My Food My Medicine: The Culturally Determined Food Preference Study of Chinese and South-East Asian Adult Patients in New Zealand

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Abstract

Background: The Asian population in NZ is increasing rapidly with projections that Asians will become the second largest ethnic group in NZ. These increasing numbers create demand for appropriate healthcare services for people of Asian ethnicity. A major concern at present is that healthcare services, including foodservices provided in DHB hospitals are not always appropriate for Asian people. Currently, Health Partnerships NZ’s national nutritional standards for meals and menu standards for adult inpatients in public hospitals are under revision. As part of this process, the DHB Dietitians Leaders Group need information on Asian ethnic group’s experience and expectations of NZ hospital foodservices.

Aim: To understand the general eating habits of Chinese and Filipino adults residing in NZ, their food preferences when they are unwell in hospital and explore their expectations and experiences of NZ public hospital foodservices.

Methods: The exploratory study employed a 3-phase, mixed methods design to investigate the food preferences of these two ethnic groups. In phase 1, a literature review investigated food preferences, food habits and cultures of both ethnic groups. A subsequent exploratory survey was conducted to complement the scant literature on food preferences of Asians living in NZ. In phase 2, focus group interviews were conducted to identify the food habits of the general Asian adult population, investigate how their food habits change when they become unwell and explore their expectations and experiences of a NZ hospital foodservice. In phase 3, an in-patient hospital experience questionnaire, and expectation interview were conducted to investigate the hospital foodservice experiences and expectations of patients of both groups. Also, to identify the foodservice factors important to Chinese and Filipino patients.
**Results:** Upon migration to NZ, the diets of Chinese and Filipino adults showed some degree of acculturation, potentially influenced by the number of years lived in NZ and country of birth. When people of these ethnicities are in hospital, ethnic foods are preferred as they play an important role in enjoyment, comfort and recovery. Important foods to have in hospitals were fruits, vegetables, meat and poultry and fish. Currently, the public hospital menu has very few ethnic food options, of which many are not well accepted by patients of these ethnic groups. Despite this finding, the participants did not expect NZ public hospitals to provide ethnic foods.

**Conclusion:** This study found that NZ public hospital foodservices are not meeting the needs of Chinese and Filipino patients. The objectives set by the NZ Public Health and Disability Services Act 2000 and the Health Quality Safety Commission require DHBs to provide effective, high quality foodservice and improve experience of care to ensure the needs of all patients are met. Providing appropriate ethnic meals such as acceptable white rice in hospital would improve the hospital experience and the quality of care for these ethnicities. Despite the small sample size, the findings from this exploratory study provides considerable information to inform the Health Partnerships NZ’s National Nutritional Standards review.
This present study explores the food preferences of Chinese and South East Asian patients for the reviewing of the current hospital menu standards. This review aims to incorporate culturally appropriate food choices for this growing population group in New Zealand. Alongside this study, another Master of Dietetics student, Huda Shahir undertook a parallel study. The parallel study focused on the food preferences of Indian and South Asian patients in New Zealand.

Gillian Lum Wen Xuan (student researcher), a Master of Dietetics student at the University of Otago, conducted the current study under the supervision of Dr Penny Field, primary supervisor, Alexandra Chisholm, secondary supervisor and Roslyn Norrie, DHB advisor. The supervisors were responsible for the development of the project design. Ethical and other approvals were applied for by Dr Field, using study documentation developed by student researcher. This project began on September 4th, 2017 for a ten-week periods and then re-commenced February 1st to June 30th, 2018. Throughout this period, weekly Zoom meetings took place between the student researcher, supervisor and co-advisor to discuss project progression.

The student researcher was responsible for the following under supervision:

- Conducting a critical review of the literature exploring the traditional food habits and preferences of Chinese and Filipino adults
- Writing the research proposal
- Developing the food preferences survey with the other Masters of Dietetics student researcher undertaking the parallel project, publishing it online using the software Survey Monkey and disseminating it to potential participants (Phase 1)
- Developing and refining the focus group schedule (Phase 2)
• Developing and refining the questionnaire and interview schedules (Phase 3)
• Preparing the study information packs (participant information sheets, consent forms and study introductory letters) for Phase 2 and Phase 3
• Recruiting participants and conducting the two pilot tests and two focus groups (Phase 2)
• Assisting in the recruitment of participants for in-patient questionnaire and interview (Phase 3)
• Administration of the in-patient questionnaire and conducting the interview with participants
• Transcription and qualitative thematic analysis of the focus group discussions and in-patient interviews
• Collation and entry of questionnaire data
• Statistical analysis of data
• Writing and compiling of this thesis

Amy Liu (cultural advisor) assisted in the development of schedules for both focus groups and questionnaires, which were administered in Phase 2 and Phase 3. Roslyn Norrie (WDHB foodservice manager) assisted in the application for Waitemata DHB Research Locality Approval. Along with Theresa Stanbrook (WDHB dietitian), they facilitated liaison with DHB services.

The project was funded by the University of Otago Human Nutrition Department.
Acknowledgements

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**Grace Ryu and AHS**, thank you for your enthusiasm towards this study and your helpful. You have made my data collection phase in North Shore hospital so much easier and faster, and I am forever grateful.

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My Parents, thank you for putting me through University. I would not be where I am without your endless love and support.
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<td>Auckland Chinese Community Center</td>
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<tr>
<td>AHS</td>
<td>Asian Health Services</td>
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<td>BMI</td>
<td>Body Mass Index</td>
</tr>
<tr>
<td>DHB</td>
<td>District Health Boards</td>
</tr>
<tr>
<td>ESC</td>
<td>Elective Surgery Centre</td>
</tr>
<tr>
<td>HQSC</td>
<td>Health Quality &amp; Safety Commission</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>NCD</td>
<td>Non-communicable Disease</td>
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<tr>
<td>NSBMBC</td>
<td>North Shore Bethel Missionary Baptist Church</td>
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<tr>
<td>NSH</td>
<td>North Shore Hospital</td>
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<td>NZ</td>
<td>New Zealand</td>
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<td>OUSA</td>
<td>Otago University Student Associations</td>
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<td>SEA</td>
<td>South-east Asian</td>
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<tr>
<td>TCM</td>
<td>Traditional Chinese Medicine</td>
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<td>UoO</td>
<td>University of Otago</td>
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<tr>
<td>UO</td>
<td>University of Otago</td>
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<tr>
<td>USA</td>
<td>United States of America</td>
</tr>
<tr>
<td>WH</td>
<td>Waitakere Hospital</td>
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<tr>
<td>WDHB</td>
<td>Waitemata DHB</td>
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1. Introduction

The Asian population in New Zealand (NZ) is increasing rapidly with projections indicating that Asians will become the second largest ethnicity in NZ (1). These increasing numbers create demand for healthcare services appropriate for Asian ethnic groups. A major concern at present is that healthcare services provided in District Health Board (DHB) hospitals are not designed or delivered to meet the needs of these ethnicities. One factor influencing patients’ overall experience of hospitals is the meals provided (2). Provision of appropriate foods that will be consumed and enjoyed is known to be clinically important in aiding recovery (2). To know the menu items preferred by Asian people living in NZ requires understanding of their general eating habits upon migration and their food preferences when they become unwell. Currently, no other NZ study has investigated the general eating habits and food preferences of Asian ethnicities when they are unwell and in hospital. Although some overseas research has been conducted, these studies are not representative of the current NZ context and are out of date (3-10). As a result, NZ DHBs have very limited data regarding appropriate foods to provide on menus for patients of Asian ethnicities.

This study investigates the Chinese and Filipino adult population residing in Auckland, NZ. Compared to all other regions in NZ, Auckland has the highest number and growth of Asian ethnicities (11). In 2013, the Asian population made up 23% of the Auckland population (12). Within this population, the largest ethnic group was Chinese, at 38.5% and the largest South East Asian (SEA) ethnicity was Filipinos, being 7% of the total Asian population (12). The adult Asian population is a priority group for dietitians seeking to develop culturally appropriate menus and revise National Adult Menu Standards. Adults are also likely to have experience dealing with illnesses which can provide valuable information on the dietary changes that occur.
The Waitemata DHB (WDHB) have the largest population of Filipinos and the second largest population of Chinese of the three Auckland DHB populations. NSH and WH are the largest hospitals in the WDHB. NSH includes the Elective Surgery Centre (ESC), which employs a different foodservice system from the rest of NSH. Foodservices in NSH are operated by the Medirest brand of Compass Group NZ. Medirest provides patient meals for the wards in the main hospital building, employing a weekly cycle menu. In the ESC, the foodservice is run by a sub-group of Medirest, Steamplicity, which employ an à-la-carte menu consisting of 10 – 15 food choices which are offered to patients daily. NSH uses a spoken menu whereas ESC uses a paper menu. For Asian adults, these differences in foodservice systems may have different quality and acceptability outcomes.

Currently, the only NZ national nutritional standards for meals and menu standards for adult inpatients in public hospitals are based on food preferences of the major ethnic group in NZ, Europeans. Objectives for DHB established by the NZ Public Health and Disability Services Act 2000 and the Health Quality and Safety Commission (HQSC) requires the provision of effective, high quality of foodservice and improved experience of care to ensure the needs of all patients are met (13, 14). However, little is known about Asian ethnicities’ experience and expectations of NZ hospitals, including their foodservice experiences. Providing unfamiliar foods may lead to plate waste and potential malnourishment, resulting in prolonged hospital stay and additional costs to healthcare (2). Together, these drivers indicate the importance and timeliness of developing an understanding of food preferences of these ethnicities during their hospital stay. Therefore, the aims of this exploratory study are to understand the general eating habits of Chinese and Filipino ethnicities residing in NZ, their food preferences when unwell in hospital and their expectations and experiences of the NZ public hospital foodservice.
2. Literature Review

Diverse cultural histories are reflected in the food habits and food preferences of Western and Asian populations. Understanding these differences is essential when investigating the food preferences of Asian populations in a hospital setting. Therefore, this literature review aims to investigate the food habits of East Asian (Chinese) and SEA ethnic groups upon immigration to western countries including NZ. This review includes a review of literature covering the culturally appropriate foods for these ethnic groups when they are unwell and how this is reflected in current hospital menu standards. The methodology of similar studies conducted are also reviewed to identify the study design suitable for this exploratory study.

With very little published literature on the food preferences of Asian people living in NZ, most of the literature reviewed is sourced overseas, in particular, other western countries such as the United States of America (USA). For this review, online journal articles and e-books with information regarding food preferences, food habits and cultures of the ethnic groups were sourced through University of Otago (UoO) Library Data bases and supplemented by references from relevant articles. Data bases searched included Google Scholar, Pubmed and Science Direct. Search terms including “Food Preference”, “Food Habit”, Chinese, “South-East Asian”, Filipino, “Dietary Acculturation”, “Patient satisfaction”, immigration and “Hospital Foodservice” were used in various combinations.

2.1 Understanding Food Habits and Food Preferences

The terms ‘food habits’ and ‘food preferences’, although related to each other, do not have the same meaning and cannot be used interchangeably. In this section, the definitions of food habits and food preferences will be reviewed.

Understanding food habits is crucial to achieving high levels of patient satisfaction with a hospital foodservice and is a necessary step prior to menu planning (15). Dietary habit is widely understood to be the habitual decisions of people regarding what foods they eat (16). Dietary
habits are the practices and associated attitudes that predetermine what, when, why and how a person will eat (15). They are influenced by many factors such as the availability of food, socio-economic status, health, food beliefs, age, region of origin, occupation, religion and cultural patterns and customs (17).

Food preference is a complex term that encompasses a range of characteristics. Definitions of food preference vary from one study to another, but most importantly, the definition reflects the research aim of each study. A study on the changes in food preferences during aging by Koehler et al defines food preference as the more desirable option when two or more alternatives are presented together, explaining that food preference is an expression of choice (18). Whereas in the foodservice literature, food preferences are defined as a degree of liking for a food item, emphasizing the relationship between favouritism and food preferences (15). Both definitions imply that fondness for the type of food is one of the most crucial factor affecting food preferences. Smith ML in a review of the archaeology of food defines food preferences more broadly as the way in which people choose from among available food items on the basis of biological or economical perceptions including taste, value, purity, ease or difficulty of preparation, and the availability of fuel and other preparation tools (19). Smith’s definition accounts for an individuals’ environment, which provides a more in-depth explanation and raises key factors to consider when looking at patient food preferences. In this study, food preference will be defined broadly to include consideration of an individual’s culture, environment (e.g. hospitalisation) and the hospital foodservice. This includes the desired taste, appearance, availability, temperature, cooking methods and ingredients used. Food preference will be used to describe the type of food that one desires in different situations.

Food preferences changes throughout life stages, including older ages. In older people, several factors affect food preferences that may not be evident in the younger population. Physiological changes associated with aging, such as altered taste and smell and dental health, are key factors
influencing food preferences (18). Aging is also associated with medical problems and illness affecting food preferences (18). These physiological changes have to be considered when investigating the food preferences of Asian ethnicities in NZ.

Definitions of Food habits and food preferences:

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**Food Habits:** the habitual decisions of people regarding what foods they eat influenced by the availability of food, socio-economic status, health, food beliefs, age, region of origin, occupation, and religion and cultural patterns and customs

**Food Preferences:** the type of food that an individual desires in different situations which are influenced by an individual’s culture, environment (e.g. hospitalisation) and the hospital foodservice

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2.2 Chinese and South-east Asian population in New Zealand

The terms SEA and Chinese population cover diverse groups of people. Each ethnic group has their own identity in terms of food habits and preferences, strongly influenced by ancestral tradition and culture. To meet the aims of this study, it is essential to understand what each major population group values most in their food culture and identify similarities and differences. It is inappropriate to categorise these rich and diverse cultures together. For this reason, this study will only review one ethnicity from the SEA group.

The Chinese ethnic group is included in the study as it is the largest Asian ethnic group in NZ (11). The NZ Census 2013 was used to select the SEA ethnic group to investigate (11). The SEA ethnicity with the largest population and/or the largest growth between 2001 and 2013 are the Filipino ethnicity as shown in Table 1 (11).

The adult population was chosen for this study because they have more established dietary patterns compared to children. Adults are also a priority group for dietitians seeking to develop culturally appropriate menus.
Table 1: Percentage population increase from 2001 to 2013 in the ethnic groups in NZ (11)

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>n</th>
<th>% Increase from 2001-2006</th>
<th>% Increase from 2006 – 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese</td>
<td>171,411</td>
<td>40.5</td>
<td>16.2</td>
</tr>
<tr>
<td>Filipino</td>
<td>40,350</td>
<td>52.7</td>
<td>138.2</td>
</tr>
<tr>
<td>Cambodian</td>
<td>8,601</td>
<td>31.3</td>
<td>24.4</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>6,660</td>
<td>37.8</td>
<td>39.6</td>
</tr>
</tbody>
</table>

%: Percentage

2.3 The Changing Ethnicity of New Zealand Population

According to Statistics NZ, ethnicity is the ethnic group or groups that people identify with or feel they belong to (11). It is self-perceived, and people can belong to more than one ethnic group. For example, an individual can be born in SEA but identify as Chinese ethnicity (11).

In recent years, the proportion of the NZ population who identify with Asian ethnicities has increased. Based on the NZ 2013 Census data, the Asian ethnic group grew rapidly from 2001 to 2013, becoming the third largest ethnic group in NZ, with European ethnic group and Maori ethnic group being the first and second largest respectively as shown in Table 2 (11).

Table 2: 2013 NZ Census – ethnic group population increase and median age (11)

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>% of population</th>
<th>% increase from 2006</th>
<th>Median age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>European</td>
<td>74.6</td>
<td>+14.0</td>
<td>41.0</td>
</tr>
<tr>
<td>Maori</td>
<td>15.6</td>
<td>+6.0</td>
<td>23.9</td>
</tr>
<tr>
<td>Asian</td>
<td>12.2</td>
<td>+33.0</td>
<td>30.6</td>
</tr>
<tr>
<td>Pacific</td>
<td>7.8</td>
<td>+11.0</td>
<td>22.1</td>
</tr>
</tbody>
</table>

%: Percentage

National Ethnic Population Projections 2013-2038 predict that the broad Asian population will exceed the Maori ethnic population by the early 2020s, making the Asian ethnicity the second largest group in NZ shown in Table 3 (1).

Table 3: National ethnic population projections in 2038 (1)

<table>
<thead>
<tr>
<th>Ethnic groups</th>
<th>Projected % population in 2038</th>
<th>Median age (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>European</td>
<td>65.5</td>
<td>-*</td>
</tr>
<tr>
<td>Maori</td>
<td>18.4</td>
<td>-*</td>
</tr>
<tr>
<td>Asian</td>
<td>22.0</td>
<td>40.4</td>
</tr>
<tr>
<td>Pacific</td>
<td>10.2</td>
<td>-*</td>
</tr>
</tbody>
</table>

*Statistic not available
%: Percentage
2.4 Food Habits and Dietary Acculturation of Chinese and Filipino Adults

In the section below, the traditional diets of Chinese and Filipino ethnicities will be reviewed.

2.4.1 Traditional Dietary Habits

In general, the traditional Asian diet can be categorised as high in carbohydrates (62% cf 48%), moderate protein content (12.6% cf 33%), high in dietary fibre (8.4% cf 6.83%) and low in fat (20% cf 33%), especially low in animal fat (2.8% cf 10.2%), when compared to a typical US western diet (6, 20, 21). A summary of the key features of each group’s traditional diets and food-related health beliefs is given below.

Chinese

Chinese people are individuals associated with China through ancestry, ethnicity, nationality, citizenship, or other affiliation (22). There are populations of Chinese people residing all over SEA including in Malaysia and Singapore. Large cultural differences exist between Chinese who reside in China and those who migrated to various parts of SEA. For this study, the dietary habits of Chinese in Mainland China, Hong Kong and Taiwan are reviewed below as they have more traditional Chinese dietary habits whereas the eating habits of Chinese from SEA are influenced by their country of residence.

Traditional Diets

The traditional Chinese diet is well-balanced, high in fiber and low in saturated fats (23). The traditional diets of the Chinese show vast differences across countries and regions summarised in Table 4. To reduce complexity, the similarities are reviewed below.

The traditional Chinese diet is high in rice, steamed buns, noodles, coarse grains, tubers, fresh vegetables and fruits, fish and shrimp, miscellaneous beans and tea (24). Traditionally, Chinese people eat 3 main meals a day (25). Meals generally consist of a carbohydrate staple such as rice, noodles or steamed buns, accompanied by stir-fried vegetables and a soup (23). After a meal, hot
tea, fresh fruits and nuts will be served (23). Dinner meals are considered the main meal, are generally eaten as a family and consist of two to four dishes and one soup, served usually with rice (23, 25).

Table 4: Summary of different Chinese cuisines in China, Hong Kong and Taiwan (26, 27)

<table>
<thead>
<tr>
<th>Regions</th>
<th>Dominant Cuisines</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>North: Beijing, Xi'an, Inner Mongolia, and Northeast China</td>
<td>Beijing, Shan Dong</td>
<td>A mixture of cuisines from across China. Uses seafood ingredients and a variety of cooking techniques. Known for its fresh, salty, crisp and tender flavours.</td>
</tr>
<tr>
<td>West: Xinjiang, Tibet and Gansu</td>
<td>Xin Jiang, Tibetan</td>
<td>Predominantly halal foods. Blend of flavours of Nepalese, Indian, and Sichuan.</td>
</tr>
<tr>
<td>Central: Sichuan, Chongqing, Hunan</td>
<td>Sichuan, Hunan</td>
<td>Numbing and spicy taste from use of garlic and chilli peppers. Similar to Sichuan. Generally spicier.</td>
</tr>
<tr>
<td>East: Guangdong, Fujian, Zhejiang, Jiangsu, Anhui</td>
<td>Cantonese/Guang Dong, Fu Jian, Jiang Su</td>
<td>Mild flavour. Dishes focus on the freshness and natural flavour of ingredients. Cooking methods and ingredients aim to preserve natural flavour in the dishes. Dishes are slightly sweet and sour, and less salty. Fresh taste with moderate saltiness and sweetness. Commonly uses stewing, braising, simmering, and warming to preserve the original flavors, and maintain clarity, freshness, and mildness.</td>
</tr>
<tr>
<td>South: Yunnan, Guizhou and Guangxi provinces</td>
<td>Southern Minority</td>
<td>High amounts of preserved foods. Sour taste.</td>
</tr>
<tr>
<td>Hong Kong, Taiwan</td>
<td>Cantonese/Guang Dong, Taiwanese</td>
<td>Mentioned above. Has influences from Fujian cuisine and Japanese cuisine.</td>
</tr>
</tbody>
</table>

Food-related traditional values

Food plays a very important role in Chinese culture. It is used to establish and maintain interpersonal relationships, express the degree of interpersonal relationships, to celebrate important events and to express an individual’s social status (25). Some foods have a symbolic meaning for special occasion, for example, noodles are often eaten during birthday celebrations as they represents health and longevity (25, 28). Bringing meals to a hospitalised family member is seen as showing support and love towards the family member, and enhancing social bonds (3).
Food-related Health Beliefs

Traditional Chinese Medicine (TCM) originated in China and historically has been practised widely across Mainland China, Hong Kong, Macau and Taiwan. Due to the complexity of TCM, only the basic TCM concepts related to food are reviewed below. TCM is a holistic approach to health that aims to achieve harmony among the body, mind and spirit (29). The principle most commonly practiced by the Chinese is belief of 2 opposing and complimentary energies in the universe, Yin and Yang (29, 30).

![Figure 1: Symbol and brief description of Yin and Yang]

These energies act similarly to homeostasis. When Yin energy decreases, Yang energy increases (30). Yin and Yang is represented as a circle that has been divided by a symmetrical curve seen in Figure 1. The white portion of the circle represents the Yang energy and the black portion represents the Yin energy. The imbalance of these energies is believed to lead to certain illnesses, as summarised in

Table 5: Common symptoms of Yin and Yang deficiencies (32)(29, 30). TCM treatment aims to correct the energy imbalance (30). The Yin and Yang concept is also used to maintain general health (31).

Table 5: Common symptoms of Yin and Yang deficiencies (32)

<table>
<thead>
<tr>
<th>Deficiency</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yin Deficiency</td>
<td>Sore mouth and tongue, dry mouth and tongue, dysphoria with feverish sensation in chest, palms and soles, and dry stool</td>
</tr>
</tbody>
</table>
Yang Deficiency  Cold limbs and waist, chills, thin sloppy stool and frequent nocturia

Dietary therapy is typically used to rebalance energies and promote recovery (32). For example, as Yin represents the ‘cold’, an individual deficient in Yin energy will consume cold foods to rebalance the energies (32). Examples of the bodily effects of the energies can be seen in Table 6, below.

**Table 6: Summary of effects of warm, hot, cold and cool foods on the body** (31, 32)

<table>
<thead>
<tr>
<th>Type of food</th>
<th>Effects on the body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warm and hot foods</td>
<td>Helps to warm the spleen and stomach for dispelling coldness, invigorate the spleen, reinforce the stomach functions, and reinforce kidney functions when an individual is deficient in Yang energy (see symptoms in table 5)</td>
</tr>
<tr>
<td>Cold and cool foods</td>
<td>Helps to cool body heat and expel damp and dryness. Also has detoxifying and laxative effects, when an individual is deficient in Yin energy (see symptoms in table 5)</td>
</tr>
</tbody>
</table>

Some foods are considered neutral in energy and will not cause any shift of energy (32). These food examples can be seen in Table 7. Once illnesses have become stable, consuming a balanced diet is emphasized, this includes eating grains, meat, fruits and vegetables (32).

When a Chinese individual is unwell, cold foods and drinks are believed to disrupt the yin and yang balance, thus hot food and drinks are preferred (3). Hot Chinese soups are also important to Chinese patients when unwell as they acts as comfort foods (3).

**Table 7: Food examples for Yin, Yang and Neutral** (32)

<table>
<thead>
<tr>
<th>Yin (cold foods)</th>
<th>Yang (hot foods)</th>
<th>Neutral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cold</td>
<td>Warm</td>
<td>Hot</td>
</tr>
<tr>
<td>watermelon,</td>
<td>glutinous rice,</td>
<td>chilli, pepper, onion, cinnamon, mutton,</td>
</tr>
<tr>
<td>bitter gourd,</td>
<td>oats, red dates,</td>
<td>venison, Rice porridge, corn, sesame, soybean,</td>
</tr>
<tr>
<td>kelp, nori,</td>
<td>pine nut, garlic,</td>
<td></td>
</tr>
<tr>
<td>water</td>
<td>chives, onion,</td>
<td></td>
</tr>
<tr>
<td>spinach,</td>
<td>coffee, black</td>
<td></td>
</tr>
<tr>
<td>honeysuckle</td>
<td>tea and chicken</td>
<td></td>
</tr>
<tr>
<td>and aloe</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Generally, TCM is still practiced after migration to western countries, most evident in the habits of elderly Chinese (23). The use of TCM to retain Chinese culture is important to elderly people (33). In other western countries, TCM appears to be used more frequently to cure simple illnesses.
or discomfort such as muscle aches, abdominal pain and fatigue than life-threatening conditions (33, 34). A study in Canada on TCM use by older Chinese immigrants found that majority of elderly Chinese immigrants use TCM in addition to western health services (35). This is also a common practice among Chinese immigrants in the USA (33, 34). The use of western health services could be due to the subsidies given by governments, which reduces the cost of western health services or the unavailability of TCM practitioners in their area (35).

**Filipino**

Filipinos, members of the Filipino ethnic group, are people who originated from or are associated with Philippines. Like China, the Philippines is a large country and each region has different food customs and eating habits. The similarities across regional food patterns are reviewed below.

**Traditional diets**

Unlike the Chinese, the Filipino food culture has been influenced by other cultures, in particular Malay, Chinese and Spanish cultures (36). Popular dishes of the Philippines are summarised in **Table 8** below (36).

**Table 8: Name and description of popular dishes in Philippines** (36)

<table>
<thead>
<tr>
<th>Dishes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobo</td>
<td>Pork, chicken, beef, or a combination simmered in vinegar and garlic sauce</td>
</tr>
<tr>
<td>Dinuguan</td>
<td>Pork flesh and innards spiced with whole peppers and stewed</td>
</tr>
<tr>
<td>Lechon</td>
<td>Whole pig roasted outdoors for long hours over charcoal</td>
</tr>
<tr>
<td>Lumpia</td>
<td>A roll of vegetables and meat in a paper- thin rice wrap</td>
</tr>
<tr>
<td>Pancit</td>
<td>Long, uncut rice noodles sautéed with meat and vegetables</td>
</tr>
<tr>
<td>Sinigang</td>
<td>Stewed fish/meat with vegetables soured by tamarind</td>
</tr>
</tbody>
</table>

Fish and rice are common consumed in a traditional Filipino diet. Lunch and dinner meal are characterised by rice, vegetables and fish (37). Fish and shrimp sauces as well as coconut products are often used in cooking. An example of Filipino meal choices is given in **Table 9** below.

**Table 9: Food common consumed in Filipino meals**

<table>
<thead>
<tr>
<th>Meals</th>
<th>Breakfast</th>
<th>Lunch and Dinner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical</td>
<td>Rice fried with garlic, eaten with an egg, sausage or fried fish (38)</td>
<td>Rice, vegetables and Sinigang (37)</td>
</tr>
<tr>
<td>food</td>
<td></td>
<td></td>
</tr>
<tr>
<td>choices</td>
<td>Rice, vegetables and Kaldereta (stewed pork with tomato sauce) (37)</td>
<td>Rice with leftovers from lunch/dinner (39)</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---------------------------------------------------------------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>Pandesal (bun made of wheat flour) or bread and margarine (38)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Rice is the main carbohydrate staple in their diet and is typically eaten with all meals (36, 39).

Rice is viewed as a symbol of strength, sustenance, sacrifice, wealth and togetherness (40). Meals without rice are seen as incomplete and unhealthy (41). Salt and high salt products such as fish or shrimp extract, and soy sauce, are also used generously in most dishes (36).

Food-related Traditional Values

Food is very important in the Filipino culture. Providing food is a sign of hospitality, and rejecting food is considered impolite (39). As food has high cultural importance, wasting food is discouraged (41). This frugal view towards food prompts Filipinos to use all edible parts of an animal in their cooking, including intestines and fat on meat (39, 41). Respect for elders and love for family is important as well (36). When a Filipino individual is hospitalised, their family would take turns to keep them company (36). Filipino patients would also prefer Filipino foods despite being familiar with western meals (36).

Food-related Health Beliefs

Traditional Filipino food-related health beliefs include valuing fatness, “just eating” fat and rice, and maximising disease resistance (41). Fatness is associated with being healthy, eating properly, and having good resistance to diseases (41). “Just eating” refers to consuming foods without monitoring and restricting intakes (41).

When Filipinos become unwell, they tend to practice self-healing and self-treatment by using home remedies, for example boiling ginger tea and drinking water for a sore throat (42). Filipinos also practice a hot cold theory of food health belief (39, 42). Similar to the Chinese belief of yin and yang, Filipinos believe that particular diseases are due to the imbalance of hot and cold in the body, and to treat the disease involves eating a food classified opposite to the disease (39). This
belief is also related to the environment for example, sudden changes in the weather from hot to cold can lead to the imbalance in the body (43).

In summary, food plays a key role in the culture and health belief system of Chinese and Filipino people. The hot and cold theory or Yin and Yang theory is commonly used to maintain health. Understanding how these health beliefs influence food preferences when unwell is crucial to designing acceptable hospital menu options.

2.4.2 Dietary acculturation

Upon immigration, most Asian immigrants will adopt a more westernised diet due to the exposure of the western culture and possibly the unavailability of traditional foods (44). Asians may retain some traditional foods while replacing others with more readily available foods in the area (44). This adoption of new food habits is called dietary acculturation, and occurs when immigrants adopt new food habits from their new environment (44). It is a gradual and continuous process (45). The degree of dietary acculturation has been shown to depend on education level, English reading ability, duration of stay, socioeconomic status, cost, convenience, lack of availability of traditional foods and place of origin (23, 46, 47).

Traditional eating habits

A small number of studies conducted in western countries support the hypothesis that people of Chinese and Filipino ethnicities still maintain their core traditional eating habits after immigration (4, 5, 10, 23, 48-50). Studies in the USA showed that upon migration, the consumption of Asian traditional diets decreases while consumption of western diets increases (10, 23, 49). However, despite the western influence in their diets after immigration, these ethnicities tend to keep their core traditional eating habits (23). This could be dependent on the availability of traditional foods in grocery stores or restaurants (48, 49). Most Chinese and Filipino immigrants retain the habit of having ethnic food for lunch and dinner, while breakfast usually the first and most common meal to be westernised (4, 10, 23, 49, 50). A large earlier
study in Pennsylvania, USA found that Chinese Americans retain some core grains, fruits and vegetables and meat and meat alternatives such as rice, noodles, spinach and fish despite the decreased intake of traditional Chinese foods (23). Dietary acculturation studies with Filipino Americans have found that rice remained the staple food after migration (5, 9, 10). Other traditional foods such as adobo and lumpia (refer to Table 8) are still important to Filipinos after migration (5). American Filipinos also retained their consumption of fruit, vegetable and fish, foods important in their traditional diets (5). These studies on dietary acculturation showed that Chinese and Filipino ethnicities retained their traditional diets to some degree after migration. However, a key limitation of this literature is the absence of studies investigating dietary habits of the second or further generations of Chinese and Filipinos in western countries who could potentially be more acculturated and retain fewer traditional dietary habits (20).

**Dietary Changes on Immigration to a Western Country**

For both ethnic groups, consumption of all food groups; breads and cereals, vegetables, fruits, meats, fish, egg, dairy products, beverages, nuts, and legumes, increased after taking up residency in a Western country (23, 47). This includes the increased intake of processed foods, sweets and sweet drinks (23). The increase in consumption is suggested to be due to ethnic groups improving their economic status after migration and the ready availability of these foods in their new countries (23, 47). The highest increase was of meat and meat products, seen most prominently in Filipino immigrants (10, 47). The increase in fat and refined sugar in the diets of Asian immigrants is a concern as it is associated with an increase risk in obesity and obesity-related disease (51-53).

