

Assessing factors in utilisation of health services and  
community aged care services by the Iranian elderly living in  
the Sydney metropolitan area:  
Acculturation aged care

by

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Finally, I take full responsibility for any mistakes or misinterpretation that may be present in the study.

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Sydney, Australia

November 2008

## Supervisor's Certificate

This is to certify that the thesis with the title of “Assessing factors in utilisation of health services and community aged care services by the Iranian elderly living in the Sydney metropolitan area : Acculturation aged care” prepared by PhD candidate Mahtab Alizadeh Khoei is ready for examination.

Professor Mark R. Mathews

## Student Declaration

I certify that this thesis titled “Assessing factors in utilisation of health services and community aged care services by the Iranian elderly living in the Sydney metropolitan area : Acculturation aged care” will be available to public after examination.

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## Statement of the Originality

I certify that the thesis entitled “Assessing factors in utilisation of health services and community aged care services by the Iranian elderly living in the Sydney metropolitan area: Acculturation aged care “ is original due to its presentation of a new and unpublished feed structure for use.

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## ABBREVIATIONS

<b>AAPI</b>	Asian American Pacific Islander
<b>ABS</b>	Australian Bureau of Statistics
<b>ANOVA</b>	Analysis of Variance
<b>HACC</b>	Home and Community Care services
<b>NESB</b>	Non English Speaking Background
<b>ESB</b>	English Speaking Background
<b>CALD</b>	Cultural And Linguistically Diverse
<b>CARMAN</b>	Caboolture and Redcliffe Multicultural Aged Network
<b>DIMIA</b>	Department of Immigration and Multicultural Affairs

## Abstract

As one of the most culturally diverse countries in the world, Australia has a high proportion of minority communities. However, its ageing population, particularly within these ethnic minorities, faces a range of barriers or difficulties in gaining access to and using health and aged care services.

This study aims to identify the acculturation factors that affect the health status of Iranian-born elderly immigrants to Australia and their utilisation of health and community aged care services. The results of this study will be of value to Iranian elders, their families, and Australian aged health care service providers. The findings could also contribute towards enriched multicultural policy and improved social fairness, access to services, and equity for the aged from different ethnic backgrounds.

302 Iranian migrants aged 65 years who had lived in the Sydney Metropolitan area for at least six months were surveyed via a written questionnaire, face-to-face interviews, and telephone interviews. The results were analysed using SPSS and then compared to the findings from a 1999 survey of NSW elderly.

The results indicate that Iranian migrants suffer higher levels of psychological distress and are more limited in their physical functioning than the general population of older Australians. They are in greater need of assistance with activities of daily living, have a lower sense of wellbeing, and are far less likely to utilise aged care services. Iranian migrant who do not speak English at home experience these disadvantages to an even greater extent

English language proficiency was the only acculturation factor found to affect whether Iranian elderly utilised health and community aged care services, while ability to engage in activities of daily living (ADL) was the only health variable associated with their utilisation of community supportive aged care services. This variable did not predict the use of community aged care services in the broader sample of NSW respondents.

Since limited proficiency in English placed elderly Iranian migrants at greater health risk and impeded their access to necessary assistance, the findings suggest that they would clearly benefit from English classes and from access to health and community care services and information regarding these services in the Farsi language.

# **CHAPTER ONE: Introduction**

This study investigates the utilisation of health services and community aged care services by elderly Iranians living in the Sydney metropolitan area. It focuses on acculturation factors (such as the language spoken at home, the level of English language proficiency, and how long they have been living in Australia) that may affect the utilisation of these services. The study also compares the health factors seen to affect the use of health and community aged care services by Iranian elderly with the results of a survey conducted on a broader sample of the general population by the New South Wales Department of Health (2000).

The health needs and access of relevant services by culturally and linguistically diverse (CALD) aged communities are not well understood and thus poorly addressed (Caboolture & Redcliffe, 2003). Regarding Iranian elderly in Australia, an extensive review of the literature yielded no substantial studies although some research on Iranian immigrants has been conducted in the United States (Rice, 1999). This study aims to address this lack by providing information about the role acculturation plays in the utilization of health and aged care services.

## **Background**

Australia's and in particular NSW's population is an ageing one consisting of a large proportion of migrants. The 2006 Census shows that 22.2% of Australians were born overseas and that older people accounted for 13.5% of the NSW population and 12% of Sydney's population (Australian Bureau of Statistics, 2007). Eighteen percent of NSW's pensioners were born in non-English speaking (NESB) countries (most commonly Italy, China and Greece). As has been the trend for some time, among the elderly females outnumber males.

