethnic identity through the consumption of medications specific to that ethnicity (Rao, 2006).

There is a trope emerging here that is also evident in the Chinese households that cultured bodies respond better to cultured medications. There is a strong belief that traditional Chinese medications work better for Chinese bodies because the objects function in a holistic way where healing procedures take into account the mind, body and spirit (Covington, 2001). The narrative by Joanna confirms similar findings from studies conducted by van Andel and Carvalheiro (2013); van Andel and Westers (2010) who found that urban and migrant Surinamese preferred using traditional medicines because they were familiar with those objects which they had used in their original countries before migration. Apart from being familiar objects, many people from different traditional societies prefer indigenous medicines whose healing processes are holistic as they consider the whole person, including the person's cultural beliefs and values. A study by Babar and colleagues (2013) on migrant health in New Zealand among Chinese and Indians found that there was a common belief among migrants that they knew what was best for their bodies. Migrants believed that traditional medications were more effective than biomedicines. Migrants further believed that traditional medications do not have side effects and were therefore safer than those offered by the biomedical health care system.

Safety issues also influenced people's preferences for certain medications over others. Debbie pointed out that there were side effects associated with antibiotics and that was the reason why she preferred Chinese traditional medications.

*Interviewer: Yeah. Ok. So, what about the risks and safety around medications?*

*Debbie: Yes, like, antibiotics, you get all sorts of problems with kidney failure or things like that.*

Debbie singles out antibiotics as medications which she associates with side effects. This is despite all medications being reported to be risky especially when they are misused. Any medication is not safe and is associated with side effects although people believe that traditional medications are safer than biomedicines as what Janet said: *“Chinese people tend to think the traditional medicine has fewer side effects”*. A study by Wong (2008) found that Chinese herbal medicines have potential side effects. This is in contrast to general belief by many people that traditional medications are safer than biomedicines.

Relatedly, the nature of ailment influences preferences participants make between biomedical and traditional health care systems. This is clear again with Peni in the following narrative. Peni suggested that his preference for either biomedical or traditional health care system depends on the nature of his ailment:

*“For joints and muscles and others I wouldn't mind going to Tongan traditional healers. But for internal stuff, I don't think they have got X-rays. The western doctors can see right through you”*.

Peni's preferences for health care systems and medications were split between the two worldviews. Depending on the nature of his ailment, Peni sought care from the best possible option. With advanced technologies used by western trained doctors who are able to examine internal body parts, Peni prefers seeking treatment from doctors over traditional healers. Peni is aware that experimenting with his internal parts of the body by unqualified people could lead to permanent harm. Peni is aware that traditional healers have limited knowledge about the functions and composition of internal body parts. However, he entrusted traditional healers to deal with external parts of his body which are easily visible and which do not need sophisticated medical equipment to work on him. Peni associates joints and muscles as less risky parts of his body which could be attended to by traditional healers while leaving doctors as specialists to deal with internal parts of his body.

Although the Heilala Household had more Tongan traditional medications than the other two Tongan households, they also preferred biomedications to traditional medicines. Ana and Tu'ipulotu prefer using biomedical healing systems and associated medicines because

indigenous methods of treatment and medications are limited in what they could do. The following is an account of why they prefer bio-medical health care systems:

*Ana: They can't see internally (referring to traditional healers)*

*Tu'ipulotu: Not proven (Faito'o Fakatonga). Doctors have done experiments and found proven results. The Faito'o Fakatonga from what we can see is just a guess work at times.*

*Ana: So with trust, you would trust the doctors more in that situation, but then when you reach a stage for example, like Katalina, when she is taken to the doctors they do not know what is wrong with her, even the specialist, then alternative options are considered.*

Trust and capacity to carry out both internal and external examinations are driving factors for Ana and Tu'ipulotu's preferences of bio-medical systems over traditional methods. Traditional healers do not have the knowledge and capacity to carry out examinations of their patients' internal bodies. Much of their work is based on guess work. The ability of medical doctors to carry out tests on their clients using proven scientific methods was an important factor to both Ana and Tu'ipulotu. However although the household prefer bio-medications to traditional medicines they do not completely rule out their use. Illnesses to do with spirituality are better attended to by traditional healers as these are not easy to attend to by using scientifically proven methods.

On availability of medications in New Zealand, Debbie in the following conversations said it was not easy to get antibiotics:

*Interviewer: Ok. What about the availability of medications – you find there's no problems with getting medications when you need them or is there things that you want that you can't get here?*

*Debbie: It's really hard to get antibiotics. Yeah, that's really hard. I don't have experience about that stuff. If you go to the doctor he just say, "Take rest and drink."*

*John: And Panadol.*

*Debbie: And the Panadol, yeah.*

*Interviewer: Lots of Panadol!*

*John: Lots of Panadol!*

*Debbie: And then everybody said, "Don't go to the doctors, you can just buy some Panadol!"*

Debbie and John's experiences on the availability of medications in New Zealand differ from those in China particularly for antibiotics. While it is easy to access antibiotics in China, in New Zealand one has to have a prescription from a doctor to access them. A study carried out by Babar and colleagues (2013) in New Zealand found that Chinese and Indian participants pointed out that medications were easily obtained over-the-counter in their home countries. Costs were minimised because there was no need to consult doctors who would then prescribe the required medications. Other than prescribing antibiotics, doctors in New Zealand suggest other ways of recovery. Rest and drinking a lot of water or tea are some of the recommendations by local doctors. Natural means of recovery are recommended in New Zealand while in China antibiotics were easily available to treat every ailment. Easy availability of antibiotics leads to medicalisation of every illness and it is also easy for people develop some resistance.

The availability of medications in New Zealand was also commented on by Zimbabwean households. They felt it was easy to obtain medications from pharmacies than it was in Zimbabwe. Themba said:

*Here I can get any type of medication that I want. The doctor can give me a prescription and I can go across and buy my medication without any problem. This is unlike in Zimbabwe where getting a prescription does not mean you get the medication in a pharmacy. Besides you have to run around comparing prices if you are lucky to get the medication.*

Although Zimbabweans have no choice but to rely on biomedicines, Themba makes a comparison on the availability of medications between Zimbabwe and New Zealand. Obtaining medications from any local pharmacy is easier in New Zealand than it is in Zimbabwe. Themba's views are based on his experiences in Zimbabwe where shortage of medications is a common feature while they are available in New Zealand in most pharmacies.

In sum, each ethnic group has its own preferences for medications and health care systems based on their history and cultural backgrounds. China for example has used traditional medications for thousands of years and the historical and cultural backgrounds continue to influence Chinese migrants wherever they settle. In New Zealand Zimbabweans migrants for example prefer to use biomedical facilities and medications because they are familiar with the system which they have been using before migrating. Migrants' preferences for bio-medications and healthcare systems are also influenced by the trust bestowed on both experienced workers and what the systems offer. Issues of cost and accessibility are also important here.

### **Cost in accessing medications**

Cost is an important factor in accessing medications and in some cases could be an obstacle to certain groups of people. Factors that influence migrants' preferences for certain medications over others include low or high costs associated with certain substances; availability and accessibility of medications and health care facilities; familiarity with using particular objects and facilities. Opinions on affordability of medications differed between households. Some households felt the cost of medications were cheaper in New Zealand as compared to where they migrated from. This point was emphasised by Ann:

*Medication is expensive in Zimbabwe because of the dollar issue and most people cannot afford to buy them. Even if you go to the public hospitals they might not have certain drugs because of the high costs to stock the medications. Compared to New Zealand, I think the medications are affordable and are always available here than in Zimbabwe. Medications in New Zealand are subsidised so anyone can buy the medications unlike in Zimbabwe where they are not subsidised and it's expensive and they cannot afford most of the medications.*

Ann made a comparison of medication costs between Zimbabwe and New Zealand. Medications in New Zealand are cheaper because they are subsidised by the government whereas in Zimbabwe they are not. The lower prices of medications in New Zealand enable Ann to access medications much easier. The other Zimbabwean households also shared the same views with Edith. For example Joe had this to say in support of Edith: "*Medications in New Zealand are subsidised so more people can buy the medications unlike in Zimbabwe*

*where they are not subsidised and it's expensive and a lot of people cannot afford most of the medications".*

For Edith, subsidy of biomedicines makes it easier for her together with many other New Zealanders to buy them. Subsidies make it affordable for people to rely on biomedicines which cost \$5,00 per prescription. In Zimbabwe, medications are not subsidised making them expensive. With economic challenges that Zimbabwe is currently facing, there is a shortage of basic products including medications. This pushes the cost of medications up and beyond the reach of many.

While Zimbabweans suggested that cost of medications and medical facilities were fairly cheap in New Zealand as compared to their country, it was not so for some migrant households. Tu'ipulotu suggested that for him consulting a doctor was expensive as he said below:

*Interviewer: And if it gets worse then you go to the doctors. How about you?*

*Tu'ipulotu: I'm the same. Plus seeking the doctor's help comes second because of money issues. The charge to go see the doctors is very, very, very expensive. You can't afford to run to the doctors every time you ache, every time something happens you run to the doctors, you can't afford to do that. So what you do is you first start off with the Panadol in case it can solve the problem for the time being, and if it gets worse or worse comes to worse than you would go to the doctors*

*Interviewer: So for you a main factor that stops you from going to the, would you rather go to the doctor first?*

*Tu'ipulotu: No.*

*Interviewer: You would rather diagnose yourself and try and...*

*Melina: Recover*

*Tu'ipulotu: Yeah, the driven factor for that is the cost.*

High doctors' consultation costs hinder Tu'ipulotu from seeking their services. His emphasis of the words "very, very, very expensive" indicates that Tu'ipulotu may not be financially stable to consult a doctor or buy some prescribed medications. Tu'ipulotu resorts to self

diagnosis as an alternative way of treatment rather than consulting a doctor. Buying cheap Panadol from a local shop saves him money.

Although he suggests that he goes to the doctor if the situation gets worse, Tu'ipulotu is putting his health at risk by delaying to seek treatment and professional advice. Tu'ipulotu is not the only one in this position. He is among many Pacific people in New Zealand who cannot afford proper medical care because of cost. Jatrana and colleagues (2010) argued that Pacific people Tongans included, fail to access quality medications and other health care services and may not access prescription substances due to cost.

### **Simultaneous use of different medicative forms**

Studies have shown that most migrants switch between biomedical and traditional health care systems although the two systems differ in their approaches (Feng, 2002). One such study was one carried out in New Zealand by Babar and colleagues (2013) among Chinese and Indian migrants to New Zealand. The study concluded that it was common for migrants to use a combination of traditional and bio-medications simultaneously. Prior to their departure for New Zealand the study found that migrating participants had used traditional medications in their former countries. The study further found that participants continued administering traditional medications while adopting the use of bio-medications when they arrived in New Zealand. It is generally believed that biomedical methods focus on individual ailments while indigenous methods use a holistic approach. Despite their differences people continue to combine the two systems into their health care lives. Simultaneous use of both bio-medications and traditional substances featured prominently among Tongan and Chinese households. A number of sub-themes were noted during the interviews and these included: recommendations from others; seeking better ways of overcoming an ailment; risks associated with simultaneous use of different medications; failure to inform health care providers of the practices.

Tu'ipulotu gave an account of how he usually resorts to administering both Tongan traditional medications and bio-medicines as he narrated below:

*Interviewer: Where did you learn about taking traditional medications with Panadol?*

*Tu'ipulotu: Exchanging ideas with the family, relatives and friends that Panadol also helps with the colds when taken together with traditional medications.*

*Interviewer: So you're mixing an alternative medication with another.*

*Tu'ipulotu: Yes, yeah. Other people also recommend that it's really good. It really works. That is taking medications (traditional) with Panadol.*

Tu'ipulotu indicates that family members and friends are sources of vital information on matters that concern his health care. They pass information they think is beneficial to him. Indications are that Tu'ipulotu is a team player who discusses issues concerning health and medications with those around him. By taking other people's advice, Tu'ipulotu places his trust on people who part with their knowledge for his benefit.

People simultaneously use different types of medications hoping that the practices produce desired results of alleviating their ailments. By using different medications simultaneously, users hope to give a chance to the better of the two medicative substances to work over the other. Tu'ipulotu's views that mixing the two medications works are in line with some findings from studies carried out on why people simultaneously use both traditional and bio-medications. For example, Easterford et al., (2005) found that many patients resorted to using both traditional and bio-medications as they sought the best ways of overcoming their illnesses. Past studies have shown that most people who use Complimentary and Alternative Medicine (CAM) also use bio-medical substances and often simultaneously (Austin, 1998; Eisenberg, 1997) for the same reasons as mentioned above.

Chinese participants were of the opinion that simultaneously administering traditional and bio-medications was a good idea. Janet whose husband Charlie has a heart condition is on medication. Charlie takes his medications twice every day. In the morning and evening he takes Chinese and biomedicines respectively. Charlie takes his medications in the kitchen every morning and evening as shown in Figure 6 above. Below is a photograph showing Charlie taking his evening Chinese traditional medications.



Figure 6: Charlie taking his bed time medications

Janet in the following discussion speaks of how Charlie uses two different types of medications for the same ailment:

*Janet: In the morning the medicine is advised by the doctor – he should take it in the morning... and this one I don't know, he just takes it at night...*

*Interviewer: Ok. So, you said that he needs to take the heart medication but there can be side effects in terms of putting him out of balance. But you think this substance is different – it's more about giving you balance rather than unbalancing you.*

*Janet: Chinese people tend to think the traditional medicine has fewer side effects. Because it's herbal, it's not medical...It's not chemicals... This is not a prescription just bought in shop.*

By simultaneously using two different medications Charlie combines two different worlds and cultures into one despite the risks involved in doing so. Charlie hopes his actions will enable him to live a healthy life. Taking herbal medications which are natural substances at night is a way of trying to counteract the negative side effects of biomedicines Charlie takes in the morning. Charlie's simultaneous use of both Chinese and biomedications is a common practice with Asian people especially when they seek to treat chronic diseases like kidney and heart ailments (Zhang et al., 2013).

Although the practice of simultaneously using traditional and bio-medications at the same time is common among certain households, people are not aware of the risks involved in the practice. Asked if he was aware of any risks associated with simultaneous use of both medications Tu'ipulotu did not think so:

*Tu'ipulotu: Short term risk – I don't realise it but because it helps remedy the situations.*

*Interviewer: Is it because you've done it before and you find out that it works so you keep doing it?*

*Tu'ipulotu: Yeah, yeah.*

There is little concern from Tu'ipulotu about any risks resulting from simultaneous use of traditional and biomedical substances. Tu'ipulotu is more interested in remedying his current ailment other than paying attention to the negative side of the practice. From his past experience of the practice, Tu'ipulotu is convinced that it is the best way of attending to his ailment. By taking the substances simultaneously, Tu'ipulotu may not be aware of risks of overdosing himself. According to DiSano (2009), side effects from traditional medications can occur especially when large amounts are consumed. The use of medications involves risks. Risks increase particularly when different substances are simultaneously used and could worsen someone's health (Hu et al., 2005). This is despite strong beliefs among those into the practice that risks are minimal. Taking bio-medications simultaneously with other substances increases the risk factor especially for users who in most cases may be unfamiliar with the adverse impact of chemical reactions associated with taking the two at the same time. Another issue that came out of this study was that participants did not inform or discuss with their health care providers that they were using both traditional and bio-medications simultaneously. The Heilala household was one such family. This was made clear from the discussion with Tu'ipulotu:

*Interviewer: Have you tried asking your doctor about it?*

*Tu'ipulotu: No. Too shy to ask because of the island medicine. Because we don't really know what it's made up of, it's only those people that make the medicine – they know what mixtures they're using. People around recommend it and it must be ok.*

For Tu'ipulotu, shyness is at the centre of not discussing his practice of simultaneously using traditional and bio-medications with his health care providers. Apart from shyness,

Tu'ipulotu may not want to discuss the practice due to lack of knowledge on the chemical composition of the traditional medicines he takes. There are several other reasons why patients do not report simultaneous use of medications to their health care providers as is the case with Tu'ipulotu. A study by Hillanbrand (2006) confirmed that patients did not tell their health care providers about their simultaneous use of traditional and biomedicines. Fear of disrespect or disapproval from a doctor, doctors not raising the issue, and the perception that doctors were disinterested in the issue were noted as some of the reasons for not letting health care providers know of simultaneous use of medications by their patients (Easterford et al, 2005; Kessler, et al., 2001; Robinson & McGrail, 2004; Vickers, Jolly & Greenfield, 2006).