**2.5 Food Preferences of Asian**

Although their dietary habits may become acculturated to a new country after immigration, Asian people tend to prefer traditional foods for some meals. This is most apparent when an individual
is unwell. For this review, ‘unwell’ will be defined as ‘being in poor health and suffering from illnesses”, where surgery or admission into a hospital is required, and ‘well’ will be defined as ‘in good health and free from illness’ and includes pregnant and lactating women, as well as elderly people. Studies found that Chinese and Filipino immigrants rely on their cultural health belief systems and practices to help prevent or treat various kinds of illnesses (4, 34, 35, 42, 50). Given the role of traditional health beliefs and culture on food practices, especially when unwell, covered in Section 2.4, all aspects of an individuals’ culture need to be considered and explored.

2.6 Effect of Immigration of Health of Ethnic Groups

It is well established that Asians who immigrate to western countries develop higher risk of poor health compared to Asians who remain in Asia (54). Studies have shown that Chinese immigrants to Canada and USA have higher rates of non-communicable disease (NCDs) chronic diseases such as diabetes, cardiovascular disease and certain kinds of cancer when compared to Chinese in Asia (23, 46, 50). Acculturation studies on Asian American have shown an association between weight gain and acculturation (55). These results of various studies suggest that adoption of a western diet higher in fat and lower in fruits and vegetables than a home country diet is a key factor increasing risk of NCD risk. Other studies found increase intake of sugar and processed foods contribute to the risk (45). These diet-related factors along with decreased physical activity are likely to contribute to the reported increase in Asian immigrants BMI (55-57) and an increasing NCD risk even further.

Limited data on Asian health in NZ demonstrates the same patterns. The “Asian Health in Aotearoa in 2011-2013: Trends since 2002-2003 and 2006-2007” study found that the prevalence of obesity in NZ Asian adults increased 26% in 2002-2003 to 41% in 2006-2007 (58). Diabetes and cardiovascular disease rates have also increased Asian adults since 2006-2007 (58). The increase in NCDs is due in part at least to low levels of physical activity and reduced intake of
fruit and vegetables in Asian adults (58). This finding is a major problem for NZ health services as it suggests that Asian health deteriorates upon migration to NZ (58). Asian health advocate argue that healthcare must be targeted at these ethnicities to help prevent the development of obesity and other health problems (59)

2.7 Current New Zealand Hospital Menu Standards

The NZ national nutritional standards for meals and menu standards for adult inpatients in public hospitals is based on the food patterns of the major ethnic group in NZ, NZ Europeans (60). These 2015 standards are an adaption of the Australian New South Wales Hospitals and Queensland Health Nutrition standards for Meals and Menus and incorporate current practices from some large and medium hospitals in NZ (60). These menu standards are critically important for foodservice providers and auditors as they determine the types of meals prepared. Although some references are made to adapt menus to cater for patients cultural or religious needs and include requirements for halal meals, no further details, such as suggested menus are given. This means that Asian patients in NZ hospitals may not be receiving culturally appropriate foods that they need and/or want. In one of the few studies on cultural acceptability of hospital food, Payne et al found that in older Chinese people with cancer, their need for culturally appropriate and acceptable foods was not met by hospital catering services in England (3). In this study, the absence of Chinese foods meant Asian patients were hesitant to stay in hospital (3).

Dissatisfaction with the hospital meals can lead to food wastage. When patients do not consume or finish their meals it is well known that malnutrition risk increases hindering recovery and may worsen their conditions (61). Providing meals that Chinese and Filipino patients are familiar with is likely to reduce the risk of malnutrition. Thus, it is important for NZ hospital foodservice to introduce more comprehensive menu standards appropriate for Asian ethnicities in NZ.
2.8 Understanding Food Preferences and Experiences

In studies of dietary acculturation to understand dietary habits, common data collection methods include qualitative interviews, focus groups, self-administered surveys or questionnaires and interviewed-administered surveys or questionnaires.

2.8.1 Qualitative Data

The purpose of qualitative research is to distinguish the meaning people give to their experiences (62). It is used when understanding circumstances from the perspective of research participants is important (62).

**Qualitative Interviews**

Qualitative interviews generate comprehensive and flexible understanding of individuals’ beliefs and perceptions relating to the topic areas (62). These interviews can be unstructured, structured, semi-structured, or in-depth depending on the type of information wanted from participants as summarised in Table 10 below (63). These interviews usually involve the researcher speaking with one participant at a time and can be done in person or through a media, for example telephone interviews (63). Interviews are usually videotaped or audiotaped then transcribed (62).

**Focus Group**

Focus groups gather qualitative data from a facilitated meeting of 6 to 10 people (49). During a focus group session, group members share ideas, experiences and opinions on a given topic (49). One focus group session may last one to two hours and is usually videotaped or audiotaped (49, 62). Each focus group has a main facilitator who is in-charge of maintaining control of the group and leading the discussion, and an assistant facilitator whose main responsibility is taking notes and monitoring the recording of the session (64). An important role of the facilitator is to ensure that members feel comfortable to share their thoughts during the session, which can be accomplished by specifying ground rules before the discussion starts (62).
Table 10: Qualitative data collection methods commonly used in healthservice delivery research

<table>
<thead>
<tr>
<th>Data collection method</th>
<th>How and When used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative Interviews</td>
<td>Unstructured Interviews are guided conversations, largely led by the respondent's priorities and concerns (64-66). Data collection usually includes observational data of participants (65). Unstructured interviews are used when the topic area is complex or when exploring areas which have not previously been extensively described (64).</td>
</tr>
<tr>
<td>Structured Interviews</td>
<td>Data collection is normally facilitated using a questionnaire (67). Interviewers ask questions in a standardised manner (67). Questions are mostly fixed choice (67). Quantitative data can be collected with this method (65).</td>
</tr>
<tr>
<td>Semi-Structured Interviews</td>
<td>The interview structure revolves around a set of pre-determined open-ended questions (65, 67). The interviewer may ask several questions that are not in the pre-determined list of questions to gather more details during the conversation (65, 67). Semi-structured interviews are most commonly used as they give participants freedom to share aspects of their experience and perspective while collecting specific information regarding the question area (31).</td>
</tr>
<tr>
<td>In-depth Interviews</td>
<td>In-depth interviews have less structure than semi-structured interviews. The interview may only cover one or two issues but in much greater detail (67). These interviews are able to inform a wide range of research questions (65). This form of interviews is commonly used by health care researchers to re-create perceptions of events and experiences related to health and health care delivery (65).</td>
</tr>
<tr>
<td>Focus group</td>
<td>Focus groups are used when a range of perspectives on a topic area is being investigated. Focus groups can also be conducted to help design a questionnaire for a more definitive quantitative survey (64).</td>
</tr>
</tbody>
</table>

2.8.2 Quantitative Data

Surveys and Questionnaires

A survey involves systematically asking people pre-prepared questions and recording their answers to produce information that is difficult or impossible to obtain through observation.

Surveys can be conducted by interviews in person or over the telephone, or self-administered through mail or the internet (68). A questionnaire is essentially a tool used for surveys.

Questionnaires are commonly used to assess patient food satisfaction in hospital (69, 70).

Descriptive statistics are common data analyses used in dietary acculturation and hospital foodservice satisfaction studies with sample sizes ranging from 66 to 210 people (50, 55, 71, 72).

Most studies investigating dietary acculturation and food preferences employ a mixed-method approach, using both qualitative and quantitative methods of obtaining and analysing data. Table
summarises data collection methods used in studies with aim similar to the current investigation. As seen in Table 11, these studies have utilised more than one qualitative method, for example both focus groups and interviews.
## Table 11: Similar dietary acculturation and dietary pattern studies and study design employed

<table>
<thead>
<tr>
<th>Author</th>
<th>Study Title</th>
<th>Study Aim</th>
<th>Study Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nan LV, Katherine L. Cason (23)</td>
<td>Dietary Pattern Change and Acculturation of Chinese Americans in Pennsylvania</td>
<td>To obtain information about dietary pattern change of Chinese Americans in Pennsylvania and its relationship with demographic characteristics and acculturation indicators.</td>
<td>Cross-sectional self-administered survey</td>
</tr>
<tr>
<td>Nina Hrboticky, Magdalena Krondl (8)</td>
<td>Dietary Acculturation Process of Chinese Adolescent Immigrants</td>
<td>To compare the use of selected culturally new and traditional foods by first and second-generation immigrants. To correlate the frequency of use of the same foods with the degree of acculturation as reflected by use of ethnic language. To compare the extent of dietary acculturation occurring from the first to the second generation with food patterns of an age and sex matched group of the indigenous population.</td>
<td>Cross-sectional community-based study, Self-administered questionnaire</td>
</tr>
<tr>
<td>Sheila Alison Payne, Jane E Seymour, Alice Chapman, Margaret Holloway (3)</td>
<td>Older Chinese people’s views on food: Implications for supportive cancer care</td>
<td>To investigate the views of older Chinese people about the role of food in cancer causation, cancer treatment and in end-of-life care.</td>
<td>Two-phase qualitative research study - Focus groups and semi-structured interviews</td>
</tr>
<tr>
<td>Rebecca Todd, Stanley Gelbier (57)</td>
<td>‘Eat more food, get more health’ – attitudes habits of a group of Vietnamese refugees</td>
<td>To understand the food patterns and nutritional problems of the Vietnamese homeland and the attitudes of the refugees towards western eating habits.</td>
<td>Interview using Structured Questionnaire</td>
</tr>
<tr>
<td>Katrine I. Baghurst, Julie A. Syrette, Muoi Muoi Tran (56)</td>
<td>Dietary Profile of Vietnamese Migrant Women in South Australia</td>
<td>To determine current dietary practices, degree and determinants of dietary acculturation and barriers to maintenance of traditional diets in Vietnamese women, the “gatekeepers” of health in Vietnamese households.</td>
<td>Structured Interview using survey and 24hr diet recall</td>
</tr>
<tr>
<td>Wei Yang, Marsha Read (6)</td>
<td>Dietary Pattern Changes of Asian Immigrants</td>
<td>To examined dietary fat and fiber intake practices, food preparation preferences and nutrition beliefs of an Asian population before and after immigration.</td>
<td>Self-administered Questionnaire (mail)</td>
</tr>
<tr>
<td>Shirley S. Hung, Stephen J. Mcphee, Christopher N. H. Jenkins, Kim Phuc Nguyen, Don C. Fordham, Ngoc-The HA. (7)</td>
<td>Dietary Intake Patterns of Vietnamese in California</td>
<td>To characterize dietary intake patterns among Vietnamese who have relocated to the U.S.</td>
<td>Survey administered using computer assisted telephone interviewing (CATI) system</td>
</tr>
<tr>
<td>Pauline Chau, Hen-shin Lee, Rose Tseng, Norma Jean Downes (4)</td>
<td>Dietary habits, health beliefs, and food practices of elderly Chinese women</td>
<td>To investigate the dietary habits, health beliefs, and food practices of elderly Chinese women living in the San Francisco Bay Area.</td>
<td>Structured Interview using Questionnaire</td>
</tr>
<tr>
<td>Stephanie Kwok, Linda Mann, Kwan Wong, Ilya</td>
<td>Dietary habits and health beliefs Of Chinese Canadians</td>
<td>To examine the relationships among dietary behaviours, traditional health beliefs (THB), and demographic characteristics of Chinese</td>
<td>Telephone interview using questionnaire</td>
</tr>
<tr>
<td>Authors</td>
<td>Study Description</td>
<td>Methodology</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Blum (50)</td>
<td>Canadians living in Toronto. Their primary sources of nutrition information were also investigated.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yi Ling Pan, Zisca Dixon, Susan Himburg, Fatma Huffman (73)</td>
<td>Asian students change their eating patterns after living in the United States.</td>
<td>Self-administered Questionnaire (mailed)</td>
<td></td>
</tr>
<tr>
<td>Jerusha Nelson Peterman, Linda Silka, Odilia I Bermudez, Parke E Wilde, Beatrice Lorge Rogers (72)</td>
<td>Acculturation, Education, Nutrition Education, and Household Composition Are Related to Dietary Practices among Cambodian Refugee Women in Lowell, MA</td>
<td>Conducted focus groups to develop survey that was used in Interview administer survey.</td>
<td></td>
</tr>
</tbody>
</table>
Table 12: Advantages and disadvantages of the qualitative and quantitative methods for measuring food preferences

<table>
<thead>
<tr>
<th>Method</th>
<th>Advantages</th>
<th>Limitations</th>
</tr>
</thead>
</table>
| Focus group             | - Able to observe participant’s interaction and emotions when answering questions  
                        | - Able to probe for additional information if necessary                  | - Interviewers must be trained to conduct the interviews                      |
|                         | - More sample size for a qualitative data collection with lesser time needed  
                        | - Participants may appreciate the willingness to listen to their opinions and concerns (68) | - Some participants may be dominating the focus group. Moderators must know how to encourage equal participation from all people. |
|                         | - Interviews must be trained to conduct the interviews                      | - Results may be biased and ungeneralizable as sample size are usually small and uses non-random samples (49) |
|                         | - Groups are difficult to assemble and recruitment of participants is time-consuming (68) | - May be expensive to recruit participants                                   |
|                         | - May be expensive                                                          | - Risk of biasing the focus group to obtain a desired response (62).        |
| Self-administered       | - Able to target a large sample group in a faster time                      | - Poor responses if some questions do not relate to the participants         |
| survey/Questionnaires   | - Low cost                                                                 | - Instrument errors (74).                                                   |
|                         | - More convenient to the participant as they may not need to travel        | - Respondent errors (74)                                                   |
| Qualitative Interviews  | - Able to pick up social cues from interviewee regarding voice, intonation, body language etc (63)  
                        | - Answers of the interviewee are more spontaneous, without an extended reflection (63)  
                        | - Data gathered is more comprehensive                                      | - “Interviewer effects” - when the interviewer guides with his or her behaviour the interviewee in a special direction (63) |
|                         | - Able to probe for more information when necessary                         | - Recruitment and conducting interviews can be time-consuming               |
|                         |                                                                           | - May be expensive                                                          |
|                         |                                                                           | - Interviewers must be trained to conduct the interviews                |


3. **Objective Statement**

The increasing Asian population in NZ is putting pressure on healthcare services to deliver healthcare services in DHB hospitals that meet the needs of Asian ethnic groups. One large concern is the current lack of appropriate foods offered to Asians in NZ hospitals. Food plays a crucial role in Asian cultural health belief systems. Familiar foods provide comfort to patients and some ethnic meals have healing properties. Currently, there is no NZ research investigating the food preferences of Asians when they are hospitalised. As a result, NZ DHBs and foodservice contractors have limited data on the appropriate foods to offer patients. Health Partnerships NZ’s National Nutritional Standards for meals and menu standards for adult inpatients in public hospitals are under revision (75). As part of this process, the DHB Dietitians Leaders Group need information on Asian ethnic group’s experience and expectations of NZ hospital foodservices. Revised standards will assist DHBs to meet their obligations under the NZ Public Health and Disability Services Act 2000 and HQSC’s goals. This indicates a need to investigate the food preferences of these ethnicities to better meet their needs.

Therefore, the primary aims of this exploratory study were to; 1) understand the general eating habits of Chinese and Filipino adults residing in NZ, 2) understand their food preferences when they are unwell in hospital, and 3) explore their NZ public hospital foodservice expectations and experiences.

The specific objectives were to:

1. Review literature on the traditional dietary habits of Chinese and Filipinos and how these changes upon migration. Also, review literature on their food preferences when they become unwell, and the qualitative and quantitative methods commonly used in similar studies.

2. Explore the general eating habits, of adult Chinese and Filipinos residing in NZ, through qualitative methods
3. Explore the food preferences of adult Chinese and Filipinos and important foods to have when they become unwell through qualitative methods

4. Explore the experiences of these ethnicities of a public hospital foodservice through qualitative and quantitative methods

5. Further explore the factors affecting the patients’ experiences and expectations on the public hospital foodservice through qualitative methods
4. **Methods**

In this chapter, the study design is described, and the study rationale presented (section 4.1).

This is followed by the ethical and other approvals obtained (section 4.2), an outline of study protocols including recruitment of participants for each stage (section 4.3 – 4.6), data analysis (section 4.7) concluding with quality assurance (Section 4.8).

### 4.1 Study Design and Rationale

This exploratory study employed a three-phase mixed-methods design to explore the food preferences of Chinese and Filipinos when they are well and unwell to provide information for NZ hospital foodservices. As this research is an exploratory study, a mixed-method study design was employed as it allows a wider range of data to be gathered than it is possible from either qualitative or quantitative methods alone. The data gathered can be used to inform further investigations. The first phase consisted of literature review and exploratory survey (Section 4.3), the second phase, focus group interviews (Section 4.4) and the third phase was questionnaire-based interviews with inpatients (Section 4.5).

Data collection for the exploratory survey and focus group was undertaken by the student researcher with help from the student researcher conducting the parallel study. Questionnaire-based interviews were conducted by the student researcher.

As discussed in the literature review (Section 2.8), similar studies commonly used mixed-method study designs and involved data collection by self-administered survey or questionnaires, questionnaire-based interviews and focus group interviews. Peterman et al’s exploratory study aim and design resonated with the purpose of
this study with data from one qualitative method informing the design of the next (72). In their investigation into the influence of acculturation on education, nutrition education and household composition of Cambodian refugee women focus groups were used to gather insights into the participants’ general dietary habits (72). The findings then helped develop survey questions that were most relevant for the participant population. This staged approach method is appropriate when there is little or no background data, such as the dietary preferences of unwell Asians residing in NZ.

For phase one of this study, a self-administered exploratory survey was developed using the literature review data. Self-administered surveys are useful for exploratory researches where prior hypothesis are not required (76). Data obtained from the exploratory survey and the literature review was used to develop the focus group schedule for phase two of this study. Similar to Peterman et al’s study, data from the focus group was used to design a more targeted self-administered questionnaire and interview questions for phase three of this study.

In phase two and phase three, the Filipino ethnicity was selected to be the focus for the SEA ethnic group. As highlighted in the literature review (Section 2.2), SEA ethnicities have very distinct differences, thus it is not appropriate to study them in aggregate. The Filipino ethnic group are the largest population group in NZ of the SEA ethnicities. According to 2013 census data, the Filipino population has tripled since 2001 (11). Therefore, the Filipino ethnic group was chosen as the SEA subpopulation group for the last two phases of this study.

The adult population was chosen for this study. According to MOH, adults are defined as 15 years and above (77, 78). In this study, the age of adults was defined as 18 years and above. This age cut off was based on a recommendation from a DHB study advisor that people of 18 years and below are not admitted into adult wards in NZ hospitals.
4.2 Ethical and other Approvals

4.2.1 University of Otago Ethical and other Approvals for Phase One

Following the outcome of a MoH Health and Disability Ethnics Committee scope review (Appendix Aa), UoO Minimal Risk Health Ethics approval was sought and obtained for this study on 3rd October 2017 (Reference number: D17/348) (Appendix Ac).

4.2.2 UoO Ethics and Waitemata DHB Locality Approval for Phase Two and Three

A separate UoO Minimal Risk Health Ethics approval was obtained on the 20th of December 2017 for phase two and three of this study (Reference number: HD18/001) (Appendix Ad).

The study proposal was submitted for UoO Maori consultation and approved by the Ngai Tahu Research Consultation Committee on 13th February 2018 (Reference number: 5705_20064) (Appendix Af). On 16th January 2018, the student researcher completed and submitted an online Waitemata Locality Application Form to register the study. Subsequently on 31st January 2018, a checklist of Locality requirements was sent to the named Principal Investigator, academic supervisor. The costing for WDHB involvement, and documents used in this needed to be submitted to the DHB research centre by a DHB staff member for final study approval. The student researcher immediately sent the signed confidentiality agreement and participant forms, written survey and interview schedule to the DHB study advisor, Foodservice manager Hospital Operations. The study advisor was responsible for preparing the costing sheet for WDHB involvement document. Due to unforeseen circumstances, the required documents were submitted to the Research Centre later than expected and DHB locality approval was not obtained until 15 May 2018 (Registration number: RM13989) (Appendix B). Consequently, a letter was sent to UoO Ethics Committee to extend the final data collection date from 30 April 2018 to 25 May 2018 for Phase 3 of the study. An amendment of the study protocol was approved on 30th April 2018 by the UO Ethics Committee (Reference number: HD18/001) (Appendix Ag).
As the Waitemata Locality Approval was obtained very late in the study, a second letter was sent to UoO Ethics Committee to further extend the data collection dates from 30 April 2018 to June 1 2018 for Phase 3 of this study, and to include Waitakere hospital (WH) in addition to NSH as a suggestion by the study advisor to speed up data collection. The amendment was approved by UO Ethics committee on 18 May 2018 (Reference number: HD18/001) (Appendix Ag).

**Figure 3: Timeline of UoO ethics and other approvals**

4.3 Phase one – Literature review and exploratory survey

4.3.1 Literature Review

A comprehensive review of published and grey literature was carried out to gather data on food preferences, food habits and cultures of the ethnic groups under investigation as well as study methods used in similar cultural food preferences studies. Information was sourced using online journal articles and e-books through the UoO library data bases, supplemented by the reference list from relevant articles. As there is very little published literature on NZ Asian’s food preferences, the literature was sourced mainly from overseas, in particular, western countries such as Canada and USA. These databases were Google Scholar, Pubmed,
ScienceDirect and Scopus. Search terms used included “Food Preference”, “Food Habit”, Chinese, “South-East Asian”, Filipino, “Dietary Acculturation”, Immigration, “Hospital Foodservice”, “Questionnaire”, “Survey”, “Focus Group” and “Qualitative Interview”. These search terms were used singly and in combination.

4.3.2 Phase One Exploratory Survey

An exploratory survey was conducted to complement the scant literature on food preferences of Asians living in NZ.

The aim of this survey was to explore the following:

- Food preferences of Chinese, SEA, Indian and South Asian adults living in NZ
- How food preferences change when they are unwell

Data collection was undertaken at the UoO, Dunedin campus during October 2017. This exploratory survey was done in conjunction with a parallel study focusing on the Indian and South Asian population in NZ.

Participants and Recruitment

Survey participants were a convenience sample of Chinese, SEA, Indian, and South Asian students enrolled at the UoO in 2017. Participants were recruited through the Otago University Students’ Associations (OUSA) relevant international student associations. The associations were Otago University Chinese Students’ Association, Bangladeshi Students’ Association, Otago University Hong Kong Students’ Association, Otago Singapore Club, Otago University Thai Students’ Association, New Zealand Otago University Taiwanese Students’ Association, Otago University Sri Lankan Students’ Association, Pakistan Students’ Association, Otago Malaysian Students’ Association, Otago Filipino Students’ Association, Indonesian Community Association and Indian Students’ Association.

Development of Survey Questions

Question topic areas were identified from the literature review and the research question. As there are no similar studies previously done in NZ, questions were developed to investigate if
the results of the survey produced similar findings to those reported in the literature. The theme of the survey was how food preferences change when an individual becomes unwell. A short simple survey was created using the online program Survey Monkey. The online exploratory survey consisted of seven questions with multiple-choice answers and one open-ended question (Table 13). The survey had four questions regarding demographics of the participants and four questions regarding food preferences. The survey was conducted in English.

The draft exploratory survey was pre-tested with a convenience sample of six Dietetic students of Asian ethnicity. The results and feedback from the Dietetic students was analysed by the student researchers and the project supervisor resulting in changes to the wording of some questions.

Table 13: Final version of exploratory survey questions (Full survey in Appendix C)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics (Multi-choice)</td>
<td>1. What is your ethnicity?</td>
</tr>
<tr>
<td></td>
<td>2. What is your country of birth?</td>
</tr>
<tr>
<td></td>
<td>3. Do you identify with any of the following religions?</td>
</tr>
<tr>
<td></td>
<td>4. How long have you been residing in New Zealand?</td>
</tr>
<tr>
<td>Food preferences (Multi-choice)</td>
<td>5. Which of the following choices do you most commonly eat? (Select those that apply to you)</td>
</tr>
<tr>
<td></td>
<td>6. Do your food choices differ when you are unwell? (E.g. having a cold)</td>
</tr>
<tr>
<td></td>
<td>7. If yes, what would you have? (Select those that apply to you)</td>
</tr>
<tr>
<td>Food preferences (Open-ended)</td>
<td>8. When you are unwell, what are the most important foods to have? (Please list at least 3 food items)</td>
</tr>
</tbody>
</table>

Study Procedure and Data Collection

The exploratory survey was distributed through word of mouth, and direct contact via email with representatives of the student associations. The representatives were given an advertisement for this survey, including the survey link, and asked to post the survey advertisement on their association’s private Facebook groups (Appendix D). Participants were made aware that they would have given consent to participate in this survey once they have entered the survey link. Data collection commenced on 6th October 2017 and ended on 20th October 2018. Data from respondents of Chinese and SEA ethnicities were extracted.
from Survey monkey into an Excel spreadsheet and compiled by the student researcher. The results were analysed with the help of the project supervisor.

4.4 Phase two – Focus groups

A focus group was conducted for the Chinese ethnicity and another for the Filipino ethnicity. The focus group aims to:

- Identify the food habits of the general free-living adult population
- Investigate whether their food habits change when they become unwell
- Identify their expectations and experiences of a NZ hospital foodservice

Figure 4: The progress of conducting focus group

4.4.1 Development of Focus Group Schedule

The data from the literature review and the exploratory survey as well as the research question were taken into consideration when designing the focus group schedule. Common ideas arising from phase one study results were included as well as other items that required further investigation. These ideas were related to changes in food preferences when an individual is unwell. More information related to the types of food preferred when people are unwell was needed. As this study aims to investigate the food preferences of these ethnicities when they are well and unwell, the focus group outline was divided into three areas as shown below:

1. Exploring participants’ general or usual eating habits in NZ
2. Food preferences when the participants are unwell
3. Food-related expectations of the NZ Hospital foodservice
The focus group schedule was drafted by the student researcher and the student researcher doing a parallel study then reviewed by the research supervisor and co-supervisor. Minor changes were made.

**Pilot test**

The finalised focus group schedule was pilot-tested to:

- Ensure questions were easy to understand, understood in the same way and were ethnically appropriate.
- Ensure that the discussion could be completed within the time stated.
- Assess the completeness of the question areas and identify areas that required clarification.

One focus group pilot test was conducted for each ethnic group with groups of four to five people, led by the student researcher and assisted by the student researcher on the parallel project. The pilot test was audio-recorded, and participants were asked to sign the consent forms prior (*Appendix Ec*).

**Chinese**

The student researcher obtained several professional contacts through the study cultural advisor and contacted these contacts through email introducing this study. An internet search was done also undertaken for Chinese community organisations, where the Auckland Chinese Community Center (ACCC) was identified and contacted. The student researcher liaised with a representative of the Community Center and arranged a date to visit the center to introduce the study to the community members and recruit participants for the pilot test and the focus group. On Tuesday 27th February 2018, 12.30 pm, the student researcher promoted the study to the community members and recruited 4 members for the pilot test.
Table 14: Demographics of Chinese ethnic group pilot test participants (n=4)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>Male</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>Age range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 – 54 Years</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>65 – 75 Years</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>75 Years and above</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Place of Birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>New Zealand</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>Years Lived in NZ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 – 40 Years</td>
<td>100</td>
<td>4</td>
</tr>
</tbody>
</table>

%: percentage  
n: number

The group had no trouble understanding and answering any questions. The student researcher noticed that all questions were easy to ask without need to constantly refer to the focus group schedule. The information gathered met the aims of the focus group. The main area that required clarification was the spices commonly used in Chinese foods. No questions required changing as participants understood all questions, and the clarifications required were not complicated. More prompts were added under some questions to gather more specific information such as spices used in food, whether they must bring meals for family members when hospitalised vice versa, and the reasons behind it.

The demographic form (Appendix Fa) was revised to collect more specific data:

- Options for ‘Age-range’ were changed to a 4-year Statistic NZ census age range for easier analysis.
- Options for ‘Years lived in New Zealand’ was changed to capture a wider range of years.
- The UoO logo was added to the form

The revised demographic form (Appendix Fb) was used for the Filipino ethnicity pilot test.

Filipino

A Filipino professional contact who is a Diabetes Nurse at the Greenlane Medical Center was introduced to the student researcher through the study cultural advisor. The student researcher had a meeting with the professional contact to discuss the study. The Filipino professional
contact arranged participants from the North Shore Bethel Missionary Baptist Church (NSBMBC) to attend the pilot test. A pilot test was conducted on Sunday 11th March 2018, 1 pm, at the Willow Park Primary School Hall where participants gather for service on Sundays.

**Table 15: Demographics profiles of Filipino ethnic group pilot test participants (n=5)**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Male</td>
<td>80</td>
<td>4</td>
</tr>
<tr>
<td>Age range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 – 49 Years</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>50 – 54 Years</td>
<td>60</td>
<td>3</td>
</tr>
<tr>
<td>65 + Years</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filipino</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>Place of Birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>Years Lived in NZ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less Than 10 Years</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>10 – 40 Years</td>
<td>80</td>
<td>4</td>
</tr>
</tbody>
</table>

%: percentage  
n: number

Similar to the pilot test with the Chinese group, the Filipino group found the questions easy to understand and answer. The only question that needed clarification was the type of food expected from the public hospital foodservice. Participants gave many general food examples such as ‘more Filipino food’. A follow-up question such as “Please name one food that you expect the hospital to provide” was added to gain specific insights if the answers were not sufficiently informative. The demographics form was revised. Options for ‘age range in years’ were changed to 10-year increments following the Statistics NZ census format, which allowed more age ranges to be captured. The demographic form was edited to fit on one page to reduce the likelihood of participants missing questions (Appendix Fc).

The final areas of inquiry are listed in **Table 16** below.
Table 16: Final focus group guide (Full schedule in Appendix G)

<table>
<thead>
<tr>
<th>Areas of inquiry</th>
<th>Questions</th>
</tr>
</thead>
</table>
| General Eating Habits: Food and drinks                | 1. What do you normally have your first meal of the day in New Zealand?  
|                                                       | a. Prompt for time of day, cooking methods, main ingredients, where do they get that from (cook/buy), and portion sizes.  
|                                                       | 2. What do you normally have for your second meal in New Zealand?  
|                                                       | a. Prompt for time of day, cooking methods, main ingredients, where do they get that from (cook/buy), and portion sizes.  
|                                                       | 3. What do you normally have for your third meal in New Zealand?  
|                                                       | a. Prompt for time of day, cooking methods, main ingredients, where do they get that from (cook/buy), and portion sizes.  
|                                                       | 4. Which of these are your main meals?  
|                                                       | a. Prompt: Largest meal/most important meal  
|                                                       | 5. What do you normally have as snacks?  
|                                                       | a. Prompt for time of day, cooking methods, main ingredients, where do they get that from (cook/buy), and portion sizes.  
|                                                       | 6. What are the difficulties in preparing your favourite food in New Zealand?  
|                                                       | a. Prompt: sourcing of ingredients, cost, availability, time  
| When Participants are Unwell: Food and drinks         | 7. When you are unwell, are there any differences in your preferred foods?  
|                                                       | a. What kind of food do you prefer?  
|                                                       | b. Are they influenced by your cultures?  
|                                                       | c. Please tell us about the cultural significance of the foods you prefer when you are unwell?  
|                                                       | d. What are your comfort foods?  
|                                                       | 8. What kind of foods are important to you when you are sick?  
|                                                       | a. Prompt for preparation method, amounts, temperature  
|                                                       | 9. What cultural traditions influences the food you eat when you are unwell?  
|                                                       | a. E.g. hot and cold foods, foods for healing or food for special conditions  
| New Zealand Hospital Foodservices                     | 10. Have you/any family members been admitted to the hospital?  
|                                                       | a. How was the experience?  
|                                                       | b. Did they finish their meals?  
|                                                       | c. Did you have to bring food for your family members/did your family members bring food for you?  
|                                                       | 11. What food do you expect NZ public hospitals to provide for Chinese/Filipino* people?  
|                                                       | a. Prompt for cooking methods, temperature, meal size, garnishes, timing, ingredients, service/presentation of meals etc  
|                                                       | 12. What else would you like to see in the NZ hospital foodservice?  
| General Comments                                      | 13. Any other comments?  

*Will be changed according to the ethnicity of the focus group
4.4.2 Focus Group Participants and Recruitment

Criteria for selecting focus group participants were as follows: at least 18 years of age, English speaking, of Chinese or Filipino ethnicity and residing in Auckland.

Participants were sourced from the same community groups as the pilot test, which was the ACCC and the NSBMBC for the Chinese and Filipino focus group respectively. The focus group was conducted at the same place where the pilot test was conducted. On the day of the Chinese focus group, the student researcher promoted the study again to the community members of the ACCC to reconfirm participants who were interested in the study. The Filipino professional contact helped with the recruitment of the Filipino participants by promoting the study to the church members.