Since immigration to Australia is expected to continue at levels similar to those experienced over the last 10 years, service planning for the future must consider the specific issues of ethnic diversity in the provision of services to NESB people as a matter of paramount importance (Australian Bureau of Statistics, 2000).

In the last two decades, approximately 22,550 Iranians have migrated to Australia. Of these, a number have found it difficult to adjust to their new surroundings and culture (Australian Bureau of Statistics, 2007; Khavarpour, Hosseinpour, & et al, 2003). In the report on the health status of older overseas-born Australians (Benham, Gibson, Holmes, & Rowland, 2000), Iran was placed in the English Proficiency Country Group EP3. This group comprises are those countries with a rating of between 50% and 80%, on the English- proficiency index. This suggests that English language proficiency is an important acculturation variable.

Evidence gathered from Iranian health service workers shows that Iranian migrants and refugees in Australia tend come from diverse religious, socioeconomic and educational backgrounds. In their study of “Mental health and service utilisation among the Iranian community in metropolitan Sydney”, Khavarpour et al. (2003) showed that this group also presented different levels of adjustment disorders and displayed different patterns in their use of health care services.

Khavarpour et al. (2003) report that the lack of data pertaining to the utilisation of health services specifically by Iranians in Sydney, is required on the general pattern of utilisation by NESB people. Kassis (1996) and McMaugh (2001) suggest that obstacles such as linguistic and cultural barriers, lack of awareness of service providers, and the perception by migrants of services as the last port of call are typical reasons why the available services are not fully utilized by NESB migrants and refugees. There is some speculation that because they have passed a special health examination prior to their visa approval and arrival in Australia, elderly migrants may be in better health than their Australian-born counterparts (Benham, Gibson, Holmes et al., 2000). However, overseas-born populations from non-English speaking countries are also comparatively older than the rest of the Australian population.

Despite the development of numerous policies and procedures to improve access to government and non-government community services, it remains a concern that many of the available mainstream services may not be meeting the specific needs

of NESB people, including Iranian elderly. For those who fall within the Home and Community Care (HACC) target group, it is possible that linguistic and cultural barriers to accessing these services may be even more significant. In general, older migrants may be less fluent in English. Many caregivers, who are usually older women, may not have been active in the English speaking workforce for much of their lives and therefore lack proficiency in English. Other cultural barriers may also be considerable and, given the changing demographics of the ageing population, it is important to understand the impact of ethnic culture on the utilisation of health services (Weisman, Rosales, Kymalainen, & Armesto, 2005).

There is clear evidence that NESB people underutilise a wide range of general hospital and community-based services including screening where language or cultural difference may form a particular barrier. It appears that to some extent the low level of use of such services is linked to NESB people being less aware of the availability of these services (McMaugh, 2001). There is also some indication that NESB people may be over utilising some services and underutilising other services. For example, NESB patients have been confirmed to be over-represented at hospital outpatient clinics and hospital emergency units because of their lack of awareness and understanding of community-based services; this could also stem from the lack of available interpreting services in the community. Underutilisation may be due to lack of easy access to services such that NESB people may not ask for help until faced with an absolute emergency (Dollis & Gifford, 1993; McMaugh, 2001).

The lack of knowledge regarding the health needs and utilisation of services by culturally and linguistically diverse (CALD) aged communities is responsible for the gap between the needs of these groups and provision of policies and thus services to meet these needs (Caboolture & Redcliffe, 2003). In recent years there has been growing interest among service providers to reduce cultural and linguistic barriers to service access. However, as McMaugh (2001) suggests, the issues are manifold and may include social, demographic, psychological, cultural and linguistic factors, as well as service-specific barriers.

There are many reasons to research ethnicity and health at a national level. Only with high-quality data can the health concerns of specific minority groups be identified and monitored, the risk and protective factors, barriers and inequities in access to and utilisation of services, and health outcomes be examined. Data are also needed for the planning and provision of both mainstream services and ethno-specific services to meet the needs of all Australians.

While long-term research would be helpful to examine the effect of duration of residence and exposure to the Australian environment and lifestyle for different groups of migrants, research involving the collection of primary data (whether defined by birthplace, language, religion, gender, socioeconomic status or a combination of these) is vital to better understand the health needs of specific migrant groups.

## **Research aims**

The Iranian migrant group is a relatively small one, so the health of the Iranian population in Australia has received little consideration. Since research relating to migrants in Australia usually has focused on young people (Thomas & Balnaves, 1993) and there is no data or research relating to elderly Iranian migrants in Australia, there was a strong rationale for undertaking this research to determine elderly Iranians' health status, and to determine the level of their knowledge of available aged care services.