The practice of combining multiple healing systems is not restricted to immigrants only as similar studies have revealed (Meleis, 2010). Meleis further wrote that as migrants move between traditional and bio-medicines, health care systems, between their countries of origin and hosts, migrants come in contact with different beliefs and normative systems. This results in migrants combining what they want best for their health and leave out what they perceive as undesirable.

Simultaneous use of two different medications is a common practice among some migrants. When migrants move to new places of settlement, they move with part of the culture among them medication and health care practices. They maintain their identity through the use of familiar health care facilities with which they are familiar. As they adapt to the new conditions, most migrants may opt to attend to both traditional and biomedical health care systems for the treatment of ailments. Such practices are believed by migrants and others to be better ways of attending to illnesses although there are high risks of interactions between traditional medications and prescribed drugs (Chen et al., 2011; Fugh-Berman, 2000; Izzo & Ernst, 2009). Most migrants who use both types of medications simultaneously believe that any side effects which are synonymous with bio-medications are neutralised by traditional substances. However studies have shown that most migrants do not discuss or disclose the use of traditional medications to their health care providers. The reasons vary from being shy, health care providers not asking their patients about the practices to not being able to explain the chemical compositions of the medications that they use. Studies have found that most people who simultaneously use different medications are not aware of side effects arising from the practice. One such study carried out among migrants found out that participants did not disclose the use of traditional medications because the substances were not considered

## **Medications and storage within the households**

Domestic dwellings are central sites for healthcare where the storage of medications is an important part of daily practices. Each household had different reasons for storing medications in certain places and these are explored through the following sub-themes that emerged from participants' narratives: accessibility issues; cues for taking medications; safety precautions; meeting certain conditions; following instructions; and cultural considerations.

Issues relating to easy access to medications were raised by a number of participants in relation to storage decisions. For example, when Ann was asked if there was a specific reason why she kept her medication in the kitchen cupboard this was her response: "*It is reachable so that if anyone is sick they can reach them*". Consideration of easily accessible storage places within households is an important issue to Ann and her family and other participants. Ann's children are grown up and medications in her household are not hidden away from family members who might want to use them. Easy access of medications enables those in pain to attend to their illness before the situation deteriorates.

Tori and Peni keep some medications in a basket and the following conversation reveals why they do that.

*Tori: It's just a basket full of odds and ends but it's got Panadol in it.*

*Interviewer: Oh, ok. And did you only put Panadol or is there any other.....*

*Tori: Yeah, just Panadol in there.*

*Interviewer: And that's put in there just because?*

*Peni: It's just a place where you can find Panadol when you need it.*



*Figure 7: A basket holding an assortment of treasured items including Panadol.*

A basket as one in Figure 7 above in Tori and Peni's household is an object that can hold people's treasured items including Panadol. A basket can be used for decorative purposes within households while at the same time holding those items like medications which are used most often. Tori and Peni keep their Panadol in the basket to keep an eye on them and check on their expiration. Baskets are ideal places to store medications especially those with finite life like Panadol. Keeping Panadol in the basket saves Tori and Peni time in the event that they need the objects.

Placement of medications in certain areas was used as a cue for taking medications within households. Placement of medications was done to aid participants to remember to take their medications or to administer them to other family members (Hodgetts et al., 2011). Tu'ipulotu placed his eye drops on his desk and when asked why he placed them there his answer was: *"So I can remember to take them with me to work in case I forget. Before I leave for work I check my desk. That's the last place I'm at before I leave the house for work"*.

Emplacement of medications by Tu'ipulotu on a desk becomes a cue for remembering to take his medications before going to work. Emplacement of medications on the desk and checking it becomes a daily routine for Tu'ipulotu. The desk acts as Tu'ipulotu's "last port of call" as he heads to work. Developing such a strategy reminds Tu'ipulotu to pass through the desk and collecting his medications on his way to work and minimises chances of leaving them behind. Ann keeps her medication in the kitchen cupboards for a similar reason: *"I put them in there to remind me that I have to take my medication. If I keep medication in the bedroom I might forget to take them"*.

Ann's kitchen cupboards serve dual purposes. Apart from storing kitchen utensils, the cupboards are used as both storage places for her medications and as places that remind Ann to take her medications. Cupboards become important cues in Ann's daily life as they remind her to take her medications. Keeping medications in the kitchen makes sense for Ann. Kitchens are places where one finds water and food is prepared and most medications are taken with either water or food. In most cases medications are stored closer to places where they are consumed.

Ann may not associate medications with her bedroom because there is no water or food to be taken there. Without water or food in the bedroom, chances are high that Ann forgets to take her medications. These views support the findings by Hewson et al., (2013), who argued that in New Zealand medications that were consumed with food and water were often stored in particular locations within the kitchen. The practice was common as medications were conveniently taken at meal times. Participants kept their medications in some places which reminded them of the need to take them when they were due.

With the increasing amount of medications stored within homes, medications can be a major cause of child poisoning hence the need to store these substances in safe places beyond the reach of children. Before storing medications wherever they are kept within households, the safety of children is highly contemplated. This was also considered an important issue by the nine migrant households. Medications are stored in different places ranging from bathrooms, bedrooms, cupboards to bags where children could not reach them. Ana stored her medications in a cupboard and her reason was: "*And to keep out of reach from the children*".

Keeping medications out of reach of children is a safety measure central to issues of responsibility (see section below), which Ana considers before storing the substances anywhere. Children have no ability to recognise substances that can harm them hence exposing themselves at risk of unintentional poisoning. Children experiment with anything that they find lying around. Ana is aware that leaving medications within the reach of children is risky hence the reason to keep her medications away from children's reach.

Nonu household had a ten month old child and storing medications out of the reach of their child was important. When asked why they kept their medications on top of their refrigerator Tori replied:

*Just out of reach of children*".

*Peni: Out of reach for our child who is ten months*

*Tori: Yeah*

*Peni: And it's a place where you can see it and it's easy to find as well*

*Tori: Yeah*

*Peni: Somewhere easy to find*

Safety issues dominate choices people make of where to store their medications within domestic spheres. Tori and Peni take both parental responsibility and precautionary measures to ensure the safety of their child by safely storing medications where the child has no access to. In the case of Tori and Peni, medications are placed on top of their refrigerator. Besides considering the safety of their child, medications are placed on top of the refrigerator for Tori and Peni's easy access of the objects should they be required.

My findings are in conformity with those by Hewson et al., (2013) who found that New Zealand households stored medications out of reach and sight of children. The main reason for such practice is to avoid child poisoning. Another study by Meyer et al., (2007) also found that medications were stored away from children's reach to avoid unintentional poisoning. Hodgetts et al., (2011b) in their study also mentioned that keeping medication out of reach of children enacts parental responsibility of ensuring a safe domestic space.

Another issue that came out of the discussions with households was that of conditions under which medications were stored in order for the potency and effectiveness of substances to be maintained. Storing medications under humid and hot conditions affect the usefulness of medications. Ann did not keep her medications in the kitchen pantry and her reasons were given in the following narrative:

*I don't keep medications in the pantry because the geyser is in there. It is hot in the pantry and can alter the effectiveness of the medication because of the heat. I store them in the kitchen cupboard. It is a cooler place and that is what the medication instructions say, to be stored in a cool place.*

Ann is aware of the negative effects of heat from the geyser to her medications hence the need to store them in a cool place. Storing medications in cool places enables them to remain effective while their exposure to high temperatures reduces their potency. Ann follows instructions on best storage practices for her medications as directed by suppliers or as written on labels.

Relatedly, cultural traditions also influenced where medications were stored. The three ethnic groups followed their cultural practices as they kept their medications away from certain areas like bathrooms. Joanna raised the issue of cultural differences when she spoke of storing medications in dry areas:

*Interviewer: What about (storing medications) in the bathroom?*

*Joanna: Never because it's wet, damp. We never leave any medicine there... We leave medications in the drawers in the handy place, like, in the kitchen or in the bedroom... Yeah. Keep it dry, in cool places.*

Joanna follows her Chinese cultural practices of keeping medications in dry, cool and dark places. Wet conditions found in bathrooms make it unsuitable to store medications in such places. Taking medications that have been affected by moisture, particularly traditional plant based substances, can have harmful effects on people. In New Zealand kitchens and bathrooms are the most popular storage places for medications (Hewson et al., 2013). This is in contrast to the households taking part in this study who did not keep medications in bathrooms due to high humid conditions associated with such places.

Participants spoke of the need to follow instructions regarding where certain medications were stored. For example, Edith kept some of her medications in the refrigerator as shown in Figure 8 below. Edith said that she stored some medications according to instructions she got from a pharmacist as stated below:

*“The ones that we keep in the fridge are the ones that are recommended to be kept there. If they are kept in warm places something would go wrong. So it's just following the instructions that we get from the pharmacist”.*



*Figure 8: Medications stored in Edith's refrigeration*

Following instructions given to Edith by a pharmacist who is in a position of authority is important to her. Edith regards the pharmacist as someone with valuable knowledge and as a person who gives clear instructions regarding the proper way of storing medications. Edith follows these instructions to keep certain medications which require being stored under cool conditions in her refrigerator. Improper storage of most medications reduces their potency. Doing so would be throwing away her hard earned money.

Another issue that came out of the household accounts was that of variation in storage places for medications. Depending on the type of medications, storage places are not permanent but change to meet certain conditions as revealed by *Joanna*: *“Could be a couple of places. Sometimes we just put them in the drawer and sometimes depends on the description on how you store it”*.

Joanna indicates that medications are stored according to appropriate conditions required for each type of medicines. Certain medications require that they be stored in cool places like refrigerators while others need to be stored in dry areas. Keeping medications under appropriate conditions help them remain potent for the duration of their life time.

Participating households were conscious of the need to adhere to safe handling and storage of medications as well as paying attention to advice from health care providers to avoid overdose and other risks associated with medications. Adherence to advice given by doctors when taking or giving prescribed or over-the-counter medications ensured safety of household members. Proper storage of medications is a very important issue as that helps the substances retain their potency (Kalyango et al., 2012). For example, medications that are exposed to sunlight or damp areas easily lose their effectiveness and could be a risk to those who take them. Some medications need to be stored in refrigerators or in cool places so that they maintained their potency. In some cases cultural beliefs also influenced where medications are stored. Consumable medications are stored in places where there is food while non-consumable medications are stored far away from food.

## **Taking responsibility for the use of medications**

Issues of sourcing and sharing medications come with taking responsibility for the use of these substances. In participants' accounts, medications enable people to take responsibility for themselves and others. Two sub-themes emerged in relation to taking responsibility for the use of medications: people taking responsibility for their own medication use and people taking responsibility for other peoples' medication use.

*Interviewer: Ok. So, in terms of the household who decides, like, is there any one person who decides who is taking what and makes sure they take it and stuff like that?*

*Debbie: Each one's [adults] responsibility. But for children, both my husband and me will look after Ray's medication and take him to the doctor.*

In this initial account adults are positioned as taking responsibility for their own medication administration and participants suggested that they do not need any reminders from family members. However for children, they are minors who depend on others. Adults are positioned as being responsible for making sure that their children take medications when they are due. As noted by Debbie, an important aspect of parental responsibility is for parents to make sure that their children take their medications and that they take them to doctors when they are not feeling well.

*Ruth: I have been taking the medication for a long time, so I don't have to be reminded by anyone. For my son I sometimes have to ask him if he has taken his medication. My daughter doesn't need to be reminded because it's a moisturiser and she automatically has to use it after a bath.*

Ruth also shares the same views as Debbie about reminding others to take medications. Taking medications over a long period of time has become a routinised practice that has become part of Ruth's life. Medications have been embedded in Ruth's life that she takes them more or less the way she takes her daily food. As pointed by Debbie the responsibility of taking medications rests with the individual adult concerned in this case Ruth. Ruth has managed to establish a routine which serves her as a reminder to take her prescription. It has also become a routine for Ruth's daughter aged 8 to use her moisturiser soon after her bath.

This has become a daily practice for her and needs no one to remind her to take her moisturiser.

Apart from children who need to be reminded to take their medications or to be given, there are other cases where household members share responsibilities for caring for others particularly the elderly. Shared responsibility is implicated in actions such as sourcing medications for others which were discussed in a previous section. Further, in the case of Katalina who is old and sickly, her family takes charge of some of her health care needs and it becomes a responsibility for all members of the three related families to look after her.

*Tu'ipulotu: Remind Katalina about her tablets, remind her of what the doctor told her and remind her not to worry too much.*

*Melina: Her future appointments.*

Reminding Katalina to take her medications becomes a shared responsibility between related Tongan households. Due to her advanced age and condition, Katalina depends on other family members for her health care needs, communication with her doctor and for her next appointments. Through taking, reminding or giving others medications, people demonstrate care for themselves and others closer to them while building relationships (Whyte, Van der Geest, & Hardon, 2002). The consumption of medicinal objects can also reaffirm familial bonds and culturally patterned relationships of care (Hodgetts et al, 2013; Hodgetts et al., 2011). Research participants come from different backgrounds of interdependence where sharing, support of each other, unity, respect and love dominate much of their lives.

Although, none of the participating households contained expired medications, they did raise issues around the importance of checking expiry dates and disposing of expired medications in relation to taking responsibility for health care. This was a core safety precaution.

Joanna imported some medications from China and when asked if she keeps an eye on the expiry dates she replied:

*Joanna: Yeah. So, actually, lots of medicine we bring over and they become expired and we just throw them away.*

*Interviewer: Oh, ok. So, when they're expired you just put them in the rubbish and off they go.*

*Joanna: Yeah.*

*Interviewer: Yeah. Ok. Ok. So, where do you, we'll get onto a drawing exercise in terms of the medicine – where they are in the house. But where do you generally, you know, say you keep the medicine and then when it expires you throw it out.*

*Joanna: Yeah.*



*Figure 9: Large stocks of medications imported from China*

Although keeping track of her medications' expiry dates is important, it does pose a problem for Joanna especially with large stocks as shown above in Figure 9. Figure above shows a large stock of both traditional and bio-medications that were imported from China by Joanna. The medications are less used in New Zealand and end up expiring. Joanna finally throws away all expired medications as she does not want to put her family at risk. Disposing of expired medications is important. However, disposing medications as Joanna does by simply flushing them down the toilet or throwing them away is not environmentally friendly.