4.4.3 Focus Group Data Collection

Subsequently, two focus groups were conducted, one focus group of 8 Filipinos and one group of 8 Chinese people. Participants were given the information sheet and consent form and asked to sign the consent form before the focus group commenced. The focus group was led by the student researcher and a student researcher on the parallel project was present to assist with recording on audio using 2 recording devices and written notes.

The Chinese focus group was conducted on 13th March 2018, and the Filipino focus group was conducted on 18th March 2018. Culturally appropriate refreshments were sourced from local shops and brought to the venues by the student researcher.

4.5 Phase three – Inpatient Questionnaires and Interviews

The aim of the questionnaires and interviews was to:

- Investigate Chinese and Filipino inpatients hospital foodservices experiences
- Identify foodservice factors that are important to patients of each ethnic group
- Investigate Chinese and Filipino patients’ expectation of hospital foodservice

On advice from the study statistician, 10 participants for each ethnic group was sought.
4.5.1 Development of Hospital Food Experience Questionnaire

**Figure 5: Process of development of in-patient questionnaire**

Common themes identified from analysis of focus group data was integrated with data from the literature reviews to develop the questionnaires for each ethnic group. The themes were prioritised in terms of importance to the research question. Interview questions were derived from questions and themes that were not asked in the questionnaire and or needed to be fully explored. A well-regarded survey and questionnaire design resource was used to guide and develop the questionnaire (76). The questionnaire and interviews schedule were developed by the student researcher assisted by the project supervisor and co-supervisor. Some questions of the questionnaire were developed in conjunction with a student researcher conducting a parallel study to enable comparisons across the two studies. Separate questionnaires were developed for each ethnicity. There were 20 questions in the final Chinese questionnaire and 21 questions in the final Filipino questionnaire excluding the demographics. Each questionnaire had 3 sections; experience of food and foodservices in NSH, expectations of food and foodservices in NSH and demographic information. The themes and number of questions are given in **Tables 17 and 18**. Some constructs were explored in both ethnicities, thus questions added were identical (Question 6, 7, 8, 9, 10, 11, 14, 15, 16) or similar (Question 5, 12, 17). Other general questions relating to the overall experience (Question 1, 2, 3, 4, 18, 19) were identical. Two hospital food expectation questions were added to investigate the food expectations of patients which included food options identified in the focus groups, such as white rice and various soups. Arranging the questions in this way helped reduce the total number of questions in the questionnaire, thus reducing participant burden. The questionnaire was reviewed by the study cultural advisor dietitian and DHB
advisor as well as the study a statistician in the department of Human Nutrition, UoO and study supervisors. Minor changes to wordings were made and additional options for some questions were added (Added ‘N.A’ for questions 9, 10, 11).

**Table 17: Final Chinese inpatient questionnaire** (Full questionnaire in Appendix K)

<table>
<thead>
<tr>
<th>Themes</th>
<th>Questions</th>
<th>Answer format</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Experience Section</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| **Overall Quality of food**     | 1. Overall, the food I received was similar to what I usually have at home.  
2. The flavour of the food I ate is similar to what I usually have at home.  
3. To have enough to eat, I needed to have food brought in by my family.                                                                 | Never -> Always*     |
| **Variety of meals available**  | 4. Each day the Hospital menu offered me enough options for each meal to allow me to choose food I preferred for:  
• Breakfast  
• Lunch  
• Dinner  
5. I could choose Chinese food from the menu I wanted to eat for:  
• Breakfast  
• Lunch  
• Dinner                                                                                                                            | Never -> Always*     |
| **Vegetables served**           | 6. I enjoyed the way the vegetables were cooked.  
7. The types of vegetables I received were similar to the vegetables I usually eat at home.                                                                 | Never -> Always*     |
| **Fruits served**               | 8. Fresh fruit was available with each meal if I wanted it.                                                                                                                                             | Never -> Always*     |
| **Meat fish poultry**           | 9. I enjoyed the way the meats and poultry was cooked.  
10. I enjoyed the way the fish was cooked.                                                                                                   | Never -> Always*     |
| **Soups Served**                | 11. During my hospital stay, I enjoyed the types of soups I received for:  
• Breakfast  
• Lunch  
• Dinner                                                                                                                                | Never -> Always*     |
| **Fluids**                      | 12. I was offered Chinese tea during my hospital stay.                                                                                                                                                  | Never -> Always*     |
|                                 | 13. Water was available when I wanted it during my hospital stay                                                                                                                                       |                       |
| **Temperature of meals**        | 14. Cold foods were served cold.  
15. Hot foods were served hot.                                                                                                             | Never -> Always*     |
| **Timing of meals**             | 16. Compared to the time I would usually have my meals, the timing of my meals was:  
• Breakfast  
• Lunch  
• Dinner                                                                                                                                | Earlier -> Much Later¹|
| **Presentation of meals**       | 17. The cutlery available was similar to the cutlery I used at home.                                                                                                                                   | Never -> Always*     |
| **Services**                    | 18. The foodservice staff words and actions showed that they were respectful of my culture.                                                                                                          | Never -> Always*     |
19. During my stay in hospital, I experienced the following conditions which affected my ability to consume and enjoy the hospital meals (Please select all that apply):

- Reduced appetite,
- Taste changes,
- Nausea, vomiting,
- Pain, constipation,
- Difficulty swallowing,
- Other.

**Expectation Section**

20. I would like to be offered the following food items (Tick every item applies to you):

- Chicken, beef, pork, other meats (e.g. lamb), fish, seafood, milk, dairy products, bread, noodles, legumes, white rice, brown rice, cereal (e.g. Weetbix),
- Ginger, congee (粥),
- Chicken Soup (炖鸡汤),
- Mustard Green Soup (芥菜湯),
- Steamed Egg on White Rice (蒸鸡蛋白饭),
- Chinese Herbs (E.g. GoJi berries (杞子),
- Chinese yam (淮山),
- Shu Di (熟地),
- Dong Quai (當歸)).

21. When I am unwell in hospital, I prefer food which is: (Tick all that apply to you)

- Fried foods, steamed foods, boiled, oily foods, hot temperature foods,
- Cold temperature foods, raw foods e.g. salad.

*Never -> Always: Never, rarely, Sometimes, Mostly, Always
1Earlier -> Much Later: earlier, similar, later, much later.

<table>
<thead>
<tr>
<th>Themes</th>
<th>Questions</th>
<th>Answer format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience Section</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Quality of food</td>
<td>1. Overall, the food I received was similar to what I usually have at home.</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td></td>
<td>2. The flavour of the food I ate is similar to what I usually have at home.</td>
<td></td>
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<tr>
<td></td>
<td>3. To have enough to eat, I needed to have food brought in by my family.</td>
<td></td>
</tr>
<tr>
<td>Variety of meals available</td>
<td>4. Each day the Hospital menu offered me enough options for each meal to allow me to choose food I preferred for:</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td></td>
<td>• Breakfast</td>
<td></td>
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<tr>
<td></td>
<td>• Lunch</td>
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<td></td>
<td>• Dinner</td>
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<td></td>
<td>5. I could choose Filipino food from the menu I wanted to eat for:</td>
<td></td>
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<tr>
<td></td>
<td>• Breakfast</td>
<td></td>
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<td></td>
<td>• Lunch</td>
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<td></td>
<td>• Dinner</td>
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<tr>
<td>Vegetables served</td>
<td>6. I enjoyed the way the vegetables were cooked.</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td></td>
<td>7. The types of vegetables I received were similar to the vegetables I usually eat at home.</td>
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<tr>
<td>Fruits served</td>
<td>8. Fresh fruit was available with each meal if I wanted it.</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td>Meat fish poultry</td>
<td>9. I enjoyed the way the meats and poultry was cooked.</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td></td>
<td>10. I enjoyed the way the fish was cooked.</td>
<td></td>
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<tr>
<td>Soups Served</td>
<td>11. During my hospital stay, I enjoyed the types of soups I received for:</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td></td>
<td>• Breakfast</td>
<td></td>
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<td></td>
<td>• Lunch</td>
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<tr>
<td></td>
<td>• Dinner</td>
<td></td>
</tr>
<tr>
<td>Fluids</td>
<td>12. I was offered Filipino tea (E.g. Salabat) during my hospital stay.</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td></td>
<td>13. I was offered Tropical fruit juices (E.g. Pineapple juice) during my hospital stay.</td>
<td></td>
</tr>
<tr>
<td>Temperature of meals</td>
<td>14. Cold foods were served cold.</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td></td>
<td>15. Hot foods were served hot.</td>
<td></td>
</tr>
<tr>
<td>Timing of meals</td>
<td>16. Compared to the time I would usually have my meals, the timing of my meals was:</td>
<td></td>
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<tr>
<td></td>
<td>• Breakfast</td>
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<td></td>
<td>• Lunch</td>
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<td></td>
<td>• Dinner</td>
<td>Earlier -&gt; Much Later¹</td>
</tr>
<tr>
<td>Presentation of meals</td>
<td>17. The cutlery available was similar to the cutlery I used at home.</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td>Services</td>
<td>18. The foodservice staff words and actions showed that they were respectful of my culture.</td>
<td>Never -&gt; Always*</td>
</tr>
<tr>
<td>Others</td>
<td>19. During my stay in hospital, I experienced the following conditions which affected my ability to consume and enjoy the hospital meals (Please select all that apply):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reduced appetite, taste changes, nausea, vomiting, pain, constipation, difficulty swallowing, other.</td>
<td></td>
</tr>
<tr>
<td>Expectation Section</td>
<td>20. I would like to be offered the following food items (Tick every item applies to you):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chicken, beef, pork, other meats (e.g. lamb), fish, seafood, milk/dairy products, bread, noodles, legumes, cereals (e.g. Weetbix), white rice, brown rice, bread, potato/kumara, Congee (rice porridge), Sinigang, Tinola, Adobo, Ginger tea (Salabat)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21. When I am unwell in hospital, I prefer food which is: (Tick all that apply to you)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fried foods, steamed foods, boiled, oily foods, hot temperature foods, cold temperature foods, raw foods e.g. salad.</td>
<td></td>
</tr>
</tbody>
</table>

*Never -> Always: Never, rarely, Sometimes, Mostly, Always

¹Earlier -> Much Later: earlier, similar, later, much later.

**Pre-test**

The final draft hospital food experience questionnaire was pre-tested with people of Chinese and Filipino ethnicity respectively. The student researcher asked participants to read the questionnaire and identify any questions or terms used that were confusing to them or potentially confusing to patients. Participants were also asked questions around the understand-ability and readability of the questionnaire. Pre-testing results were analysed by the student researcher and the project supervisor and used to refine the final questionnaire.
Chinese

Chinese staff were sourced from the Asian Health Services (AHS) in NSH with the help of a professional contact. The pre-test for the Chinese questionnaire was conducted on the 20th of April 2018 at the AHS office. Six staff members undertook post questionnaire completion interviews lasting approximately 10 minutes. Most participants had no problem understanding the questions and had no further comments. A few participants raised concerns about Chinese patients’ English proficiency as in their experience, most Chinese patients have lower English-speaking abilities, especially older Chinese patients. Participant feedback and subsequent changes made to questions are listed in Appendix J. Question 14 (cold foods were served cold) was removed from the questionnaire after feedback as participants highlighted that Chinese people do not have cold foods in hospital and the question would be irrelevant.

Filipino

This pre-test was conducted on the 1st and 2nd of May 2018. Five Filipino staff members of NSH undertook the post questionnaire completion interviews lasting approximately 5 minutes, on 1st May. The interview with the other participant was conducted on 2nd May 2018 and lasted approximately 10 minutes. Overall, participants found the questionnaire easy to understand and relevant to their culture. They also mentioned that most Filipino patients have good English-speaking abilities and would have no problems completing the questionnaire. The participants’ feedback and subsequent changes made to questions are listed in Appendix L.
Participants and Recruitment

Criteria for selecting participants were as follows: 18 years of age, English speaking, of Chinese or Filipino ethnicities, booked for surgery at NSH and WH between Monday April 30th 2018 and Friday June 1st 2018 with hospital stay of at least two overnight days. The WDHB study advisor identified potential participants by extracting data from the WDHB ‘Current Inpatient by Ethnic Group” report. The student researcher met with the WDHB study advisor every morning excluding weekends to check the report from 21st May 2018 to 1st June 2018. Potential participant’s ward number, admission date and name were noted down. This confidential information is destroyed immediately after usage according to the instructions of the hospital’s patient confidentiality protocol. The WDHB study advisor or the student researcher acting with delegated authority then approached the Charge Nurse Manager on the wards or the nurse in charge of the potential participants and enquire if the participants were mentally and physically able to participate in the study. Upon approval from the ward nurses, the potential participants were approached by the study advisor or the student researcher in their wards to introduce the study and seek written consent for participation in the study. AHS
were employed to help the WDHB study advisor or the student researcher with the explanations for several patients who had language barrier. Interested patients were given a study pack, which contained an introductory letter, information sheet, and consent form. The student researcher will preserve the participant’s anonymity by using the unique code identifier on all records. The time and ward detail of the participant was sent to AHS if the participant required translation, to enable AHS to send a translator to the ward during the time of the interview Participants were offered a supermarket voucher to the value of $20 for completing both the written questionnaire and brief interview.

Data collection

The consented participants were approached by the student researcher during the day of expected discharge to conduct the hospital food experience questionnaire and interview. Each participant was invited to complete the hospital food experience questionnaire and given 20 minutes to complete the questionnaire. The student researcher returned after 20 minutes to collect the completed questionnaire and undertake the brief interview. All interviews were audio-recorded using a voice tracer device by Philips (Model name: Philips Voice Tracer DVT 1200 Digital Voice Recorder). Participants with language barriers were assisted by an AHS translator who helped with translation of the questionnaire and interview questions. For participants who required translation, the student researcher remained in the ward with the translator while the translator was administering the questionnaire. The student researcher took observational data as the questionnaire was being completed. Data collection took place at NSH and WH between the 21st of May and the 1st of June 2018.

4.6 Data Analysis

4.6.1 Qualitative analysis

In this study, focus group and interview transcripts were analysed using the thematic analysis approach. Thematic analysis identifies themes within qualitative data and uses these themes to answer the research question (79). This analysis is flexible in nature as it does not require the
following of any specific theory or perspectives, which makes it useful for this exploratory study (79). Braun & Clarke’s 6-step analytical framework was used in this study (79). The 6-steps framework used for the analysis are detailed below:

1. Audio recordings of the focus groups and interviews were selectively transcribed. All material relevant to the broad research area was transcribed into individual Microsoft Word for Windows 2016 documents. Key elements of Krueger and Casey’s transcripts protocol such as bolding moderator’s comments and double-spacing between speakers were followed (80). The student researcher read the transcripts numerous times to become familiar with the data.

2. Initial codes were then generated. This involved organising data into meaningful groups. The student researcher manually identified recurring topics and words in the transcripts, highlighting these words with different colours in Microsoft Word. A record was kept of the frequency of recurring ideas. Potential quotes that captured the essence of a code were noted. Codes generated from the data are shown in Appendices M, N, O, P. As a quality measure, the project supervisor reviewed the generation of initial codes.

3. Preliminary themes were identified using the initial generated codes. Themes are patterns that capture important data regarding the research question (79). The codes were organised into broader themes. This process produced 6 main overarching themes and 12 subthemes for the Chinese focus group whereas 5 main themes and 9 subthemes were produced for the Filipino focus group. Nine themes and 14 subthemes were produced by the Chinese in-patient interviews while 3 themes and 9 subthemes were produced by the Filipino in-patient interviews. Subthemes are themes within a theme that help explain and or describe larger, more complex themes (79).

4. These preliminary themes were then reviewed to ensure that each related to the research questions and were modified to create the final themes.
5. The themes underwent final refinement to ensure that the data under each theme was appropriate. Furthermore, this ensured that data grouped under the theme is correct. Final theme names were defined and related to the research question. These themes and subthemes were discussed and reviewed by the project supervisor. Final overarching themes for the Chinese focus group, Filipino focus group were developed. Overarching themes for the Chinese in-patient interviews and Filipino in-patient interviews were also developed.

6. Subsequently, finalised themes were presented in the results section (Chapter 5.2 and 5.3.4)

4.6.2 Quantitative analysis – Inpatient experience questionnaire

Basic statistical analysis of the inpatient questionnaire was performed by the student researcher using Microsoft Excel. On the advice of a statistician descriptive statistics were used to summarise data from the relatively small number of participants. The mean was calculated for numerical responses to questions with a Likert scale of “Never (1), Rarely (2), Sometimes (3), Mostly (4), Always (5)”’. The mean was used to determine the average option selected on the Likert scale for each question. The mean data ranged from 1 to 5. Responses to free text questions were aggregated and presented as bar graphs.

4.7 Quality Assurance

The following steps were taken to ensure the quality of data collection and analysis.

An established protocol following RA Krueger and LT Midanik, was used to develop the focus group schedule and questionnaires (76, 80). The exploratory survey was deduced from the literature and the content was reviewed by the project supervisor and dietetic student colleagues before data collection commenced. Pilot tests were undertaken for both focus group schedules to ensure that questions asked would gather data relevant to this study. Expert reviews and pre-test were conducted for the food hospital experience questionnaire to
ensure that the questions were appropriate and suitable for the target population. Expert reviews were conducted by the study supervisors, DHB study advisor, cultural advisor and the UoO Human Nutrition department statistician, all of whom were familiar with the study aims. The pre-test participants sourced mostly from NSH are familiar with the hospital foodservice and are in contact with patients of these ethnicities. Analysis of data followed established methods including Braun and Clarke’s six-phase framework for thematic analysis (79). Participants sourced for phase 2 and 3 of this study were a fair representation of Chinese and SEA patients in public hospitals. The student researcher had prior training in motivational interviewing, micro-counselling skills and best practice communication as part of the UoO’s Masters of Dietetics programme. These skills equipped the student researcher to conduct the focus groups and interviews to achieve their objectives.
5. **Results**

This chapter reports results from all three phases of this study; phase 1 exploratory survey, phase 2 focus group and phase 3 inpatient hospital food experience questionnaire and expectations interview.

5.1 **Phase 1 – Exploratory Survey**

This exploratory survey was undertaken to explore the food preferences of Chinese and SEA adults residing in NZ. This information, along with the literature review, was used to develop the schedule for Phase 2 focus groups. The data for the exploratory survey was collected from a convenience sample of students studying in the UoO.

As mentioned in the literature review, there can be significant differences in food habits among ethnicities based on the country of birth. Thus, the results were categorized by the participants’ country of birth. There was a total of 75 responses from Chinese and SEA ethnicities. Participants were categorized by country of birth; Brunei (n: 2), China (n: 2), Hong Kong (n: 1), Indonesia (n: 2), Malaysia (n: 28), NZ (n: 4), Singapore (n: 9), Philippines (n: 25), Thailand (n: 1) and Vietnam (n: 1). The majority of the participants were from Malaysia (37.3 %) and the Philippines (33.3 %). Ethnicities included Burmese (n: 2), Chinese (n: 28), Eurasian (n: 1), Filipino (n: 23), Indonesian (n: 1), Indian (n: 2), Malay (n: 18), Vietnamese (n: 1) and Thai (n: 1). A majority of the respondents had lived in NZ for 1 – 3 years (n: 23) and 3 – 9 years (n: 27). Forty-one respondents indicated that they would change their eating habits when they were unwell. Only 4 respondents preferred western cuisines when they were unwell. Several similar foods were important to participants across the ethnic groups. These common foods were rice porridge, also known as congee, soups such as chicken soup, fruits and vegetables. Important drinks included plain water as well as honey and lemon drinks.
5.2 Phase 2 – Focus Group

5.2.1 Pilot test

The aims of the pilot test were to ensure that the questions were appropriate for participants and answers would produce substantial data for the research. One pilot test was conducted for each ethnic focus group. Minor changes were made after the pilot-tests; adding more prompt questions and changes to the demographic form that participants were asked to complete before the focus group commenced. In-depth information about the pilot tests can be found in Chapter 4.4.1.

5.2.2 Focus group results

Focus groups were conducted to investigate the general eating habits of Chinese and Filipino people residing in NZ. Focus groups also sought to identify the food preferences of these ethnicities when they become unwell, and their expectations of hospital foodservices in NZ. Data collected from focus groups were used to develop the in-patient hospital food experience questionnaire administered in phase 3 of this study.

Chinese Focus Group

The Chinese focus group was carried out in the activity room at the ACCC. Eight participants consented to participate in this study.

Table 19: Demographic characteristics of participants in Chinese focus group (n=8)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>%</th>
<th>n</th>
</tr>
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<tbody>
<tr>
<td>Gender</td>
<td></td>
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<tr>
<td>Females</td>
<td>50</td>
<td>4</td>
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<tr>
<td>Male</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Age range</td>
<td></td>
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</tr>
<tr>
<td>60 – 69 Years</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>70 – 79 Years</td>
<td>12.5</td>
<td>1</td>
</tr>
<tr>
<td>80 – 89 Years</td>
<td>12.5</td>
<td>1</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>100</td>
<td>8</td>
</tr>
<tr>
<td>Place of Birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>12.5</td>
<td>1</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>12.5</td>
<td>1</td>
</tr>
<tr>
<td>New Zealand</td>
<td>75</td>
<td>6</td>
</tr>
<tr>
<td>Years Lived in NZ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 – 40 Years</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>Born in NZ</td>
<td>75</td>
<td>6</td>
</tr>
</tbody>
</table>

%: percentage
n: number

Six participants were 2nd generation Chinese living in NZ. A majority of the participants were older adults, as defined by Statistics NZ as being over 65 years (81). Most participants were
born in NZ while 2 participants were from Guang Zhou, China and Hong Kong. Most participants described themselves as ‘Kiwi-Chinese’ because they grew up in NZ and saw themselves as being very adapted to the kiwi culture.

The questions asked in the focus group were in 3 main sections; participants’ general eating patterns in NZ, food preferences when they become unwell and the experiences and expectations of the NZ hospital foodservice. Common themes identified from analysis of each section are presented below.

1. General Eating Habits

Western meals

Western foods were often consumed for breakfast (Weetbix, toast, rolled oats and Bran flakes) and lunch (sandwiches, pies, burgers). Commonly consumed drinks were coffee and western tea such as English breakfast and NZ Bell Tea. Participants mentioned that they grew up in NZ and were very accustomed to western breakfast and lunch foods.

Chinese Meals

Rice porridge also known as congee or 粥 (Jeok), was consumed occasionally as part of lunch. Dinners had the most Chinese cultural influence and were more frequently home-cooked. Dinner was also the largest meal of the day for most participants, where family would gather and have the meal together. Typical meals were described as consisting of seasonal fresh vegetables, some meat and carbohydrates such as white or brown rice, or noodles (rice noodles, rice vermicelli and mung bean noodles). The common cooking method for vegetables was stir-frying with ginger. Meat may be stir-fried with the vegetables or cooked separately by roasting or stir-frying. The common cooking method for fish was steaming. Long grain rice was preferred with Chinese meals. Chinese drinks included Chinese green tea. “Most of the Chinese around will have some rice and vegetables, some meat and plenty of variety.”
Fruit was also an integral part of their diets. Fresh fruits such as bananas were eaten as snacks or desserts after dinner.

2. Health beliefs

The types of food consumed were frequently driven by health beliefs. Participants were health conscious due to health issues related to aging. Common examples included consuming oat porridge (*because of the beneficial effects on cardiovascular health*) and Java tea (*it’s a special tea which is good for your health ... makes you go to the toilet*). Others included limiting deep-fried foods (*they are not good for you*) and canned foods.

“As we got older we have to be more sensible. The main meal of the day is largely greens, vegetables...we cut back on protein foods intakes. We have minimised carbohydrates ... But that’s just because we get older and we have health issues and we have to consider these healthy diets. When we were young, there were three rice meals a day...”

Chinese medicine soup also known as 藥材湯 (Jeok coi tong) by participants was frequently consumed. Chinese medicine soup consisted of Chinese herbs including Dong Quai also known as Female Ginseng, Chinese Yam and Goji Berry It is believed that drinking these soups helps ‘support the stomach’. There was different versions of the Chinese medicine soup depending on the types of herbs added.

“There’s two version of it, there’s one which cleansing and the other one is what we call Bo sum which ... supposedly a lot of iron in it ... build you up sort of kind of tonic”

3. Other influences on food patterns

Several participants took care of grandchildren during the day and meals often suited what the children wanted to eat.

“We have grandchildren, we have to eat what they eat ... My snacks are all dictated to the grandchildren, what the grandchildren are going to eat otherwise I might not bother.”

Motivation to prepare meals was another factor influencing meals constituents. Chinese meals generally take longer to prepare and required more skill. It was also harder to cook Chinese
meals for a large group of people. Participants may have foods that were more convenient on some days such as baked beans and spaghetti or takeaways.

“*Yes, you eat by yourself just stir-fry. But when you’ve got a family...you got to make sure there’s four or five dishes on the table...*”

4. Food Preferences when Unwell

**Congee or Rice porridge (粥)**

The common food item eaten when the participants are unwell was Congee or rice porridge, also known as Jeok or Zhou in Cantonese and Mandarin pronunciation.

“...*As a mother, what you will cook for someone who is sick ... is Bo Jeok (Boil congee)*”

The consistency of congee was described to be similar to a soup, where a spoon would drop to the bottom of a bowl when filled with congee.

“*If you put a spoon up in Jeok and it stands up instead of falls, it’s too thick.*”

The temperature of congee had to be hot, described as ‘*needing to give the spoon of congee a couple of blows before consuming it*’. Short grain rice is often used to make congee, along with chicken or pork bones, ginger, salt, dried mushrooms and minced chicken. Sometimes hundred-year eggs, also known as preserved egg, or salted eggs would be used, along with sesame oil for flavour. Congee was usually garnished with spring onions, shrimp flakes, onion flakes and dried scallops.

“*If you use a short grain or medium grain rice, it sort of breaks a part better than the long grain. Long grain does not do that very well... Lots and lots of water... flavour with very thinly cut fresh ginger, you can either put the salt or add it later, you might add some soy sauce or dark soy sauce.*”

**Fluids**

Plain water and clear fluids such as Chinese soups are fundamentally important in Chinese diets and aware especially important when unwell. Drinking sufficient fluids was believed to promote good health. When Chinese become unwell, they drink plenty of fluids.
“I think drinking is inherent to good health. Drinking clear fluids ... And that came through my family life and we try to maintain that...Being sick and having a fever you need more fluids so drinking soups is part and parcel of Chinese life.... if we don’t have soup I will drink cups and cups of water...”

Soups commonly mentioned by participants were carrot soup, chicken soup and mustard green soup. Most soups involve preparing a good chicken stock, which is a barrier as high quality chicken could not be found in NZ. Fresh whole chicken is preferred to frozen whole chicken when making chicken stock.

Lemon juice and honey in hot water is believed to help with chest problems. Other drinks are lemon and ginger tea or adding lemon and honey to tea.

**Temperature of foods**

Hot temperature foods were important when participants were unwell.

“you lose your taste buds so keep it simple and hot, plain foods.”

**Cooking methods**

Fried or deep-fried foods were not preferred as they were seen as unhealthy.

“Steaming. Water noodles rather than fried. So keep away from fried food basically”

**Chinese Herbs**

There was a Chinese herb to treat every medical condition. Chinese herbs Dong Quai and Shu Di was often used alone when someone is feeling weak or dizzy. Chinese herbs were also used to make tonics, which consist of steaming herbs for approximately 3 hours or longer.

Chicken tonic was identified as having health promoting properties. A typical tonic contains Chinese herbs such as Chinese yam, Goji berries and red dates.

5. Experience of New Zealand Hospital Foodservice

**Quality of meals**

Only one participant had bad experiences with poor-quality hospital food. The participant reported that:
“The mash potatoes was really hot on the outside, it was frozen in the middle and lumpy. It has had peas in, the peas were white and hard like marbles. The cabbage was boiled to death. It smelled absolutely sulphurous ... And it was white. … They brought up this banana, someone must have sat on it before it got to me.”

Meal service

The same participant identified problems with the serving method of some meals. The participant reported that:

“...The bread was fresh ... but I had two slices of bread, they put one slice in each paper bag, and the paper of the paper bag has absorbed all the moisture from the outside of the bread. And it wasn't at all nice....”

Food brought in for family

As Chinese foods were not available in hospitals, participants would bring food for their parents when hospitalised. Their parents were older generation Chinese who are not as accustomed to western foods. When participants themselves were hospitalised, their family would bring fresh fruits when they visited.

Vegetables

Some participants had experienced over-cooked vegetables in hospital meals. Most participants found the boiled vegetables acceptable while others preferred steamed vegetables and for the vegetables to be crisp.

6. Expectations of New Zealand Hospital Foodservice

Participants could not identify a specific food they wanted hospital to provide but emphasized the importance of overall nutrition and balance of meals, and the variety of meals available. As one participant put it:

“if it is healthy, nutritious, it should be alright. You’re not actually in the Hilton here (in hospital) ... and if the food is regarded as balanced by the dietitian I think you have to accept
that they are doing their job properly. But you need to think about a variety ... More than just an ethnicity”

Foods expected were described as ‘simple and plain foods that are not overcooked’, such as a basic Chinese meal of rice with vegetables and chicken.

“When you are in hospital most people are not well, so they are not after the spicy or strong tasting fried food. So, when you are going to have the plain, simple just cook it nice. Not over cooked or undercooked”

Improvement in quality of food items would be a big positive change in the hospital meals.

“I think if you can control the quality of the rice coming out of the kitchen ... and the standard of quality control of the vegetables, it will be a big milestone...I think will be pretty hard just getting the vegetables crisp rather than boiled...”

Rice

As rice was the staple for Chinese people, having rice as an option in the menu would make a positive impact for Chinese patients.

“The basic for Chinese is rice so you have that on the menu as an option to potatoes and other starch that will be a number one ... Chinese eat rice every night”

Rice served would have to be cooked the way Chinese people were used to. Participants described preferred rice as being hot, and ‘not clump together and sticky’. Long grain rice was most commonly consumed by participants. Using a rice cooker was the most common cooking method, but in the past, participants would cook rice over a stove. Participants gave valuable insight the cooking method of rice using the stove method:

“You must wash the rice first to get the loose starch off. Then you boil it with about, usually it is this much water above the rice, regardless of size of pot and quantity of rice. And you boil it till...until all the water is gone, then turn it down to as low as it can possibly get then put the lid on then let it steam gently for 17 minutes ... Then you stir it to fluff it. And it shouldn’t stick, and it shouldn’t have a raw middle.”
Regarding the feasibility of the hospital to provide rice, participants would compare Chinese restaurants to the hospital setting stating that:

“If Chinese restaurants can serve the amount of rice it does on a daily basis, hospitals should be able to.”

Participants highlighted that having a rice option such as steamed rice or congee would be beneficial for the Chinese patients but did not expect congee to be offered. Participants mentioned that when having congee, they would prefer it with a big Chinese spoon.

Filipino Focus Group

Eight Filipino Adults participated in this focus group. Five participants lived in NZ for 10 – 40 years and 3 participants had lived in NZ for less than 10 years. All participants were under 50 years of age, 2 participants were between 0 – 19 years, 2 participants were between ages 20 – 29 years and 4 participants were between ages 40 – 49 years.

Table 20: Demographics characteristics of participants in Filipino focus group (n=8)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>75</td>
<td>6</td>
</tr>
<tr>
<td>Male</td>
<td>25</td>
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</tr>
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<td>Age range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 – 19 Years</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>20 – 29 Years</td>
<td>25</td>
<td>2</td>
</tr>
<tr>
<td>40 – 49 Years</td>
<td>50</td>
<td>4</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filipino</td>
<td>100</td>
<td>8</td>
</tr>
<tr>
<td>Place of Birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>100</td>
<td>8</td>
</tr>
<tr>
<td>Years Lived in NZ</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 10 Years</td>
<td>37.5</td>
<td>3</td>
</tr>
<tr>
<td>10 – 40 Years</td>
<td>62.5</td>
<td>5</td>
</tr>
</tbody>
</table>

As the Filipino focus group followed the same structure with the Chinese focus group, the results are presented in the same format.