This study identifies the needs of the Iranian elderly and recommends solutions to some of the problems facing this NESB community. Specifically, it examines the acculturation component among elderly Iranians and makes clear recommendations for assessing needs and adapting health services for their utilisation by elderly Iranian immigrants in the Sydney metropolitan area.

The overall aim of this research is to illuminate the role of acculturation factors in accounting for potential discrepancies surrounding the utilisation of health services and community aged care services by elderly Iranians. A further goal is to compare health factors affecting utilisation of health services and community aged

care services by elderly Iranians with the findings from the survey of New South Wales Older People's Health 1999 (New South Wales Department of Health, 2000).

The study addresses two hypotheses pertaining to the Iranian elderly:

- § Acculturation impacts on the utilisation of health services and community aged care services
- § There are differences in the utilisation of health services and community aged care services between the Iranian elderly and the elderly population of the State of NSW in general.

## **Organisation**

While this chapter has outlined the focus and rationale behind this research, Chapter 2 discusses relevant prior research regarding the cultural background of Iranians as the study's focus group and the concept of acculturation in the context of health service needs. Chapter 3 explains the methods used to complete this research. Chapters four, five, six, seven, and eight deal with the statistical analysis used to evaluate the research hypothesis formulated in chapter three and presents the findings of the study on the "Assessment of the factors influencing the utilization of health services and community aged care services among the Iranian elderly in metropolitan Sydney in 2005-06; Acculturation aged care survey".

The first section of Chapter 4 presents a detailed overview of the participants. It examines their socio-economic, demographic and migration background as well as their general health and medical conditions. It covers oral health and sensory screening, women's health, physical functioning, activity of daily living, psychological distress and wellbeing, utilization of health services and community aged care services and examines caregivers and care-giving, social activity, housing arrangements, and access to information.

Chapter 5 examines the role of acculturation to outline the correlation and regression between acculturation and utilisation of health services, of community aged care services, and physical and mental health components.

Chapter 6 focuses on the utilisation of health services and the correlation and regression between their use and socio-demographic characteristics, medical problems, physical activity, social activity, accessing information, utilisation of community aged care services, and care-giving.

In Chapter 7, the utilisation of community basic and supportive aged care services is presented with an analysis of the correlation and regression between utilisation of these services and the same socio-demographic characteristics and other factors as before.

A comparative analysis of the utilization of health services and basic and supportive community aged care services by Iranians and by the general populace of the elderly in New South Wales elderly is presented in Chapter 8.

## **Conclusion**

The Australian health system does not have any documentation on the health condition of elderly Iranians, thus this first survey in the Sydney metropolitan area is expected to form a valuable resource to understanding this minority group and their health. While recent studies of Iranian immigrants to the United States of America have shown that, in general, Iranian migrants experience many social, cultural and physical difficulties adjusting to their new surroundings and lifestyle, similar results can be expected in Australia (Good, Good, & Moradi, 1985).

It is anticipated that the findings will offer aged care service providers, such as HACC and related agencies, the opportunity to become better informed about the special needs of elderly Iranians as members of the CLAD and NESB communities. It is hoped that, as a result of this information, the NSW Government may undertake to develop more multicultural policies, programs and services which are better able to meet the special needs of elderly migrants and which embody greater social fairness, access and equity for ethnic aged people in general, and Iranian elderly people in particular.

The study will offer elderly Iranians, their families, and aged health care service providers and community services insight into factors which affect the acculturation process and in turn may assist in improving their utilisation of aged care and health services and thus of taking preventative measures with regard to disorders or sickness.

# **CHAPTER TWO: Review of the Literature**

## **Introduction**

This literature review is comprised of two parts. The first section provides historical information about Iran and background data on Iranians' health status. The second section introduces the concept of acculturation; an overview of health needs in NESB elderly; the health status of migrants in general; utilisation of health and aged care services; barriers to the utilisation of services experienced in relation to the elderly migrants' specific cultures; and the effect of acculturation on the utilisation of health care services among elderly migrants. Where possible, data pertaining to Iranian migrants is used; where no such data is available, minorities showing similar background features have been used as an example.

## **Section 1: Iran and Iranian culture**

The Islamic Republic of Iran, so named since the revolution in 1979, is quite a large country situated between Turkey, the Republic of Azerbaijan, Armenia, and the Caspian Sea. Turkmenistan lies to the North, Turkey, Iraq and Kuwait to the West, Afghanistan and Pakistan to the East, and the Persian Gulf and Sea of Oman to the South (Regional Survey of the World, 2000). Iran is a member state of the Eastern Mediterranean Region of World Health Organisation (Mohit, 2000). The official religion of Iran is Islam and the official language Farsi.