When asked what she does with expired medication, Ann said: *“Normally I just throw them away, I flush them away so that the kids cannot see them”*. Ann shows parental care for her children by flushing expired medications away so that the children do not access them. Although it is not the best way of discarding medications for environmental reasons, at least Ann tries her best to minimise chances of her children accessing expired medications which could result in putting their lives at risk.

Checking of expiry dates on medications is a common practice within households. However, in some households, checking of expiry dates is only done when the medications are to be taken. Within such households there is no one person responsible for checking expiry dates on medications. Households are aware of the risks of taking expired medications hence the reason for checking for the expiry dates. Expired medications are disposed of in many different ways including throwing them into the bins.

### **Medications and the media**

As material and social objects, medications enter and are stored within participating households according to the patterns discussed above. Medications also enter the home symbolically via various media forms and interpersonal conversations. Media messages about medicinal products, risks and uses are also engaged in the home as a primary locale for audiencing (Morley, 2000). Media messages in New Zealand are commonly finding their way into homes of many people through magazines, televisions, internet, radios and other gadgets. In New Zealand, where unlike most OECD countries, direct-to-consumer advertising of prescription medicines is permitted and this allows New Zealanders to access more medications from their homes. Participants' responses to medication advertisements differed from person-to-person. The following issues emerged in relation to medications and the media: effectiveness of medication advertisements; availability of more medications on the market through advertisements; doctors as better informants; and lack of trust in advertisements.

Tiffany noticed Coldrex tablets being advertised on television and when asked how effective the advertisement was, she replied:

*Yeah, the Coldrex tablets advertisements are more effective than the Panadol ones, that's why I picked up on them...The Coldrex advertisements are similar, but I just thought the Coldrex one caught my attention. I think it was because I was so used to seeing Panadol advertisements and then to see something different that does the same job as the Panadol was good.*

Although Panadol and Coldrex advertisements are similar, excitement at seeing a new product (Coldrex) being advertised on television reportedly influenced Tiffany's decision to

buy and try it. Participants refer to media advertisements when reporting a perceived increase in the availability of medications. In doing so, participants conflate the symbolic presence of media on their screens with the actual availability of medications in society. As Otile and Lesieli suggest:

*Lesieli: I know they weren't allowed to advertise that stuff on TV. They weren't allowed to, you couldn't, you were not allowed to advertise, like, medicine stuff on TV but now you can. So it's just easier now.*

*Interviewer: Is that a good thing or a bad thing?*

*Lesieli: It's kapai.*

*Otile: Because you think it is whatever they say it is and they don't have to tell the truth, the whole truth. They can leave some bits out. It's good and bad, I reckon.*

Lesieli and Otile share mixed opinion on whether medication advertising is positive or negative. Lesieli suggests that advertising of medications is good whilst Otile had reservations and maintained a more neutral position. Due to limited time and content, advertisements for medications have been associated in increased risk of people using advertised medication incorrectly (Shaw, 2008). Lesieli also associated increased commercialization of medications and their ready availability in supermarkets with such risks:

*It's a higher risk because no-one's there to tell you. Like, the ones you buy from the supermarket no one's there to tell you how much you can take. So you can just take whatever.*

*Otile: But isn't it usually written on the packet?*

*Lesieli: But then they can buy as much as they want, aye?*

Other participants were more specific about the potential negative aspects of medication advertisements as good others did not share the same views. The accounts of such participants often reflected the third person effect where the advertisements did not influence their own purchasing choices but were attributed as a cause of other peoples' medicative choices. For example, the Gumbo and Rugare Households suggested that advertisements had little or no influence on how they went about obtaining their medications. These participants

emphasized their reliance on health care professionals rather than advertisers. Edith reflected on the media's role in her decision-making process:

*Edith: Well I usually change channels [see figure 5] whenever an advert comes on or I simply do other things at that time when the advert is on because...I know they think that viewers are gullible and that viewers can be made to believe that things on television are the right things to do. The difference is I know what I want and if I go to the doctors I will be given a better product. Because those are drug companies advertising their products, possibly a product that is not selling well at the pharmacy and they are trying to find more buyers. My first point of call is the doctors and if it is just a minor element I will go to the pharmacy and talk to the pharmacist and tell him what my problem is. I will ask for the best product for that problem and at times the pharmacist may not be able to help me and tells me to go to the doctors. I won't buy anything because it is on television.*

Edith sees no value in listening or watching television advertisements. Her actions also mean that Edith does not rely on or trust television advertisements for her medication requirements. Edith consults her doctors or pharmacists who give her the necessary information and prescribe her the right medications. Edith expresses traditional views that patients have received most of their information about prescription drugs from their physicians other than from advertisements (Chin, 2005). Edith proposes that the companies' interests are more about benefitting themselves financially than giving people more information about benefits of medications available on the market. This perspective supports what was found in a study by Frosch et al., (2007). In their study the authors found that advertisements had limited educational value and there were many chances that they may oversell the benefits of drugs in ways that might conflict with promoting population health.



Figure 10: Television advertisement recorded in the medications diary of Rugare Household

Joe and Ann also felt that advertisements such as that depicted in Figure 10 above had no influence in their decision making in relation to what medications to source in their day to day lives:

*Joe: Adverts don't personally influence me from my own thinking. If I am satisfied with say Paracetamol, I do not have to change because there is now a new product on the market (Panadol). And if you visit a doctor he doesn't give you that type of medication which is being advertised, you are prescribed an old one which used to be there and you wonder why they advertise when the product is not there in the pharmacy. For example Colgate, they advertise like they have new herbal...but it is still Colgate, when I go in the shop all I look for is Colgate.*

This account reflects a disregard for engaging with marketing efforts to shift audiences from using one brand of a medication to another when the substances are essentially the same. Many participants are happy to restrict themselves to medications that they are familiar with and consider effective in helping them manage their health.

Brenda also expressed a lack of trust in medication advertising:

*Brenda: The advertisement will attract people to go to shop and buy something. We can't absolutely trust them because there's some conditions apply. It's different conditions. Better to go to the doctors and listen to them.*

Most advertisements are accompanied by “conditions apply” clauses which very few people understand. Most people are not aware of the contents of the said conditions. Failure to follow instructions may lead to putting one's health at risk. Brenda suggests that it is better to

attend to doctors for face to face discussions. Doctors are better positioned to explain to their patients in simple terms the suitability of medications, proper way of administering medications and risks involved in taking them.

In sum, participants' interpretations of the use of DTCA of medications in New Zealand varied. Some participants are accepting of medication advertisements and even refer to how these may influence their purchasing choices. Other participants are more critical and do not trust advertisements for medications. Participants feel that the media does not offer much information to people to enable them to make informed decisions. They point at lack of information regarding the side effects associated with medication use as one example. Health care providers, including doctors and pharmacists, are regarded as more reliable sources of information. Health care providers are viewed as trained people who are knowledgeable about matters to do with medications and health care.

### **Chapter discussion**

This chapter documents the importance of households as institutions for the use of medications in everyday life (Saunders & Williams, 1988). Sorensen and colleagues (2006) also argued that the household is a particularly significant place for medication storage and use. Particularly important to the selection, acquisition, storage and use of medications are householder understandings and cultural beliefs. Household understandings of biomedical and indigenous medications and social practices surrounding the everyday use of these substances provide the key focus for my analysis. Religious beliefs played a key role in how medications were understood and used, particularly among the Tongans and Zimbabwean households. People believed that living a healthy life required one to respect God. Most illnesses were regarded resulting from acts against God. Most believed without the power of God nothing works and that includes medications. Prayer was at the centre of much of their beliefs and use of medications.

Participant accounts demonstrate how medications are embedded in complex cultural, familial, social and health care practices. It is also important to note that medication preferences varied between households with most Zimbabwean and Tongan participants preferring bio-medications over traditional medicines. Chinese migrants differed from the other two groups as they preferred their own traditional substances, which they associated

with fewer side effects when compared to biomedicines. Chinese migrants preferred their traditional medications as these were considered suitable for their bodies. However, also evident in the accounts of Chinese householders is a propensity of change and adjustment to the host country, which is evident in shifting medication preferences usage. As Chinese migrants explore the New Zealand health system, they become more accustomed to using both traditional and bio-medications. Such shifts are reflected in how householders' medicative practices transcend strict distinctions between biomedical or Western medications and their own indigenous traditions. Various bio-medications were used in conjunction with traditional or indigenous substances when the later were available.

The accounts of all nine households reflect how migrants continue with the healthcare and medication practices that they are familiar with from their former countries. Such practices also provide continuity in healthcare practices between one's country of origin and that of new settlement (*cf.*, Li, Hodgetts & Ho, 2010; North, 2008). All were familiar with biomedicine with the Zimbabwean households relying most on this system followed by the Tongan and Chinese households. One explanation for these differences is access. Chinese medicine is a global system and as such various medications are available to migrant Chinese whereas Zimbabwean and Tongan indigenous medications are somewhat more difficult to obtain.

Among the medications possessed by migrant households were those sourced locally and abroad. Most of the medications found in the nine households were over-the-counter medications sourced from local supermarkets, pharmacies, doctors, hospitals and home gardens. A study carried out in Atlanta, Georgia, in the USA among Taiwanese and Chinese migrants reported that gardening was an important part of the households as it entailed the planting of edible foods that served a medicinal purpose (Jiang & Quave, 2013). In the case of Chinese households, most of the medications in their possession came from markets in China. Selected medications in the Chinese and Tongan households were also sourced from their countries. Flow of medications were not only restricted to those coming into New Zealand from either Tonga or China. In some cases medications flowed to the two countries from New Zealand. This suggests that medication sources are varied across different households and that any understanding of migrant acquisition and sharing of medications should consider transnational flows of these substances.

The three migrant ethnic groups came from communities and societies which prioritised sharing, unity, respect and love which dominate much of their lives. In the event that any member of their families or close relatives falls sick, migrants are there to support each other by sourcing a cure and making sure that the member takes the medication as prescribed by a doctor. Sharing of medications within families appeared to take place only for illnesses which did not require doctors' prescriptions. Over the counter medications, including Panadol and Paracetamol and traditional medications were the most shared substances within households. Medications that were obtained over the counter were considered safe to share. Sharing medications brought household members closer to each other and this allowed them to demonstrate care for one another. Through sharing these substances participants demonstrate care for themselves or others when they are not feeling well (Whyte et al., 2002). Antibiotics which were prescribed for particular individuals were among the medications that were not shared between families. Households were aware that prescribed medications were given for specific conditions and this discourages people from sharing such substances.

Storage of medications played centre stage in how participants handled the substances once they were brought into homes. Safety issues were considered most before storing medications in different places. Medications were stored in places which were out of reach of children. Some medications were stored dry places as a way of maintaining their potency. Medications were stored nearer to places they were consumed especially in the kitchen. Some medications were stored in places that reminded people to remember to take their medications at certain times. Examples were storing bed time medications in bedrooms, and storing them in the kitchen where they are taken with water.

## Chapter Four: Thesis Conclusion

### Introduction

The present research aims to document medications, migration and cultural texturing of familial healthcare among three ethnic migrant groups which have settled in New Zealand. What is clear from this study is that migration to other countries involves the movement of not only physical selves, but also the knowledge of groups regarding health, illness, treatment and care. Such movements raise questions surrounding the continuation of health-related knowledge and practices for migrants in a new place. This study informs us about how medications are understood and used by the three indigenous groups of migrants although this has generally remained unclear among many other people. There has not been any collective study carried out in the past to explore every day experiences and uses of medications among Zimbabwean, Tongan and Chinese migrants who have settled in New Zealand and beyond. The study therefore aims at advancing knowledge about meanings associated with medications and exploring familial understandings of and socio-cultural practices surrounding the use of these objects in everyday lives of migrant households as they settle in new places.

Medications are an important part of some communities which use these substances to treat infectious diseases, manage symptoms of chronic diseases and prevent adverse health outcomes (Clark, 2012). Medications are embedded in complex cultural, familial, social and health care relations and are found in many different forms including prescription drugs, dietary supplements, traditional remedies, and enhanced foods (Nikora et al., 2011). Medications are diverse objects that acquire particular meanings when they enter into the lives of people (van der Geest & Whyte, 1989; van der Geest & Hardon, 2006). They are substances with social, cultural and pharmacological lives, designed to prevent illness and alleviate suffering (Hodgetts et al., 2011). Medications can be swallowed, inserted into body parts like eyes and ears, or rubbed on the skin. Different cultural and ethnic groups of people define and understand medications differently depending on their own traditions and uses associated with these substances (Shoemaker et al., 2007). Knowledge about medications is learnt as people grow up within their societies, experience illness themselves or respond to

the ailments of other people. Central sites for learning about medications include families and households.

This thesis further set out to explore the ways in which medications, as cultural objects, are procured, stored, shared and consumed by the three groups of transnational immigrants. Of particular interest was the interweaving of both indigenous healthcare knowledge and medications brought into New Zealand by immigrant households and their use of both traditional and biomedicines. Another important aspect of the study raised by participants is the role of home spaces. Households were key locations of care. This study found out that home spaces played an important role for maintaining each household's health. Households were found to be main places where medications were stored, administered and used as reported in a study carried out by Sorensen and colleagues (2006). In the home spaces, the use of medication occurs within the context of householder efforts to respond to and manage illness, and to preserve the familial relationships and cultural traditions (Hodgetts et al., 2011; Hodgetts et al., unpublished). Through taking or giving others medications within home spaces, people demonstrate care for themselves and others close to them (Whyte, van der Geest & Hardon, 2002). The consumption of such material objects also reaffirms familial bonds and culturally patterned relationships of care.

In this chapter I present my findings which are divided into two sections. The first section reviews meanings given to medications by migrants. Under this section I discuss medication uses, storage places and sharing practices associated with medications within households. The second section covers the role of culture and its relationship with migration. I will then discuss ethnic similarities and differences that were noticed among the three migrant households in their medication practices. General implications for my study and its limitations are discussed next. I have also spelt out suggestions about future research directions. This is followed by a brief conclusion which marks the end of this thesis.

### **Medications: meanings, uses, storage and sharing**

Medications are objects with "social lives" as well as pharmacological lives (Whyte, et al., 2002). Once in the hands of people they represent not only relief from suffering or the maintenance of health, but also represent identity, morality, relationships, care, healing and hope, amongst other things. These non-medical meanings are, however, implicated in the

therapeutic processes associated with their use, enhancing or limiting these functions. Attention to these complex social and symbolic meanings of medications, both medical and non-medical, will help us understand how social practices involving medications can impinge on the quality of health and health care (van der Geest & Hardon, 2006).

Medications have complex life cycles involving diverse actors, socio-cultural systems and institutions that influence who uses what medications, how, when and why (van der Geest et al., 1996). The meanings associated with medications shape where they go, who gains access to them, and how they are shared within and across households. Findings from this study show that meanings assigned to medications are complex. An interesting finding from this study is how ethnic migrants viewed medications from two worldviews. Participants viewed medications from both biomedical worldviews and indigenous knowledges. The study further reveals how migrants from indigenous communities continue to seek and use health care systems and a range of medications which have been developed in their countries of origin over millennia. Participants originated from traditional societies which view illness and disease as an imbalance of the mind and body. The imbalance expresses itself on physical, emotional and mental levels which need a holistic approach in the way people attend to illness. Although many of these traditions have been disrupted, delegitimised and changed through processes of colonisation, they still remain part of these communities. These societies which have lived closer to nature for centuries possess immense knowledge of their environs. It is necessary that other people understand other health care practices particularly now when the world is becoming a small global village where migrants are moving from their countries of birth to other places. Going beyond the dominant biomedical worldview enriches our understanding of other health care practices by indigenous societies.