1. General Eating Habits

Western Meals

Western style meals were usually consumed for breakfast (cereals and bread with spreads) and lunch (sandwiches and salads). Lunch meal items were often chosen based on convenience.
Filipino meals

Rice was an essential element of all Filipino meals. Fried rice was eaten for breakfast during weekends. Filipino meals consist of steamed jasmine rice and Filipino meat dishes cooked with vegetables. Common dishes included beef steak, sinigang and adobo (refer to Table 8). These meals were often consumed for dinner and lunch if there were leftovers. Meat, poultry and fish dishes were important in meals and were often the main ingredients. Asian vegetables such as carrots, broccoli, cabbage, beans and bok choy were often used, being either stir-fried or added to meat dishes. Variety of meals was important to some participants, with the main protein having to be different between days. Fruits were a key element in their diets as well. Fresh fruits were eaten though the day as a snack and after dinner. Bananas were commonly eaten and occasionally apples. Salabat tea also known as ginger brew is a Filipino tea also drunk by participants. Spices important to Filipino dishes are ginger, chili, garlic and onion. For spicy dishes, chilli, chilli powder, cayenne pepper would be used. Fresh herbs such as cilantro and coriander were also key elements in Filipino dishes. Other condiments such as soy sauce and fish sauce were also commonly added to Filipino dishes.

2. Eating Utensils

Utensils commonly used were spoon and fork. If there were none available, participants would use their hands.

3. Food Preferences when Unwell

Rice and Congee (Lugaw)

All participants expressed the importance of consuming rice when they were unwell. Rice is often cooked until soft in dishes such as Lugaw, or added to various liquids such as soups, coffee or milo. Lugaw is a Filipino dish like Chinese congee, but with lemon juice added. Lugaw uses sticky rice with shredded chicken and ginger, and garnished with spring onions, fried garlic and boiled egg. Lugaw was described as a comfort food by participants.
Soups

Soups preferred when Filipinos were unwell include beef, pork or chicken bone broth called nilagang, sinigang or tinola respectively. Sinigang was described as a sour dish as it contained tamarind.

“It is like a boil up... we have two kinds. The other one is with tamarind which is sour and the other one is just salt and pepper. And sometimes fish sauce to make it tasty”

Drinks

Salabat tea or ginger tea was important to some participants. The tea was made by boiling fresh ginger in water. Calamansi juice was given when an individual has a cold.

4. Experience of New Zealand Hospital Foodservice

Taste of Food

Two participants found the food in hospital tasteless. One participant showed disapproval that hospital foods were not cooked fresh in the hospital kitchens, instead brought in frozen.

“... I was offered something kind of soup but not exactly how you know, it is different. I just taste it but for me it's still bland.”

Due to the taste and overall quality of hospital meals, participants asked their family members to bring in food when they were in hospital.

Timing of Meals

Meal times were generally acceptable, only one participant felt that hospital meals were served too early and preferred breakfast to be served around 7am and dinner to be served around 6.30pm.

“it’s not just about the food but it’s the timing as well, like because I have always been there for several time, they always serve too early.”
Health beliefs

A common belief surfaced in relation to people in the Philippines with skin allergies (eczema). They would not be served chicken skin, chicken, eggs, sardines, canned foods or salt-water fish in hospital. Patients would not consume these food items even if they were served.

5. Expectations of New Zealand Hospital Foodservice

There was a strong sense that participants would prefer familiar foods when in hospital. However, as participants are living in NZ, this was moderated by the view that they should learn to adapt to western cuisines. Steamed jasmine rice and soup dishes such as Mami, a dish with rice vermicelli in beef broth with vegetables, were the main items Filipino participants expected to be offered in hospital. It was important for meals, especially soup dishes, to be served very hot. Tropical fruit drinks such as pineapple juice and mango juice were important to Filipino culture and was expected to be available in hospital. The quality of pineapple juice was also important as one participant stated:

“...Dole pineapple juice ... Because the Dole is really quality pineapple.”

5.3 Phase 3 Questionnaire and Interview

Phase 3 of this study involved of participants completing the Hospital Food Experience Questionnaire and participating in a brief interview.

Essentially, the focus group analysis was used in the development of the hospital food experience questionnaire. Two separate questionnaires for the Chinese and Filipino ethnicities were developed, pretested and amended before the commencement of data collection. The full questionnaires can be found in Appendices K and L. In-depth details of the development of this questionnaire can be found in Section 4.5.1.

5.3.1 Results of Hospital Experience Questionnaire

This section presents a summary of the findings from the hospital food experience questionnaire, which sought to investigate participants’ experience of the foodservice.
Chinese Hospital Food Experience Questionnaire

Eleven Chinese participants completed the hospital food experience questionnaire. Almost half of the participants were female (45.5 %) and (54.5 %) male. All participants were born outside of NZ, with majority of participants born in China (72.7 %). A majority of participants (72.7 %) had lived in NZ for 10 – 40 years. Participants ranged in age, from 30 – 39 years to 90 – 99 years. Participants’ length of hospital stay varied from 2 – 3 nights (36.4 %) to 6 or more nights (45.4 %). Thirty-six percent (n: 4) of participants were in the ESC ward.

Table 21: Demographic characteristic of Chinese participants (n = 11)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>% of study participants</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Female</td>
<td>45.5</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>54.5</td>
</tr>
<tr>
<td>Age range</td>
<td>0-19 years</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>20-29 years</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>30-39 years</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>40-49 years</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>50-59 years</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>60-69 years</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>70-79 years</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>80-89 years</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>90-99 years</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>100 years and over</td>
<td></td>
</tr>
<tr>
<td>Ethnic Group</td>
<td>Chinese</td>
<td>100</td>
</tr>
<tr>
<td>Country of birth</td>
<td>China</td>
<td>72.7</td>
</tr>
<tr>
<td></td>
<td>Malaysia</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>Taiwan</td>
<td>18.2</td>
</tr>
<tr>
<td>Years lived in New Zealand</td>
<td>Less than 10 years</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td>10 – 40 years</td>
<td>72.7</td>
</tr>
<tr>
<td></td>
<td>More than 40 years</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>All my life</td>
<td></td>
</tr>
<tr>
<td>Nights spent in Hospital during this admission</td>
<td>1 night</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>2 – 3 nights</td>
<td>36.4</td>
</tr>
<tr>
<td></td>
<td>4 – 5 nights</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>6 + nights</td>
<td>45.4</td>
</tr>
</tbody>
</table>

n = number

Foodservice experience

The hospital foodservice experience section consisted of 18 questions. Table 22 and Table 23 present the results and mean score from questions employing a Likert scale of ‘Never to Always’. Question 15 (Compared to the time I would usually have my meals, the timing of my meals was: Breakfast, Lunch, Dinner) is presented in Figure 7 as it was not based on a ‘Never to Always’ Likert scale.
Seventy-seven percent of questions (quality of meals, taste, variety, vegetables, fruits, meat and poultry, fish, soups, Chinese tea, temperature, cutlery used) had a mean score of less than 3, signifying that most participants selected options 'sometimes', 'rarely' and 'never'. Only 2 questions had a mean score of 4 and over (question 13: Hot water was available when I wanted it during my hospital stay and question 17: The foodservice staff were respectful of my culture)

Table 22: Results of hospital food experience questionnaire (Chinese)

<table>
<thead>
<tr>
<th>Questions</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Overall quality of meals</td>
<td>45.4</td>
<td>18.1</td>
<td>27.2</td>
<td>9.09</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td>2 Taste of meals</td>
<td>45.4</td>
<td>18.1</td>
<td>36.3</td>
<td>1.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Portion Size</td>
<td>36.3</td>
<td>9.09</td>
<td>18.1</td>
<td>27.2</td>
<td>9.09</td>
<td>2.64</td>
</tr>
<tr>
<td>4a Menu variety (Breakfast)</td>
<td>27.2</td>
<td>27.2</td>
<td>27.2</td>
<td>9.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4b Menu variety (Lunch)</td>
<td>9.09</td>
<td>36.3</td>
<td>36.3</td>
<td>9.09</td>
<td>2.73</td>
<td></td>
</tr>
<tr>
<td>4c Menu variety (Dinner)</td>
<td>9.09</td>
<td>27.2</td>
<td>36.3</td>
<td>18.1</td>
<td>2.91</td>
<td></td>
</tr>
<tr>
<td>5a Chinese options (Breakfast)</td>
<td>45.4</td>
<td>36.3</td>
<td>18.1</td>
<td>1.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5b Chinese options (Lunch)</td>
<td>45.4</td>
<td>54.5</td>
<td>1.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5c Chinese options (Dinner)</td>
<td>54.5</td>
<td>45.4</td>
<td>1.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Taste of Vegetables</td>
<td>27.2</td>
<td>18.1</td>
<td>27.2</td>
<td>2.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Variety of Vegetables</td>
<td>18.1</td>
<td>27.2</td>
<td>36.3</td>
<td>18.1</td>
<td>2.55</td>
<td></td>
</tr>
<tr>
<td>8 Available Fruits</td>
<td>45.4</td>
<td>27.2</td>
<td>9.09</td>
<td>18.1</td>
<td>2.00</td>
<td></td>
</tr>
<tr>
<td>12 Availability of Chinese tea</td>
<td>63.6</td>
<td>18.1</td>
<td>18.1</td>
<td>1.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Availability of Hot water</td>
<td>18.1</td>
<td>27.2</td>
<td>54.5</td>
<td>4.36</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 Hot Temperature foods</td>
<td>27.2</td>
<td>27.2</td>
<td>18.1</td>
<td>27.2</td>
<td>3.45</td>
<td></td>
</tr>
<tr>
<td>16 Cutlery used</td>
<td>27.2</td>
<td>36.3</td>
<td>27.2</td>
<td>9.09</td>
<td>2.27</td>
<td></td>
</tr>
<tr>
<td>17 Foodservice staff</td>
<td>9.09</td>
<td>72.7</td>
<td>18.1</td>
<td>4.09</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Percentage of people who selected the option

Abbreviation: Qn: Question.

Table 23: Results of Hospital Food Experience Questionnaire (Chinese)

<table>
<thead>
<tr>
<th>Questions</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
<th>N/A*</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 Taste of Meat and poultry</td>
<td>18.1</td>
<td>18.1</td>
<td>36.3</td>
<td>9.09</td>
<td>18.1</td>
<td>2.91</td>
<td></td>
</tr>
<tr>
<td>10 Taste of Fish</td>
<td>36.3</td>
<td>18.1</td>
<td>18.1</td>
<td>9.09</td>
<td>18.1</td>
<td>3.00</td>
<td></td>
</tr>
<tr>
<td>11a Soups (breakfast)</td>
<td>9.09</td>
<td>9.09</td>
<td>9.09</td>
<td>72.7</td>
<td>4.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11b Soups (Lunch)</td>
<td>9.09</td>
<td>18.1</td>
<td>18.1</td>
<td>36.3</td>
<td>9.09</td>
<td>3.55</td>
<td></td>
</tr>
<tr>
<td>11c Soups (Dinner)</td>
<td>9.09</td>
<td>18.1</td>
<td>27.2</td>
<td>36.3</td>
<td>9.09</td>
<td>3.40</td>
<td></td>
</tr>
</tbody>
</table>

1Percentage of people who selected the option
*N/A: Excluded from analysis of Mean

Question 11a (During my hospital stay, I enjoyed the types of soup I received for Breakfast) had a mean score of 4, which suggests a high enjoyment level for soups served for breakfast.
However, most participants (72.7 %) did not have soups during breakfast. This may suggest that the result of this question is un-reliable.

For question 15, most participants found the time breakfast (63.6 %), lunch (81.8 %) and dinner (45.5 %) was served in the hospital was similar to when they have meals at home.

![Timing of Meals in Hospital Compared to at home](image)

**Figure 7** Results: (Question 15 the timing of meals in hospital compared to at home)

**Expectation**

Results for the two expectation questions are presented in bar graphs (Figure 8 and 9) below.

The most preferred food options (90.9 %) question 19 (I would like to be offered the following food items: tick every item that applies to you) were chicken soup, fish, noodles and white rice. This is followed by 72.7 % of participants preferring to receive congee, chicken, steamed egg on rice and soy sauce. Sixty-three percent of participants preferred beef, ginger, milk (whole/trim) and potato/kumara. Fifty-four percent of participants preferred legumes, bread, and dairy products. Forty-five percent of participants preferred seafood, lamb and pork. The least chosen options were cereals (27.3 %), brown rice (27.3 %) and other meats (9.09 %).

From Figure 9 results for question 20 (When I am unwell in hospital, I prefer food that is: tick all that apply to you), it is evident that hot temperature foods were preferred by all participants (100 %). Other types of food selected were steamed (63.7 %), boiled (54.5 %),
fried (45.5%) and raw (27.3%). No participants selected the options cold temperature and oily foods.

**Figure 8: Results (Question 19) food types that Chinese participants would like to receive**

- White Rice
- Noodles
- Chicken Soup
- Fish
- Chicken
- Soy sauce
- Steamed Egg on White Rice
- Congee (Rice Porridge)
- Ginger
- Potato/Kumara
- Milk (whole/trim)
- Beef
- Legumes
- Dairy Products
- Bread
- Seafood
- Lamb
- Pork
- Brown Rice
- Cereals (E.g. Weetbix)
- Other Meats

**Figure 9: Results (Question 20 types of food preferred by participants)**

- Cold Temperature
- Oily
- Raw (E.g. Salad)
- Fried Food Options
- Boiled
- Steamed
- Hot Temperature
Filipino Hospital Food Experience Questionnaire

Four participants completed the hospital food experience questionnaire. Most participants were male (75%). Fifty percent were between 30 – 39 years of age, 25% of participants were between 60 – 69 years and 25% of participants were between 70 – 79 years. All participants were born in the Philippines. Half of the participants lived in NZ for less than 10 years and half of the participants lived in NZ for 10 – 40 years. Most participants (75%) hospital stay was for 2 – 3 nights. Two participants (50%) were in the ESC ward.

Table 24: Demographic profile of Filipino participants (n= 4)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>%</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>Male</td>
<td>75</td>
<td>3</td>
</tr>
<tr>
<td>Age range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-19 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-39 years</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>40-49 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-59 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-69 years</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>70-79 years</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>80-89 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90-99 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100 years and over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnic Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filipino</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Country of birth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Years lived in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 10 years</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>10 – 40 years</td>
<td>50</td>
<td>2</td>
</tr>
<tr>
<td>More than 40 years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All my life</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nights spent in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital during this admission</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 night</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 – 3 nights</td>
<td>75</td>
<td>3</td>
</tr>
<tr>
<td>4 – 5 nights</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 + nights</td>
<td>25</td>
<td>1</td>
</tr>
</tbody>
</table>

n = number

Foodservice Experience

The hospital experience section consisted of 19 questions. Tables 25 and 26 display the results and mean score from questions employing a Likert scale of ‘Never to Always’. Results from question 16 (Compared to the time I would usually have my meals, the timing of my meals was: Breakfast, Lunch, Dinner) are presented in Figure 10 as the question was not based on a ‘Never to Always’ Likert scale.
Thirty-nine percent of experience questions had a mean of 3 score and lower (overall quality, taste, portion, Filipino food, breakfast soups, salabat tea and tropical fruit juice).

Approximately 52% of experience questions had a mean score of 4 and over.

Table 25: Results of hospital food experience questionnaire (Filipino)

<table>
<thead>
<tr>
<th>Questions</th>
<th>Options 1</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Overall quality of meals</td>
<td></td>
<td>25</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td>2.00</td>
</tr>
<tr>
<td>2 Taste of meals</td>
<td></td>
<td>50</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
<td>2.00</td>
</tr>
<tr>
<td>3 Portion Size</td>
<td></td>
<td>50</td>
<td></td>
<td>50</td>
<td></td>
<td></td>
<td>3.00</td>
</tr>
<tr>
<td>4a Menu variety (Breakfast)</td>
<td></td>
<td>50</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td>4.50</td>
</tr>
<tr>
<td>4b Menu variety (Lunch)</td>
<td></td>
<td>25</td>
<td>25</td>
<td>50</td>
<td></td>
<td></td>
<td>4.25</td>
</tr>
<tr>
<td>4c Menu variety (Dinner)</td>
<td></td>
<td>25</td>
<td>25</td>
<td>50</td>
<td></td>
<td></td>
<td>4.25</td>
</tr>
<tr>
<td>5a Chinese options (Breakfast)</td>
<td></td>
<td>50</td>
<td>25</td>
<td>50</td>
<td></td>
<td></td>
<td>1.75</td>
</tr>
<tr>
<td>5b Chinese options (Lunch)</td>
<td></td>
<td>25</td>
<td>25</td>
<td>50</td>
<td></td>
<td></td>
<td>2.25</td>
</tr>
<tr>
<td>5c Chinese options (Dinner)</td>
<td></td>
<td>50</td>
<td>25</td>
<td>50</td>
<td></td>
<td></td>
<td>1.75</td>
</tr>
<tr>
<td>6 Taste of Vegetables</td>
<td></td>
<td>50</td>
<td>25</td>
<td>25</td>
<td></td>
<td></td>
<td>3.75</td>
</tr>
<tr>
<td>7 Variety of Vegetables</td>
<td></td>
<td>25</td>
<td>25</td>
<td>25</td>
<td></td>
<td></td>
<td>3.50</td>
</tr>
<tr>
<td>8 Available Fruits</td>
<td></td>
<td>25</td>
<td></td>
<td>75</td>
<td></td>
<td></td>
<td>4.50</td>
</tr>
<tr>
<td>9 Availability of Filipino tea</td>
<td></td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>10 Availability of Fruit juice</td>
<td></td>
<td>75</td>
<td></td>
<td>25</td>
<td></td>
<td></td>
<td>2.00</td>
</tr>
<tr>
<td>11a Soups (breakfast)</td>
<td></td>
<td>25</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td>4.00</td>
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<tr>
<td>11b Soups (Lunch)</td>
<td></td>
<td>25</td>
<td>25</td>
<td>25</td>
<td></td>
<td></td>
<td>3.50</td>
</tr>
<tr>
<td>11c Soups (Dinner)</td>
<td></td>
<td>25</td>
<td>25</td>
<td>25</td>
<td></td>
<td></td>
<td>4.00</td>
</tr>
</tbody>
</table>

1 Percentage of people who selected the option

Abbreviation: Qn: Question

Table 26: Results of hospital food experience questionnaire (Filipino)

<table>
<thead>
<tr>
<th>Questions</th>
<th>Options 1</th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
<th>N/A*</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 Taste of Meat and poultry</td>
<td></td>
<td>25</td>
<td>75</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>10 Taste of Fish</td>
<td></td>
<td>25</td>
<td>50</td>
<td>75</td>
<td>25</td>
<td>4</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>11a Soups (breakfast)</td>
<td></td>
<td>25</td>
<td>50</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>11b Soups (Lunch)</td>
<td></td>
<td>25</td>
<td>25</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>11c Soups (Dinner)</td>
<td></td>
<td>25</td>
<td>25</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

1 Percentage of people who selected the option

*N/A: Excluded from analysis of Mean


In question 16, a majority of the participants felt that the time breakfast (75%), lunch (75%) and dinner (75%) was served in the hospital similar to at home (Figure 10).
Expectations

For question 20 (see Figure 11) (I would like to be offered the following food items tick every item that applies to you), all participants selected pineapple juice, fish, chicken, white rice and Filipino dishes; tinola, sinigang, adobo and lugaw. Seafood, noodles, beef and ginger tea or salabat tea were selected by 75% of participants. Fifty percent of participants selected pork and potato. The least preferred (25%) options were brown rice, milk, dairy products, whole meal bread, white bread, kumara and congee. Other meats and lamb were not selected.

Figure 12 shows that hot temperature foods were preferred by all participants (100%). Steamed and boiled food options were also popular with participants (75%). Fried, oily, cold temperature and raw foods were selected the least (25%).

Figure 10: Results (Question 16 the comparison of timing of meals in hospital)
Figure 11: Results (Question 20 food items Filipino participants would like to receive)

Figure 12: Results (Question 21 type of food preferred of Filipino participants)
5.3.2 Results of Interviews

This section presents a summary of analysis of transcripts of interviews with all 11 Chinese and 4 Filipino participants. These interviews aimed to explore participant’s responses on the Hospital food experience questionnaire and further investigate participants’ expectations of Hospital foodservice. Interview data underwent thematic analysis and main themes derived from the data are presented below. The main themes are presented in order of importance and relevance to the research question. Some themes have sub-themes presented to provide clearer explanations. Quotations from interviews with participants are included where appropriate.

Six interviews were conducted assisted by translators.

**Chinese Interviews**

1. Expectations of NZ Hospital Foodservice

Chinese people did not expect Chinese food to be provided by NZ hospital foodservices. Three sub-themes help explain this strong overall finding.

**Public Hospital**

As NSH is a public hospital and services were free, participants felt that they could not be demanding.

“I cannot provide too much comment because these services are free, so we cannot highly request like people can provide us for some Chinese food …”

Participants were aware of the costs limitations of public hospitals and felt that it would be difficult to implement more menu items specific for Chinese people as it would increase the cost of hospital menus.

**Minority Ethnicity**

Chinese participants saw themselves as being a minority group and there were many other ethnicities in NZ and so did not expect the hospital to provide Chinese meals.
“as a public hospital, they cannot meet all the requirement for all the different ethnicities ... maybe talking about more than about 100 ethnicities in Auckland we cannot meet all their needs.”

Preference for Chinese meals

Chinese meals were still preferred despite not expecting hospitals to provide them. Participants would like more Chinese meal variety if it were possible.

“...if say they can cook Chinese food ... then of course that is a preference ...”

Although there were some Chinese foods in the hospital menu, participants felt that these items were not cooked in a ‘proper’ Chinese cooking style and did not consider those foods as Chinese food.

2. Foods for Health Reasons

Several food items were important due to their effects on health and recovery in hospital. The following sub-themes describe the key factors that participants need when in hospital.

Healing properties of hot temperature food and drinks

Hot temperature meals and drinks were inherently important when participants were unwell in hospital. Hot foods and drinks were believed to be protective to the stomach, aiding recovery and providing comfort.

“... in hospital we prefer some warmer food and hot food going into the body ... and not harmful for the stomach... the Asian and western structure is slightly different ... for example for European people after eating the hot things that like to receive the cold drink like just cooling down but the Chinese people ... they like to have food first, hot food and warm food into the stomach and then drink some warm tea or hot tea or hot water, warm water afterwards ... they believe it is protection. when she eats it at least my body feels comfort.”

When food was served cold in hospitals, participants would ask to heat it up in microwave. Despite the importance of meal temperature, with the main meals being hot, it was acceptable when desserts were served cold.
Vegetables

For most participants having vegetables in hospital is very important. Vegetables were believed to be good for their stomachs and help with digestion. Preferred portion size of vegetable ranged from a quarter of a plate to half of a plate.

Fruits

A majority of the participants believed that having fresh fruit was important when hospitalised. Certain fruits have effects on some medical conditions. Pink apple was said to help patients stop coughing. Some fruits may not be suitable for patients. One example given was the effect of mango and it was inappropriate to serve mango to gynecology patients. “They believe about mango actually contribute to the body to flush the blood and make the blood bleeding so if you are talking about the gynecology surgery ... she already bleeding after the surgery so if you give mango they believe it is making more blood come out.” All participants stated that they wanted more fresh fruits to be offered to them during their hospital stay. Most participants wanted fruits to be served at every meal or at least during lunch and dinner. Common fruits preferred were apples, banana, grapes, kiwi fruit, mandarins and oranges.

Fish

Most participants felt that having fish was important when in hospital. Fish was believed to aid in recovery and help with appetite.

3. Language Barriers

Nearly half of the participants interviewed had poor English-speaking abilities. A common problem that arise was the language barrier between Chinese patients and the foodservice staff taking their menu orders. They were unable to choose foods from spoken menu as they did not understand English, as a result food was often chosen for them by the foodservice staff. Due to this, participants felt that there was little choice on the menu.
“She said for her the problem is the language... because she can’t choose the menu... She just said because the menu not change a lot ... choice always similar or same”

4. Oily Foods

Oily foods were not preferred when unwell in hospital. Oily food was seen as unhealthy and was not good for recovery. Participants believed that oily foods would affect the stomach negatively when recovering from an illness.

“... not good for stomach because my digestion not very well’

5. Chinese-cooking methods

Many participants preferred their meals cooked in a ‘Chinese-style’. For them, European-style cooking was bland-tasting and over-cooked, which was not desirable, as seen in low scores in the hospital food experience questionnaires. Western sauce such as white sauce served with meals was not acceptable to some participants.

“… kiwi vegetables seem like so soft and no taste, no soy sauce, no oil”

Participants preferred meals that have a slight salty taste and soy sauce is a recurring condiment usually added to Chinese-cooking. The following sub-themes related to specific meal items mentioned.

Vegetables

Desirable vegetables was described to be mildly fried, crisp texture, not overcooked, not too oily, and have a bright colour, which shows the vegetables are fresh. The most common Chinese cooking method described was stir-frying with a combination of either garlic, ginger, onions or salt. Soy sauce can also be added for extra flavour.

“How to stir-fry just oil and garlic and stir-fry and put some salt that is all...”

The type of vegetable was also important. Cooking western vegetables in a Chinese-style does not yield the same result. Most participants preferred having Asian vegetables such as bean sprouts, broccoli, Chinese cabbage, choy sum and green beans.
White Rice

Participants did not enjoy the rice served in hospital as the rice was too hard. Some participants did not order white rice as they thought that the rice would not be cooked properly. They felt that the foodservice would not be able to improve the quality of rice.

“... when Chinese people cook the rice, it will be very soft and nice but when Kiwi people cook the rice it is very hard.”

Many participants wanted rice to be added into menus if the quality of rice can be improved. Several participants had no preference for the type of white rice whereas other preferences ranged between jasmine rice, short grain rice and long grain rice. One participant also mentioned that rice should be served with Chinese style side dishes, stating that:

“If they make the vegetables and poultry Chinese style then I will eat them with rice but it will feel a bit weird to have rice with steamed vegetables”

Soups

Generally, participants found the soups served in hospital acceptable, however if given a choice, they would prefer Chinese soups. Chinese soups were described to be clear, with some chopped vegetables.

“Clear Chinese soup with a little bit of chopped vegetables”

Rice Porridge

Some participants had chicken rice porridge during their hospital stay and found it acceptable. However, they commented that the rice porridge was not cooked in a Chinese-style. One key complaint was the chicken pieces being too big when it was supposed to be in small, shredded pieces in the Chinese cooking way.

“I don't really find it difficult to eat but it's quite nice. Of course, the Chinese way of congee is the... Is in the sense is different because normal congee you put the sauce and the things, so it is like different”
Meat, Poultry and Fish

Soy sauce was a common condiment used when cooking meat and poultry. A Chinese-style cooking method for meat and poultry was described as:

“Fry a little and put some soy sauce and water and just stew cook.”

Common cooking methods for fish mentioned were steaming and frying, with Chinese sauce, ginger and garlic.

6. Frugal nature

Some participants mentioned that they would still consume the meals in hospital. One participant stated that as a Chinese person, he is not picky. Another participant mentioned that in China, they were taught from a young age to not waste food due to the lack of food.

“I think our Chinese especially for the senior people they don’t want to waste any food because you know in the past Chinese is really poor … our education you can’t waste food because it is hard to work hard and get food so you have to finish even if you don’t like.”

7. Service

Overall, most participants felt that the foodservice staff were respectful of their culture. Only one participant had a bad experience with one foodservice staff due to the negative attitude of the staff demonstrated by not smiling. That staff member also did not ask the participant for her preferred choice of drink and the drink served was not liked by the participant.

8. Family support

Some participants have their family bringing in homecooked Chinese meals as they were used to having Chinese foods. Participants also felt that the hospital food did not taste good. One participant also had chicken soup brought in, as she believed that it is good for recovery.

9. Other Foods
Noodles

Most participants would like to have noodles in hospital. Types of noodles preferred were Chinese noodles, wheat noodles and rice noodles. Common cooking methods were Chinese soup noodles or Chinese fried noodles with vegetables and some meat. The taste of the noodles was more important than the cooking method.

“I suppose you can cook it with soup, or even fry, but it is the taste rather than the thing.”

One participant mentioned that noodles should be easy to eat with a fork and spoon in hospitals as meals were often eaten in bed.

Chinese Tea

Although Chinese tea was not expected to be provided, some participants felt that it would be beneficial if it was provided. Chinese teas mentioned were Pu’er tea and Jasmine tea.

10. Cutlery

Although the cutleries served in hospital was different from at home, most participants did not expect the hospital to provide ethnic cutleries. However, some participants struggled with the unfamiliar cutleries and preferred to use chopsticks.

Filipino Interviews

1. Expectations of the NZ hospital Foodservice

Most participants did not expect Filipino food to be provided in hospital. The reason was they were a minority group in NZ. Also, they felt that not many other people would enjoy Filipino meals and thus would not be appropriate for hospitals.

“We are multi culture here, what Filipinos like some other cultures don’t like it. The Indians won’t like, they like curry ... the Chinese like other stuff ...”

2. Filipino Food

Filipino food was preferred by all participants and they would like to have Filipino food if it possible. Filipino food was described to be rice and side dishes such as adobo and sinigang.
Other Filipino food and drink items wanted were lugaw, salabat tea and tropical fruit juices. These food items emerged as sub-themes under this theme.

Rice

All participants would like to be offered rice more frequently when in hospital. In their recent hospital experience, rice was only available as an option on dinner menus. Rice was a staple for participants and they would like to have rice served lunch and dinner. One participant would also like to have rice breakfast.

“Filipino eat rice even at breakfast, 3 times a day with side dishes adobo, sinigang... all our meals are similar to each other.”

The rice served in hospital was generally acceptable. Types of rice preferred were Japanese rice, jasmine rice, long grain rice and basmati rice. Ideal rice is fluffy and soft. More importantly, rice must be served with culturally appropriate meat and vegetables dishes.

Tropical Fruit Juice

For all participants it was important to receive fruit juices in hospital. The type of fruit juice was not important. Tropical fruit juice was not expected to be provided but having it would improve participants’ hospital stay. Fruit juice should be served at every meal.

“I don’t want to give them a hard time. I can manage. I can drink you know what they serve.”

Salabat Tea

Salabat tea was not expected to be provided in hospitals however most participants enjoy Salabat tea and would like to have Salabat tea in hospital.

Lugaw

Participants generally enjoy consuming lugaw as it is a familiar food. Optimal lugaw is a thick texture, where a spoon would float if it was placed in a bowl of lugaw.

“it’s like you have the chicken meat and then sauté it and then put the little bit of rice and then it will boil ... until it is soft ... if you want when it is already cooked you can just put you know half of the lemon and squeeze it.”
3. **Important Foods**

Several food items emerged as being particularly important to Filipino, these are presented as sub-themes below.

**Hot Temperature Foods**

Hot temperature food was important to all participants. Hot foods were believed to help stomach feel better. Main meals should be served hot. The hot temperature was described as:

*“Pick up spoon and give a couple of blows”*

**Vegetables**

All participants felt that having vegetables in hospital was important. Participants enjoyed the vegetables served in the hospital but would prefer having Asian vegetables such as broccoli, carrots, long beans. Preferred cooking methods are stir-frying and blanching.

**Fish**

Fish was important to participants when in hospital. Participant felt that fish was easier to digest and most preferred having fish over meat and poultry when unwell. Acceptable fish was usually steamed or fried.

**Meat and Poultry**

In addition, meat and poultry menu options were important to most participants. Preferred cooking methods were boiling, sautéing and stir-frying with ginger and onion. In most Filipino dishes, meat and vegetables were often cooked together.

**Fruits**

Most participants felt that having fruits was important when hospitalised. Some participants would like to receive fruits with every meal while others would like to receive fruits for lunch and dinner. Fruits included apples, banana, grapes, pears and oranges.

**Other Findings**

Only some participants experienced conditions that might affect their appetites such as nausea and reduced appetite. However, those participants state their appetite would mostly depend on
the quality and type of meals served. If they did not enjoy the meals, they would not finish eating it. They would consume bread that was provided to keep them full.

Despite low overall scores for question 15 (Compared to the time I would usually have my meals, the timing of my meals was: Breakfast, Lunch, Dinner), Chinese participants did not expect hospitals to provide meals at different timings.

Most participants felt that the portion sizes of hospital meals were adequate for them. However, they would often have family bring in ethnic food as they did not enjoy the hospital meals. Some participant would ask family to bring in ethnic food as they were home-sick.

**Common Themes of In-patient Questionnaire and In-patient Interviews**

This section presents the key differences between the in-patient questionnaire results. The common themes from the inpatient expectation interviews between the Chinese and Filipino participants will also be presented.

Major differences are seen in the experiences of both ethnic groups in hospital summarised in **Table 27, below**. Overall, Filipino patients had a better enjoyment of the hospital foodservice.