The country has a population of 68,017,860 of which over 4.9% (1,637,512 males and 1,683,010 females) are elderly, aged 65 years and over (New York Times, 2006). Life expectancy at birth for the total population of Iran is 69.96 years (68.58 years for males; 71.4 years for females). The population is relatively young with the average age around just under 20 years. Recent efforts to control population growth have been quite successful and the annual increase dropped from over 3.5% in 1986 to 1.4% in 1996.



Source: New York Times (2006), *About at Geography*

The average family has fewer than five persons and can be best described as in transition from an extended structure to a nuclear arrangement. However, as a result of this transition, the family is prone to many stresses. Already familial support for the elderly is clearly under threat but the declining number of children and young members in the family may exacerbate the lack of familial support for aged persons (Ministry of Health and Medical Education Iran, 2000).

Overall, literacy is 79.4% but present improvements in education are expected to affect these figures and potentially give future generations of aged a better understanding of their social and health needs; and allow them to take advantage of health care services in future (New York Times, 2006).

## **Political and social phenomena in Iran**

Called Persia until 1935, Iran became an Islamic republic in 1979 after the ruling monarchy was overthrown and the Shah was forced into exile. Conservative clerical forces established a theocratic system of government with ultimate political authority nominally vested in a learned religious scholar. Iranian-US relations have been strained since a group of Iranian students seized the US Embassy in Tehran on 4 November 1979 and held it until 20 January 1981. Between 1980 and 1988, Iran fought a bloody and indecisive war against Iraq, a war that eventually spread to the Persian Gulf and led to clashes between the US Navy and Iranian military forces in 1987-1988.

Iran was designated a state sponsor of terrorism for its activities in Lebanon and elsewhere in the world, and remains subject to US economic sanctions and export controls because of its refusal to follow US dictates. Despite the election of a reformist president and parliament in the late 1990s, all attempts to heed popular dissatisfaction and institute reforms have floundered in face of conservative politicians who have actively prevented any such measures from being taken and have, in fact, increased repressive measures and consolidated their control over the government (New York Times, 2006).

When a constitutional monarchy was established in 1925, the sudden change had a remarkable effect on the lives of Iranians: They could now go to university, could elect their preferred delegates to parliament, and began to appreciate the concept of individual rights and freedoms. Hand in hand with women's emancipation, job opportunities became accessible to both sexes. Women gained the right to vote and to be involved in the social and political activities failed to achieve its planned objective of instituting a democratic system and rule of law. Nevertheless, the long history of feudalism had embedded its values and traditions within the fundamental principles of Iranian society, from family structure to religious practice, and remained an obstruction to the development of a free democratic civilisation. The central objective revolutionaries of the era were trying to achieve, namely that people would have the means to involve themselves in the regime, remained elusive (Fisher, 2000).

Although changes were considerable, the heritage of feudalism prohibited any genuine development in the society (Khavarpour, Gholamshahi, & Bicer, 2000).

The 1979 revolution and establishment of the republic based on Islamic principles transformed the country into a more traditional and religious society. This environment left no room for opposition or minority opinions. As a result, certain ethnic minorities, such as the Kurds, began to demonstrate for an autonomous homeland. Other religious minorities, such as the Bahais whose beliefs opposed the Islamic philosophy of government, began to be persecuted. These developments led to an exodus of Iranian refugees to other countries (Khavarpour et al., 2000).

### **The Iranian story of ageing**

In 1999 the Iranian ministry of health and medical education conducted a survey on the health and economic status of the country's aged population. The overall results of this national survey highlighted the need and importance of financial support and health care for the elderly. Seventy two percent of those surveyed were found to be illiterate and education and training of the elderly was concluded to be central to reducing the problems facing this ageing population. The illiteracy rate in rural areas was considerably higher than in urban areas. Socioeconomic indicators showed that among the elderly, men living in urban areas could afford the highest standard of living while the situation for elderly women living in rural areas was the poorest and tended to worsen as they got older. From these statistics, it can be concluded that elderly people living in rural areas are disadvantaged in different social and health services relative to counterparts in urban areas. There is an essential priority for legislatives and policy makers to review the existing programs in allocation of budget and distribution of human resources in different areas (Ministry of Health and Medical Education Iran, 2000).