The study found that meanings assigned to medications are actively negotiated through use and dialogue between householders and in relation to broader cultural traditions, health care providers and the symbolic environment that includes DTCA. As an example, this study found that medications have social meanings to migrant participants. It was clearly stated by the participants that they preferred using medications which had meaning to them, they identified with and they had grown up using. This is in line with a study carried out by Kong and Hsieh (2012) in the United States of America among elderly Chinese migrants. The study revealed that the migrants preferred using traditional Chinese medications which had meaning to them. Traditional medications were used as a tool, a resource and a product of

meaning-construction in their everyday life. Kong and Hsieh pointed out that TCM is not just a resource for illness management but allows them to perform and reaffirm their cultural identity as Chinese. This same point was emphasised by Jiang and Quave (2013) whose study also found that TCM allowed Chinese immigrants to claim their identities because the objects are part of Chinese way of life.

Another form of understandings of medications expressed by households was primarily associated with the preventative and curative functions of particular substances. Both Ruth and Peni (Nonu Household) stated that medications were both preventative and curative objects. The findings support previous studies including one by Jana (2006) who suggested that the objective of curative medicines is to restore a diseased person to a normal healthy state. Jana went further to state that preventative medicines aim at eliminating the cause of the disease by avoiding it rather than treat it especially at community level. The study also makes it clear that in some instances, particularly among the migrants, meanings and understandings of medications took into consideration both cultural, spiritual and religious practices. These findings are in agreement with previous studies which have pointed to the role of religion and respite in functional understandings of medications (Whyte et al., 2002).

Understandings of medications and their uses were also evident among migrants in their broader medication preferences for either bio-medications or traditional medicines or both. Preferences of medications varied between participants, households and ethnic groups. For example, Zimbabwean households preferred using bio-medications over indigenous medicines. Their preferences have their origins in colonial practices that involve the subjugation of indigenous knowledge and traditions and the legacy of successive colonial governments and missionaries who promoted the view that anything African was inferior to their own ways of responding to illness (*cf.*, Hodgetts, Drew, Sonn, Stolte, Nikora, & Curtis, 2010).

With the colonisation of Zimbabwe and the creation of a Westernised professional class in urban centres, negative attitudes towards indigenous medications have developed (*cf.*, Waldron, 2012). Traditional healers together with their practices and medicative objects have been denigrated by the settler society and supplanted by bio-medications and associated practices. The effects of such influences continue to dominate in the lives of Zimbabwean migrants whose traditional medications were officially designated as being 'backward' and labelled as 'African medicines' (Kazembe, 2008). According to Kazembe (2008), younger

generations residing in urban settings in Zimbabwe have lost contact with indigenous medicative practices, knowledge and healthcare systems. Kazembe's argument is supported by findings from my study which reveals that Zimbabwean participants are young and originate from urban areas where biomedical health care systems dominate. My study also found that Zimbabwean participants have limited knowledge about indigenous medications and associated health care practices.

Findings among Tongan participants reveal that those who migrate from Tonga prefer using a combination of traditional and biomedicines. Preferences for using both types of medications reflect the healthcare systems in Tonga which serve as an example of medical pluralism incorporating both traditional and biomedical practices (McGrath, 1999). Tongans actively chose between their indigenous and biomedical healthcare options. Differences are noticeable among Tongans born and bred within the New Zealand culture who prefer using bio-medications which they grew up using and associate with proof of efficacy, science and modern technologies. In contrast, the study found that Chinese participants prefer using their own traditional medications over biomedical objects although those who took part in this study admitted that they attend to both substances. Chinese participants regard their own traditional medications as safer and more appropriate for their Chinese bodies and as a result less likely to cause negative side effects when compared to bio-medications (Chen, 2007). Preference for Chinese traditional medications is attributed to a number of factors. Firstly, preference of traditional medications can be associated with the Chinese health care system which has remained intact despite prolonged interactions with biomedical system. Secondly, the Chinese health care system recognises both biomedical and traditional ways of attending to illness and health care issues. This gives the Chinese choices between the two health care systems (Chen, 2007). However all the migrants point out that when the need arises, they are willing regardless of their preferences to try both indigenous and biomedicines as part of the ongoing experimentation associated with medication use in everyday life.

Although little is known about the emplacement and uses of medications in domestic spaces, this study informs us of the importance of households as places for medication storage. Medications storage spaces vary between households and these were extensively discussed by participating migrants. In most cases medication storage spaces act as cues for households to take medications at appropriate times. Each household gave different reasons for storing medications in certain places. Cultural issues in some cases determine where medications are stored and safely consumed. According to a recent study by Hewson and colleagues (2013),

kitchens and bathrooms are the most common places for storage of medications in New Zealand. Unlike the findings from Hewson's study, none of my participants keep medications in their bathrooms. This is likely a product of the ethnic makeup of the participating groups in the Hewson study and my research. The study by Hewson was dominated by Pakeha participants whose medicative practices are likely to differ from those of my migrant participants. This difference adds further weight to the importance of considering issues of ethnicity and culture in medication use and associated practices. In future research we should also consider issues of cultural hygiene as identified by Nikora and colleagues (2011) and as pertinent to Maori households. In Maori households, medications that are ingested are stored and consumed in food eating spaces, which include kitchens. Nikora's study pointed out that externally applied and inserted medications are kept away from food related places.

Another interesting finding from the study involves sharing of medication practices within or between households. My study found that sharing of medications particularly for non-prescribed and traditional substances is a common practice among migrants. With backgrounds of interdependence where sharing, unity, respect and love dominate much of their lives, sharing of certain substances is not a new phenomenon. Sharing medications extends out beyond the household and into transnational practices particularly for Chinese and Tongan households, who import, stockpile and share indigenous medications from their countries of origin. Sharing and caring for others therefore help migrants re-create a home and sense of Chineseness or Tonganness in New Zealand.

Sharing allows people to demonstrate care for one another and to tackle the issue of sickness collectively. Through sharing certain medications relationships among migrant households are sustained and nurtured (Hodgetts et al., 2011). The consumption of shared material objects such as medications also reaffirms familial bonds and culturally patterned relationships of care. Participants originate from a background of interdependence where sharing, unity, respect and love dominate much of their lives. In the event that any member of their family or immediate family falls sick, they are there to support each other by sourcing a cure and making sure that the member takes the medication as prescribed by a health care provider. No household reported sharing prescribed medications as they were associated with specific risks and the needs of particular persons. In cases where family members suffered from the same ailment, it was pointed out that those members consulted doctors who would prescribe either the same or different medications. Although in this study none of the households shared prescribed medications, this was in contrast to research carried out among

Chinese and Indian migrants in New Zealand by Babar and colleagues (2013). The study found that it was common for prescribed medications to be shared. Doctors' consultation fees and costs associated with going to pharmacists to obtain prescribed medications were the main reasons given by participants for sharing the substances.

What I have contributed to the literature is to centralize the importance of culture within migrant medication use and contributed to knowledge of the everyday use of medications and familial healthcare relationships among migrants to New Zealand today. Medicines have been acculturated into familial practices of care (Hodgetts et al., 2011a, 2011b.). I have also shed further light on the human side of medication use and in doing so begun to grapple with some of the mundane complexities of the everyday functions of medications in the therapeutic landscape of the home. I have provided further support for the view that medications are central to the maintenance of health as well as identities and familial relationships as found out in many other previous studies (*cf* Doran et al., 2005; Pound et al., 2005; Shoemaker & de Oliveira, 2008). I have provided further support for the view that medications are central to the maintenance of health as well as identities and familial relationships as argued in many other previous studies (*cf* Doran et al., 2005; Pound et al., 2005; Shoemaker & de Oliveira, 2008).

### **The role of culture: migration, ethnic similarities and differences**

Culture is an important patterned way of life since it guides and defines how groups of people live and what they believe in and value. Culture affects all societies and shapes how people view the world around them and make sense of it. Culture enables people to formulate ways of responding to and coming to terms with illness as a physical, social and cultural construct (Castillo, 1997; Helman, 2001; Ngubane, 1977). According to Helman (2001) culture acts as a 'lens' through which people perceive and interpret their worldview according to how they understand it. This study found that each migrant group's explanation of health and illness differs according to their cultures. Migrant households bring varied cultural practices and beliefs which differ from one society to the other and are all shaped by their different cultures (Sobo & Loustaunau, 2010). Each of the three groups has its own ways of understanding medications and health; explaining causes of illness and how best it is treated; and who should be involved in the treatment process. The findings confirm those from previous studies which found that people of diverse cultural backgrounds often make different

attributions of illness, health, disease, symptoms, treatment and healthcare providers which are all influenced by their different cultures (Hjelm & Mufunda, 2010; and McKaughlin & Braun, 1998; Vaughn et al., 2009). With such diverse cultural beliefs, there is need to understand these differences especially for groups of migrants who come from communities which hold fatalistic views about health and illness issues which they believe are caused by factors beyond human control. This thesis foregrounds the importance of culture in medication practices because culture provides the lenses through which people make sense of health and illness and offers avenues for response to illness (Castillo, 1997; Helman, 2001; Ngubane, 1977).

In relation to migration, moving and settling in other countries entails migrants translocating their culturally linked traditional beliefs and practices including those related to health care to foreign lands (Nayak et al., 2012; Rosenblum & Tichenor, 2012). Rosenblum and Tichenor pointed that rituals celebrated by migrants in foreign countries are usually elaborated with cultural images and objects that are obtained from departed countries. The researchers further argued that the transfer of such objects from one cultural context to another is an evident feature of the migration process. With migration on the increase, migrants bring a mixture of cultural experiences and practices to their new locations which they try to keep while simultaneously acquiring new ones from the host countries (Bekerman & Geisen, 2012). According to Green and colleagues (2008) migration enables people to bring their familiar cultural objects including customs and languages to new places while it allows them to establish a home away from home. We have seen from my findings how research participants bring to New Zealand familiar objects among them different medications, cultures, customs and languages from their departing countries.

Another aspect associated with migration as revealed by participants is that they maintain social-cultural connections across geopolitical borders. Tongan and Chinese participants revealed that they often go back to their countries of origin whenever the opportunity arises. Past studies also confirm the same results and concluded that migrants often work to maintain socio-cultural connections between their countries of origin and those of settlement (Green, Power & Jang, 2008; Joyce, 2010; Li, 2010; Perruchoud & Redpath-Cross, 2011). Although migrants are geographically separated from their original countries through the process of migration, they continue to establish, maintain and reinforce multiple and constant economic, socio-cultural and emotional interconnections with departed countries. Migrants are able to maintain multi-stranded social ties and interactions across the boundaries of nation states

despite the long distances separating them from their original homes (Maastricht University, 2012; Vertovec, 1999). Participants revealed that they often go back to their original countries on holiday where they meet their relatives. Such practices enable Joanna (Yangliu Household) together with other migrants in similar situations to remain socially and culturally connected to their countries of birth.

Joanna for example, disclosed that she often goes back to China where she buys both traditional and bio-medications which she brings back to New Zealand. Similar findings came from a study in the United States among Mexican migrants who often travel back to Mexico in search of familiar health care facilities and medications which they identify with (Chavez, 1984). Apart from being pulled by cheaper health care facilities and medications in Mexico when compared to the United States, Mexicans desire to remain socially and culturally connected to their places of birth by accessing familiar objects. Those who seek familiar medical health care facilities in Mexico bring back prescribed medications and other substances to the United States.

Participants confirmed that they are engaged in similar practices of going back to their original countries to seek health care services they are familiar with. Past studies have revealed that migrants employ a range of transnational health seeking strategies in order to seek resolution to their health care problems (Bergmark et al., 2008; Lee et al., 2010). The studies noted that many migrants continue to make use of health services in their original countries directly or through friends or relatives (Bastia, 2013). In most cases it was noted that the actions by migrants are motivated by the failure of health systems in countries of settlement to accommodate the health care needs of migrants (Ormond, 2013). Relying on services from former home countries affords migrants opportunities to receive greater family support, access cheaper medication and more familiar forms of medical health care facilities. Debbie, Ana and Tuipulotu mentioned the high costs of medications in New Zealand as some of the reasons why they seek alternative health care in Tonga. This confirms results from a similar study in the United States among Brazilians which revealed that prohibitive costs of health care forced migrants to travel to Brazil to seek health care in their original country (Hilfinger Messias, 2002). The same study also pointed out that some Brazilian migrants put their health problems on hold until they made return trips back to Brazil where they easily accessed health care facilities. Dias and colleagues (2010) also found that Brazilian migrants in Portugal also used the same strategy of using health care services in Brazil. This they did either by attending medical appointments when they went back to their country on holiday or

by consulting health care providers over the phone, often relying on relatives to make the contacts. Familiarity with the services provided and relatively lower costs were the main reasons why the migrants sought health care facilities in their countries of origin. Similar trends have been found among Latin American migrants settled in Europe. A study of over 1000 Latin Americans based in London found that about 30% of these migrants sought health care facilities in their original countries. Reasons varied although costs and being familiar with services offered were among some of them (McIlwaine et al., 2011).

As already discussed in many sections of this thesis maintaining a sense of identity was another practice that was common among some migrants. A sense of identity was at the centre of why migrants desire to continue using familiar substances from their original countries. Tori's parents together with Chinese participants are good examples of migrants who continue to use traditional medications from their departed countries. Such practices are a confirmation of findings from studies by Hendrikse (1995) and Faist (2006) who argued that migrants retain most of their cultural practices and identities long after migrating to foreign countries. Morton (1996) has also argued that *anga fakatonga* is frequently invoked in Tongans' everyday lives as both defining element of Tongan identity and as the values and behaviours that comprise their culture. Everyday medication practices which are expressed by Tongan participants are among many other examples of how cultural identity is incorporated in people's day to day lives when they migrate to new countries. Through migration migrants are able to retain many aspects of their original cultural practices by maintaining their sense of identity. Migration enables immigrants to meet various other cultural traditions where these overlap and merge in social spaces resulting in hybrid identities emerging (Joyce, 2010).

My findings shed light on how migration involves both the movement of physical bodies as well as knowledge about medications, health, illness, treatment and care as revealed in other studies (Faist, 2006; Trujano, 2008). Migration facilitates the importation of familiar objects including medications from departed countries. The medications are stockpiled and shared among householders or between families once they arrive in New Zealand. Through such practices aspects of migrants' home countries are reproduced in New Zealand. Imported medications evoke feelings of familiarity, continuity and safety and help migrants gain a sense of being at home in their new environment (Philipp & Ho, 2010). What we see in this thesis is the role of medications as transnational objects in such processes of re-remembering and re-homing somewhere new. These findings also support the assertion that through

consuming medications from home, migrants are provided with a sense of security and continuity in self. Such practices help to reflect a commonly held belief that familiar medications with which people grow up using are indeed useful in the treatment of illness (Glick Schiller, Basch, & Blanc-Szanton. 1992).

Apart from what has been discussed above, the study also reveals noticeable similarities as well as differences in migrants' cultural health care beliefs and medication practices. The nine migrant households shared some similar practices despite the fact that they come from different backgrounds. Firstly, I found that the nine households come from collectivist countries in which kinship is a strong value in their lives. This was emphasised by all households as I found that they show their gratitude and love to those family members who may not be in good health. Households show care for those in ill health by sourcing some medications for them. Households also show care by accompanying the sick for appointments with their health care providers. A study by Srivastava (2007) supports this assertion. Srivastava argued that migrants from collectivist countries have strong kinship relationships and show their gratitude and love when a member is ill by caring for them.