**Table 27: Brief summary of Chinese and Filipino in-patient questionnaire**

<table>
<thead>
<tr>
<th>Questions</th>
<th>Chinese</th>
<th>Filipino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall food received</td>
<td>Rarely similar to at home</td>
<td>Rarely similar to at home</td>
</tr>
<tr>
<td>Taste of meals</td>
<td>Rarely similar to at home</td>
<td>Rarely similar to at home</td>
</tr>
<tr>
<td>Portion size</td>
<td>Sometimes enough to eat</td>
<td>Sometimes enough to eat</td>
</tr>
<tr>
<td>Menu Variety</td>
<td>Sometimes enough options</td>
<td>Mostly enough options</td>
</tr>
<tr>
<td>Ethnic meal options</td>
<td>Rarely available</td>
<td>Rarely available</td>
</tr>
<tr>
<td>Variety</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variety of Vegetables</td>
<td>Rarely similar to at home</td>
<td>Sometimes similar to at home</td>
</tr>
<tr>
<td>Taste of Vegetables</td>
<td>Rarely similar to at home</td>
<td>Sometimes similar to at home</td>
</tr>
<tr>
<td>Fruits</td>
<td>Rarely offered in hospital</td>
<td>Offered most of the time</td>
</tr>
<tr>
<td>Taste of meat and poultry</td>
<td>Sometimes enjoyed the way it is cooked</td>
<td>Mostly enjoyed the way it is cooked</td>
</tr>
<tr>
<td>Taste of fish</td>
<td>Sometimes enjoyed the way it is cooked</td>
<td>Mostly enjoyed the way it is cooked</td>
</tr>
<tr>
<td>Soups available</td>
<td>Mostly enjoyed soups in hospital</td>
<td>Mostly enjoyed soups in hospital</td>
</tr>
<tr>
<td>Ethnic Tea</td>
<td>Rarely offered in hospital</td>
<td>Never offered in hospital</td>
</tr>
<tr>
<td>Hot temperature foods</td>
<td>Sometimes served hot</td>
<td>Mostly served hot</td>
</tr>
<tr>
<td>Cutlery</td>
<td>Rarely similar to at home</td>
<td>Mostly similar to at home</td>
</tr>
<tr>
<td>Foodservice staff</td>
<td>Mostly respectful</td>
<td>Always respectful</td>
</tr>
</tbody>
</table>

The meals received in hospital were rarely similar to what patients of these ethnicities usually have at home. From the expectation interviews, it is clear that these patient groups do not expect NZ public hospitals to provide ethnic meals for them. Several common important
foods when unwell (*fruits, Asian vegetables, meat and poultry, fish and white rice*) were found in both ethnic groups. Additional foods that patients of these ethnic groups want the NZ public hospital to provide are white rice and noodles. Both patient groups would like to be offered more fruits during their hospital stay. Key elements of meals that were found to be important to patients of these ethnicities were hot temperature food and drinks.

Overall, the results presented in this chapter indicate that many factors affect the food preferences of in-patients of these ethnicities. The next chapter therefore, moves on to discuss how these findings relate to the existing literature and the potential changes the NZ public hospital foodservice could make to better meet the needs of these ethnicities.
6. Discussion
To the best of the student researcher’s knowledge, this is the first study to investigate the general eating habits of Chinese and Filipinos residing in NZ as well as their food expectations of and experiences in NZ public hospitals. In this chapter, the general eating habits of these ethnicities in NZ is discussed (section 6.1), followed by the food preferences of these ethnicities when they become unwell (section 6.2). Lastly, the experiences of these ethnic groups with the NZ public hospital foodservice are considered (section 6.3).

6.1 General Eating Habits of Chinese and Filipino People Living in New Zealand
Findings from phase 2 of this study are primarily discussed in this section as participants were free-living and well at the point of data collection. This study found that Chinese and Filipinos retained some traditional eating habits despite living in NZ for many years. These eating habits were evident for dinner meals every day for both ethnicities, while only Filipinos showed similar eating habits for lunch meals on weekdays. In general, Filipinos retained more traditional eating habits than the Chinese. It is important to bear in mind the possible bias in this observation as most Chinese participants grew up in NZ, so their diets would potentially be more acculturated.

This study found that breakfast was the most acculturated meal in Chinese and Filipinos in NZ, which is consistent with overseas studies investigating dietary acculturation (10, 24, 31, 32). Other changes to dietary habits found were meat and rice intakes. Filipinos have increased their meat and poultry intakes after migration. An analysis of Asian eating habits from the 2008/09 Adult National Nutrition Survey found that approximately half of the SEA and East Asian participants ate red meat 3 or more times a week (82). Unfortunately, there are no comprehensive investigations into NZ Asian dietary habits where Chinese and Filipinos were studied separately. This finding of the present study is consistent with dietary acculturation studies where different Asian populations increased their red meat intakes after migration (47, 56, 57, 83). It can therefore be suggested that there is a relationship between
migration to NZ and red meat intakes. White rice remained an important carbohydrate staple for Filipinos, which is line with those of previous studies investigating dietary acculturation in Filipino Americans (5, 48). However, contrary to findings from dietary acculturation studies (23), the Chinese in this study had a lower intake of meat and poultry intakes. The lower intake of rice seen in these participants were consistent with overseas dietary acculturation studies (23). This result may be explained by the Chinese participants being more health conscious due to their age (18). Another possible explanation is the participants being second generation Chinese-NZ as opposed to Filipinos being first generation Filipinos-NZ. Overseas studies have found that first generation Asian ethnicities retained many traditional eating habits after migration (10, 48, 72). Although there are limited studies on second generation ethnicities, it can be hypothesised that they would be more acculturated than the first-generation ethnicities. This may explain the difference in findings in the Filipino and Chinese participants.

6.2 Food preferences of Chinese and Filipino People when they become unwell

In this section, the relevant aspects of food preferences (availability, desired taste, cooking methods, ingredients, temperature, situations) are used for this discussion. Cooking methods, ingredients used, and desired taste are discussed together in Section 6.2.2. The analysis of phase 3 data is the basis for this discussion as it was collected from unwell and hospitalised participants, who are most relevant to the aims of this study.

6.2.1 Type of food desired in different situations

The current study found that Chinese and Filipino patients preferred ethnic foods when unwell in hospital as these foods have various healing properties and provide comfort. This finding is consistent with other studies where Asians preferred ethnic meals when unwell (23, 50, 56, 57). This shows the importance of providing ethnic meals in hospital.
6.2.2 Availability and Taste

As expected, this study found that there were little or no recognisable ethnic food and drink options on a NZ public hospital menu. Despite these findings, Chinese and Filipino patients did not expect NZ public hospitals to provide ethnic meals. This was due to patients being of a minority ethnicity and the free public hospital services. This result may be underpinned by the Chinese patients’ lack of confidence in the hospital foodservices’ ability to prepare authentic, acceptable Chinese meals. They had a pre-conceived belief that the hospital foodservice is unable to prepare Chinese foods to their preferences. Another possible explanation for this finding relates to families bringing food for patients. Family support is important in both ethnic cultures and families will bring meals into hospital as a form of support and display of love (3, 36). This may also be related to the low confidence in the hospital’s cooking abilities with familiar Asian foods.

An important aspect that makes ethnic food familiar is the taste. Participants reported that hospital meals tasted different to the meals they usually consume. Familiarity of taste depends on the ingredients used and cooking methods. Chinese and Filipino patients preferred meals to be cooked using ethnic preparation methods. Preferred ingredients were mostly of Asian origin such as Asian vegetables. Important spices and condiments commonly used in ethnic meals such as garlic, onion and soy sauce make dishes taste familiar. These ingredients paired with ethnic cooking methods make up a Chinese or Filipino-style meal. This means that pairing western ingredients with an Asian cooking method would not yield the same results and vice versa. A prominent example that arises from this study was the rice served in hospital. White rice in hospital was cooked using a western cooking method that yielded a different texture and taste, and as a result, was not accepted by most Chinese patients. These findings show that preparation of acceptable ethnic meals is complex and more research regarding the feasibility of the public hospital providing for a large number of Asian patients is required.
6.2.3 Temperature

This study found that for Chinese and Filipinos having hot temperature food and drinks when unwell is important. Hot temperature is believed to be protective to the stomach and aid in recovery. This shows that the hospital foodservice not only has to think about the preparation of ethnic meals, but also the service of these meals.

The present results showed that taste, cooking methods, ingredients used, temperature and availability contribute to familiarity in meals and improve overall hospital experiences.

6.3 Experience

As may be expected, this study found that Chinese patients in NZ public hospitals had a poor overall experience with the hospital foodservice which indicates that they did not enjoy the meals provided during their hospital stay. Surprisingly, Filipino patients had a better overall experience. However, due to the smaller sample size, these results must be interpreted with caution. A possible explanation for this finding is that half the Filipino participants were in the ESC while most Chinese participants were in NSH. The different foodservice systems employed might produce a difference in food quality. For example, Chinese patients did not enjoy the white rice served whereas Filipino patients found it acceptable. This finding was unexpected because both ethnic groups described their preferred rice as soft and fluffy. Both foodservice systems cooked rice in a steam oven. Rice served at the ESC are prepared at Auckland City hospital, chilled, packaged into single meals with other components then sealed and transported to the centre. Rice at NSH is cooked onsite and served fresh. A possible explanation is that the temperature of meals in the ESC is hotter as it was microwaved just before meal service. This suggests that meal temperature has a strong influence on the acceptability of meals by these ethnicities.

One clinically relevant finding was that most patients would finish their meals as no other food was available. Another interesting finding was the frugal nature of patients’ approach to food, seen more prominently in older Chinese patients. They are cautious about food wastage
as they were taught not to waste food growing up in China. These findings suggest that plate waste would not be a good measure of meal enjoyment in hospital for this particular group.

6.3.1 Other aspects of foodservice influencing Chinese and Filipino patient experience

Chinese and Filipino patients felt that the foodservice staff were generally culturally respectful. This study found that the attitudes of staff when serving patients is important. Patients were appreciative when staff had a positive attitude while a negative attitude, such as not smiling, was interpreted as being rude. This further shows the importance of staff understanding more aspects of the Asian culture to provide better care for these ethnicities.

In NSH, a spoken menu was used while an English written menu was used in the ESC. One unexpected but important clinically relevant finding was the language barriers, especially with older Chinese patients and potentially with new immigrants. Meals for these patients were often selected by the foodservice staff as they were unable to communicate their preferred choices. This means that patients with poor English proficiency potentially may not be provided with the meals that they preferred. This is a critical issue that has not been addressed in NZ hospitals. This finding shows that unfamiliar foods provided in hospital is not the only issue experienced by people of these ethnicities with poor English proficiency.

Meal timings in hospital were different for some Chinese and Filipino patients but they did not expect the timing of meals to change. As it would be challenging to change hospital meal timing to suit every patient’s needs, this finding shows that this is not necessary.

The cutlery provided in hospitals was accepted by most Chinese and Filipino patients. Older Chinese patients who were used to ethnic cutlery such as chopsticks had more difficulty adapting to fork and spoons. This could lead to difficulty eating and may result in reduced food intakes especially in the weaker patients. The risk of malnutrition is high in these patients especially if they have a long hospital stay and do not have food brought in by families.
6.4 Conclusion

This study explored the general eating habits of Chinese and Filipinos in NZ and their food preferences when they are unwell in hospital. The diets of these ethnicities reflect some degree of acculturation, which is potentially dependent on the years lived in NZ and country of birth. Despite these findings, these ethnicities expressed a preference for ethnic foods when they are hospitalised. Food plays a vital role in enjoyment, comfort and most importantly recovery for people of these ethnicities. Other factors such as language barriers, attitudes of staff and cutlery provided also affect hospital experience. Currently, NZ public hospitals have few cultural meal options, some of which are unfortunately not well accepted. Although these patients do not expect NZ public hospitals to provide ethnic foods, the objectives set by the NZ Public Health and Disability Services Act 2000 and the HQSC requires DHBs to provide effective, high quality foodservice and improve experience of care to meet the needs of all patients (13, 14). Thus, it is their responsibility to provide appropriate ethnic meals such as acceptable white rice in hospital to meet the needs of these ethnicities. This would in turn improve their hospital experience and the quality of care. Despite the small sample size, this study provides information to improve the hospital experience of Chinese and Filipino patients and demonstrate that hospital care can better meet the needs of Asian people residing in NZ. A sample menu to assist this process is provided in Appendix Q. In the menu food patterns for Chinese patients includes a stir-fry meat with vegetable dish, rice or noodles, a portion of vegetables, milk and a piece of fruit. Whereas food patterns for Filipino patients include a tropical fruit, a traditional meat dish with vegetables such as Sinigang or Tinola, rice and a fruit juice.

6.5 Strength and limitations

One key strength of this study was that it comprised a combination of qualitative and quantitative methodologies, matched to the aim of each phase. This 3-phase exploratory study investigated a wide topic area and provides baseline data that can be used for future research.
In phase 3, several patients with poorer English-proficiency were recruited. These patients tend to retain more traditional eating habits, thus giving more variety to the samples’ response. Another important strength is ethnic background of the student researcher. This gives the student researcher an ability to recruit, collect and interpret data that is more detailed and nuanced than a non-Asian researcher could produce.

The main limitation of this study was the small sample size of Filipino patients recruited in phase 3, which restricted the generalisation of findings. As the recruitment criteria for phase 3 limited the number of eligible participants, 6 fewer Filipino participants were recruited than intended. Surgical patients in NSH tend to have a very short stay and are often discharged within a day of surgery. Surgical patients experienced fatigue and were weak, making it difficult to conduct interviews effectively. Patients who had a longer stay would have consumed more meals and might have a different stance on their hospital foodservice expectations and experience. Future investigations should consider these issues when designing the study protocols. The language barrier seen in 5 Chinese participants in phase 3 required the help of a trained translator. The disadvantages of using a translator must be acknowledged: selective translation, impartiality of the translator and reliability of interpretations (84). However, the translators used had several years of experience and were familiar with the aims of this study.

6.6 Implications for future Research

The results of this study indicate several areas for urgent future research to enhance the quality of care for Chinese and Filipino patients in hospital. Firstly, quantifying the dietary habits of these ethnicities in NZ will help to understand the dietary acculturation process and their risk of developing health problems and diseases. Exploring in more detail cultural health beliefs and how these affect their approach to disease management would allow health professionals to provide more targeted care. Further investigations into the expectations of these ethnicities on all aspects in NZ hospital foodservice would encourage quality
improvement. Lastly, developing a validated in-patient experience questionnaire suitable for patients of these ethnicities would help inform the NZ public foodservice on quality improvement areas.
7. **Application to Practice**

The objectives set by the NZ Public Health and Disability Services Act 2000 and the HQSC requires DHBs to provide effective, high quality foodservice and improve experience of care to meet the needs of all patients. Thus, the hospital has the responsibility to provide appropriate care for all patients. With the increasing population of Asian ethnicities in NZ, the number of Asian people admitted to hospital system will increase. This puts pressure on the NZ public hospital systems to implement hospital services and standards to meet the needs of these ethnicities.

This study found several areas that could be improved. Firstly, offering a carbohydrate staple with every meal such as white rice and noodles. These foods have to be cooked ‘properly’. More research into the feasibility of the hospital being able to provide foods cooked to the liking of these ethnicities will have to be done. Adding these carbohydrate staples as a menu option would benefit these ethnicities as well as other Asian ethnicities. Secondly, increasing the frequency of offering fresh fruits would improve the hospital stay for patients of these ethnicities. Current hospital menu standards include a standard where fruits have to be offered twice a day, however, it appears that it was not followed through on the NSH menu. Thirdly, the language barrier between foodservice staff and patient needs to be resolved. Currently, patients with poor English proficiency are not able to choose food they want due to the language barrier. This was more prevalent in older Chinese patients. Adding Chinese characters to menus or pictures of meals would make it easier for patients and the foodservice staff when taking menu orders. Lastly, nutrient analysis should be undertaken on common Chinese and Filipino food items for use in further studies investigating the dietary habits of these ethnicities. More investigations into the expectations and experience of the hospital foodservice would allow hospital foodservices to further understand the broader needs of Chinese and Filipino patients. This information can then be used to introduce more menu
items that are appropriate and will benefit Chinese and Filipino patients. More importantly, the hospital foodservice staff must be trained to prepare Chinese and Filipino meals. This research experience has been challenging with many setbacks throughout the research process. A major issue that emerged was the data collection period for phase 3. Initially, I thought that the recruitment of Filipino patients would be easy as I was told that there was a good number admitted to NSH. However, when I started recruitment, I realised that there are not many Filipino patients admitted into hospital for surgery. As the data collection period was allocated only 2 weeks, this made me feel stressed and anxious that we would not be able to meet the target number of Filipino participants. Upon a discussion with the study advisor, I requested the UO Ethical approval be expanded to include WH for data collection. The recruitment process was not efficient as we had to search electronically by surgical wards to identify potential participants. As there was lack of Filipino in those wards, I requested to see if there are any patients who would have surgery placed in other wards. Fortunately, I found 1 Filipino patient in the other wards who fitted the criteria. Even though the Filipino participants recruited did not meet the target number, more Filipino participants were recruited because I was looking for ways to expand the potential participants. This process required me to think on my feet and problem solve. In this case, it was how to increase the Filipino participants. I have learnt the value of being flexible and open minded when circumstances require a different approach to solve a problem.
8. References


35. Lipoeto NI, Lin KG, Angeles-Agdeppa I. Food consumption patterns and nutrition transition in South-East Asia. Public Health Nutr 2013 Sep;16(9):1637-43.


75. Nutritional Standards For Meals and Menus for Adult Inpatients. Health Partnerships NZ.
77. Mehta S. Health needs assessment of Asian people living in the Auckland region: Northern DHB Support Agency (NDSA); 2012.
9 List of Appendices

A. Ethical Approvals
   a. Ministry of Health, Health and Disability Scope Review
   b. UoO Minimal Risk Health Ethics Departmental Approval (Phase 1)
   c. UoO Minimal Risk Health Ethics approval (Phase 1)
   d. UoO Ethical Approval (Phase 2 and 3)
   e. UoO Minimal Risk Health Ethics Approval Letter (Phase 2 and 3)
   f. UoO Maori Consultation Letter (Phase 2 and 3)
   g. Approval Letter for Study Protocol Amendments (30th April 2018)
   h. Approval Letter for Study Protocol Amendments (18th May 2018)
B. Waitemata Locality Approval
C. Exploratory Survey (Phase 1)
D. Study information Pack for Phase 1
   a. Information sheet
   b. Facebook post/Email advertisement
E. Study Information Pack for Phase 2
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   b. Consent forms
   c. Information sheet
F. Demographic Form for Phase 2
   a. 1st version
   b. 2nd version
   c. Final Version
G. Focus group schedule
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   b. Information sheet
   c. Consent form
I. Hospital Food Experience Questionnaire Pre-test (Chinese)
J. Hospital Food Experience Questionnaire Pre-test (Filipino)
K. Final Hospital Food Experience Questionnaire (Chinese)
L. Final Hospital Food Experience Questionnaire (Filipino)
M. Codes and themes gathered from Chinese Focus Group
N. Codes and themes gathered from Filipino Focus Group
O. Codes and themes gathered from Chinese Inpatient Interviews
P. Codes and themes gathered from Filipino Inpatient Interviews
Q. Ethnic Hospital Menu Sample
Appendix Aa: Ministry of Health, Health and Disability Scope Review

Tuesday, 19 December 2017

Dr Penny Field
Department of Human Nutrition
University of Otago
Penny.field@otago.ac.nz

Dear Dr Field,

Study title: My Food is my Medicine: The culturally determined hospital food preferences study

Thank you for emailing HDEC a completed scope of review form on 19 December 2017. The Secretariat has assessed the information provided in your form and supporting documents against the Standard Operating Procedures.

Your study will not require submission to HDEC, as on the basis of the information you have submitted, it does not appear to be within the scope of HDEC review. This scope is described in section three of the Standard Operating Procedures for Health and Disability Ethics Committees.

Your study meets the student-led research exemption criteria described below. Your scope of review form described an observational research project for the attainment of a masters degree. Participants are Asian patients who have received food during their stay in hospital. The cultural appropriateness of the food provided will be evaluated and information will be created in a way to be included into the National Menu Standards and to assist with menu development.

For the avoidance of doubt a study conducted wholly or principally for the purposes of an educational qualification requires HDEC review only if it:

- is an intervention study, or
- is not conducted at or below a Master’s level.

If you consider that our advice on your project being out of scope is in incorrect please contact us as soon as possible giving reasons for this.

This letter does not constitute ethical approval or endorsement for the activity described in your application, but may be used as evidence that HDEC review is not required for it.

Please note, your locality may have additional ethical review policies, please check with your locality. If your study involves a DHB, you must contact the DHB’s research office before you begin. If your study involves a university or polytechnic, you must contact its institutional ethics committee before you begin.
Please don't hesitate to contact us for further information.

Yours sincerely,

[Signature]

Tom Kent
Advisor
Health and Disability Ethics Committees
hdecs@moh.govt.nz
## UNIVERSITY OF OTAGO HUMAN ETHICS COMMITTEE
### APPLICATION FORM: CATEGORY B

**Departmental Approval**

1. **University of Otago staff member responsible for project:**
   Field Penny Dr.

2. **Department/School:**
   Department of Human Nutrition, University of Otago

3. **Contact details of staff member responsible (always include your email address):**
   Email: penny.field@otago.ac.nz

4. **Title of project:**
   Patient Cultural Food Preferences of Chinese, South East Asian, Indian and South Asian Adults living in New Zealand

5. **Indicate type of project and names of other investigators and students:**

<table>
<thead>
<tr>
<th>Staff Research</th>
<th>Names</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Research</td>
<td>2 names</td>
</tr>
<tr>
<td>Gillian Lum, Huda Shahir</td>
<td></td>
</tr>
<tr>
<td>Level of Study (e.g. PhD, Masters, Honors)</td>
<td></td>
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<tr>
<td>Masters of Dietetics</td>
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<td>External Research/ Collaboration</td>
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<td>Names</td>
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<td>Institute/Company</td>
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Reporting Sheet for use ONLY for proposals considered at departmental level

An information panel will give an outline of the exploratory study and the link to the survey. Informed consent will be deemed to be obtained when participants click on the link to open the survey: https://www.surveymonkey.com/r/KGD88X2
Survey questions are provided below.

9. Disclose and discuss any potential problems and how they will be managed:

The survey is confidential and anonymous. The participants can withdraw from participating in the survey at any time and will not be disadvantaged.

*Applicant’s Signature: .................................................................

Name (please print): .................................................................

Date: 2 Oct 2019

*The signatory should be the staff member detailed at Question 1.

ACTION TAKEN

☑ Approved by HOD
☐ Approved by Departmental Ethics Committee
☐ Referred to UO Human Ethics Committee

Signature of **Head of Department: ......................................................

Name of HOD (please print): .............................................................

Date: 3/10/2017

**Where the Head of Department is also the Applicant, then an appropriate senior staff member must sign on behalf of the Department or School.

Departmental approval: I have read this application and believe it to be valid research and ethically sound. I approve the research design. The research proposed in this application is compatible with the University of Otago policies and I give my approval and consent for the application to be forwarded to the University of Otago Human Ethics Committee (to be reported to the next meeting).

IMPORTANT NOTE: As soon as this proposal has been considered and approved at departmental level, the completed form, together with copies of any Information Sheet, Consent Form, recruitment advertisement for participants, and survey or questionnaire should be forwarded to the Manager, Academic Committees or the Academic Committees Administrator, Academic Committees, Rooms G22,
Appendix Ac: UoO Minimal Risk Health Ethics approval (Phase 1)

Dr P Field  
Department of Human Nutrition  
Division of Sciences  

8 November 2017

Dear Dr Field,

I am writing to confirm for you the status of your proposal entitled “Patient Cultural Food Preferences of Chinese, South East Asian, Indian and South Asian Adults living in New Zealand”, which was originally received on October 16, 2017. The Human Ethics Committee’s reference number for this proposal is D17/348.

The above application was Category B and had therefore been considered within the Department or School. The outcome was subsequently reviewed by the University of Otago Human Ethics Committee. The outcome of that consideration was that the proposal was approved.

Approval is for up to three years from the date of HOD approval. If this project has not been completed within three years of this date, re-approval must be requested. If the nature, consent, location, procedures or personnel of your approved application change, please advise me in writing.

Yours sincerely,

[Signature]

Mr Gary Witte  
Manager, Academic Committees  
Tel: 478 8256  
Email: gary.witte@otago.ac.nz
Human Ethics Committee (Health)
Minimal Risk Health Research – Audit and audit related studies

This document describes the circumstances when ethics review is permissible for Minimal Risk Health Research. It also describes the process and provides the application form for approval.

Explanation

There are two situations to which this process applies:

A. When the previously collected and stored health data is de-identified.
   Where the study only uses information that cannot be linked to an identifiable individual (see the Health Information Privacy Code, Rule 11 (2) (c) (i)

B. When identifiable health information is being used for audit of health provision, process or outcomes.

While ethics review may not be required for clinical audit, ethics review should be considered:

- where there is any doubt that the audit also constitutes research;
- when the method of evaluation is beyond usual practice or adds risk for the patient;
- and also may be advisable when it is anticipated or intended that this activity will lead to any publication which has a requirement for ethics approval.

Even though ethics approval may be given this does not preclude the need for:

- Locality authorisation from the Health Agency\(^1\) involved as in (B) above;
- Permission(s) from the Health Agency which is providing the de-identified information as in (A) above;
- Research consultation with Maori;
- A confidentiality agreement between the researcher and the Health Agency describing requirements for confidentiality of health information where this is not already included as part of locality authorisation.

The research may not commence until these approvals and agreements are in place and formal ethical approval has been granted by the subcommittee of the University of Otago Human Ethics Committee (Health).

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\(^1\) Health Agency (taken from HRC Guidelines for Ethics for Health Research 2002) A Health Agency is a person or body which provides health or disability services. Any purchaser of health services is declared to be a Health Agency. A “school, faculty or department of a tertiary educational institution which provides the training or a component of the training necessary for the registration of a health profession” is a Health Agency.
1. **Complete the form**
   - Use language which is, as far as possible, free from jargon and is comprehensible to lay people, or children if applicable.
   - Ensure, if applicable, that the Consent Form and Information Sheet have been carefully proof-read; the institution as a whole is likely to be judged by them.
   - If being used in electronic form, the various sections of this application form should be expanded or contracted to suit the length of the information to be entered.
   - It is helpful if applicants use a font different to the default font on the electronic application form as this helps to distinguish the applicant’s entries from the standard headings. Please do not use all capital letters or italics.

2. **Submit the completed form and attachments to your Head of Academic Department or Clinical Service for approval and signing.**

3. **Submit one signed form to the University of Otago Human Ethics Committee (Health) with all required authorisation documents to Gary Witte gary.witte@otago.ac.nz 64 3 479 8256, or Jo Farron de Diaz jo.farronediaz@otago.ac.nz 64 3 479 8956, rooms G23 or G26, Ground Floor, Clocktower Building, University of Otago (Dunedin campus).**

   Or, a signed form and attachments can be emailed to gary.witte@otago.ac.nz or jo.farronediaz@otago.ac.nz

4. **Final approval will be confirmed by letter to the Principal Investigator from the Manager, Academic Committees.** Minimal Risk Health Research studies are reviewed outside the normal meeting cycle by a subcommittee of the University of Otago Human Ethics Committee (Health). Upon receipt of the form, an acknowledgement of receipt will be sent confirming the date of the review. Following review a formal approval letter will be sent. Where there are any issues raised by the subcommittee, notification will be given at this time.
1. Title of Study:

My Food is my Medicine

The culturally determined hospital food preferences study

2. Investigators

Principal Investigator (University of Otago staff member responsible for project)

Name: Penny Field
Department: Human Nutrition
Title: Dr
Email: penny.field@otago.ac.nz

Co-investigators

Name: Alex Chisholm
Department: Human Nutrition
Title: Dr
Email: alex.chisholm@otago.ac.nz

Student Investigators

Name: Gillian Lum
Department: Human Nutrition
Level of Study: Master of Dietetics
Email: lumwe830@student.otago.ac.nz

Name: Huda Shahir
Department: Human Nutrition
Level of Study: Master of Dietetics
Email: mohhu782@student.otago.ac.nz

3. Study Description:

a. Briefly and in plain English describe the proposed study and the relevant background

This Quality Assurance Study is being conducted for the National DHB Dietitian Leaders Group to inform the development of hospital menus for non-European inpatient population groups. Currently the food preferences of these patients are unknown.

Professional advice and support is being given by Deborah Chettleburgh DHB Dietitian Leaders Group, Priscilla Jina and Amy Liu senior Auckland-based Dietitians' as cultural advisors, Roslyn Norrie senior Waitemata DHB Dietitian and Stella Welsh senior Counties Manukau DHB Dietitian.

Study Aim: To determine and understand Asian (Chinese, South East Asian, Indian and South Asian) adults' food preferences when they are in hospital and their experience of NZ hospital food service, to enable Food Services to better meet the food preferences of each ethnic group and thereby their nutritional needs.

Research Question: What are the culturally determined food preferences of adult Chinese, South East Asian, Indian and South Asian patients in NZ hospitals?

Objectives:

1. To understand and determine culturally appropriate foods for adult Chinese, South-East Asian, Indian, South Asian patients in DHB hospitals.

2. To present this information so that it can be incorporated into the National Menu Standards and assist with menu development.
The study will be conducted as two projects. In Project One, based in the Waitemata DHB, Gillian Lum will investigate adult Chinese and South-East Asian adult preferences and experiences. In Project Two, based in Counties Manukau DHB, Huda Shahir will investigate Indian and South Asian adult preferences and experiences. Chinese and South East Asian people represent large percentages of the Waitemata DHB Asian population. Indian people constitute the largest percentage of the Counties Manukau DHB Asian population, however, following either the Hindu or Islam religion is known to exert a profound influence on food patterns.

b. Please attach the study protocol -attached.

4. Peer review
   Has Peer Review been carried out?
   □ X Yes - Please attach peer review-attached.
   □ No - Please provide explanation

5. Funding Body/Sponsor
   The sponsor is the organisation with overall responsibility for the initiation, management and financing arrangements of a study.
   Which of the following best describe the sponsor(s) of your study?
   □ X University of Otago       □ another academic institution
   □ collaborative research group  □ district health board (DHB)
   □ other government agency      □ pharmaceutical company
   □ medical device company       □ other (e.g. non-governmental organisation (NGO), or contract research organisation)

6. Is your study based on de-identified data which has been previously collected in a database
   □ Yes - go to question 10
   □ X No - go to next question

7. Does your study include access to health information where individuals are identifiable and is an audit of health provision, process and/or outcome.
   □ X Yes - go to question 8
   □ No - a full University of Otago Human Ethics (Health) application is required.

8. If your study seeks access to identifiable health information will you be seeking informed consent?
   □ X Yes - Attach a Participant Information Sheet and Consent Form- Focus Group and Inpatient forms attached. - go to question 9
   □ No - From your audit, will you publish any health information in a form which could reasonably be expected to identify any individual?
   □ No X - go to question 9

Page 4 of 6
9. Where identifiable health information is being accessed:
   a. You must receive authorisation allowing you to access the information from the Health Agency where the information is held.
      - I have ALREADY obtained authorisation (Attach a copy of the authorisation)
      - X I will be obtaining authorisation before commencing the research: from Waitemata DHB and Counties Manukau DHB following receipt of HDEC Out of Scope Letter. HDEC scope consideration submitted.
      - As a clinical leader I already have the appropriate authority
      Briefly explain your role:

b. A confidentiality agreement is required (if not included in the locality authority) confirming that patient confidentiality will be maintained at all times by all those using this information. (Attach agreement). Gillian Lum will sign a Waitemata DHB Student Confidentiality Agreement, Huda Shahir will sign a Counties Manukau DHB Student Confidentiality Agreement before commencing their research projects on 1 February 2018.

10. Where de-Identified information is being accessed, the agency from which the information is being obtained may need to provide authorisation for the use of the information for the study.
   - ☐ We have ALREADY obtained (attach a copy of the authorisation )
   - ☐ We will be obtaining authorisation before commencing the research
   - ☐ We do not need authorisation for this information (Please provide an explanation)

Not applicable.