Another similar practice noticed among the migrants involved the sharing of medications particularly for over-the-counter and traditional medications. All households reported sharing over-the-counter medications. Tongans and Chinese who had easy access to traditional medications reported sharing these objects. Among Tongan and Chinese households, medications were reportedly shared within and between related families. Sharing of medications allows people to demonstrate care for one another and to tackle the issue of sickness as a unit. Sharing is a common practice among collectivist societies and when migrants move to new countries they continue with the same practices they are used to. Through sharing certain medications social relationships among the households are sustained and nurtured. None of the nine households reported sharing prescribed medications.

Issues of spiritual beliefs were common among the households as these played a major role in health care and medication practices within the nine households. Participants believe that spirituality plays an important role in their lives. They also believe that there is a co-relationship between their spiritual beliefs and health care outcomes. I found that Christianity is a major factor that influences participants' beliefs especially among Zimbabwean and Tongan households. Christianity has strong influences on some of the Zimbabweans and Tongans who strongly believe in the power of God. Households holding such Christian

values believe that God's power enables healing process to succeed through His blessing. Participants sharing Christian views believe in the power of God and prayers as enablers to successful healing using traditional or bio-medications or a combination of both. A common view held by such households is that individuals should have faith in God who they believe ultimately has overall responsibility over one's health and the healing process. Medications are believed to serve as bridging objects not only between people but also between humans and God by becoming 'points of contact' (Krause, n.d.). Krause argues that although medications do not contain spiritual power, they create connections to Godly power. Although none of the participants revealed that they pray over their medications before taking them as is the practice with food, prayer transforms into a different object – a connection to God and an avenue of communication. Besides medications being meaningful in how they alter the state of the body, they also help Christians to incorporate God into their daily lives. Christians believe that God amplifies the helpful objects and helps to reduce the harmful side-effects that could be associated with the substances (Krause, n.d.).

Studies from other researchers including one carried out by Nayak and colleagues (2012) confirm the same findings that some societies have beliefs rooted in holy rituals, salvation, offerings and sacrifices linked to their culture. Nayak's findings and my study emphasize the need for health care providers and policy makers to be aware of the influence of religious, spirituality and fatalistic beliefs on migrants' health care beliefs and related practices. There is growing evidence suggesting that a strong relationship between spirituality and medicine is increasing and that religious beliefs and health care outcomes are co-related (Anandarajah & Hight, 2001). Religious and spiritual beliefs are thought to result in more hope, greater well-being and a more positive perspective (Puchalski, 2001). On the other hand, Chinese spirituality about health and illness was invoked in discussion of yin and yang concept. This concept has been explained in other parts of this thesis.

There were other similar practices which were found among participants. Depending on the nature of medications taken into households, participants make choices of where these objects are finally stored before consumption. For example, the study found that participants prefer storing certain medications in cool places far from hot and humid places. Medications which require refrigeration are stored in refrigerators while those that do not need to be refrigerated are stored in other suitable places like cupboards. Although households may differ in choosing where to store medications, kitchens and bedrooms were found to be the most popular storage places among participants. My study found that bathrooms are less

preferred as participants associate such places with humid conditions which may reduce the potency of their medications. Culturally, households associate bathrooms with personal hygiene hence such places being viewed as unsuitable for storage of especially orally consumed medications. These results confirm those from a study by Tourinho and colleagues (2008) who found that bedrooms and kitchens were the most commonly used places for storing medications. In Tourinho's study bathrooms were less preferred. From the New Zealand context and according to a study by Hewson and colleagues (2013), kitchens and bathrooms are popularly used by New Zealanders to store medications. Hewson's study pointed out that although kitchens and bathrooms were popular for storing medications, they were not suitable due to high temperatures and humidity associated with the two places. Hewson's study found that kitchens were the most preferred storage areas followed by bathrooms. None of my participants considered kitchens' high temperatures when deciding where medications were stored. There was no comparison carried out in this study to determine which of the two places was more popular than the other.

Another similar practice I found among the participants was the consideration of safety issues which are central to all households' choices of where to store medications among other factors. Safety is a priority for all households who report storing medications out of reach of children. Most medications are placed in lockable places. Households are aware of the consequences that could result from children accessing medications which are not meant for them. My results confirm those from a study by Williams and colleagues (2009) which found that medication storage within households is an important safety issue particularly in families where there are children.

Although this study has highlighted similar ethnic practices among households, a number of differences were also found. Zimbabweans for example prefer using bio-medications which they are familiar with. These are medications which they have been using back in their country of origin. Zimbabweans do not have much choice but to rely on biomedical objects and related health care systems. Zimbabweans have no access to their traditional medications which no longer hold meaningful centre stage in their daily lives. This was in contrast to the other two groups who have access to both bio-medications and traditional substances. Tongan and Chinese households reported that they can easily access traditional medications from their former countries and these could be used simultaneously with bio-medications in some cases. Exceptional cases were found among New Zealand born and bred Tongan participants who prefer using bio-medications and related health care systems. During the research

Tongan households possessed more traditional medications than their Chinese counterparts. Being closer to Tonga could be one reason why Tongan households had more traditional medications in their possession. The shorter distance between Tonga and New Zealand could result in a larger volume of people moving between the two countries more frequent hence transportation of traditional medications from Tonga being easily facilitated.

### **General implications**

From the study, there is clear need for more in-depth understanding of migrants' medication practices, migration process and their cultural texturing of familial healthcare. Greater knowledge of these constructs can aid efforts by health care providers and policy makers to understand cultural differences within migrant groups. Migrant groups bring to their countries of settlement culture specific ideas and values related to concepts of health and illness which may differ from those found in their new settlements.

### **Study limitations**

This study involving three different cultural groups from Zimbabwe, Tonga and China is the first of its kind to be conducted in New Zealand. As a result the study could not be without some limitations. Comparison of this study with any other previous studies of similar nature was difficult due to lack of relevant literature from past research. This made it difficult coming up with supportive and comparative material for my study. In particular this problem was more noticeable within Zimbabwean content as no similar research has ever been conducted among this group of migrants who have settled in other countries including New Zealand. Another limitation that I experienced with Zimbabweans migrants was that they were less knowledgeable about indigenous medications and associated health care practices. As a result very little was gathered on indigenous knowledge from this migrant group. Having used Tongan and Chinese data made available to me and which had been conducted by my supervisors and other colleagues, I found it difficult to comprehend some sections of the data. I could not access migrant Tongan and Chinese participants for any clarification on some of the issues. As a result some important information could have been lost along the way. Lastly, although the study involved three migrant groups, the views expressed by migrant households in this research do not represent those of other ethnic New Zealand

immigrant population. There are many other migrant groups who have settled in New Zealand whose practices may differ from those expressed in this study. Other migrant groups may have different health care practices, health and illness beliefs from those that are expressed in this study. The three migrant groups representing nine participating households is a small sample of the migrant population resident in New Zealand. The small sample size has the potential to limit the generalisations that can be made from this study.

### **Future research directions**

Future research with larger numbers may be required to enable better generalisation of findings. A larger sample size will facilitate expanding and replicating upon the relevancy and accuracy of emerging themes from the study. It has emerged from this study that more questions have been raised than answered and I therefore propose two areas that need to be further researched. What is clearly apparent is the need for future research to take issues of ethnicity and culture into account when seeking to understand contemporary cultural and medicative practices brought into the country by immigrants. Secondly more research is needed on the health effects of simultaneous use of both traditional and bio-medications by migrants in New Zealand and whether or not they disclose to their health care providers such practices.

### **Conclusion**

This study has presented a comparative analysis of three racially, socially and politically different ethnic groups of immigrants who have chosen to make New Zealand their new home. The study set out to explore household understandings, practices and uses of medications by immigrants from Zimbabwe, Tonga and China. In this context, the study has shed new light on understandings of medications by these groups of immigrants through their every day uses, practices and experiences. This study has made it clear that householders view medications from a culturally hybridised standpoint encompassing both traditional and bio-medication perspectives (Blok & Jensen, 2011). Apart from understanding migrants' meanings and definition of medications, there is also the need to understand their health care practices, their views on health and illness all of which may be understood differently from the New Zealand context. The influx of migrants into New Zealand has presented health care

providers and other policy makers with new challenges. The dissemination of findings from this study will potentially enhance healthcare providers' knowledge of medication practices in everyday lives of migrant groups who have settled in New Zealand. Although medications are not without risks, documenting a clear understanding of medication-taking practices for migrants and how these are utilised into their daily lives may enhance efforts to support the health needs of migrant households and the development of services and interventions that support migrant families in the management of illness within their homes.

With migration on the increase and a wider cultural diversity becoming a feature in New Zealand, there is need to acknowledge cultural differences brought into the country by migrants. When migrating to foreign countries migrants take and maintain certain cultural beliefs and health concepts which remain prevalent among them (Joyce, 2010). Although migrants settle in other places, they maintain strong ties with their countries of origin. They also continue to use familiar cultural objects among them traditional medications from their original countries. It is becoming increasingly important that health care providers whose clientele includes immigrant patients understand the use of traditional medications among other practices by their clients (Jiang & Quave, 2013). Jiang and Quave argue that health care providers have to be aware of possible synergistic effects or other herb-drug interactions resulting from consumption of large quantities of traditional medications. There is also need to be aware of any reactions resulting from the simultaneous use of traditional and biomedicines. Formulation of new health care policies incorporating migrants' customary beliefs about causes and treatment of illness, their health and medication practices enables migrants to settle more comfortably in foreign lands including here in New Zealand. The results from my study illustrate different medicinal system preferences, medication usage and practices, relationships and care within households and cultural health care and illness beliefs among Zimbabweans, Tongans and Chinese migrant population in New Zealand. With the number of migrants on the increase, such practices by migrants have to be understood in countries where they are settling in. Understanding different meanings assigned to medications and practices by migrants enables them to settle comfortably in their chosen countries of settlement. Policy makers are also able to come up with policies that incorporate migrants' interests in how their health care practices are dealt with.

## References

- Abdo-Rabbo, A., Ansari, Al., Gunn, B. C., & Suleriman, B. J. (2009). The use of medicines in Oman: Public knowledge, attitudes and practices. *Sultan Qaboos University Medical Journal*, 9(2), 124-131.
- Abel, G. A., Penson, R. T., Joffe, S., Schapira, L., Chabner, B. A., Lynch, T. J. (2006). Direct-to-consumer advertising in oncology. *Oncologist*, 1(2), 217-226.
- Alaszewski, A. (2006). *Using diaries for Social Research*. Retrieved 18 January, 2013 from <http://books.google.co.nz>
- Alvord, L. A. (1997). *Health and health care of Indian and Alaska native*. Lecture presented at Stanford Medical School, Stanford, CA.
- Ameling, A. (2000). Prayer: An ancient healing practice becomes new again. *Holistic Nurses Practice*, 14(3) 40-48).
- Anandarajah, G., & Hight, E. (2001). Spirituality and medication practice: Using the HOPE questions as a practical tool for spiritual assessment. *American Academy of Family Physicians*, 63(1), 81-89.
- Appelbaum, K. (2006). Pharmaceutical marketing and the invention of the medical consumer. *PLoS Medicine*, 3(4), e189.
- Archer, W.G. (1947). The Santal treatment of witchcraft. *Man in India*, 27(2), 103–121.
- Ariel, H., Dvorkin, L., Steinman, R. Y., Allswang, G., Berman, A., Brenner, F., & Silverman, D. (2008). Intercessory prayer: A delicate celestial orchestration between spiritual and physical worlds. *Journal of Alternative Complement Medicine*, 14(4), 351-352.
- Astin, J. A., Pelletier, K. R., Marie, A., & Haskell, W. L. (2000). Complementary and alternative medicine use among elderly persons: one-year analysis of a Blue Shield Medicare supplement. *Journal of Gerontology Series A: Biological Sciences and Medical Sciences*, 55(1), M4-9.
- Babar, Z., Pengelly, K., Scahill, S. L., Garg, S., & Shaw, J. (2013). Migrant health in New Zealand: Exploring issues concerning medicines access and use. *Journal of Pharmaceutical Health Services Research*, 4(1), 41-49.
- Balakrishnan, K., Tordoff, J., Norris, P., & Reith, D. (2006). Establishing a baseline for the monitoring of medicines availability for children in the UK: 1998 to 2002. *British Journal of Clinical Pharmacology*, 63, 85–91.
- Banks, M. (2001). *Visual method in social research*. Thousand Oaks: Sage.

- Bassett, F.S., & Holt, E.A.L. (2002). New Zealand resident Tongan people's health and illness beliefs and utilisation of the health care services. *Pacific Health Dialogue*, 9 (1).
- Bastia, T. (Ed.). (2013). *Migration and inequality*. Retrieved 22 September, 2013 from <http://books.google.co.nz>
- Becker, A. E. (1995). *Body, self and society: The view from Fiji*. Philadelphia: University of Pennsylvania Press.
- Bekerman, Z., & Geisen, T. (Eds.). (2012). *International Handbook of migration, minorities and education: Understanding cultural and social differences in processes of learning*. Retrieved 18 January, 2013 from <http://books.google.co.nz>
- Belk, R. W. (1979). Gift-giving behavior. In Jagdish E. Sheth (ed.) *Research in Marketing*, Vol. 2, Greenwich, Conn.: JAI Press.
- Bennahum, D. (1998). Navajo beliefs and end-of-life issues. In MNGEC (Eds.), *Indian elder caregiver*. Albuquerque, NM: New Mexico Geriatric Education Centre.
- Bernal, H. (1996). Delivering culturally competent care. In: P. Barry (Ed.). *Psychosocial Nursing: Care of physically ill patients and their families*, (3rd ed.). Philadelphia: Lippincott.
- Bergmark, R., Barr, D., & Garcia, R. (2008). Mexican immigrants in the US living far from the border may return to Mexico for healing services. *Journal of Immigrant and Minority Health*, 12(4) 610-614.
- Bloomfield, S. F. (2002). *Illness and cure in Tonga: Traditional and modern medical practice*. Nuku'alofa, Tonga: Vava'u Press.
- Bodeker, G., & Kronenberg, F. (2002). A public health agenda for traditional, complementary and alternative medicine. *American Journal of Public Health*, 92(10), 1582-1591.
- Bodibe, C., & Sodi, T. (1997). Indigenous healing. In D. Foster, M. Freeman, & Y. Pillay (Eds.), *Mental health policy issues for South Africa* (p. 181–192). Cape Town: MASA Multimedia Publications.
- Bortolotti, L., & Mameli, M. (2006). Deception in Psychology: Moral costs and benefits of unsought self-knowledge. *Accountability in Research*, 13, 259-275.
- Broodryk, J. (2002). *Ubuntu: Life lessons from Africa*. Tshwane: Ubuntu School of Philosophy.
- Brooker, C. (2002). *Churchill Livingstone's dictionary of nursing*. Edinburgh, England: Churchill Livingstone.

- Bruhn, J. G. (1997). Health: its meaning and expressions. In J.G. Bruhn & J. E. Brandon (Eds.), *Border Health: Challenges for the United States and Mexico*, Garland Publication, Inc., New York.
- Butani, Y., Weintraub, J. A., & Barker, J. C. (2008). Oral health-related cultural beliefs for four racial/ethnic groups: Assessment of the literature. *BMC Oral Health*, 8(26).
- Cao, Q. (2011). *Chinese immigrants to Finland: A qualitative study of housing, employment, access to health care and child care as sociological dimensions in their settlement process*. Retrieved 05 June, 2013 from <https://helda.helsinki.fi>
- Carballo, M. (2001). Emerging health challenges in the context of migration. In P. J. Van Carballo, M., & Nerukar, A. (2001). Migration, refugees and health risks. *Emerging Infectious Diseases*, 7(3), 556.
- Carrier, J. G. (1995). *Gifts and commodities: Exchange and Western Capitalism since 1700*. Routledge: London.
- Castillo, R. (1997). *Culture and mental illness: A client centred approach*. Pacific Grove, CA: Brook Cole.
- Central Intelligence Agency. (n.d.). *The world fact book – Tonga*. Retrieved 11 November, 2012 from <https://www.cia.gov>
- Chavunduka, G. L. (1980). Witchcraft and the law in Zimbabwe. *Zambezia*, VIII (ii), 129-147.
- Chavez, L. R. (1984). Doctors, Curanderos, and Brujas: Health Care Delivery and Mexican Immigrants in San Diego. *Medical Anthropology Quarterly*, 15(2), 31-37.
- Chen, J., Ng, E., & Wilkins, R. (1996). The health of Canada's immigrants in 1994-1995. *Health Reports*, 7(4), 33-45.
- Chen, X. W., Sareq, E. S., Sneed, K. B., Liang, J., Chew, H., Pan, S. Y., & Zhou, S. F. (2011). Clinical herbal interactions with conventional drugs: from molecules to maladies. *Current Medical Chemistry*, 18(31), 4836-50.
- Chen, F. P., Chen, T. J., Kung, Y. Y., Chen, Y. C., Chou, L. F., Chen, F. J., & Hwang, S. J. (2007). Use frequency of traditional Chinese medicine in Taiwan. *BMC Health Services Research*, 7 (26).
- Cheung, F. M. C. (1986). Psychopathology among Chinese people. In M. H. Bond (Ed.). *The psychology of the Chinese people*. New York: Oxford University Press.
- Chin, P. (2005). Chinese. In J. G. Lipson & S. L. Dibble (Eds.), *Culture and clinical care*. San Francisco: UCSF Nursing Press.

- Chin, M. H. (2005). The patient's role in choice of medications: Direct-to-consumer advertising and patient decision aids. *Yale Journal of Health Policy, Law, and Ethics*, 5(7), 771-784.
- Chinouya, M., & O'keefe, E. (2006). Zimbabwean cultural traditions in England: Ubuntu-Hunhu as a human rights tool. *Diversity in Health & Social Care*, 3(2), 89-98.
- Chapfakacha, V. (1994). The role of culture in primary health care. *South African Medical Journal*, 84(12), 860-861.
- Chivaura, V.G. (n.d.). *Hunhu/ubuntu: A sustainable approach to endogenous development, bio-cultural diversity and protection of the environment in Africa*. Retrieved 7 September, 2012 from <http://www.bioculturaldiversity.net>
- Cilliers, J. (2008, July). *In search of meaning between Ubuntu and Into: Perspectives on preaching in post-apartheid South Africa*. Paper presented at the 8th International Conference of Societas Homiletica, Copenhagen, Denmark.
- Clifford, J. (1994). Diasporas. *Cultural Anthropology*, 9(3), 302–338.
- Collier, J. Jr. (1957). Photography in anthropology: a report on two experiments. *American Anthropologist*, 59, 843–859.
- Conn, K. M., Halterman, J. S., Lynch, K., & Cabana, M. D. (2007). The impact of parents' medication beliefs on asthma management. *Pediatrics*, 120(3), 521–526.
- Conrad, P., & Barker, K. K. (2012). The social construction of illness: Key insights and policy implications. *Journal of Health & Social Behaviour*, 51(1), S67-S79.
- Corbetta, P. (2003). *Social Research theory, methods and techniques*. London: SAGE Publications.
- Covington, M. B. (2001). Traditional Chinese Medicine in the treatment of diabetes. *Diabetes Spectrum*, 14(3), 154-159.
- David, M. , & Sutton C.D. (2004). *Social Research the basics*. London: SAGE Publications.
- de Nijs, M. (2013). Complementary and alternative medicine: The history, current prevalence and future projections. Retrieved 5 July, 2013 from [digital commons.liberty.edu](http://digitalcommons.liberty.edu)
- Dias, S., Gama, A., Rocha, C. (2010). Immigrant women's perceptions and experiences of health care services: Insights from a focus group study. *Journal of Public Health*, 18(5), 489-496.
- DiSano, D. (2009). Holistic mental health – Revised: A comparison of traditional and alternative treatments for mental disorders. Retrieved 18 January, 2013 from <http://books.google.co.nz>

- Dixit, S., Mishra, M., & Sharma, A. K. (2008). Conceptualisation of health and illness: A study of social representations among Bondos of Orissa. *Psychology and Developing Societies, 20*(1), 1-26.
- Doran, E., Robertson, J., & Henry, D. (2005). Moral hazard and prescription medicine use in Australia - the patient perspective. *Social Science & Medicine, 60*(7), 1437-1443.
- Dupuis, A., & Thorns, D. C. (1996). Meanings of home for older home owners. *Housing Studies, 11*(4), 485.
- Dutta, M. J. (2008). *Communicating health: A culture centred approach*. Polity Press, Cambridge: UK
- Dyck, I., Kontos, P., Angus, J., & McKeever, P. (2005). The home as a site for long term care: Meanings and management of bodies and spaces. *Health and Place, 11*(2), 173-185.
- Easthope, H. (2004). A place called home. *Housing, Theory and Society, 21*(3), 128-138.
- Easterford, K., Clough, P., Comish, S., Lawton, L., & Duncan, S. (2005). The use of complementary and alternative practitioners in a cohort of patients with epilepsy. *Epilepsy and Behaviour, 6*(1), 59-62.
- Eisenberg, D. M. (1997). Advising patients who seek alternative medical therapies. *Annals of Internal Medicine, 127*(1), 61-69.
- Elliot, H. (1997). *The use of diaries in sociological research on health experience*. Retrieved 28 July, 2013, from <http://www.socresonline.org.uk>
- Faist, T. (2000). Transnationalization in international migration: implications for the study of citizenship and culture. *Journal of Ethnic and Racial Studies, 23*(2), 189-222.
- Faist, T. (2006). *The transnational social spaces of migrants*. Retrieved 30, October, 2012, from <http://www.uni-bielefeld.de>
- Feng, C. (2002). Merging Chinese traditional medicine into American health system. *Journal of Young Investigators, 6*(5).
- Finau, S. A. (1994). Traditional health practices in a modern Pacific: A dilemma or blessing? *New Zealand Medical Journal, 107*, 14-17.
- Fredriksen-Goldsen, K. I., Shiu, C.S., Starks, H., Chen, W. T., Simoni, J., Kim, H. J., Pearson, C., Zhao, H., & Zhang, F. (2011). You must take the medications for you

- and for me: Family caregivers promoting HIV medication adherence in China. *AIDS Patient Care STDS*, 25(12), 735–741.
- Frosch, D. L., Krueger, P. M., Hornik, R. C., Cronholm, P. F., & Barg, P. K. (2007). Creating demand for prescription drugs: A content analysis of television direct-to-consumer advertising. *Annals of Family Medicine*, 5(1), 6-13.
- Fuller, J. H., & Toon, P. D. (1988). *Medical practice in a multicultural society*. Heinemann. London
- Fugh-Berman, A. (2000). Herb-drug interaction: Review. *The Lancet*, 355, 134-138.
- Garfinkel, H. (1967). *Studies in ethnomethodology*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Gesler, W. (1992). Therapeutic landscapes: Medical issues in light of the new cultural geography. *Social Science and Medicine*, 34, 735–746.
- Gieryn, T. (2000). A space for place in sociology. *Annual Review of Sociology*, 26, 463–496.
- Gleeson, B. & Kearns, R. A. (2001). Remoralizing landscapes of care. *Environment and Planning D: Society and Space* 19, 61–80.
- Goldsworthy, R. C., Schwartz, N. C., & Mayhorn, C. B. (2008). Beyond abuse and Exposure: Framing the impact of prescription-medication sharing. *American Journal of Public Health*, 98(6), 1115-1121.
- Goulding, E., Murphy, M., & Blasi, Z. D. (2011). Sharing and Borrowing prescription medication: A survey of Irish College students. *Irish Journal of Medical Science*, 180, 687-690.
- Gray, D. E. (2004). *Doing research in the real world*. London: SAGE Publications.
- Green, G., H. Bradby, A., Chan & M. Lee. 2006. “We are not completely Westernised”: Dual medical systems and pathways to health care among Chinese migrant women in England. *Social Science and Medicine*, 62, 1498-1507.
- Green, A. E., Power, M. R., & Jang, D. M. (2008). Trans-Tasman migration: New Zealanders’ explanations for their move. *New Zealand Geographer*, 64, 34-45.
- Gweshe, E. (2013, March, 13). Saving lives through herbal medicine. *The Zimbabwean*. Retrieved from <http://www.thezimbabwean.co>.
- Habermas, J. (1976). *Communication and the evolution of society*. London, UK: Polity Press.

- Harper, D. (2002). Talking about pictures: a case for photoelicitation. *Visual Studies*, 17, 13-26.
- Harrison, B. (2002) Photographic visions and narrative inquiry. *Narrative Inquiry*, 12(1), 87–111.
- Hathaway, A. D., & Atkinson, M. (2003). Active interview tactics in research on public deviants: Exploring the two-cop personas. *Field Methods*, 15, 161-185.
- Helman, C. G. (2001). *Culture, health and illness*. London: Heinemann
- Helman, C. (2007). *Culture, health and illness*. (5th ed.). London: Hodder Arnold Publishers.
- Henderson, S., & Petersen, A. (Eds.) (2002). *Consuming health*. London: Routledge.
- Hendrikse, E. P. (1995). *Migration and culture: The role of Samoan churches in contemporary Aotearoa-New Zealand*. Retrieved 23 October, 2012 from <http://hdl.handle.net>
- Hendrix, L. R. (1999). *Health and care of American and Alaska Native Elders*. Retrieved 2 June, 2013 from <http://www.stanford.edu>
- Hewson, C., Shen, C. C., Stachan, C., & Norris, P. (2013). Personal medicines storage New Zealand. *Journal of Primary Health Care*, 5(2), 146-150.
- Hillanbrand, E. (2006). Improving traditional-conventional medicine collaboration: perspectives from Cameroonian traditional practitioners. *Nordic Journal of African Studies*, 15(1), 1–15.
- Hjelm, K & Mufunda, E. (2010). Zimbabwean diabetics' beliefs about health and illness: an interview study. *BMC International Health & Human Rights*, 10(7).
- Ho, D.Y.F. (1986). Chinese patterns of socialisation: A critical review. In M. H. Bond (Ed.), *The psychology of the Chinese people*. New York: Oxford University Press.
- Ho, D. (1996). Filial piety and its psychological consequences. In M. H. Bond (Ed.), *The handbook of Chinese psychology*. Hong Kong, China: Oxyford University Press.
- Hodgetts, D. & Chamberlain, K. (2007) Special issue: Media and health. *Journal of Health Psychology* 11(2), 171–174.
- Hodgetts, D., Chamberlain, K., Gabe, J., Dew, K., Radley, A., Madden, H., Norris, P., & Nikora, L. W. (2010). Emplacement and everyday use of medications in domestic dwellings. *Health & Place*, 17(1), 353-360.
- Hodgetts, D., Chamberlain, K., Gabe, J., Dew, K., Radley, A., Madden, H., & Nikora, L. W. (2011). Emplacement and everyday use of medications in domestic dwellings. *Health & Place*, 17(1), 353-360.

- Hodgetts, D., Nikora L.W., & Rua, M. (2011a) Maori men and the indirect procurement and sharing of prescription medications. *AlterNative* 7(2), 152-162.
- Hodgetts, D., Nikora, L. W., & Li, W. (2012) *Migrating medications: medication use and the transnationalization of familial healthcare practices*. Presentations from the International Interdisciplinary Social Inquiry Conference. International Interdisciplinary Social Inquiry Conference, 17-21 June 2012, Bursa, Turkey
- Hodgetts, D., Chamberlain, K., Gabe, J., Dew, K., Radley, A., Madden, H., Norris, P., & Nikora, L. (2011b). Emplacement and everyday use of medications in domestic dwellings. *Health and Place* 17(1), 353-360.
- Holroyd, A., Vegsund, B., Stephenson, P. H., & Beuthin, R. E. (2012). Medication use in the context of everyday living as understood by seniors. *International Journal of Qualitative Studies on Health and Well-Being*, 7(10).
- Hopton, K. (2006). Cultural awareness in occupational therapy: the Chinese example. *British Journal of Occupational Therapy*, 69(8), 386-9.
- Izzo, A. A., & Ernst, E. (2009). Interactions between herbal medicines and prescribed drugs: an updated systematic review. *Drugs*, 69(13), 1777-98.
- Hu, Z., Yang, X., Ho, P. C., Chan, S. Y., Heng, P. W., Chan, E., Duan, W., Koh, H. L., & Zhou, S. (2005). Herb-drug interaction: A literature review. *Drugs*, 65(9), 1239-1282.
- Huang, Y. (2013). *Self-management of Type 2 diabetes among Mainland Chinese immigrants in Canada: A qualitative study*. Retrieved 05 June, 2013 from <https://dspace.lib.uoguelph.ca>
- International Organisation for Migration. (2010). *Facts and Figures*. Retrieved 23 August, 2012 from [www.iom.int](http://www.iom.int)
- International Organisation for Migration. (2010). *Migration and transnationalism: Opportunities and challenges*. Retrieved 23 August, 2012 from <http://www.iom.int>
- International Organisation for Migration. (2011). *Glossary on Migration: International Migration Law*. Retrieved 18 October, 2012 from <http://www.iom.int>
- Jana, B. (2006). *Community medicine: Preventive and social*. B. Jain Publishers (P) Ltd. New Delhi. India.
- Jiang, S., & Quave, C. L. (2013). A comparison of traditional and health strategies among Taiwanese and Chinese immigrants in Atlanta, Georgia, USA. *Journal of Ethnobiology and Ethnomedicine*, 9(61).