11. The University of Otago has a Policy for Research Consultation with Māori. Have you already completed, or do you propose to undertake Māori consultation? (Please see http://www.otago.ac.nz/research/moricconsultation/index.html).
   - ☐ Yes, we have ALREADY undertaken consultation (attach a copy of your completed Research Consultation with Māori Form)
   - ☐ Consultation with Maori submitted online.
   - ☐ No - If no, provide a brief outline of reasons why not (This is not required for Audit studies)

Signatures

Researcher statement

I confirm that:

• I have read the Health Information Privacy Code, specifically Rule 10 Limits on Use of Health Information and Rule 11 Limits on Disclosure of Health Information and my proposed research complies with both Rules;
• the information contained in this form is true and accurate;
• I will not commence this research without the required authorisations and agreements being in place before the study commences.
Applicant signature:  
(Principal Investigator)  

Name: (please print) Penny Field  
Date: 19 December 2017  

Departmental Approval  
I have read this application and believe it satisfies the criteria as outlined above and I further acknowledge that the study being proposed complies with established ethical standards set out in the guidelines from the National Ethics Advisory Committee and the Health Information Privacy Code, specifically Rule 10 Limits on Use of Health Information and Rule 11 Limits on Disclosure of Health Information. The research proposed in this application is compatible with the University of Otago policies and I give my consent for the application to be forwarded to the subcommittee of the University of Otago Human Ethics Committee (Health) with my recommendation that it be approved. I will also ensure that all authorisations and agreements described in the application will be in place before the study commences.  

Departmental Approval Signature  
[Signature]  

Name: (please print)  
S. Sammon  
Date: 20/12/17  

Check list  

☐ Has the Principal Investigator signed (page 5)?  

☐ Has the application been signed and approved by the Head of Department (page 5)?  

☐ If applicable, (see question 8 (a) and 9) attach a signed authorisation  

☐ If applicable, (see question 8 (b)) attach confidentiality agreement  

☐ If applicable, (see Question 7) attach a Participant Information Sheet and Consent form.  

☐ If applicable, (see question 10) attach Research Consultation with Maori form  

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2 In cases where the Head of Department is also the principal researcher then the appropriate Dean or Pro-Vice-Chancellor must sign.
Appendix Ae: UoO Minimal Risk Health Ethics Approval Letter for Phase 2 and 3

Dear Dr Field,

I am writing to you concerning your proposal entitled “My Food is my Medicine - The culturally determined hospital food preferences study”, Ethics Committee reference number HD18/001.

The above research was submitted and reviewed as a ‘Minimal Risk Health Research – Audit and Audit related studies’ proposal. The outcome of that consideration was that the Committee was of the view that the study as described is consistent with Rule 11(2) (c) of the Health Information Privacy Code 1994 and was approved.

The standard conditions of approval for all human research projects reviewed and approved by the Committee are the following:

Conduct the research project strictly in accordance with the research proposal submitted and granted ethics approval, including any amendments required to be made to the proposal by the Human Research Ethics Committee.

Inform the Human Research Ethics Committee immediately of anything which may warrant review of ethics approval of the research project, including: serious or unexpected adverse effects on participants; unforeseen events that might affect continued ethical acceptability of the project; and a written report about these matters must be submitted to the Academic Committees Office by no later than the next working day after recognition of an adverse occurrence/event. Please note that in cases of adverse events an incident report should also be made to the Health and Safety Office:

http://www.otago.ac.nz/healthandsafety/index.html

Advise the Committee in writing as soon as practicable if the research project is discontinued.

Make no change to the project as approved in its entirety by the Committee, including any wording in any document approved as part of the project, without prior written approval of the Committee for any change. If you are applying for an amendment to your approved research, please email your request to the Academic Committees Office:

gary.witte@otago.ac.nz
Approval is for up to three years from the date of this letter. If this project has not been completed within three years from the date of this letter, re-approval or an extension of approval must be requested. If the nature, consent, location, procedures or personnel of your approved application change, please advise me in writing.

Yours sincerely,

[Signature]

Mr Gary Witte  
Manager, Academic Committees  
Tel: 479 8256  
Email: gary.witte@otago.ac.nz

c.c. Assoc. Prof. L Houghton  Department of Human Nutrition
Wednesday, 14 February 2018.

Dr Penelope Field,
Department of Human Nutrition - Dietetic Training Programme,
DUNEDIN.

Tēnā Koe Dr Penelope Field,

My Food is my Medicine The culturally determined hospital food preferences study

The Ngāi Tahu Research Consultation Committee (the committee) met on Tuesday, 13 February 2018 to discuss your research proposition.

By way of introduction, this response from The Committee is provided as part of the Memorandum of Understanding between Te Rūnanga o Ngāi Tahu and the University. In the statement of principles of the memorandum it states “Ngāi Tahu acknowledges that the consultation process outlined in this policy provides no power of veto by Ngāi Tahu to research undertaken at the University of Otago”. As such, this response is not “approval” or “mandate” for the research, rather it is a mandated response from a Ngāi Tahu appointed committee. This process is part of a number of requirements for researchers to undertake and does not cover other issues relating to ethics, including methodology they are separate requirements with other committees, for example the Human Ethics Committee, etc.

Within the context of the Policy for Research Consultation with Māori, the Committee base consultation on that defined by Justice McGechan:

“Consultation does not mean negotiation or agreement. It means: setting out a proposal not fully decided upon; adequately informing a party about relevant information upon which the proposal is based; listening to what the others have to say with an open mind (in that there is room to be persuaded against the proposal); undertaking that task in a genuine and not cosmetic manner. Reaching a decision that may or may not alter the original proposal.”

The Committee considers the research to be of interest and importance.

The Committee notes the researchers have identified that while this research may be of great benefit to Māori, they will not be investigating responses from Māori. The Committee believes a great opportunity will be lost and asks if partnerships with Māori liaison groups within the DHBs where the research is to take place might be explored.

The Committee suggests dissemination of the research findings to Māori health organisations regarding this study.
We wish you every success in your research and the committee also requests a copy of the research findings.

This letter of suggestion, recommendation and advice is current for an 18 month period from Tuesday, 13 February 2018 to 13 August 2019.

Nāhaku noa, nā

Mark Brunton
Kaiwhakahaere Rangahau Māori
Research Manager Māori
Research Division
Te Whare Wānanga o Otago
Ph: +64 3 479 8738
Email: mark.brunton@otago.ac.nz
Web: www.otago.ac.nz
Dear Dr Field,

I am again writing to you concerning your proposal entitled “My Food is my Medicine - The culturally determined hospital food preferences study”, Ethics Committee reference number HD18/001.

Thank you for your email of 25th April 2018 requesting an amendment to the above study.

The Committee notes that there have been unforeseen delays in recruiting participants in to the study and, as such, you now expect to need an additional 4 weeks to collect participant data. You further note that you have been advised to widen the inclusion criteria from ‘elective surgery’ to ‘surgery’ to increase the chances of achieving the minimum number of participants needed.

The Committee accepts and approves the amendment and thanks you for providing the revised documentation.

Your proposal continues to be fully approved by the Human Ethics Committee. If the nature, consent, location, procedures or personnel of your approved application change, please advise me in writing. I hope all goes well for you with your upcoming research.

Yours sincerely,

[Signature]

Mr Gary Witte
Manager, Academic Committees
Tel: 479 8256
Email: gary.witte@otago.ac.nz

cc. Assoc. Prof. L Houghton  Department of Human Nutrition
Appendix Ah: Approval Letter for Study Protocol Amendments (18th May 2018)

HD18/001

Academic Services
Manager, Academic Committees, Mr Gary Witte

18 May 2018

Dr P Field
Department of Human Nutrition
Division of Sciences

Dear Dr Field,

I am again writing to you concerning your proposal entitled “My Food is my Medicine - The culturally determined hospital food preferences study”, Ethics Committee reference number HD18/001.

Thank you for your request for amendment of 16th May 2018 notifying the committee of the difficulties the research team are having with recruitment. The Committee notes that the Waitemata DHB Study Liaison Dietician recommends that Filipino participants are recruited at WDHB’s adjacent Waitakere Hospital.

The Committee accepts and approves the amendment but asks that you ensure that the appropriate authorisations are in place to recruit from Waitakere Hospital.

Your proposal continues to be fully approved by the Human Ethics Committee. If the nature, consent, location, procedures or personnel of your approved application change, please advise me in writing. I hope all goes well for you with your upcoming research.

Yours sincerely,

[Signature]

Mr Gary Witte
Manager, Academic Committees
Tel: 479 8256
Email: gary.witte@otago.ac.nz

cc. Assoc. Prof. L Houghton Department of Human Nutrition
Appendix B: Waitemata Locality Approval

From: Research & Knowledge Centre  research@waitematadhb.govt.nz
Sent: Tuesday, 15 May 2018 2:45 p.m.
Cc: Raslyn Nome (W2HB)
Subject: RM13989 Locality Authorisation

Dear Gillian

The Research & Knowledge Centre has now received the relevant approvals for the following study:

Title: My Food is My Medicine – The Culturally Determined Hospital Food Preferences Study

Registration #: RM13989

This study now has Waitemata DHB Locality Authorisation. Please continue to forward to us copies of all correspondence regarding ongoing ethics approval for this study (if any). All amendments to your study must be submitted to the Research & Knowledge Centre for review. Any substantial amendment must also be submitted to the Ethics Committee for approval.

Note that all research, audit and related activity must meet ethical standards in relation to the safe storage, retention and destruction of research data.

At the conclusion of this study a copy of any outputs, reports or publications should be forwarded to research@waitematadhb.govt.nz

Good luck with your study.

Regards
Research & Knowledge Centre
Level 1, Kahui Manzaki (Building 5)
North Shore Hospital Campus
Waitemata DHB

research@waitematadhb.govt.nz
ph: (09) 486 8920 ext 43740

Legal Disclaimer: www.waitematadhb.govt.nz/Disclaimer.aspx
Appendix C: Exploratory Survey (Phase 1)

Appendix J: Exploratory Survey

Food Preferences among the Asian Population Residing in New Zealand

Masters of Dietetics, Department of Human Nutrition, University of Otago

This survey is part of our Masters of Dietetics thesis, which aims to understand and determine culturally appropriate foods for adult Chinese, Indian, South-East Asian and South-Asian patients in DHB hospitals. This survey is administered to investigate the food preferences of the Asian population residing in New Zealand and if it differs when this population is unwell. The data collected from this survey will help develop a questionnaire, which will be administered to the Asian population residing in Auckland.

Providing information through this online survey is taken as an indication of voluntary consent to participate.

Thank you for your participation.

1. What is your ethnicity? (Please select all that apply.)

- [ ] Chinese
- [ ] Malay
- [ ] Indian
- [ ] Vietnamese
- [ ] Indonesian
- [ ] Thai
- [ ] Taiwanese
- [ ] Sri Lankan
- [ ] Pakistani
- [ ] Bangladeshi
- [ ] Cambodian
- [ ] Other (please specify)

2. What is your country of birth?

- [ ] New Zealand
- [ ] Philippines
- [ ] China
- [ ] India
- [ ] Thailand
- [ ] Sri Lanka
- [ ] Vietnam
- [ ] Pakistan
- [ ] Taiwan
- [ ] Bangladesh
- [ ] Malaysia
- [ ] Nepal
- [ ] Singapore
- [ ] Bhutan
- [ ] Indonesia
- [ ] Maldives
- [ ] Other (please specify)

3. Do you identify with any of the following religions? (Please select all that apply.)

- [ ] Protestantism
- [ ] Buddhism
- [ ] Catholicism
- [ ] Hinduism
- [ ] Christianity
- [ ] Sikhism
- [ ] Judaism
- [ ] Taoism
- [ ] Islam
- [ ] No religion
- [ ] Other (please specify)
4. How long have you been residing in New Zealand?

- [ ] Below 1 year
- [ ] 1 - 3 years
- [ ] 3 - 9 years
- [ ] More than 10 years
- [ ] Non-applicable (born in New Zealand)

5. Which of the following choices do you most commonly eat? (Select those that apply to you)

- [ ] Western cuisine
- [ ] Malay cuisine
- [ ] Indian cuisine
- [ ] Filipino cuisine
- [ ] Sri Lankan cuisine
- [ ] Thai cuisine
- [ ] Chinese cuisine
- [ ] Vietnamese cuisine

Other (Eg. Bangladeshi cuisine, Japanese cuisine etc.):

6. Do your food choices differ when you are unwell? (Eg. having a cold)

- [ ] Yes
- [ ] No

7. If yes, what would you have? (Select those that apply to you)

- [ ] Chinese cuisine
- [ ] Indian cuisine
- [ ] Western cuisine
- [ ] Malay cuisine
- [ ] Sri Lankan cuisine
- [ ] Filipino cuisine
- [ ] Vietnamese cuisine
- [ ] Thai cuisine
- [ ] Other (please specify)

8. When you are unwell, what are the most important foods to have? (Please list at least 3 food items)

[ ]

[ ]

[ ]

DONE

See how easy it is to create a survey.
Appendix Da: Information Sheet for Phase 1

Patient Cultural Food Preferences Project
INFORMATION FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information carefully before deciding whether or not to participate. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request.

What is the Aim of the Project?

This project being undertaken as part of the requirements for Huda Shahir and Gillian Lum Masters of Dietetics. This project aims to understand and determine culturally appropriate foods for adult Chinese, Indian, South-East Asian and South Asian patients in DHB hospitals.

Since there is no existing data available from New Zealand, this survey was created to gather preliminary information from students in these ethnic groups to inform our data collection tools.

We are interested in the food preferences of Asians residing in New Zealand and if it differs when you are unwell.

What Types of Participants are being sought?

Ideal participants will be people from Chinese, Indian, South-East Asian and South Asian ethnic groups. They must be adults aged more than 15 years old. Participants are recruited via student associations in the University of Otago. The associations are Otago University Chinese Students’ Association, Bangladeshi Students’ Association, Otago University Hong Kong Students’ Association, Otago Singapore Club, Otago University Thai Students’ Association, New Zealand Otago University Taiwanese Students’ Association, Otago University Sri Lankan Students’ Association, Pakistan Students’ Association, Otago Malaysian Students’ Association, Otago Filipino Students’ Association, Indonesian Community Association and Indian Students’ Association.

Survey is distributed by the word of mouth, and direct contact with the representatives of the student associations. The representatives will post the link to the survey in their Facebook groups and promote the participation of the survey.

What will Participants be asked to do?

Read this information, then if you decide to participate please access the survey using the link below.

Providing information through this online survey is taken as an indication of voluntary consent to participate.
This anonymous survey contains 8 simple questions, accessed through the online platform called Survey Monkey. It will take no longer 5 minutes to complete the survey.

Please be aware that you may decide not to take part in the survey without any disadvantage to yourself.

What Data or Information will be collected and what use will be made of it?

Information about your ethnicity, country of birth, food preferences and important foods when unwell will be collected. The data collected will help build up on existing knowledge about the food habits and preferences of adult Asians living in New Zealand.

The survey is anonymous as there is no personal and demographic information asked that will identify participant’s identity. All information collected will be confidential. The student researchers and supervisor will have access to the data collected. The data will be stored in the Survey Monkey Data base.
Data obtained as a result of the research will be retained for at least 5 years in secure storage. Any personal information held on the participants may be destroyed at the completion of the research even though the data derived from the research will, in most cases, be kept for much longer or possibly indefinitely.

Can Participants change their mind and withdraw from the project?

You may withdraw from participation in the survey at any time and without any disadvantage to yourself.

What if Participants have any Questions?

If you have any questions about our survey, either now or in the future, please feel free to contact either:

Huda Shahir, Gillian Lum or Dr. Penny Field
Student Researchers Supervisor
Department of Human Nutrition Department of Human Nutrition
Tele: 03 479 7959 Tele: 03 479 7956
mohhu782@student.otago.ac.nz penny.field@otago.ac.nz
lumwe830@student.otago.ac.nz

This study has been approved by the Department stated above. However, if you have any concerns about the ethical conduct of the research you may contact the University of Otago Human Ethics Committee through the Human Ethics Committee Administrator (ph 03 479-8256). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Title of the email or post: We need your help! - Masters of dietetics research project: Cultural Food Preferences

We need your help to complete this online survey!

This project being undertaken as part of the requirements for the Masters of Dietetics students, Huda Shahir and Gillian Lum.

Our project aims to understand and determine culturally appropriate foods for adult Chinese, Indian, South-East Asian and South Asian patients in DHB hospitals. Since there is no existing data available from New Zealand, this survey was created to gather preliminary information from students in these ethnic groups to inform our data collection tools.

We are interested in the food preferences of Asians residing in New Zealand and if it differs when you are unwell.

Information about your ethnicity, country of birth, food preferences and important foods when unwell will be collected. The data collected will help build up on existing knowledge about the food habits and preferences of adult Asians living in New Zealand. This anonymous survey contains 8 simple questions, accessed through the online platform called Survey Monkey. It will take no longer 5 minutes to complete the survey.

Providing information through this online survey is taken as an indication of voluntary consent to participate. Please be aware that you may decide not to take part in the survey without any disadvantage to yourself.

For more information, refer to the information sheet attached.

If you have any questions about our survey, either now or in the future, please feel free to contact either:

Huda Shahir, Gillian Lum
Student Researchers
Department of Human Nutrition
Tele: 03 479 7959
mohhu782@student.otago.ac.nz
lumwe830@student.otago.ac.nz

or

Dr. Penny Field
Supervisor
Department of Human Nutrition
Tele: 03 479 7956
penny.field@otago.ac.nz
My Food is My Medicine: The Culturally Determined Hospital Food Study

Dear Sir/Mam,

Thank you for taking the time to read the enclosed information and considering taking part in our study to learn about food preferences of Chinese/Filipino/Hindu Indian and South Asian/Muslim Indian and South Asian when admitted into a hospital. You are receiving this letter as you have expressed interest in the study and meet the criteria for taking part in a group discussion.

Information about the food Chinese/Filipino/Hindu Indian and South Asian/Muslim Indian and South Asian prefer to eat when in the hospital is limited. At the moment, foodservices in New Zealand hospitals do not have enough information to include appropriate foods for Chinese/Filipino/Hindu Indian and South Asian/Muslim Indian and South Asian on the menu. As we know, food is very important for recovery from surgery and illnesses. Serving appropriate foods will help Filipino recovery more quickly, reduce risk of malnutrition and decrease the length of their hospital stay.

The focus groups we are inviting you to attend will give us and hospital dietitians essential information about the food Filipino people prefer to eat when in hospital and can benefit future generations of patients.

The students undertaking this research project, Gillian Lum and Huda Shahir, are in their fifth and final year of study at the University of Otago, completing their Masters of Dietetics degree.

Please read the attached information sheet carefully. Take time to consider and, if you wish, talk with relatives or friends, before deciding whether or not you will take part. If you decide to come to the focus group, we thank you. If you decide not to take part, there will be no disadvantage to you and we thank you for considering our request.

If you do decide to attend the focus group, we would appreciate if you email us at myfoodmymed@student.otago.ac.nz to confirm your attendance and further information (time, date, venue) will be sent to you. You can also email us if you have any further enquires.

Yours sincerely,

Gillian Lum and Huda Shahir
Student Dietitians, University of Otago, Masters of Dietetics

*This introductory letter will be tailored to the respective ethnic groups.
My Food is My Medicine: The Culturally Determined Hospital Food Preferences Study.
Principal Investigator: Dr Penny Field, penny.field@otago.ac.nz, tele 03 4797956

CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-
1. I have read the Information Sheet concerning this study and understand the aims of this research project.
2. I have had sufficient time to talk with other people of my choice about participating in the study.
3. I confirm that I meet the criteria for participation which are explained in the Information Sheet.
4. All my questions about the project have been answered to my satisfaction, and I understand that I am free to request further information at any stage.
5. I know that my participation in the project is entirely voluntary, and that I am free to withdraw from the project at any time without disadvantage.
6. I know that when the project is completed all personal identifying information will be removed from the paper records and electronic files which represent the data from the project, and that these will be placed in secure storage and kept for at least ten years.
7. I understand that the results of the project may be published and be available in the University of Otago Library, but that I agree that any personal identifying information will remain confidential between myself and the researchers during the study, and will not appear in any spoken or written report of the study.
8. I know that there is no remuneration offered for this study, and that no commercial use will be made of the data.

I agree to take part in this project.

.......................................................... .............................................
(Signature of participant) (Date)

..........................................................
(Printed Name)
Appendix Ec: Information sheet (Phase 2)

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to take part. If you decide to participate we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request.

What is the Aim of the Project?

We want to learn about food Chinese and South East Asian adults prefer to eat when they are in hospital in New Zealand. Dietitians in New Zealand public hospitals need this information to change the hospital menus and way food is served to better meet the food preferences of Chinese and South East Asian people and their nutritional needs.

The aim of the discussion is to learn about the food habits of the general Chinese and South East Asian adult population and the foods they prefer when they are well and how it changes when they are unwell. We also want to learn about the foods they expect the hospitals to provide and their experiences or their relatives’ experiences (if any) of meals during their stay at New Zealand public hospitals.

This project is being undertaken as part of the requirements for Gillian Lum’s Masters of Dietetics.

What Types of Participants are being sought?

We are seeking people of Chinese and Filipino ethnicity. Participants must be over 18 years of age, English speakers and living in Auckland.

What will Participants be asked to do?

Should you agree to take part in this project, you will be asked to attend a group discussion of 6 to 10 people whose ethnic background is the same or similar to yours. At the group discussion, two student dietitian researchers will ask questions about what you usually eat and what you prefer to eat when you are in hospital for a few days.

To participate in this group discussion, you will need to hand in the enclosed consent form before the discussion starts.

You will be asked several questions on your eating habits when you are well and unwell, and your expectations on New Zealand’s hospital foodservices.

The group discussion will take approximately one hour. Food and drinks will be provided.
The group discussion will be audio recorded to allow us to accurately capture all the comments. The results and analysis of the recording will not identify individuals by name, you will remain anonymous. During the group discussion, you may decline to answer any question(s) if you feel hesitant or uncomfortable.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself.

**What Data or Information will be collected and what use will be made of it?**

We will be asking questions about what you usually eat and what you prefer to eat when you are in hospital. We will also ask your age range, gender, ethnicity, length of stay in New Zealand, whether you have previously spent time in a hospital.

Audio recording will be used for the analysis of the focus groups. The transcripts of the focus group will not reveal the identity of the participants. Only the student researcher, Gillian Lum and Dr Penny Field, will have access to personal information and even then, only the study numbers will identify individuals.

No information that will identify you as an individual will be collected for the study. Data will be extracted from the audio recordings of the focus groups; no copies will be made and the recordings will be erased from the student researcher’s computer at the conclusion of the study in July 2018. The transcripts of the focus groups will not reveal the identities of the participants. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve your anonymity.

**Can Participants change their mind and withdraw from the project?**

You may withdraw from participation in the project at any time and without any disadvantage to yourself.

**What if Participants have any Questions?**

If you have any questions about our project, either now or in the future, please feel free to contact either:-

*Gillian Lum*  
Department of Human Nutrition  
University Telephone Number: 03 479 7956  
Email Address: lumwe830@student.otago.ac.nz

*Dr Penny Field*  
Department of Human Nutrition  
Email Address: penny.field@otago.ac.nz

This study has been approved by the Department stated above. However, if you have any concerns about the ethical conduct of the research you may contact the University of Otago Human Ethics Committee through the Human Ethics Committee Administrator (ph +643 479 8256 or email gary.witte@otago.ac.nz). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Appendix Fa: Demographic Form for Phase 2 (1st version)

For each question circle or write in the space provided the option that best applies to you. Please answer every question.

Demographics

1. Gender
   - Male
   - Female

2. Age in years
   - 18-24
   - 25-34
   - 35-44
   - 45-54
   - 55-64
   - 65-74
   - 75+

3. Which ethnic group do you belong to? Please mark all spaces that apply to you.
   - New Zealand European
   - Chinese
   - Filipino
   - Indian

Other such as Japanese, Korean please state:

4. Country of Birth

5. Duration of Stay in NZ* (Written in Years eg: 40 years)

Thank you for completing the survey.
Appendix Fb: Demographic Form for Phase 2 (2nd Version)

We would like to know more about you!

For each question, tick or write in the space provided the option that best applies to you. Please answer every question.

Demographics

1. Gender
   - Female
   - Male

2. Age Range in Years
   - 15-19
   - 20-24
   - 25-29
   - 30-34
   - 35-39
   - 40-44
   - 45-49
   - 50-54
   - 55-64
   - 65+

3. Which ethnic group do you belong to? Please mark all spaces that apply to you.
   - Chinese
   - New Zealand European

Other please specify:

4. Where were you born?
5. How many years have you lived in New Zealand?

- [ ] Less than 10 Years
- [ ] 10 – 40 Years
- [ ] More than 40 Years
Appendix Fc: Demographic Form for Phase 2 (Final Version)

We would like to know more about you!

For each question, tick or write in the space provided the option that best applies to you. Please answer every question.

Demographics

1. Gender
   ○ Female
   ○ Male

2. Age Range in Years
   ○ 0-19 Years
   ○ 20-29 Years
   ○ 30-39 Years
   ○ 40-49 Years
   ○ 50-59 Years
   ○ 60-69 Years
   ○ 70-79 Years
   ○ 80-89 Years
   ○ 90-99 Years
   ○ 100 Years and over

3. Which ethnic group do you belong to? Please mark all spaces that apply to you.
   ○ Chinese/Filipino*
   ○ New Zealand European

Other please specify:

4. Where were you born?

5. How many years have you lived in New Zealand?
   ○ Less than 10 Years
   ○ 10 – 40 Years
   ○ More than 40 years
   ○ All my life, I was born here

*Changes according to Ethnic focus group
Appendix G: Focus group schedule

My Food is My Medicine: The Culturally Determined Hospital Food Preferences Study

Focus Group Outline

Focus group aim: To identify the food habits of the general adult population when they are well and how these food preferences when they are unwell. Food preferences identified in the focus groups will inform the development of questionnaires to investigate Asian* adult patient’s expectations of hospital foodservice.

Outline:
- Time: 1 hour
  - Refreshments available
  - Venue: Auckland Chinese Community Center
1. Sign Consent form and Demographic data collection (10 minutes)
   a. Participants to read and sign consent forms
   b. Participants to fill in Demographic form
      • Age range
      • Gender
      • Ethnicity
      • Country of birth
      • Length of stay in NZ
2. Icebreaker (10 minutes)
   a. Write name on name tag
   b. Introduce ourselves and participants
      - What they enjoy most about New Zealand
3. Introduction of the study (3 minutes)
   a. Overview of the study
   b. Aim of the focus group
   c. What will be done with the results gathered from the focus group
   d. Explain Rules of the focus group
      - Facilitator
      - Recorder/assistant moderator
      - Participants

Major Questions (30 minutes)
1. What do you normally have for your first meal of the day in New Zealand?
   a. Prompt for time of day, cooking methods, main ingredients, where do they get that from (cook/buy), and portion sizes.
2. What do you normally have for your second meal in New Zealand?
   a. Prompt for time of day, cooking methods, main ingredients, where do they get that from (cook/buy), and portion sizes.
3. What do you normally have for third meal in New Zealand?
   a. Prompt for time of day, cooking methods, main ingredients, where do they get that from (cook/buy), and portion sizes.
4. Which of these are your main meals?
   a. Prompt: largest meal/most important meal
5. What do you normally have as snacks?
   a. Prompt for time of day, cooking methods, main ingredients, where do they get that from (cook/buy), and portion sizes.
6. What are the difficulties in preparing your favourite food in New Zealand?
   a. Sourcing of ingredients, cost, availability, time
7. When you are unwell, are there any differences to your meal pattern?
8. What kind of foods are important to you when you are sick?
   a. Prompt for preparation methods, amounts, temperature, how served
9. What cultural traditions influences the food you eat when you are unwell?
   a. E.g. hot and cold foods, foods for healing or food for special conditions
10. Have you or any family members been admitted to a hospital in NZ?
    a. Can you share the food experiences? E.g. having Western foods when unwell
    b. Did you/they finish their meals?
    c. Did you have to bring food for your family members/did your family members bring food for you?
11. What food do you expect NZ public hospitals to provide for Chinese/Filipino* people?
    a. Prompt for cooking methods, temperature, meal size, garnishes, timing, ingredients, service/presentation of meals etc
12. What else would you like to see in the NZ hospital foodservice?
13. Any other comments?
Ending (5 minutes)
   a. Brief Summary of the points discussed in the focus group.
   b. Thank them for their participation.
   c. Invite participate in more refreshments.

Footnote: the measurement under the cooking methods/recipe will be using Chinese spoon for Chinese and south-east Asian group, and normal measuring spoon for Indian and south-Asian group.

*Changes according to ethnic groups
Appendix Ha: Introductory Letter (Phase 3)

Introductory letter
“My Food is My Medicine”
The culturally Determined Hospital Food Preferences Study

Dear

Thank you for taking the time to read the enclosed information and considering in taking part in our study to learn about food preferences of Chinese/Filipino/Hindu Indian and South Asian/Muslim Indian and South Asian when they are admitted to hospital. You are receiving this letter as you have expressed interest and meet the criteria for taking part in this study.

Information about food Chinese/Filipino/Hindu Indian and South Asian/Muslim Indian and South Asian people prefer to eat when in hospital is limited. At the moment, New Zealand hospital foodservice do not have the enough information to include appropriate foods for Chinese/Filipino/Hindu Indian and South Asian/Muslim Indian and South Asian people on the menu. As we know, food is very important for recovery from surgery and illness. Serving appropriate foods will help Chinese/Filipino/Hindu Indian and South Asian/Muslim Indian and South Asian to recover quickly, reduce risk of malnutrition and decrease length of hospital stay.

The questionnaire and interview we are inviting you to complete will give us and Hospital Dietitians essential information about the food Chinese/Filipino/Hindu Indian and South Asian/Muslim Indian and South Asian people prefer to eat when in hospital, and feedback from your experience of the food and service you receive during your stay at Middlemore Hospital/North Shore Hospital. These information can benefit future generations of patients and help in adapting cultural food into hospital menu to provide good foodservice to this ethnic group.

The students undertaking this research project, Gillian Lum and Huda Shahir, are in their fifth and final year of study at the University of Otago, completing their Masters of Dietetics degree.

Please read the attached information sheet carefully. Take time to consider and, if you wish, talk with relatives or friends, before deciding whether or not you will take part. If you decide to, we thank you. If you decide not to take part, there will be no disadvantage to you and we thank you for considering our request. For your efforts, upon completion of the study you will receive a $20 supermarket voucher.

If you do decide to take part, we would appreciate if you can sign and return the consent form (attached) to the Hospital Dietitian in-charged. The student researcher will only approach you once you have given consent. You can contact the student researchers at myfoodmymed@otago.ac.nz for more information.

Yours sincerely,

*This introductory letter will be tailored to the respective ethnic groups.
My Food is My Medicine: The Culturally Determined Hospital Food Preferences Study

INFORMATION SHEET FOR PARTICIPANTS

Thank you for showing an interest in this project. Please read this information sheet carefully before deciding whether or not to participate. If you decide to take part we thank you. If you decide not to take part there will be no disadvantage to you and we thank you for considering our request.

What is the Aim of the Project?

We want to learn about the Chinese and South East Asian adults’ food preferences when they are in New Zealand public hospitals in order to improve hospital food service systems. Dietitians in public hospitals are in need of this information to change hospital menu and service provided to Chinese and South East Asian patients to better meet their food preferences and so their nutritional needs.

It is a quality improvement project, therefore it aims to investigate Chinese and South East Asian patient’s experience of hospital food services and identify the food that are preferred to be adapted in the New Zealand menu standard for hospital food service.

This project is being undertaken as part of the requirements for Gillian Lum’s Masters of Dietetics and supervised by Dr Penny Field.

What Types of Participants are being sought?

We are seeking a random sample of people of Chinese and Filipino ethnicity who are booked for elective surgery requiring at least two over-night stay in North Shore Hospital between Monday March 26 2018 and Friday April 27 2018. Participants must be over 18 years of age and English speakers. We are looking of 10 participants of each ethnicity group.

What will Participants be asked to do?

Should you agree to take part in this project, you will be asked to complete a written questionnaire (approximately 20 items) and a brief 15 minutes interview before being discharged from North Shore Hospital. The questionnaire and interview will mainly ask about your experience of the North Shore Hospital food service. To take part in this study, you will need to sign and return an enclosed consent form before you complete the questionnaire.

On the day of discharge, you will be approached by the student researcher to confirm your consent to this study and you will be asked to complete the written questionnaire for
approximately 20 minutes. The student researcher will return to collect the questionnaire and then you will undertake an interview with the student researcher. This will take approximately 15 minutes.