- Joyce, A. M. (2010). Return migration from England to Ireland: The impact of accent on feelings of belonging. *Socheolas: Limerick Student Journal of Sociology* 2(2), 58-74.
- Kajornboon, A. B. (2004). *Creating useful knowledge: A case study of Policy Development in E-Learning at Chulalongkorn University Language Institute*. Dissertation. University of Melbourne: Australia.
- Kandelman, D., Arpin, S., Baez, R. J. & Petersen, P. E. (2012). Oral health care systems in developing and developed countries. *Periodontology*, 60(1), 98-109.
- Kazembe, T. (2007). Traditional medicine in Zimbabwe. *The Rose+Croix Journal*, 4, 55–72.
- Kazembe, T. (2008). Some cultural aspects of traditional medicine, traditional religion, and gender in Zimbabwe. *The Rose+Croix Journal*, 5, 36-49.
- Kershen, A. (Ed.). (2002). *Food in the migrant experience*. Aldershot: Ashgate
- Kessler, R. C., Davis, R. B., Foster, D. F., Van Rompay, M. I., Walters, E. E., Wilkey, S. A., Kaptchuk, T. J., & Elsenburg, D. M. (2001). Prescription medication borrowing and sharing among women of productive age. *Journal of Women's Health*, 17(7). *Annals of Internal Medicine*, 135(4), 262-268.
- Kim, B. S. K., Atkinson, D. R., & Umemoto, D. (2001). Asian cultural values and the counselling process: Current knowledge and directions for future research. *The Counselling Psychologist*, 29, 570-603.
- Kincheloe, J. (2005). On to the next level: Continuing the conceptualization of the bricolage. *Qualitative Inquiry*, 11(3), 323-350.
- Kleinman, A. (2004). Culture and depression. *Journal of Medicine*, 10, 951-953.
- Klitzing, S. W. (2004). Women living in a homeless shelter: Stress, coping and leisure. *Journal of Leisure Research*, 36(4), 483.
- Koenig, H. G. (2003). Religion, spirituality and health: an American physician's response. *Med J Aust*, 178, 51-52.
- Kong, H. & Hsieh, E. (2012). The social meanings of Traditional Chinese Medicine: Elderly Chinese migrants' health practices in the US. *Journal of Immigrant and Minority Health*, 14(5), 841-9.
- Krause, K. (2008a). Transnational therapy networks among Ghanaians in London. *Journal of Ethnic and Migration studies*, 34 (2), 235-251.
- Krause, K. (n.d.). Pharmaceutical potentials: Praying over medications in Pentecostal healing. Retrieved 8 August, 2013 from <http://books.google.co.nz>

- Kunene, M. (1981). *Anthem of the decades: A Zulu epic*. Heinemann, London.
- Kyker, J. W. (2011). *A person among others: Music, morality, and postcolonial politics in the songs of Oliver Mtukudzi*. Retrieved 7 September, 2012, from <http://repository.upenn.edu>
- Lee, J. Y. N., Kearns, R. & Friesen W. (2010). Seeking affective health care: Korean immigrants' use of homeland medical services. *Health and Place*, 16(1), 108-115.
- Lefebvre, H. & Nicholson-Smith, D. (2007). *The production of space*. Malden, MA: Blackwell.
- Legard, R., Keegan, J., & Ward, K. (2003). In-depth interviews. In J. Ritchie & J. Lewis (Eds.), *Qualitative research practice: A guide for social research students and researchers* (pp. 138-169). Thousand Oaks, CA: Sage.
- Leininger, M. M. (2002). Culture care theory: A major contribution to advance transcultural nursing knowledge and practices. *Journal of Transcultural Nursing*, 13, 189-192.
- Li, W. W. & Chong, M. D. (2012). Transnationalism, social wellbeing and older Chinese migrants. *Graduate Journal of Asia-Pacific Studies*, 8(1) 29-44.
- Li, W. W., Hodgetts, D., & Ho, E. (2010). Gardens, transition and identity reconstruction among older Chinese immigrants to New Zealand. *Journal of Health Psychology*, 15(5), 786-796.
- Lin, K. (2000). *Chinese food cultural profile*. Ethnomed: Washington: 6. (02706) Retrieved 3 June, 2013 from <http://ethnomed.org>
- Liu, X. (2004). Han. In C.R. Ember & M. Ember (Eds.), *Encyclopedia of medical anthropology: Health and illness in the world's cultures* (pp. 703–717). New York: Kluwer Academic/Plenum Publishers
- Ma, G. X. (1999). Between two worlds: The use of traditional and western health services by Chinese immigrants. *Journal of Community Health*, 24(6), 421-437.
- Maastricht University. (2012). *Transnational migration*. Retrieved 30, October, 2012 from <http://www.maastrichtuniversity.nl>
- Machinga, M. (2011). Religion, health and healing in the traditional Shona culture of Zimbabwe. *Practical Matters*, 4, 1-8.
- Madge, C. (1998). Therapeutic landscapes of the Jola, The Gambia, West Africa. *Health & Place*, 4(4), 293-311.
- Mallett, S. (2004). Understanding home: A critical review of the literature. *The Sociological Review*, 52(1), 62-89.

- McElroy, A. & Jezewski, M.A. (2001). Cultural variation in the experience of health and illness. In G.L. Albrecht, R. Fitzpatrick, & S.C. Scrimshaw (Eds.), *The handbook of social studies in health and medicine* (pp. 191–209). London: Sage.
- McGrath, B. B. (1999). Swimming from island to island: Healing practice in Tonga. *Medical Anthropology Quarterly, New Series, Vol. 13*(4), 483-505.
- McIlwaine, C., Cock, J. C., & Linneker, B. (2011). *The Latin American community in London*. London: Trust for London.
- McLaughlin, L. & Braun, K. (1998). Asian and Pacific Islander care decision-making. *Health and Social Work, 23* (2), 116-126.
- Messias, D. K. H. (2002). Transnational health resources, practices and perspectives: Brazilian immigrant women's narratives. *Journal of Immigrant Health, 4*(4), 183 – 200.
- Meth, P. (2003). Entries and omissions: Using solicited diaries in geographical research. *Area, 35*(2), 195-205.
- Meyer, S., Eddleston, M., Bailey, B., Desel, H., Gottschling, S., & Gortner, L. (2007). Unintentional household poisoning in children. *Klin P ä diatr, 219*(5), 254 – 270
- Ministry of Health and Child Welfare (n.d.). *The National Health Strategy for Zimbabwe 2009 – 2013*. Zimbabwe, Southern Africa: Author.
- Morton, H. (1996). *Becoming Tongan: An ethnography of childhood* (1<sup>st</sup> ed.). Honolulu: University of Hawaii Press.
- Morton, H. (1998). Creating their own culture: Diasporic Tongans. *The Contemporary Pacific, 10*(1), 1-30.
- Moynihan, R., Bero, L., Ross-Degnan, D., Henry, D., Lee, K., Watkins, J., & Soumerai, S. (1999). *Media coverage of medicines: good information or misleading hype?* Retrieved from <http://gateway.nlm.nih.gov>
- Mullan, J., Ellis, J., Worsley, A., & Yeo, W. (2010). *Prescription medication hoarding, borrowing and sharing among elderly Illawarra residents*. Retrieved 2 June, 2013 from [ro.uow.edu.au](http://ro.uow.edu.au)
- Nayak, M. G., Sharada, & Geroge, A. (2012). Social-cultural perspectives on health and illness. *Nitte University Journal of Health Science, 2*(3), 61-67.
- National Aboriginal Health Organization. (2006). Fact Sheet: Cultural safety. *National Aboriginal Health Organization*. Retrieved 18 August, 2012, from [www.naho.ca](http://www.naho.ca)
- National Prescribing Service Limited (2009). *Medication safety in the community: A review of the literature*. Retrieved 15 February, 2013 from <http://www.nps.org.au>

- New Zealand Nurses Organisation. (1995). Cultural safety in nursing education. In: *Policy and Standards on Nursing Education*. Wellington: New Zealand Nurses Organisation.
- Ngubane, H. (1977). *Body and mind in Zulu medicine: An ethnography of health and disease in Nyuswa-Zulu thought and practice*. London: Academic Press.
- Nikora, L. W., Hodgetts, D., Carlson, T., & Rua, M. (2011). Māori and medications: What happens with the pills go home? *AlterNative: An International Journal of Indigenous Peoples*, 7(2), 87-99.
- North, N. (2008). *Immigrant doctors practising non-Western medicine: a study of self-employed immigrant Chinese and Indian doctors practising non-biomedical traditions of medicine*. Palmerston North, NZ: New Settlers Programme, Massey University.
- Nsamenang, A. B., & Tshombe, T. M. S. (2011). *Handbook of African Educational theories and practices: A generative teacher education curriculum*. Retrieved 7 September, 2012, from <http://books.google.co.nz>
- Oluwabamide, A. J., & J. O. Umoh, J. O. (2011). An Assessment of the Relevance of Religion to Health Care Delivery in Nigeria: Case of Akwa Ibom State. *Journal of Sociology and Social Anthropology*, 2(1), 47-52.
- Paediatric Special Interest Group. (1998). *Standards and Guidelines for Physiotherapy Practice in Paediatrics in New Zealand*. New Zealand Society of Physiotherapists Inc. <http://www.myson.co.nz>
- Palen, L., & Aalokke, S. (n.d.). *Of pill boxes and piona benches: "Home-made" methods for managing medication*. Retrieved 24 October, 2012 from <https://www.cs.colorado.edu>
- Papps, E., & Ramsden, I. (1996). Cultural safety in nursing: the New Zealand experience. *International Journal for Quality in Health Care* 8(5), 491–7.
- Parsons, C. (1985). *Healing practices in the South Pacific*. Honolulu: University of Hawaii Press.
- Pearce, C. (1990). Tsika, human and the moral education of primary school children. *Zambezia*, XVII (11), 145-160.
- Perkins, H. C., Thorns, D. C. Winstanley, A., & Newton, B. M. (2002). The study of 'Home' from a social scientific perspective: An annotated bibliography second edition. Retrieved 25 March, 2013 from <http://www.ssrc.canterbury.ac.nz>

- Perruchoud, R., & Redpath-Cross, J. (2011) (Eds). *Glossary on migration*. International Migration Law No. 25. Retrieved 12, September, 2012 from <http://www.west-info.eu> (Publishers International Organisation on Migration, Geneva Switzerland).
- Petersen, E. E., Rasmussen, S. A., Daniel, K. L., Yasdy, M. M., & Honein, M. A. (2008). Prescription medication borrowing and sharing among women of productive age. *Journal of Women's Health, 17*(7), 1073-1080.
- Petridou, E. (2001). *The taste of home*. In D. Miller (Ed.), *Home possessions. Material culture behind closed doors* (pp. 87-104). Oxford: Berg.
- PHARMAC, (2007). PHARMAC Annual Review 2006. Wellington: PHARMAC.
- Philipp, A. & Ho, E. (2010). Migration, home and belonging: South African migrant women in Hamilton, New Zealand. *New Zealand Population Review, 26*, 81-101.
- Portes, A. (1997). Immigration theory for a new century: Some problems and opportunities. *International Migration Review, 31*(4), 799-852.
- Pound, P., Britten, N., Morgan, M., Yardley, L., Pope, C., Daker-White, G., et al. (2005). Resisting medicines: a synthesis of qualitative studies of medicine taking. *Social Science & Medicine, 61*(1), 133-155.
- Pratt, M. L. (1999). *Arts of the Contact Zone, Ways of Reading*. (5<sup>th</sup> ed.) (Eds.) David Bartholomae and Anthony Petrofsky (New York: Bedford/St. Martin's).
- Prout, A. (1996). Actor – network theory, technology and medical sociology: An illustrative analysis of the metered dose inhaler. *Sociology of Health and Illness 18*(2), 198-219.
- Radley, A. & Taylor, D. (2003). Images of recovery: A photo-elicitation study on the hospital ward. *Qualitative Health Research, 13*(1), 77-99.
- Rao, D. (2006). Choice of medicine and hierarchy of resort to different health alternatives among Asian Indian migrants in a metropolitan city in the USA. *Ethnicity and Health, 11*(2), 153-167.
- Rosenblum, R., & Tichenor, D. J. (Eds.). (2012). *The Oxford handbook of the politics of international migration*. Retrieved 18 January, 2013 from <http://books.google.co.nz>
- Ryder, A. G., Yang, J., & Heini, S. (2002). Somatisation vs psychologisation of emotional distress: A paradigmatic example for cultural psychopathology. In W. J. Lonner, D. L. Dinnel, S. A. Hayes, & D. N. Sattler (Eds.), *Online reading in psychology and culture* (Unit 10, Chapter 2). Bellingham, WA: Center for Cross-Cultural Research, Western Washington University.

- Sahlberg-Blom, E., Ternestedt, B. M., & Johansson, J. E. (1998). The last month of life: Continuity care site and place of death. *Palliative Medicine* 12(4), 287-296.
- Saliman, G. (2010). The prayer prescription. *The Permanente Journal*, 14(1), 41-45.
- Saunders, P., & Williams, P. (1988). The constitution of the home: Towards a research agenda. *Housing Studies*, 3(2), 81-93.
- Schwartz, B. (1967). The Social Psychology of the gift. *American Journal of Sociology* 71, 1-11.
- Shaw, A. (2008). *Direct-to-consumer-advertising of pharmaceuticals: The DTC advertising debate*. Proquest
- Shoemaker, S. J., & de Oliveira, D. R. (2008). Understanding the meaning of medications for patients: The medication experience. *Pharmacy World and Science*, 30(1), 86-91.
- Simmel, G. (1996). Faithfulness and gratitude. In Komter, A. E. (Ed.). *Gift: An interdisciplinary perspective*. Amsterdam. Amsterdam University Press.
- Sindiga, I. (1995). *Traditional medicine in Africa*. East African Publishing House, Nairobi, Kenya.
- Small, C. A. (1997). *Voyages: from Tongan villages to American suburbs*. Cornell University.
- Sobo, E. J., & Loustaunau, M. O. (2010). *The cultural context of health, illness and medicine*. (2<sup>nd</sup> ed.). California. USA. Greenwood Publishing Group.
- Sointu, E. (2006). The search for wellbeing in alternative and complementary health practices. *Sociology of Health & Illness*, 28(3), 330-349.
- Sorensen, L., Stokes, J., Purdie, D., Woodward, M., & Roberts, M. (2006). Medication management at home: medication risk factor prevalence and inter-relationships. *Journal of Clinical Pharmacy and Therapeutics* 31, 485-491.
- Srivastava, R. (2007). *The healthcare professional's guide to clinical cultural competence*. Toronto: Mosby Elsevier.
- Suurmond, E. (2010). Good motherhood and the need for a transnational perspective. *Journal of Social Intervention* 19(4).
- Swartz, L. (1998). *Culture and mental health: A South African view*. Cape Town: Oxford University Press.
- Thomas, V. (2009). Health care in developing countries: Need for finance, education or both? *Calicut Medical Journal*, 7(1), e1.
- Tom, L.A.S.H. (n.d.). *Health and healthcare for Chinese-American elders*. Retrieved 10 September, 2012, from <http://www.stanford.edu>

- Trujano, C.Y.A. (2008). *Indigenous routes: A framework for understanding indigenous migration*. Retrieved 8, September, 2012 from <http://www.iom.int>
- Tsai, W. (2011). The identity of the Chinese in Belgrade: A national question. Independent Study Project (IPS) Collection. Retrieved 20 August, 2012, from <http://digitalcollections.sit.edu>
- United Nations, (2004). World Economics and Social Survey 2004, International Migration. Department of Economic and Social Affairs, United Nations, New York.
- van Andel, T., & Carvalheiro, L. G. (2013). Why urban citizens in developing countries use traditional medicines: The case of Suriname. *Evidence-Based Complementary and Alternative Medicine*. doi: 10.1155/2013/687197
- van Andel, T., and Westers, P. (2010). Why Surinamese migrants in the Netherlands continue to use medicinal herbs from their home country. *Journal of Ethnopharmacology*, 127(3), 694-701.
- van der Geest, S., Whyte, S. R., & Hardon, A. (1996). The anthropology of pharmaceutical: A biological approach. *Annual Review of Anthropology* 25, 153 – 178.
- van der Geest, S., & Hardon, A. (2006). Social and cultural efficacies of medicines: Complications for antiretroviral therapy. *Journal of Ethnobiology and Ethnomedicine*, 2:48 doi: 10.1186/1746-4269-2-48.
- Vaughn, L. M., Jacquez, F. & Baker, R.C. (2009). Cultural health attributions, beliefs and practices: effects on healthcare and medical education. *The Open Medical Education Journal*, 2, 64-74.
- Vertovec, S. (1999). Conceiving and researching transnationalism. *Ethnic & Racial Studies*, 22(2), 445-462.
- Waldron, I. R.G. (2012). Out from the margins: Centring African-centred knowledge in psychological discourse. *The Australian Community Psychologist*, 24(1), 38-51.
- Wang, Y. (2011). *New perspectives on Chinese immigrants' experiences under the New Zealand healthcare system: A qualitative descriptive study*. Retrieved 24 June, 2012 from <http://aut.researchgateway.ac.nz>
- Williams, N., Robertson, J., McGorm, K., Roberts, K., & Elton, R. (2009). What factors affect medication-storage practice among patients on methadone maintenance treatment? *International Journal of Pharmacy Practice*, 17(3), 165-169.
- Wheeler, J. (2011). Is a picture worth a thousand words? Using mind maps to facilitate participant recall in qualitative research. *The Qualitative Report*, 16(2), 509-522.