You will be asked several questions on your eating experience in North Shore Hospital and some cultural and non-cultural reasons behind your preferences. The interview will be audio recorded and some notes may be taken to allow accurate capture of all comments. The results and analysis of the questionnaire and interview recording will remain anonymous. During both questionnaire and interview, you may decline to answer any particular question(s) if you feel hesitant or uncomfortable.

Please be aware that you may decide not to take part in the project without any disadvantage to yourself.

**What Data or Information will be collected and what use will be made of it?**

We will be collecting information regarding your age, gender, ethnicity, the length of your hospital stay, and eating experience in North Shore Hospital. The purpose of collecting this information is to help in gathering more information for the development of food service menu standards in New Zealand Hospitals for Asian ethnicities in New Zealand.

Written and audio recording will be used for the analysis of the focus groups. The transcripts of the questionnaire and interview will not reveal the identity of the participants. Upon participating in this study, you will be randomly located a study number which will be used for all the data we collect. Only the student researchers, Gillian Lum and Huda Shahir, and Dr Penny Field, will have access to personal information and even then, only the study numbers will identify individuals.

No information that will identify you as an individual will be collected for the study. Anonymous data will be extracted from the written questionnaire forms, audio recordings and notes of the interview; no copies will be made and the recordings will be erased from the student researcher’s computer at the conclusion of the study in July 2018. The transcripts of the questionnaire and interview will not reveal the identities of the participants. The results of the project may be published and will be available in the University of Otago Library (Dunedin, New Zealand) but every attempt will be made to preserve your anonymity.

**Can Participants change their mind and withdraw from the project?**

You may withdraw from this project at any time and without any disadvantage to yourself.

**What if Participants have any Questions?**

If you have any questions about our project, either now or in the future, please feel free to contact either:-

- Gillian Lum and Penny Field
- Department of Human Nutrition
- University Telephone Number: 03 479 7956

Email Address: lumwe830@student.otago.ac.nz Email Address: penny.field@otago.ac.nz

*Home contact details of student researchers should not be included unless a special case has been made.*
This study has been approved by the Department stated above. However, if you have any concerns about the ethical conduct of the research you may contact the University of Otago Human Ethics Committee through the Human Ethics Committee Administrator (ph +643 479 8256 or email gary.witte@otago.ac.nz). Any issues you raise will be treated in confidence and investigated and you will be informed of the outcome.
Appendix Hc: Consent Form (Phase 3)

My Food is My Medicine: The Culturally Determined Hospital Food Preferences Study.
Principal Investigator: Dr Penny Field, penny.field@otago.ac.nz, tele 03 4797956

CONSENT FORM FOR PARTICIPANTS

I have read the Information Sheet concerning this project and understand what it is about. All my questions have been answered to my satisfaction. I understand that I am free to request further information at any stage.

I know that:-
1. I have read the Information Sheet concerning this study and understand the aims of this research project.
2. I have had sufficient time to talk with other people of my choice about participating in the study.
3. I confirm that I meet the criteria for participation which are explained in the Information Sheet.
4. All my questions about the project have been answered to my satisfaction, and I understand that I am free to request further information at any stage.
5. I know that my participation in the project is entirely voluntary, and that I am free to withdraw from the project at any time without disadvantage.
6. I know that when the project is completed all personal identifying information will be removed from the paper records and electronic files which represent the data from the project, and that these will be placed in secure storage and kept for at least ten years.
7. I understand that the results of the project may be published and be available in the University of Otago Library, but that I agree that any personal identifying information will remain confidential between myself and the researchers during the study, and will not appear in any spoken or written report of the study.
8. I know that there is a remuneration of $20 Supermarket Voucher offered for this study, and that no commercial use will be made of the data.

I agree to take part in this project.

.............................................................................
(Signature of participant) ........................................
(Date)

.............................................................................
(Printed Name)
### Appendix I: Hospital Food Experience Questionnaire Pre-test (Chinese)

<table>
<thead>
<tr>
<th>Original question</th>
<th>Comments by Participants</th>
<th>Action(s) taken</th>
<th>Revised question</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Overall, the flavour of the food was similar to what I usually have at home.</td>
<td>Participant suggested changing flavour to taste to simplify the question.</td>
<td>‘Flavour’ was substituted with ‘taste’.</td>
<td>2. The taste of the food was similar to what I usually have at home.</td>
</tr>
<tr>
<td>3. To have enough to eat, I needed to have food brought in by my family.</td>
<td>Participant suggested adding more information such as ‘additional food’ or ‘extra’, and ‘home or friends’ in addition to family at the end of the sentence.</td>
<td>Amendments were made with the participant’s suggestions.</td>
<td>3. To have enough to eat, I needed to have extra food brought in by my family and/or friends.</td>
</tr>
<tr>
<td>4. Each day the Hospital menu offered me enough options for each meal to allow me to choose food I preferred for:  ● Breakfast  ● Lunch  ● Dinner</td>
<td>Participant felt that this question can be complicated especially if it needs to be translated into Chinese.</td>
<td>The question was shorten and made simpler.</td>
<td>4. Each day there was enough choice on the hospital menu to allow me to choose food I preferred for:  ● Breakfast  ● Lunch  ● Dinner</td>
</tr>
<tr>
<td>12. I was offered Chinese tea during my hospital stay.</td>
<td>Two participants mentioned that Chinese tea is not provided in the hospital and the answer will be a definite ‘never’. 1 participant felt that this question may not be fit for a hospital situation and may confuse participants.</td>
<td>No changes were made despite the concerns as a negative answer can be used as evidence for the patient’s needs.</td>
<td></td>
</tr>
<tr>
<td>13. Water was always available when I wanted it during my hospital stay.</td>
<td>Two participants mentioned that hot water is preferred in Chinese patients. It will be more relevant to ask about hot water as cold water is always available, whereas patients have to ask for hot water if they wanted it.</td>
<td>Hot water will be the focus of this question.</td>
<td>Hot water was available when I wanted it during my hospital stay.</td>
</tr>
<tr>
<td>14. Cold foods were served cold.</td>
<td>Participants mentioned that Chinese patients do not consume the cold foods provided when they are hospitalized. Chinese patients prefer hot foods</td>
<td>This question was removed as it is not relevant to participants, and the number of questions can be reduced.</td>
<td>-</td>
</tr>
</tbody>
</table>
especially after surgery or giving birth. Thus, this question may not be relevant to this population.

16. The time I received my meals during was similar to the time I usually have my meal:
   - Breakfast
   - Lunch
   - Dinner

One participant misunderstood the question initially, as she thought that the question was referring to the difference in time of meal that was supposed to be served. Upon clarification, she suggested putting ‘same as home” into the question to make it clearer.

One participant felt that the options “earlier” or ‘much earlier’ is unclear. She suggested adding “1-2 hours” in addition to the option ‘earlier’ to make the question clearer.

One participant felt that the transition between options were a bit confusing but understood it after reading it a second time.

The question was changed to make it clear that the participants were meant to compare home and hospital meal timings.

Time range was added beside the options.

16. Compared to the time I would usually have my meals at home, the timing of my meals in the hospital was:
   - Breakfast
   - Lunch
   - Dinner

Options:
   - Much earlier (2+ hours), Earlier (1 hour), similar, Later (1 hour), Much later (2 hours)

18. The foodservice staff words and actions showed that they were respectful of my culture.

Participant felt that this question is particularly long.

The sentence was shortened.

18. The foodservice staff were respectful of my culture.

19. During my stay in hospital, I experienced the following conditions which affected my ability to consume and enjoy the hospital meals (Please select all that apply):
   - Reduced appetite, taste changes, nausea, vomiting, pain, constipation, other.

Participant mentioned that participants may not understand what nausea is, and the difference between nausea and vomiting.

A brief description of ‘Nausea’ was added.

19. During my stay in hospital, I experienced the following conditions which affected my ability to consume and enjoy the hospital meals (Please select all that apply):
   - Reduced appetite, taste changes, nausea (Feel like vomiting), vomiting, pain, constipation, difficulty swallowing, other.

20. I would like to be offered the following food items (Tick every item applies to you):

Participant suggested adding warm drinks to the list of options. Another participant suggested adding soy sauce

The list of Chinese herbs were taken out of the options. Mustard green soup was

20. I would like to be offered the following food items (Tick every item applies to you):
- Chicken, beef, pork, other meats (e.g. lamb), fish, seafood, milk, dairy products, bread, noodles, legumes, white rice, brown rice, cereal (e.g. Weetbix), Ginger, congee (粹), Chicken Soup (炖鸡汤), Mustard Green Soup (芥菜湯), Steamed Egg on White Rice (蒸鸡蛋白饭), Chinese Herbs (E.g. Goji berries (杞子), Chinese yam (淮山), Shu Di (熟地), Dong Quai (當歸)).

  to the list of options.

  One participant mentioned that the Chinese character for Rice porridge and oat porridge is the same, which might confuse Chinese patients. She also suggested changing the Chinese characters for the 'chicken soup' option as the current Chinese character refers to the herbal chicken soup.

  Participants have raised concern about the use of Chinese herbs. Most Chinese herbs have medicinal properties which can affect the effects of western medicine when consumed together. Participant suggested that when using these herbs, it is important to have a herbalist ensure that the herbs were suitable for the patients.

  Two participants mentioned that the mustard green soup is eaten to cool down body heat, and should be avoided when an individual is weak. One participant felt that the food options were very Cantonese. It may not relate to patients of different regions such as Taiwan patients.

  taken out as well.

  ‘Rice porridge was added to the term 'Congee' to avoid misunderstanding.

  The Chinese characters of chicken soup were changed.

  Soy sauce was added to the options.

- Chicken, beef, pork, other meats (e.g. lamb), fish, seafood, milk/dairy products, bread, noodles, legumes, rice/cereals, Ginger, Congee (Rice porridge), chicken soup (清鸡汤), steamed egg on white rice, Soy sauce.
**Appendix J: Hospital Food Experience Questionnaire Pre-test (Filipino)**

<table>
<thead>
<tr>
<th>Original question</th>
<th>Comments by Participants</th>
<th>Action(s) taken</th>
<th>Revised question</th>
</tr>
</thead>
<tbody>
<tr>
<td>12. I was offered Filipino tea (E.g. Salabat tea) during my hospital stay.</td>
<td>2 participants mentioned that Salabat tea may not be relevant to Filipinos as the practice of drinking Salabat tea is not as common now. However, one participant mentions drinking Salabat tea on a regular basis.</td>
<td>There were conflicting information about the relevance of Salabat tea to Filipinos. So the question will not be changed.</td>
<td>-</td>
</tr>
<tr>
<td>14. Cod foods were served cold.</td>
<td>Participant suggested adding examples such as ‘ice-cream’ or ‘salad’ as she was a little confused with this question.</td>
<td>14. Cold foods were served cold (e.g. Ice-cream or salad).</td>
<td></td>
</tr>
<tr>
<td>19. During my stay in hospital, I experienced the following conditions which affected my ability to consume and enjoy the hospital meals (Please select all that apply): • Reduced appetite, taste changes, nausea, vomiting, pain, constipation, difficulty swallowing, other.</td>
<td>Three participants mentioned that nausea may be a new term to some people, and they may not understand what it means.</td>
<td>19. During my stay in hospital, I experienced the following conditions which affected my ability to consume and enjoy the hospital meals (Please select all that apply): • Reduced appetite, taste changes, nausea (feel like vomiting), vomiting, pain, constipation, difficulty swallowing, other.</td>
<td></td>
</tr>
<tr>
<td>20. I would like to be offered the following food items (Tick every item applies to you): • Chicken, beef, pork, other meats (e.g. lamb), fish, seafood, milk/dairy products, bread, noodles, legumes, cereals (e.g. Weetbix), white rice, brown rice, bread, potato/ kumara, Congee (rice porridge), Sinigang, Tinola, Adobo, Ginger tea (Salabat), Others</td>
<td>Participant suggested adding the option ‘tropical fruit juice’ to the list of options. Participant suggested separating Kumara and potatoes as Filipino enjoy having kumara more. She also suggested separating the bread options into white bread and brown bread. Participant suggested putting ‘Lugaw’ in addition to congee for the Congee option.</td>
<td>Pineapple juice was added to the list as it had been mentioned in the focus group that Pineapple juice is important to the Filipino culture.</td>
<td>20. I would like to be offered the following food items (Tick every item applies to you): Chicken, beef, pork, other meats (e.g. lamb), fish, seafood, milk/dairy products, bread, noodles, legumes, cereals (e.g. Weetbix), white rice, brown rice, white bread, whole meal bread, potato, kumara, Congee (rice porridge), Lugaw Sinigang, Tinola, Adobo, Ginger tea (Salabat), Pineapple juice, Others</td>
</tr>
<tr>
<td>prefer food which is: (Tick all that apply to you)</td>
<td>option.</td>
<td>prefer food which is: (Tick all that apply to you)</td>
<td></td>
</tr>
<tr>
<td>Fried foods, steamed foods, boiled, oily foods, hot temperature foods, cold temperature foods, raw foods e.g. salad</td>
<td></td>
<td>Fried foods, steamed foods, boiled, oily foods, hot temperature foods, cold temperature foods, raw foods e.g. salad, Others</td>
<td></td>
</tr>
</tbody>
</table>
Appendix K: Final Hospital Food Experience Questionnaire (Chinese)

Hospital Food Experience Questionnaire

Welcome and thank you for being part of the Culturally Determined Food Preferences Study for Chinese people. This questionnaire should take approximately 15 minutes to complete. Please answer every question — there are no right or wrong answers. Thank you for your time.

Section 1: Your Recent Experience of Food and Foodservice at North Shore Hospital

Please think back to meals and drinks you received during your current stay at North Shore Hospital.

For each question please mark the option that best applies to you or write in the space provided. Please answer every question.

1. Overall, the food I received during my hospital stay was similar to what I usually have at home.

   ○ Never  ○ Rarely  ○ Sometimes  ○ Mostly  ○ Always

2. Overall, the taste of the food was similar to what I usually have at home.

   ○ Never  ○ Rarely  ○ Sometimes  ○ Mostly  ○ Always

3. To have enough to eat, I needed to have extra food brought in by my family and/or friends.

   ○ Never  ○ Rarely  ○ Sometimes  ○ Mostly  ○ Always
4. Each day, there was enough choice on the hospital menu to allow me to choose food I preferred for:

   a) Breakfast

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
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</table>

   b) Lunch

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<tr>
<th>Never</th>
<th>Rarely</th>
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<th>Mostly</th>
<th>Always</th>
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   C) Dinner

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<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
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</table>

5. I could choose Chinese food from the menu for:

   a) Breakfast

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
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<tbody>
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</table>

   b) Lunch

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<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
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<tbody>
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</table>

   C) Dinner

<table>
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<tr>
<th>Never</th>
<th>Rarely</th>
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<th>Mostly</th>
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</tbody>
</table>
11 During my hospital stay, I enjoyed the types of soups I received for:

a) Breakfast

Never Rarely Sometimes Mostly Always Not Applicable

b) Lunch

Never Rarely Sometimes Mostly Always Not Applicable

C) Dinner

Never Rarely Sometimes Mostly Always Not Applicable

12 I was offered Chinese tea during my hospital stay.

Never Rarely Sometimes Mostly Always

13 Hot water was available when I wanted it during my hospital stay.

Never Rarely Sometimes Mostly Always

14 Hot foods were served hot.

Never Rarely Sometimes Mostly Always
15 Compared to the time I would usually have my meals at home, the timing of my meals in the hospital was:

a) Breakfast

☐ ☐ ☐ ☐ ☐ ☐
Much Earlier (2+ hours) Earlier (1 hour) Similar Later (1 hour) Much Later (2+ hours)

b) Lunch

☐ ☐ ☐ ☐ ☐ ☐
Much Earlier (2+ hours) Earlier (1 hour) Similar Later (1 hour) Much Later (2+ hours)

C) Dinner

☐ ☐ ☐ ☐ ☐ ☐
Much Earlier (2+ hours) Earlier (1 hour) Similar Later (1 hour) Much Later (2+ hours)

16 The cutlery available was similar to the cutlery I use at home

☐ ☐ ☐ ☐ ☐
Never Rarely Sometimes Mostly Always

17 The food service staff were respectful of my culture.

☐ ☐ ☐ ☐ ☐ ☐
Never Rarely Sometimes Mostly Always
18 During my stay in hospital, I experienced the following conditions which affected my ability to consume and enjoy the hospital meals (Please select all that apply):

<table>
<thead>
<tr>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced appetite</td>
</tr>
<tr>
<td>Taste changes</td>
</tr>
<tr>
<td>Nausea (Feel like vomiting)</td>
</tr>
<tr>
<td>Difficulty Swallowing</td>
</tr>
<tr>
<td>Vomiting</td>
</tr>
<tr>
<td>Pain</td>
</tr>
<tr>
<td>Constipation</td>
</tr>
</tbody>
</table>

Other please state:

[Blank space for additional comments]
Section 2: Expectations of Food and Foodservice at North Shore Hospital

Now at the end of this admission, having thought about the issues through taking part in this study, please consider your expectations of hospital meals.

While answering these questions, consider your preferences, and the food that you could eat to help your condition.

For each question tick the options that best applies to you. Please answer every question.

19) I would like to be offered the following food items (Tick every item applies to you):

<table>
<thead>
<tr>
<th>Item</th>
<th>Ticked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td></td>
</tr>
<tr>
<td>Pork</td>
<td></td>
</tr>
<tr>
<td>Lamb</td>
<td></td>
</tr>
<tr>
<td>Other meats</td>
<td></td>
</tr>
<tr>
<td>Legumes</td>
<td></td>
</tr>
<tr>
<td>Brown Rice</td>
<td></td>
</tr>
<tr>
<td>Bread</td>
<td></td>
</tr>
<tr>
<td>Ginger</td>
<td></td>
</tr>
<tr>
<td>Chicken Soup (清鸡汤)</td>
<td></td>
</tr>
<tr>
<td>Soy Sauce</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td></td>
</tr>
<tr>
<td>Seafood</td>
<td></td>
</tr>
<tr>
<td>Milk (Whole/Trim)</td>
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<tr>
<td>Dairy Products</td>
<td></td>
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<tr>
<td>Noodles</td>
<td></td>
</tr>
<tr>
<td>White Rice</td>
<td></td>
</tr>
<tr>
<td>Potato/Kumara</td>
<td></td>
</tr>
<tr>
<td>Cereals (E.g. Weetbix)</td>
<td></td>
</tr>
<tr>
<td>Congee (Rice Porridge)</td>
<td></td>
</tr>
<tr>
<td>Steamed Egg on White Rice (蒸鸡蛋白饭)</td>
<td></td>
</tr>
</tbody>
</table>

Other, please list:

[Blank space]

ID: _____
20. When I am unwell in hospital, I prefer food which is:
   (Tick all that apply to you)

   Fried  ☐  Steamed  ☐
   Oily   ☐  Boiled   ☐
   Hot temperature ☐  Cold temperature ☐
   Raw (E.g. Salad) ☐
   Other, please list:

   [space for input]
Section 3: Information about you

For each question tick the option that best applies to you or write in the space provided. Please answer every question.

Demographics

1. Gender

Male ☐ Female ☐

2. Age Range in Years

0-19 Years ☐ 60-69 Years ☐
20-29 Years ☐ 70-79 Years ☐
30-39 Years ☐ 80-89 Years ☐
40-49 Years ☐ 90-99 Years ☐
50-59 Years ☐ 100 Years and over ☐

3. Which ethnic group do you belong to? Please mark all boxes that apply to you.

Chinese ☐ New Zealand European ☐

Others please detail in box below:

4. Which country were you born in?


144
5. How many years have you lived in New Zealand.
   
   Less than 10 years  
   10 – 40 years  
   More than 40 years  
   All my life, I was born here  

6. How many nights have you spent in the hospital during this admission?
   
   1 Night  
   2 – 3 Nights  
   4 – 5 Nights  
   6+ Nights  

Thank you for completing the survey ☺

The student researcher return to collect the completed questionnaire and conduct a brief interview with you. If you have any questions or concerns about our project, either now or in the future, please feel free to email myfoodmymed@otago.ac.nz.
Appendix L: Final Hospital Food Experience Questionnaire (Filipino)

Hospital Food Experience Questionnaire

Welcome and thank you for being part of the Culturally Determined Food Preferences Study. This questionnaire should take approximately 15 minutes to complete. Please answer every question – there are no right or wrong answers. Thank you for your time.

Section 1: Your Recent Experience of Food and Foodservice at North Shore Hospital

Please think back to meals and drinks you received during your current stay at North Shore Hospital.

For each question please mark the option that best applies to you or write in the space provided. Please answer every question.

1. Overall, the food I received during my hospital stay was similar to what I usually have at home.

   Never          Rarely          Sometimes          Mostly          Always

2. Overall, the taste of the food was similar to what I usually have at home.

   Never          Rarely          Sometimes          Mostly          Always

3. To have enough to eat, I needed to have extra food brought in by my family and/or friends.

   Never          Rarely          Sometimes          Mostly          Always
4. Each day, there was enough choice on the hospital menu to allow me to choose food I preferred for:

   a) Breakfast

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
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</tbody>
</table>

   b) Lunch

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
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</table>

   c) Dinner

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</tr>
</tbody>
</table>

5. I could choose Filipino Food from the menu for:

   a) Breakfast

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
</tr>
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</tr>
</tbody>
</table>

   b) Lunch

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>○</td>
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<td>○</td>
<td>○</td>
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</tr>
</tbody>
</table>

   c) Dinner

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
</tr>
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<tbody>
<tr>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
6 I enjoyed the way the vegetables were cooked

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
</tr>
</thead>
</table>

7 The types of vegetables I received were similar to the vegetables I usually eat at home.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
</tr>
</thead>
</table>

8 Fresh fruit was available with each meal if I wanted it.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
</tr>
</thead>
</table>

9 I enjoyed the way the meats and poultry was cooked.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
<th>Not Applicable</th>
</tr>
</thead>
</table>

10 I enjoyed the way the fish was cooked.

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
<th>Not Applicable</th>
</tr>
</thead>
</table>
11 During my hospital stay, I enjoyed the types of soups I received for:

a) Breakfast

☐ ☐ ☐ ☐ ☐ ☐ ☐
Never Rarely Sometimes Mostly Always Not Applicable

b) Lunch

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Never Rarely Sometimes Mostly Always Not Applicable

C) Dinner

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Never Rarely Sometimes Mostly Always Not Applicable

12 I was offered Filipino tea (E.g. Salabat tea) during my hospital stay.

☐ ☐ ☐ ☐ ☐ ☐
Never Rarely Sometimes Mostly Always

13 I was offered Tropical fruit juices (E.g. Pineapple juice) during my hospital stay.

☐ ☐ ☐ ☐ ☐ ☐ ☐
Never Rarely Sometimes Mostly Always

14 Cold foods were served cold (E.g. Ice-cream or salads).

☐ ☐ ☐ ☐ ☐ ☐ ☐
Never Rarely Sometimes Mostly Always
15. Hot foods were served hot.

   Never   Rarely   Sometimes   Mostly   Always

16. Compared to the time I would usually have my meals, the timing of my meals was:

   a) Breakfast

      Much Earlier              Earlier               Similar               Later              Much Later
      (2+ hours)                (1 hour)             (1 hour)              (1 hour)           (2 + hours)

   b) Lunch

      Much Earlier              Earlier               Similar               Later              Much Later
      (2+ hours)                (1 hour)             (1 hour)              (1 hour)           (2 + hours)

   C) Dinner

      Much Earlier              Earlier               Similar               Later              Much Later
      (2+ hours)                (1 hour)             (1 hour)              (1 hour)           (2 + hours)

17. The cutlery available was similar to the cutlery I use at home

   Never   Rarely   Sometimes   Mostly   Always
18 The food service staff were respectful of my culture.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Mostly</th>
<th>Always</th>
</tr>
</thead>
</table>

19 During my stay in hospital, I experienced the following conditions which affected my ability to consume and enjoy the hospital meals (Please select all that apply):

- Reduced appetite
- Taste changes
- Nausea (Feel like vomiting)
- Difficulty Swallowing
- Vomiting
- Pain
- Constipation

Other please state:

[Blank space]
Section 2: Expectations of Food and Foodservice at North Shore Hospital

Now at the end of this admission, having thought about the issues through taking part in this study, please consider your expectations of hospital meals.

While answering these questions, consider your preferences, and the food that you could eat to help your condition.

For each question tick the options that best applies to you. Please answer every question.

20 I would like to be offered the following food items (Tick every item that applies to you):

<table>
<thead>
<tr>
<th>Item</th>
<th></th>
<th>Item</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td></td>
<td>Fish</td>
<td></td>
</tr>
<tr>
<td>Beef</td>
<td></td>
<td>Seafood</td>
<td></td>
</tr>
<tr>
<td>Pork</td>
<td></td>
<td>Milk (Whole/Trim)</td>
<td></td>
</tr>
<tr>
<td>Lamb</td>
<td></td>
<td>Dairy Products</td>
<td></td>
</tr>
<tr>
<td>Other meats</td>
<td></td>
<td>Noodles</td>
<td></td>
</tr>
<tr>
<td>Legumes</td>
<td></td>
<td>White Rice</td>
<td></td>
</tr>
<tr>
<td>Brown Rice</td>
<td></td>
<td>Cereals (E.g. Weetbix)</td>
<td></td>
</tr>
<tr>
<td>Potato</td>
<td></td>
<td>Kumara</td>
<td></td>
</tr>
<tr>
<td>White Bread</td>
<td></td>
<td>Whole meal Bread</td>
<td></td>
</tr>
<tr>
<td>Congee (Rice Porridge)</td>
<td></td>
<td>Lugaw</td>
<td></td>
</tr>
<tr>
<td>Sinigang</td>
<td></td>
<td>Adobo</td>
<td></td>
</tr>
<tr>
<td>Tinola</td>
<td></td>
<td>Ginger tea (Salabat)</td>
<td></td>
</tr>
<tr>
<td>Pineapple Juice</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Other, please list:

[Blank space for listing]
21 When I am unwell in hospital, I prefer food that is:
(Tick all that apply to you)

- Fried
- Oily
- Hot temperature
- Raw (E.g. Salad)
- Steamed
- Boiled
- Cold temperature

Other, please list:

[ ]
Section 3: Information about you

For each question tick the option that best applies to you or write in the space provided. Please answer every question.

Demographics

1. Gender
   Male ☐  Female ☐

2. Age Range in Years
   0-19 Years ☐  60-69 Years ☐
   20-29 Years ☐  70-79 Years ☐
   30-39 Years ☐  80-89 Years ☐
   40-49 Years ☐  90-99 Years ☐
   50-59 Years ☐  100 Years and over ☐

3. Which ethnic group do you belong to? Please mark all spaces that apply to you.
   Filipino ☐  New Zealand European ☐
   Others please detail in box below:
   
4. Where were you born?
   
   [Blank space]
5. How many years have you lived in New Zealand.
   Less than 10 years [ ]
   10 – 40 years [ ]
   More than 40 years [ ]
   All My life, I was born here [ ]

6. How many nights have you spent in the hospital during this admission?
   1 Night [ ]
   2 – 3 Nights [ ]
   4 – 5 Nights [ ]
   6+ Nights [ ]

Thank you for completing the survey 😊

The student researcher will return to collect the completed questionnaire and conduct a brief interview with you. If you have any questions or concerns about our project, either now or in the future, please feel free to email myfoodmymed@otago.ac.nz.
Appendix M: Codes and themes gathered from Chinese Focus Group

Chinese Focus group – Common Themes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>All of the participants have western breakfast such as Weetabix, toasts and oats. Some participants have tea along with their meal, ranging from Java tea, Green tea and English Breakfast. Some foods eaten for health reasons e.g. psyllium, cinnamon, bran, oats. Having breakfast at 7-8 am is seen in 4 of the participants. The rest vary from 5 am, 8-9 am and 9-10 am.</td>
</tr>
<tr>
<td>Lunch</td>
<td>Lunch is also generally western foods e.g. pies and sandwiches. Some participants will have Chinese foods on some days such as Jeok/Zhou (congee). One participant described cooking the congee with lamb or pork and kumara with veggies, with red rice, black rice and long grain rice. Another participant describe cooking congee with pork bones, Chinese mushrooms and dried scallops. The participant's lunch choices are influenced by family responsibilities such as taking care of grandchildren or convenience. On some days, there will be home-prepared food, leftovers or purchasing takeaways.</td>
</tr>
<tr>
<td>Dinner</td>
<td>Dinner has more Chinese influence to it. Dinner is mainly seasonal, fresh vegetables with some meat and carbohydrates such as white or brown rice or noodles. Noodles include egg noodles, rice noodles, rice vermicelli and mung bean noodles. Dinner is mostly home prepared. Most participants have vegetable gardens and use the vegetables that they have grown in their dishes, thus the vegetables used in their meals are usually in season. Vegetables are usually stir-fried and consist of cabbage, carrot, spinach, cauliflower, Gai choy, beans and mushrooms. One participant mentioned stir-frying the vegetables with ginger. Having vegetable dishes in dinner is very important to the participants. Meat dishes may be stir-fried with the vegetables or cooked separately by roasting or stir-frying. Fish is usually steamed. 3 participants have dinner at 7 pm and the rest of the participants have dinner around 6 to 7 pm. Participants mentioned the preference of long grain rice. Short grain rice is used to cook Jeok/Zhou (congee). Fresh fruit for dessert and pudding only on special occasions.</td>
</tr>
<tr>
<td>Main meal</td>
<td>Most of the participants feel that evening meals are their main meal.</td>
</tr>
<tr>
<td>Snacks</td>
<td>Participants commonly have fruits such as bananas as snacks. One participant mentioned having steamed buns. Participants drink Green tea and hot water as well.</td>
</tr>
<tr>
<td>Difficulties preparing meals</td>
<td>One participant mentioned that chopping the ingredients takes a lot of time but other participants do not mind. Another participant said motivation to cook. Another participant said that knowing her parents’ recipes were a barrier as they do not have a fixed recipe, and it is based on taste and skills. Participants have no difficulty accessing foods. One participant mentioned that Chinese vegetables are more expensive in Auckland compared to Wellington and so does not consume as many Chinese vegetables now.</td>
</tr>
<tr>
<td>Differences to meal patterns when unwell</td>
<td>When they are unwell, they would like to have hot temperature foods. Participants will avoid fried foods, and drink lots of water. Two participants describe fried foods or deep fried foods as unhealthy and tries to avoid it as much as possible. One participant states that “drinking soups is part and parcel of Chinese life” when they are sick and having fever. The participant also mentioned that he and his family believes that drinking clear fluids is inherent to good health and that includes clear Chinese soups or plain water. Other participants have also mentioned drinking water along with their meals on a daily basis regardless of</td>
</tr>
</tbody>
</table>
illnesses. Jeok/Zhou (congee) is a common food that they have when they are unwell. The consistency of congee is similar to a soup, where a spoon will drop to the bottom of the bowl filled with congee. The temperature has to be hot. One participant describes hot temperature as needing to give the spoon of congee a couple of blows before consuming it. Congee is usually cooked with short grain rice, chicken bones or pork bones, ginger, salt, dried mushrooms and minced chicken. Sometimes hundred year eggs or salted eggs are used, along with sesame oil for flavour. Congee is usually garnished with spring onions, shrimp flakes, onion flakes and dried scallops.

Soups are also common. Participants describe what their parents would make for them when they are unwell, such as chicken soup (煲鸡汤 Bo Gai Tong) and mustard green soup (芥菜汤 Gai Chuy tong) with egg. Another participant mentioned that her mother would make a chicken tonic with Chinese herbs. The Chinese herbs that were used for that tonic were Shu Di (熟地), Chinese yam (淮山 Wai San), Goji berries (杞子 Gei Zi) and Fong Dong. Participants mentioned that the quality of chicken used for stock is important, and they cannot find flavourful chicken in New Zealand. Flavourful stock can be made from fresh chicken. Frozen chicken does not give the same flavour.

Participants mentioned that when an individual is dizzy or weak, having Dong Quai is good for the body. The Chinese herbs Dong Quai and Shu Di are good for bringing heat to the body. One participant says that it ‘heats up your blood’ and ‘replaces your energy’.

Other foods they have when unwell include steamed egg on white rice (蒸雞蛋白飯 Zing Gai Daan Baak Faan). Drinking lemon and ginger tea or adding lemon and honey to tea is another practice. One participant mentioned that since he has a lot of chest problems, he has lemon juice and honey in hot water. Participants also mentioned a tea called 感冒茶 (Gan Mo cha) which is Herbal Cold Remedy Tea in English. They have it when they are coughing. Drinking plenty of fluids is important when participants are unwell. They also tend to avoid fried foods.

**Utensils**

When they receive congee, they would like it in a Chinese bowl with a Chinese spoon.

**Experience with hospital food**

Participants do not mind having kiwi foods as they grew up with it. One participant felt that the quality and presentation of some of the meals she had during admission needs improvement. She also preferred having her meals in the dining hall or in the hospital lawn or balcony as she felt that it will be much nicer, company beneficial and make the food more enjoyable.

Participant’s family will bring fresh fruits when they visit them during hospital. The participants will bring food for their parents during their stay as Chinese food is not readily available. One participant has a father staying in a rest-home, and she often brings food for her father as they do not provide Chinese food. And when they do, the rice was not prepared to his liking and he did not have it.

**Food expectation in hospital**

They mentioned that they understood that they are in the hospital and do not expect much other than that foods to be nutritious and balanced. Participants mentioned that if rice could be added to the menu as an option to potatoes, it will make a big difference for the Chinese patients. The cooking method of rice is very important to produce acceptable rice. Participants mentioned that if the Chinese restaurants could serve the amount of rice it does on a daily basis, the hospitals should be able to. Using rice cooker is the common method of cooking rice.

Rice with vegetables and chicken minimum for Chinese.
One participant mentioned serving some fermented bean curd with chilli on rice for flavour. They do not expect congee to be served, but to have a rice option on the selective menu, such as steamed rice or congee, will be good. Another participant mentioned that having stir-fried vegetables with Chinese vegetables such as Kai Lan and Choy Sum will be easy to do for a hospital. One participant expected more variety in the hospital menus regardless of ethnicity. Some participants felt that vegetables can be too overcooked sometimes. One participant preferred them to be steamed rather than boiled, although most participants do not mind boiled vegetables. Controlling the quality of the meals served, for example having the ‘vegetables crisp rather than boiled’ and the rice to be hot and not ‘clump together and sticky’. One participant mentioned serving simple, plain foods that is not overcooked. The presentations of food is very important in the hospital such as the colour of trays and the utensils used for meals.

| Culturally significant foods (Health Reason) | Every condition has a Chinese herb that can help with the condition. Some participants do not know the medicinal properties of the Chinese herbs and tonics but have it as them is tasty to them. One participant drinks Medicine soup 藥材湯 (jeok coi tong) often, that is herbs boiled together and said to support the stomach and cleanse the body. Another tonic called “Bo Sum” which has a lot of iron and is used to build the body up. Herbs that are often mentioned by participants were Bulbus Lilii (百合), Wolf berries (杞子), Ling Zhi (靈芝), Dang Quai (當歸), Shu Di (熟地), Chinese dates (蜜棗), red dates (紅棗) and Fong Dong (防黨). Dong Quai (當歸) is a herb that heats the blood up and gives energy, so it is consumed when an individual is feeling weak. In maternity, the Cantonese believe that fried ginger and egg served with rice is important for a mother who just had a baby. Java tea is a Malaysian tea that is stated to help dissolve kidney stones, prevent urinary tract infections, lower blood pressure, help treat blood circulatory disorders and maintain blood sugar levels into normal ranges. |
| Other comments | They mentioned that cooking for one is much easier in Chinese dishes as they can make stir-fry. However, if they prepare meals for their family, there has to be four or five dishes on the table. |
## Appendix N: Codes and themes gathered from Filipino Focus Group

<table>
<thead>
<tr>
<th>Themes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>Breakfast on the weekdays is usually western foods such as cereals. They also have bread with spread often. The younger participants usually do not have breakfast. During the weekends when they have more time, one participant will have fried rice.</td>
</tr>
<tr>
<td>Lunch</td>
<td>Some participants have Filipino dishes such as beef steak and adobo. Having leftovers from the day before is a common practice, it usually consist of rice and Filipino dishes. Some participants eat sandwiches and salads during lunch. Others may takeaway food nearby out of convenience. Lunch is usually between 12-1pm.</td>
</tr>
<tr>
<td>Dinner</td>
<td>Dinner usually consist of rice and meat dishes with vegetables cooked Filipino style. Most dinners will be Filipino styled cooking such as Sinigang or Adobo. Rice used is mainly Jasmine rice, steamed. Fruits are often taken after dinner, banana being the most common type. One participant said that apples are too hard on her gums so she does not have apples as often. Vegetables used are often Asian vegetables such as carrots, broccoli, cabbage, beans, Bok choy. Vegetables are stir-fried or added to meat dishes. A variety of food served in a week is important to two of the participants. The main protein foods used have to vary from day to day. Meat seems to be very important during dinner as meat is their main dish with vegetables added to meat dishes sometimes. They consume all kinds of meat and poultry such as pork, chicken, beef and also fish.</td>
</tr>
<tr>
<td>Biggest Meal</td>
<td>A mixture of lunch and dinner. A participant states that it depends on when everyone eats together.</td>
</tr>
<tr>
<td>Snacks</td>
<td>No common snacks were identified. Participants mentioned nuts, tuna and crackers, cheese, bananas and cranberry or lemon and ginger tea.</td>
</tr>
<tr>
<td>Difficulties in preparing food</td>
<td>Participants stated that there are no difficulties sourcing the ingredients, however the price of the fresh vegetables are expensive, especially some vegetables such as bitter melon, long beans and okra. They also mentioned that the higher quality products such as Dole pineapple juice and bananas are more expensive but they prefer it to other brands.</td>
</tr>
<tr>
<td>differences in meal patterns when unwell</td>
<td>Participants would like something liquid and soft such as congee and soups. Rice is a very important staple when participants are unwell. Rice is cooked until soft (congee) or added to various liquids such as soups or coffee. Congee in Filipino dishes is similar to Chinese but with added lemon to make it sour. They use sticky rice instead of jasmine rice when they make congee. They add shredded chicken and ginger, and garnish with spring onions, fried garlic and boiled egg. Participants also mentioned consuming beef/pork/chicken bone broth when they are unwell, called Tinola, Nilagang or Sinigang. Sinigang contains tamarind which makes the dish sour. One participant also mentioned making juice out of Calamansi when someone has a cold. One participant mentioned drinking green tea with lemon and ginger.</td>
</tr>
</tbody>
</table>
| **Other comments about culture and food** | Participants mentioned the importance of meat and rice in their diet. Meat and vegetables are usually cooked together in a same dish.  
They believe that bitter melon is good for their blood.  
Congee is a comfort food for the participants, especially during winter.  
Salabat (Ginger tea) is brought up from their culture, it consist of boiling fresh ginger in water. |
| **Food experiences in Hospital** | One participant thought that the food was tasteless, and also showed disapproval that the hospital foods are not cooked in the hospital kitchens. Another participant did not enjoy the meals as well, she did not enjoy having yoghurt during breakfast, and the soups taste bland. The participant mentioned that she will ask her husband to bring food in for her. She also did not like the meal timings, stating that dinner is served too early at 5pm and she would prefer around 630pm. And breakfast was 6am and she is not used to the timing as she usually has her breakfast at 7:20am.  
Another participant did not enjoy the Weetabix that was given to her during breakfast as it was too hard. Another participant said it was like ‘eating cardboard’. Participants will ask their family members to bring food to them if they are hospitalised.  
When asked about whether they would prefer to have more familiar foods in the hospital, most of the participants stated yes. One participant stated that they don’t mind western foods and another stated that since they are in NZ, they should learn to adapt to kiwi foods. |
| **Food expectations** | Participants expect steamed jasmine rice to be served in hospitals. They also expect soupy foods to be served, such as Mami, which is rice vermicelli in beef broth with vegetables. They also expect Pineapple juice or tropical drinks to be served. Coconut water is also important as they believe that it cleanses the bladder.  
Temperature for meals must be very hot, especially if it is soup dishes.  
Utensils that are important to them are spoon and fork, or their hands. They usually do not use knives. |
| **Spices** | Ginger, chilli, garlic and onion are the most important spices in Filipino dishes. To spice dishes up, chilli, chilli powder and cayenne pepper are often used. |
| **Other comments** | Filipino love adding coconut cream to dishes. They prefer coconut cream to coconut milk as they like a creamy consistency.  
In the Philippines, people with skin allergies (eczema) will not be served chicken skin, chicken, eggs, sardines, canned foods or salt-water fish.  
Filipino immigrants are starting to develop allergies when they move to NZ. |
# Appendix O: Codes and themes gathered from Chinese Inpatient Interviews

<table>
<thead>
<tr>
<th>Themes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Why Food was not similar in the hospital</td>
<td>Most participants mentioned that the difference in taste was due to the different cuisines of the hospital meals. They preferred having foods that are slightly salty and not very oily and stated that European foods tasted bland. One participant also felt that the hospital food is too sweet. Some participants felt that the food was similar as they had western foods at home sometimes.</td>
</tr>
<tr>
<td>Expectations of the foodservice</td>
<td>Participants have no expectations of the hospital foodservice to provide Chinese foods for them. Most of the participants felt that since they were a minority ethnic group in NZ, they cannot be fussy. They also mentioned that New Zealand is a multi-ethnic country and meeting each of the ethnic group’s preference is impossible. Another reason is the free services of the public hospital. They mentioned that it would cost the hospital too much money to implement new menu items for the Chinese patients in hospital.</td>
</tr>
<tr>
<td>Preference</td>
<td>All participants would prefer having Chinese meals when they are unwell in hospital.</td>
</tr>
<tr>
<td>Family bringing food in</td>
<td>Some of the participants families bring in Chinese food for them even though the hospital meal portions were enough to keep them full. The reason was due to their habit of having Chinese meals. The dislike for the taste of hospital meals were another reason. One participant have her husband bring in chicken soup as she believe that it helps with her recovery.</td>
</tr>
<tr>
<td>Chinese foods</td>
<td>Participants felt that the Chinese meals in the hospital menu were not authentic Chinese meals thus did not enjoy them. One participant mentioned that the cooking methods makes a dish Chinese cuisine “It is all the same it is just the way it is cooked”. Participation wanted more Chinese meals in the menu if it were possible. This will help to make hospital stay more enjoyable. One participant mentioned that having a Chinese chef would be beneficial in making sure that the Chinese meals were authentic. Two participants mentioned that they wanted more Chinese soup options on the hospital menu.</td>
</tr>
<tr>
<td>Variety</td>
<td>Most participants felt that there were not enough meal choices on the menu. They also felt that there was a lack of Chinese meals on the menu as well.</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Most participants did not enjoy the way vegetables were cooked in hospital because of the bland taste and soft texture. Participants enjoy their vegetables cooked a Chinese way, which was mostly described as stir-frying. Garlic, onions, salt, Chinese soy sauce or other Chinese sauces can added to it for flavour. Vegetables cannot be very oily. Stir-fry is described as adding a small amount of oil and mildly frying it quickly. Vegetables should be crisp, bright colour and look fresh. It is important that vegetables are not overcooked. One participant do not like steamed vegetables. One participant did not mind having boiled vegetables if it is accompanied with salt and pepper or Chinese soy sauce. Participants feel that all meals should have vegetables. The vegetables that participants enjoy is Asian vegetables such as beans, cucumber, baby bok choy, eggplant, choy sum, shanghai cabbage, Chinese cabbage, green beans, broccoli, spinach and bean sprouts. Some participants preferred seasonal vegetables as they feel that it taste better. One participants mentioned that she enjoy vegetables to be served with rice. Only 2 participants enjoy having salads. Preferred portion size of vegetables ranged from 1/3 of plate, ¼ of the plate and...</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Fruits</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Vegetables are important to most participants. Some participants feel that having vegetables is good for their stomach and digestion. Some participants do not have vegetables in hospital because it does not taste good to them.</td>
<td>Fruits are important for most participants as it is believed to help in recovery. One participant believed that eating pink apple would help people to stop coughing. One participant mentioned that mango is not suitable for people with gynaecology surgery as it is believed to help expel blood from the body. So having mango would encourage bleeding after surgery.</td>
</tr>
<tr>
<td></td>
<td>Fruits enjoyed were apple, banana, mandarin, kiwi fruits, peach, pear, pink apple and grapes.</td>
</tr>
<tr>
<td><strong>White rice</strong></td>
<td>Most participants did not enjoy the way white rice was cooked in hospital. Some participants did not order the rice as they were unsure of the cooking methods used by the hospital foodservice. Some participants believe that the hospital cannot improve their rice quality. Preferred rice is described to be very soft. Some participants mentioned that it does not matter if rice is served or not as they felt that the hospital foodservice do not know how to cook rice. Some would prefer white rice if the cooking is good. It will be helpful if rice is provided. One participant mentioned that rice should be served with Chinese style vegetables and poultry dishes. Types of white rice preferred included short grain, long grain rice, Jasmine rice.</td>
</tr>
<tr>
<td><strong>Rice Porridge</strong></td>
<td>Some participants felt that the rice porridge was acceptable. One participant mentioned that even though the rice porridge in hospital taste okay, it is not cooked in a Chinese way. One participant liked rice porridge thick, while another participant preferred it to have a slightly watery texture. One participant mentioned that the chicken in the chicken porridge was too big when it was supposed to be shredded.</td>
</tr>
<tr>
<td><strong>Noodles</strong></td>
<td>Most participants also want noodles to be included. Noodles dishes include soup noodles, fried noodles. Type of noodles include Chinese noodles, rice noodles and wheat noodles. Noodles will have to be cooked in a Chinese way, with vegetables and some meat. The taste have to be a ‘Chinese taste’. One participant mentioned that the noodles served have to be convenient to eat with a spoon and fork as they are lying on the bed while eating.</td>
</tr>
<tr>
<td><strong>Chinese herbs</strong></td>
<td>Some participants would like to have Chinese herbs in hospital if the foodservice are able to cook it well. They wanted Chinese herbs in soups or cooked with vegetables.</td>
</tr>
<tr>
<td><strong>Foodservice Staff</strong></td>
<td>One participant mentioned that one staff was rude and always not smiling when the staff serve them. The staff also did not ask for the drink choice of the patient before serving.</td>
</tr>
<tr>
<td><strong>Language barrier</strong></td>
<td>Some participants mentioned that they could not choose the menu items because of the language barrier. One participant mentioned that she had no choice and thus felt that the hospital menu has no variety. Foodservice staff usually choose the food for these patients.</td>
</tr>
<tr>
<td><strong>Oily foods</strong></td>
<td>Participants do not like oily foods when they are unwell in hospital. One participants said that oily foods are not good for her digestion. Oily foods will be eaten when participants are healthy.</td>
</tr>
<tr>
<td><strong>Difference in timing</strong></td>
<td>All participants did not mind the difference in timing. One participant mentioned that because of the hospital schedule where patients sleep at 8pm, it would be impossible to meet the timing request of all patients.</td>
</tr>
</tbody>
</table>
Appendix P: Codes and themes gathered from Filipino Inpatient Interviews

<table>
<thead>
<tr>
<th>Themes</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taste</td>
<td>Participants felt that the taste of hospital meals are different from what they usually have at home. One participant felt that the taste is most important in meals and must taste like Asian style.</td>
</tr>
<tr>
<td>Food from home</td>
<td>Two participants have food brought in by families. One participants’ families brought in food because they had a celebration and brought in some food from the celebration to the patient. One participant was not familiar with the hospital meals and missed home cooked food, so he had family bring food into hospital.</td>
</tr>
<tr>
<td>Expectations of hospital</td>
<td>Most participants did not expect the hospital to provide Filipino food. The reason was because they felt that New Zealand is a multi-cultural country and they cannot expect the hospital to cater to them. Participants would like to have Filipino meals or other Asian meals if it were possible.</td>
</tr>
<tr>
<td>Rice</td>
<td>Rice is important to participant. One participant mentioned that Filipinos eat rice at every meal and felt that the rice provided in hospital is not enough. All participants would like to receive rice at all 3 meals. Participants felt that the rice served in hospital is acceptable. Preferred rice is described as fluffy and soft. Rice preferred are jasmine rice, long grain rice and basmati rice. One participant mentioned that rice have to compliment the taste of the rest of the meals. One participant also mentioned that he would like to have fried rice.</td>
</tr>
<tr>
<td>Noodles</td>
<td>Participants wanted noodles to be provided in hospitals. Cooking methods of noodles mentioned are soup or fried. Type of noodles included yellow fine noodles or egg noodles.</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Vegetables are important to participants when in hospital. Preferred portions are ⅓ of the plate, ⅔ of the plate and one palm size. Preferred vegetables are broccoli, carrots, long beans, cabbage, spinach, beans and other Asian style vegetables. Cooking methods are blanched vegetables with salt and pepper or stir-frying with garlic and onion.</td>
</tr>
<tr>
<td>Fruits</td>
<td>Fruits are important to participants when they are in hospital. Two participants want fruits with every meals while two participants wanted fruits with lunch and dinner meals. Fruits preferred are bananas, apples, oranges, pineapples, pears and grapes. One patient had diabetes and was advised not to eat oranges but still received oranges even though she requested for other fruits.</td>
</tr>
<tr>
<td>Meat and poultry</td>
<td>Meat and poultry was important to participants. One participant preferred meat and vegetables to be cooked together. Cooking methods of meat and poultry ranges from boiling, stir-frying and Sauté-ing. One participant wanted meat and poultry served in all meals. Preferred portion sizes are ¼ of the plate and one palm size.</td>
</tr>
<tr>
<td>Fish</td>
<td>Most participants generally enjoy having fish. One participant felt that fish was easier to digest and was more important than having meat and poultry when she is unwell. Fish is steamed or fried. Preferred portion size was one palm size.</td>
</tr>
<tr>
<td>Soups</td>
<td>Participants like having soups in hospital. Soups will make hospital food more enjoyable. Most participants found the hospital soups acceptable. Other soups that participants want introduced are Marconi soup and noodle soup.</td>
</tr>
<tr>
<td>Salabat Tea</td>
<td>Most participants enjoy having salabat tea but does not expect hospital to provide it for them. However, they feel that it will make hospital stay more enjoyable if salabat tea was served. One participant does not drink salabat tea and another participant felt that the Kiwi tea is acceptable.</td>
</tr>
<tr>
<td>Tropical fruit juices</td>
<td>Most participants felt that receiving fruit juice is important, the type of fruit juice does not matter, as long as there is fruit juice provided. This will help their hospital more enjoyable. One participant wants fruit juice to be served at every meal.</td>
</tr>
</tbody>
</table>
meal. One other participant feels she does not want to bother the hospital and does not expect the hospital to provide fruit juices for her.

<table>
<thead>
<tr>
<th>Cutlery</th>
<th>The hospital cutlery is similar to what was used at home. Participants generally use fork and spoon when they are at home.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cooking methods</td>
<td>Oily foods were not preferred by participants. One participant mentioned that oily foods is seen as unhealthy.</td>
</tr>
<tr>
<td>Hot foods</td>
<td>Hot foods were important to participants. It helps to make their stomachs feel better. Hot was described as “Pick up spoon and give a couple of blows.”</td>
</tr>
</tbody>
</table>
| Lugaw | Participants like having Lugaw and would like it to be on the hospital menu. The preferred lugaw has a thick texture where a spoon will float when it is place in it.  
“it’s like you have the chicken meat and then sauté it and then put the little bit of rice and then it will boil until it is soft and then that’s with the soup, if you want when it is already cooked you can just put you know half of the lemon and squeeze it.” |
| Spices | Participants mentioned that they wanted meals to have spices like Onion, ginger, pepper and salt. The spices used are what make the dish different from western meals.  
One participant mentioned that she did not enjoy receiving parsley but liked oregano.  
One participant also wants soy sauce and sweet and sour sauce to be added to dishes. |
## Appendix Q: Ethnic Hospital Menu Sample

### 1 Week Sample Menu for Filipino Adults in the Philippines (85)

<table>
<thead>
<tr>
<th>Breakfast</th>
<th>Snack</th>
<th>Lunch</th>
<th>Snacks</th>
<th>Dinner</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Day 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ripe Papaya</td>
<td>Taho</td>
<td>Paksiw Na Galunggong</td>
<td>Boiled camote</td>
<td>Breaded pork</td>
</tr>
<tr>
<td>Fried Egg</td>
<td></td>
<td>Munggo Gisado</td>
<td>Fruit juice</td>
<td>Pinakbet</td>
</tr>
<tr>
<td>Bisugo Daing</td>
<td></td>
<td>Rice</td>
<td></td>
<td>Rice</td>
</tr>
<tr>
<td>Rice</td>
<td></td>
<td>Banana</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole Milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Day 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ripe mango</td>
<td>Puto puti</td>
<td>Chicken adobo</td>
<td>Panamerikano with margarine</td>
<td>Fried tilapia</td>
</tr>
<tr>
<td>Fried hotdog</td>
<td></td>
<td>Chop Suey</td>
<td>Whole milk</td>
<td>Laing</td>
</tr>
<tr>
<td>Oatmeal</td>
<td></td>
<td>Rice</td>
<td></td>
<td>Rice</td>
</tr>
<tr>
<td>Coffee</td>
<td></td>
<td>Sweetened white kidney beans</td>
<td></td>
<td>Lakatan</td>
</tr>
<tr>
<td><strong>Day 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melon</td>
<td>Palitaw</td>
<td>Pork sinigang with vegetables and gabi</td>
<td>Pasencia cookies</td>
<td>Fried daing na bangus</td>
</tr>
<tr>
<td>Scrambled egg</td>
<td>Calamansi juice</td>
<td>Rice</td>
<td>Pechay gisado</td>
<td>Pechay gisado</td>
</tr>
<tr>
<td>Pandesal with margarine</td>
<td></td>
<td>Ripe langka</td>
<td>Rice</td>
<td>Rice</td>
</tr>
<tr>
<td>Whole milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Day 4</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Banana</td>
<td>Ensaymeda</td>
<td>Chicken tinola with vegetables</td>
<td>Biko</td>
<td>Steamed alimasag with malunggay</td>
</tr>
<tr>
<td>Sautéed sardines</td>
<td>Boiled peanuts</td>
<td>Rice</td>
<td>Pineapple juice</td>
<td>Sayote gisado</td>
</tr>
<tr>
<td>Rice</td>
<td></td>
<td>Red guava</td>
<td></td>
<td>rice</td>
</tr>
<tr>
<td>Whole milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Day 5</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ripe papaya</td>
<td>Cuchinta</td>
<td>Fried chicken</td>
<td>Pancit bihon</td>
<td>Gintaang Tilapia</td>
</tr>
<tr>
<td>Oatmeal</td>
<td>Whole milk</td>
<td>Togue-cabbage carrot gisado</td>
<td></td>
<td>Rice</td>
</tr>
<tr>
<td>Hard boiled egg</td>
<td></td>
<td>Rice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coffee</td>
<td></td>
<td>Indian mango</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Day 6</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dalanghita (Tangerine)</td>
<td>Salted cracker pack with liver spread</td>
<td>Nilagang Baka with vegetables and potato</td>
<td>Suman kamoteng kahoy</td>
<td>Adobong pusit with egg plant</td>
</tr>
<tr>
<td>Tocino</td>
<td></td>
<td>Rice</td>
<td>Calamansi juice</td>
<td></td>
</tr>
<tr>
<td>Salted egg with tomatoes</td>
<td></td>
<td>Rice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice</td>
<td></td>
<td>Avocado</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whole milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Day 7</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fresh pineapple</td>
<td>Pandemonay with cheese pimiento</td>
<td>Menudo</td>
<td>Fried saba</td>
<td>Paksiw Na Ayungin</td>
</tr>
<tr>
<td>Chicken arroz caldo</td>
<td></td>
<td>Rice</td>
<td></td>
<td>Steamed talong okra,</td>
</tr>
<tr>
<td>Whole milk</td>
<td></td>
<td>Chico</td>
<td></td>
<td>kangkong leaves with</td>
</tr>
</tbody>
</table>
## Description of Filipino meals (86)

<table>
<thead>
<tr>
<th>Filipino meals</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisugo Daing</td>
<td>Fried Salted dried fish</td>
</tr>
<tr>
<td>Paksiw Na Galunggong</td>
<td>Fish such as galunggong is cooked with water, vinegar, and some spices.</td>
</tr>
<tr>
<td>Pandesal</td>
<td>A popular bread in Philippines</td>
</tr>
<tr>
<td>Tocino</td>
<td>A Filipino cured meat product made from pork</td>
</tr>
<tr>
<td>Chicken arroz caldo</td>
<td>A type of Filipino rice porridge with chicken slices.</td>
</tr>
<tr>
<td>Munggo Gisado</td>
<td>Sautéed Mung Beans with added meat, seafood and vegetables.</td>
</tr>
<tr>
<td>Chop Suey</td>
<td>Stir-fried vegetable fish with meat and shrimp</td>
</tr>
<tr>
<td>Chicken adobo</td>
<td>Chicken simmered in vinegar and garlic sauce.</td>
</tr>
<tr>
<td>Pork sinigang</td>
<td>Stewed pork with vegetables soured by tamarind</td>
</tr>
<tr>
<td>Gabi</td>
<td>Taro</td>
</tr>
<tr>
<td>Langka</td>
<td>Jackfruit</td>
</tr>
<tr>
<td>Chicken tinola</td>
<td>Ginger and onion based soup</td>
</tr>
<tr>
<td>Togue</td>
<td>Sautéed mung bean</td>
</tr>
<tr>
<td>gisado</td>
<td>Chicken or pork stew</td>
</tr>
<tr>
<td>Nilagang Baka</td>
<td>Filipino beef soup with vegetables cooked until meat becomes very tender</td>
</tr>
<tr>
<td>Menudo</td>
<td>A type of pork stew</td>
</tr>
<tr>
<td>Chico</td>
<td>Sweet tasting fruit with edible coat</td>
</tr>
<tr>
<td>Boiled camote</td>
<td>Sweet potato</td>
</tr>
<tr>
<td>Pan americano</td>
<td>A type of bread</td>
</tr>
<tr>
<td>Adobong pusit</td>
<td>Squid stewed in vinegar, soy sauce and squid ink.</td>
</tr>
<tr>
<td>Pinakbet</td>
<td>Vegetable stew cooked in shrimp paste</td>
</tr>
<tr>
<td>Ginataang Tilapia</td>
<td>Fish cooked in coconut milk</td>
</tr>
<tr>
<td>Paksiw Na Ayungin</td>
<td>Fish cooked in vinegar</td>
</tr>
<tr>
<td>alimasag with malunggay</td>
<td>Crabs cooked in coconut milk with a type of herb</td>
</tr>
<tr>
<td>Sayote gisado</td>
<td>Chayote (vegetable from gourd family) is sautéed with garlic, onion, tomato and ground pork</td>
</tr>
<tr>
<td>Laing</td>
<td>Spicy vegetable dish cooked in coconut milk</td>
</tr>
</tbody>
</table>

## Description of Filipino Snacks (86)

<table>
<thead>
<tr>
<th>Filipino Snacks</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taho</td>
<td>Muscles</td>
</tr>
<tr>
<td>Puto puti</td>
<td>Filipino rice cakes</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------------------------------</td>
</tr>
<tr>
<td>Ensaymeda</td>
<td>Soft, sweet bread covered with butter, sugar and cheese</td>
</tr>
<tr>
<td>Cuchinta</td>
<td>Steamed rice cake</td>
</tr>
<tr>
<td>Pande monay with cheese pimiento</td>
<td>A type of Filipino bread</td>
</tr>
<tr>
<td>Pasencia cookies</td>
<td>Filipino Meringue cookies</td>
</tr>
<tr>
<td>Biko</td>
<td>Filipino rice cake made from sticky rice</td>
</tr>
<tr>
<td>Pancit bihon</td>
<td>Filipino noodle dish</td>
</tr>
<tr>
<td>Suman kamoteng kahoy</td>
<td>Steamed Filipino rice cake consisting of grated cassava, brown sugar and coconut cream</td>
</tr>
<tr>
<td>Fried saba</td>
<td>Fried banana</td>
</tr>
</tbody>
</table>

Sample menu options for main meals for Chinese adults (87)

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Stir-fried Beef and Broccoli</td>
<td>• Moo Goo Gai Pan</td>
<td>• Black Pepper Pork stir-fry</td>
<td>• Vegetable Lasagna</td>
<td>• Baked Fish</td>
</tr>
<tr>
<td></td>
<td>• Chinese Cabbage w/ glass noodles</td>
<td>• Broccoli, Sweet Potato</td>
<td>• Corn Chowder</td>
<td>• Side Salad w/ Dressing</td>
<td>• Bok Choy</td>
</tr>
<tr>
<td></td>
<td>• Rice</td>
<td>• Rice</td>
<td>• Green Beans</td>
<td>• Stir-Fry Mushrooms</td>
<td>• Chop Suey</td>
</tr>
<tr>
<td></td>
<td>• Milk</td>
<td>• Milk</td>
<td>• Rice</td>
<td>• Rice</td>
<td>• Rice</td>
</tr>
<tr>
<td></td>
<td>• Whole Fruit</td>
<td>• Whole Fruit</td>
<td>• Milk</td>
<td>• Whole Fruit</td>
<td>• Milk</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Whole Fruit</td>
<td></td>
<td>• Whole Fruit</td>
</tr>
<tr>
<td>Week 2</td>
<td>• Black bean sauce with Chicken</td>
<td>• Spaghetti and Meatballs Italian Blend</td>
<td>• Sweet and Sour Pork</td>
<td>• Sichuan Beef</td>
<td>• Shrimp Egg Foo Young</td>
</tr>
<tr>
<td></td>
<td>• Egg Flower Soup</td>
<td>• Vegetables</td>
<td>• Stir-fry Broccoli, Cauliflower</td>
<td>• Peas and Carrots</td>
<td>• Stir-fried Broccoli and Carrots</td>
</tr>
<tr>
<td></td>
<td>• Brussel Sprouts</td>
<td>• Side Salad w/ Dressing</td>
<td>• Cauliflower</td>
<td>• Fresh Spinach</td>
<td>• Rice</td>
</tr>
<tr>
<td></td>
<td>• Rice</td>
<td>• Milk</td>
<td>• Rice</td>
<td>• Milk</td>
<td>• Milk</td>
</tr>
<tr>
<td></td>
<td>• Milk</td>
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<td>• Milk</td>
<td>• Whole Fruit</td>
<td>• Whole Fruit</td>
</tr>
<tr>
<td></td>
<td>• Whole Fruit</td>
<td></td>
<td>• Whole Fruit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week 3</td>
<td>• Orange Chicken</td>
<td>• Cabbage Roll</td>
<td>• Chicken Parmesan</td>
<td>• Pork Chop</td>
<td>• Baked Fish</td>
</tr>
<tr>
<td></td>
<td>• Chinese Cabbage w/ glass noodles</td>
<td>• Sweet Potato</td>
<td>• Zucchini, Leek and Potato Soup</td>
<td>• Bok Choy, Peas and Carrots</td>
<td>• Bok Choy</td>
</tr>
<tr>
<td></td>
<td>• Carrots</td>
<td>• Cauliflower and Carrots</td>
<td>• Rice</td>
<td>• Rice</td>
<td>• Rice</td>
</tr>
<tr>
<td></td>
<td>• Rice</td>
<td>• Milk</td>
<td>• Milk</td>
<td>• Milk</td>
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</tr>
<tr>
<td></td>
<td>• Milk</td>
<td>• Whole Fruit</td>
<td>• Whole Fruit</td>
<td>• Whole Fruit</td>
<td>• Whole Fruit</td>
</tr>
<tr>
<td></td>
<td>• Whole Fruit</td>
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<td></td>
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</tbody>
</table>
## Description of Chinese meals

<table>
<thead>
<tr>
<th>Chinese meals</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg Flower Soup</td>
<td>Chinese soup with eggs stirred into chicken broth</td>
</tr>
<tr>
<td>Black bean sauce with Chicken</td>
<td>Stir-fried chicken with black bean sauce</td>
</tr>
<tr>
<td>Chinese Orange Chicken</td>
<td>Fried bite size boneless chicken breast with orange sauce</td>
</tr>
<tr>
<td>Moo Goo Gai Pan</td>
<td>Stir-fried chicken with Chinese vegetables and straw mushrooms</td>
</tr>
<tr>
<td>Cabbage Roll</td>
<td>Pork or beef in rolled in cabbage</td>
</tr>
<tr>
<td>Shrimp Egg Foo Young</td>
<td>Chinese omelette with shrimps</td>
</tr>
<tr>
<td>Sichuan Beef</td>
<td>Sautéed shredded beef in chilli sauce</td>
</tr>
</tbody>
</table>