- Whyte, S. R., van der Geest, S., & Hardon, A. (2002). *Social Lives of Medicines*. Cambridge: Cambridge University Press.
- Wong, H. C. G. (2008). Side effect of CAM/Chinese herbal medicines. *BCMJ*, 50(2), 58.
- Wu, E. S. (2013). *Traditional Chinese Medicine in the United States: In search of spiritual meaning and ultimate health*. Retrieved 13 October, 2013 from <http://books.google.co.nz>
- Xu, J. & Yang, Y. (2009). Traditional Chinese Medicine in the Chinese health care system. *Health Policy*, 90(2-3), 133-9.
- Yanchar, S. C., Gantt, E. E., & Clay, S. L. (2005). On the nature of a critical methodology. *Theory & Psychology*, 15(1), 27–50.
- Yescas, C. (2010). *Hidden in plain sight: Indigenous migrants, their movements and their challenges*. Retrieved 15 December, 2012 from <http://www.migrationinformation.org>
- Zhang, J. J., & Verhoef, M. J. (2002). Illness management strategies among Chinese immigrants living with arthritis. *Social Science & Medicine*, 55, 1975-1802.
- Zhang, Y., Deng, Y., Chen, Y., Chuang, P. Y., & He, J. C. (2013). Therapeutic use of traditional Chinese herbal medications for chronic diseases. *Kidney International*, doi:10.1038/ki.2013.276
- Zlotnik, H. (1998). International Migration 1965-96: An Overview. *Population and Development Review*, 24(3), 429-468.

## Appendices

**Appendix A: Medications in Everyday Life Consent Form**



THE UNIVERSITY OF  
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*Te Whare Wananga o Waikato*

Research reference:

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**Medications in everyday life**

**Consent Form**

**General Medications Diary**

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree to participate in this study under the conditions set out in the Information Sheet

Signature: \_\_\_\_\_ Date: \_\_\_\_\_ Full

Name – printed \_\_\_\_\_

## Appendix B: Photo Elicitation Information Sheet



Research reference:

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THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Wāikato*

### Photo Elicitation Information Sheet

What is this part of the research about?

You have already agreed to be the person in your household who will take part in the photo project for the research. In this part of the research we would like you to take photos of anything about medications – photos that show us how you see “the world of medications”. These photographs may be about any aspect of medications that you want to show – we do not have any specific expectations about the nature or type of photographs you might take, only that they will involve medications in some way.

The photographs can be taken on your own digital camera or we can give you a disposable camera. You should take the photographs over the next two weeks. Please note that you may take photos of people in public places, but you must obtain their consent to take photographs of them when they are not in public places. Once you have taken around 15-25 photographs, please get in touch with me, [Local Researcher], and let me know you have completed the project. I will then make a time that is convenient to discuss your photos with me. This discussion will cover the meanings of the photos and what you consider they show about medications. It will take us about one hour and will be recorded and transcribed for analysis.

What are your rights if you decide to participate?

If the photographs you take involve identifiable people we will mask their features to ensure that they cannot be identified. The information you provide during the interview will be kept completely confidential, and any personal or identifying features will be altered to ensure anonymity. All the data will be stored in a secure place, and no one other than the researchers will have access to it without your consent. Your name will not be used to identify the materials or in any reports that come out of the research. The materials collected in the study will be

used in the analysis for the research, and brief extracts from the interview and some photographs (with identifying features masked) may be used in publications and presentations arising from the research.

You should also know that you have the following rights:

- You are under no obligation to take part in this project.
- You can ask questions about the research before agreeing to take part, and about the project at any time during the study.
- You can decline to talk about any issues during our discussion.
- You can ask for the recorder to be turned off at any time during the discussion.
- You may withdraw from the project up to two weeks after our discussion. If you do, the recording of our discussion and your photographs will be destroyed.

**How can you contact us?**

Dr Linda Waimarie Nikora

Maori & Psychology Research Unit

Faculty of Arts and Social Sciences

University of Waikato

Ph 07 856 2889 ext 8200

Email: [psyc2046@waikato.ac.nz](mailto:psyc2046@waikato.ac.nz)

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Email: [K.Chamberlain@massey.ac.nz](mailto:K.Chamberlain@massey.ac.nz)

Mrs Helen Madden

School of Psychology

Massey University

Private Bag 102904

North Shore Mail Centre

Ph: 09 414 0800 ext 41220

Email: [H.Madden@massey.ac.nz](mailto:H.Madden@massey.ac.nz)

If I have any concerns about this project, I may contact the convenor of the Research and Ethics Committee (Dr Robert Isler, phone: 838 4466 ext. 8401, e-mail [r.isler@waikato.ac.nz](mailto:r.isler@waikato.ac.nz))

**Appendix C: Medications in Everyday Life Consent Form**



THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*

Research reference:

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**Medications in everyday life**

**Consent Form**

**Medication Use Diary**

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree to participate in this study under the conditions set out in the Information Sheet

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Full Name – printed \_\_\_\_\_

Date: \_\_\_\_\_

Signature:  
\_\_\_\_\_

Full name (printed):  
\_\_\_\_\_

Which \$100 voucher would you like to be sent to you (please tick):

Pak 'n' Save  Countdown  Foodtown  Warehouse  Petrol voucher

Would you like to receive a summary of the results? Yes  No

Name:  
\_\_\_\_\_

Email address:  
\_\_\_\_\_

**or**

Postal Address:

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**Appendix D: Medications in everyday life - Household Data Sheet**



Research reference:

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THE UNIVERSITY OF  
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*Te Whare Wānanga o Waikato*

**Medications in everyday life**

**Household data sheet**

Name	Age (years)	Gender	Ethnicity	Occupation

## Appendix E: Medications in everyday life - Household researcher checklist



THE UNIVERSITY OF  
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*Te Whare Wānanga o Waikato*

Research reference:

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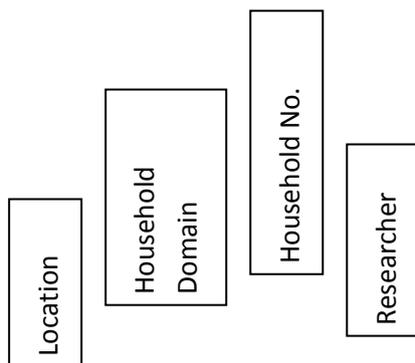
### Medications in everyday life

### Household researcher checklist

#### To do prior to data collection

Completed

Assigned research reference no. featuring location, household domain, no. of household and researcher (see below), and entered reference on this checklist and on consent forms



**Key to household domain**

AK	HCI	1	KC
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- WN    HAM    1-5    HCI    – chronic illness  
DN    HDS          HAM    – alternative medications  
HM    HWC          HDS    – dietary supplements  
                   HWC    – household with children

**ALL** name and contact details fields on information sheets replaced and printed on letterhead

**Materials to take**

- multiple copies of information sheets
- copy of household consent form (print double-sided)
- copy of household data sheet
- graph paper
- digital camera
- digital recorder
- one copy of each task information sheet
- one copy of each task consent form
- disposable camera
- diary x 2

**To do during data collection**

- Copy of the information sheet given to each household member
- Details of information sheet explained to participants
- Participant questions sought and answered
- Discussed consent form contents with participants re using data beyond project
- Participants completed consent form and household data sheet

**START DISCUSSION**

(Digitally record household identifier, data domain and researcher name prior to discussion commencing)

• Plan of house identifying medications location sought from household members

• Photos of medications locations taken and linked to the plan

• Participants asked to get out their medications and related paraphenalia

• Participants prompted to discuss all items listed on prompt sheet

• Assigned sub tasks to household members and given them relevant information sheets:

- Medication use diary

- Photo elicitation

- General medications diary

• Organised a future meeting with individuals carrying out sub-tasks and for household exit discussion:

- Medication use diary Day: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

- Photo elicitation Day: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

- General medications diary Day: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

- Household Exit discussion Day: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**To do after data collection**

• Household plan and consent forms forwarded to Helen

• All discussion and interview recordings and digital photos from household uploaded onto web OR downloaded to CD and sent to Helen

## Appendix F: Medications in everyday life General Medications Diary Information

### Sheet



THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Wāikato*

Research reference:

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### Medications in everyday life

#### General Medications Diary Information Sheet

##### What is this part of the research about?

You have already agreed to be the person in your household who will take part in keeping a general medications diary for the research. In this part of the research we would like you to keep a diary recording any time that medications of any sort come to attention in any way (while watching television, reading magazines, shopping, and so on – wherever medications come to attention). This can include medications of all types – prescription medicines, over-the-counter medicines, alternative medicines, dietary supplements, health care remedies. Also, at the end of each day, we would like you to think about one episode when medications came to your attention that day and write brief notes or comments on that episode. We will give you a diary to record these daily medications episodes and you can use this to write your brief daily comment if you wish. Alternatively you could keep your comments on an audio recording or typed onto your computer, as you chose. This diary will then be the focus for a personal interview at the end of the week, where the meanings of your diary entries will be discussed. The interview will be conducted by [Local Researcher], will take about one hour, and will be recorded and transcribed for analysis.

##### What are your rights if you decide to participate?

The information you provide in the diary and the interview will be kept completely confidential, and any personal or identifying features will be altered to ensure anonymity. All the data will be stored in a secure place, and no one other than the researchers will have access to it without your consent. Your name will not be used to identify the materials or in any reports that come out of the research. The materials collected in the study will be used in the analysis for the research, and brief extracts from the diary and interview may be used in publications and presentations arising from the research.

You should also know that you have the following rights:

- You are under no obligation to take part in this project.
- You can ask questions about the research before agreeing to take part, and about the project at any time during the study.
- You can decline to talk about any issues during our discussion.
- You can ask for the recorder to be turned off at any time during the discussion.
- You may withdraw from the project up to two weeks after our discussion. If you do, the recording of our discussion and your diary will be destroyed.

### **How can you contact us?**

Local researcher	Professor Kerry Chamberlain	Ms Helen Madden
Local researcher's address	School of Psychology Massey University Private Bag 102 904 North Shore Mail Centre Ph: 09 414 0800, extension 41226 Email: K.Chamberlain@massey.ac.nz	School of Psychology Massey University Private Bag 102 904 North Shore Mail Centre Ph: 09 414 0800, extension 41220 Email: H.Madden@massey.ac.nz

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application numbers 08/054 and 08/067. If you have any concerns about the conduct of this research, please contact Dr Denise Wilson, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x9070, email [humanethicsnorth@massey.ac.nz](mailto:humanethicsnorth@massey.ac.nz).

## **Appendix G: Topics for household discussions**

The following list of topics to be covered by the researcher during the initial household discussion:

- The meanings of medications (our primary focus)
- Personal medication use, including the use of alternative medications and supplements, and storage (who in the household takes medications, what medications are taken, where and how are they taken, what are they used for, where are they stored in the home)
- The flow of medications through the household and beyond (how the medications arrived, if and how medications move beyond the house, how are medications disposed of)
- What material objects in the home are related to medication use (e.g., first aid kits, glucose meters, asthma inhalers, storage containers)
- Availability of medications in society today
- Uses beyond the prescribed
- Medications beyond prescription (supplements, pharmacy only, OTC, alternative – include inhalers, topical creams)
- Issues of prevention/promotion/maintenance/cure (relation between)
- Morality – good/bad – Why? How?
- Risk – safety, adherence, responsibility
- Personal approach to medications (resisting/passive or active acceptance, etc)
- Relationships involving medications (sharing, caring, taking, nagging)
- Consumerism – DTC marketing/pharma/regulation, etc

## Appendix H: Photo Information Sheet



THE UNIVERSITY OF  
**WAIKATO**  
*Te Whare Wānanga o Waikato*

Research reference:

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## Medications in everyday life

### Photo Information Sheet

#### What is this part of the research about?

You have already agreed to be the person in your household who will take part in the photo project for the research. In this part of the research we would like you to take photos of anything about medications – photos that show us how you see “the world of medications”. These photographs may be about any aspect of medications that you want to show – we do not have any specific expectations about the nature or type of photographs you might take, only that they will involve medications in some way.

The photographs can be taken on your own digital camera or we can give you a disposable camera. You should take the photographs over the next two weeks. Please note that you may take photos of people in public places, but you must obtain their consent to take photographs of them when they are not in public places. Once you have taken around 15-25 photographs, please get in touch with me, [Local Researcher], and let me know you have completed the project. I will then make a time that is convenient to discuss your photos with me. This discussion will cover the meanings of the photos and what you consider they show about medications. It will take us about one hour and will be recorded and transcribed for analysis.

#### What are your rights if you decide to participate?

If the photographs you take involve identifiable people we will mask their features to ensure that they cannot be identified. The information you provide during the interview will be kept completely confidential, and any personal or identifying features will be altered to ensure anonymity. All the data will be stored in a secure place, and no one other than the researchers will have access to it without your consent. Your name will not be used to identify the materials or in any reports that come out of

the research. The materials collected in the study will be used in the analysis for the research, and brief extracts from the interview and some photographs (with identifying features masked) may be used in publications and presentations arising from the research.

You should also know that you have the following rights:

- You are under no obligation to take part in this project.
- You can ask questions about the research before agreeing to take part, and about the project at any time during the study.
- You can decline to talk about any issues during our discussion.
- You can ask for the recorder to be turned off at any time during the discussion.
- You may withdraw from the project up to two weeks after our discussion. If you do, the recording of our discussion and your photographs will be destroyed.

**How can you contact us?**

Local researcher	Professor Kerry Chamberlain	Ms Helen Madden
Local researcher's address	School of Psychology	School of Psychology
	Massey University	Massey University
	Private Bag 102 904	Private Bag 102 904
	North Shore Mail Centre	North Shore Mail Centre
	Ph: 09 414 0800, extension 41226	Ph: 09 414 0800, extension 41220
	Email: K.Chamberlain@massey.ac.nz	Email: H.Madden@massey.ac.nz

This project has been reviewed and approved by the Massey University Human Ethics Committee: Northern, Application numbers 08/054 and 08/067. If you have any concerns about the conduct of this research, please contact Dr Denise Wilson, Chair, Massey University Human Ethics Committee: Northern, telephone 09 414 0800 x9070, email [humanethicsnorth@massey.ac.nz](mailto:humanethicsnorth@massey.ac.nz).

# Appendix I: Example of a Household Mapping Exercise