A study in 2006 of the health status of the elderly in the western area of Tehran, Iran, included 410 participants over 60 years old. The results indicated that respondents suffered from a number of chronic illnesses, such as arthritis (60%) which was the most common health problem, followed by hypertension (36%),

cataracts (34.9%) and gastrointestinal disorders (26.8%). In terms of perceived health status, 32.9% of the participants saw their health as poorer compared to their peer group. Approximately 85.9% of the participants neither smoked nor drank alcohol; 69.3% of the elderly had a low salt and low fat diet; 75.6% consumed milk and dairy and meat, fresh vegetables and fruit. Only 0.7% received flu vaccinations. There were statistically significant differences in the mean scores of health behaviours with regard to gender, age group, education, economic status, living arrangement, number of chronic diseases and perceived health status compared to their peers. 89.8% of the elderly had had a blood pressure check at least once in the past year. About 81.7% of the elderly had visited a GP within the last one to two years (Nikpour, Habibi, & Haghani, 2006).

### **Social implications of ageing in Iran**

Loneliness, social isolation, illiteracy and lack of education, and exposure to conflict situations greatly increase older people's risk of disability and early death (Ministry of Health and Medical Education Iran, 2000). Apart from these issues, a considerable proportion of the elderly worry about inadequate income and financial support when they retire or become disabled.

Fortunately, in Iran, due to religious beliefs and cultural tradition, it is a great honour for the families to care for older persons and families still take on this role and duty. In doing so, the role of women — in particular, daughters — is very important. However, along with changes in the size of family, the increased employment of women and their participation in social and economic activities has changed the very structure of these families such that the women spend less time caring for their elderly relatives. This phenomenon will continue to be an important challenge in the future and families may need to seek professional help by transferring their aged members to home care centres.

According to the 1999 national survey, more than 80% of older persons across the country lived with their spouse or children while almost 17% lived alone. More women than men lived alone which can in part be attributed to the fact that older women rarely remarry after their husband's death. Families who look after their aged

relatives and do not receive assistance from the government are placed under a considerable financial burden.

Regarding social interaction between generations and the role of the family, nearly 86% of older persons felt that, more than any other help, they received companionship from their families. This would indicate a strong emotional relationship between the younger and older generations of the family.

Regarding practical care and daily needs, 47% of older men were referred for help with personal care, while 32% required assistance in preparing food. The results for women indicated that 40% requested help with food preparation and 55% were reliant on financial support from their families (Ministry of Health and Medical Education Iran, 2000). Hence, it is understood that the elderly, especially the frail, also require assistance in their daily needs such as shopping and food preparation.

### **Economic implications in Iran**

All over the world, the populations of developing countries are ageing. Because of decreased fertility rates and improved life expectancy, the percentage of older citizens is increasing. This increased longevity is in turn changing the needs of the population requiring new solutions and a revised pattern of resource distribution. In Iran, currently, about 4.9% of the total population are older than 65, while 50% of people are younger than 22 (New York Times, 2006); together this amounts to a large percentage of the population that is potentially in need of financial assistance.

According to the Iranian national survey, 17% of men over 65 did not earn any income, while some 70% of elderly women did not earn any income either and were dependent on their families. It must be remembered that there is no social security system in Iran. The elderly population derive their income mainly from retirement payments, personal savings and support from family. From the aspect of housing, women are more likely to live in rented houses, in units or with their children, while 30% or more of elderly men own their own house. This would

indicate that women generally face greater problems in old age than men (Ministry of Health and Medical Education Iran, 2000).

A general review of the survey indicates that the major requirements of old men and women follow almost the same pattern. The major needs of elderly women are health care, fair income, public transport, and social support. Elderly men, on the other hand, need adequate income, access to appropriate health care, and public transport. However, the elderly women are clearly in greater need while rural women, in particular, appear to suffer from a sense of not belonging to other family members and from inadequate health care. With 35% of elderly Iranians lacking any form health insurance or social security the economic implications are dire. Again, the figures indicate the discrepancy between men and women (70% men and 68% women in cities had insurance) and between urban and rural populations (Ministry of Health and Medical Education Iran, 2000).

### **Health and disease in Iran**

The health status of elderly people in Iran was assessed in the first national survey conducted in 1999. The results showed that 20% of elderly men and 26% of elderly women had experienced some kind of accident, of which traffic accidents and falls were the most common. Women were more inclined to fall and again, rural populations showed rates of incidence that those in cities. Older women were not only more prone to accidents but were also more likely to need medical treatment for such accidents. Other incidents, including food or drug poisoning, were seen more frequently in men than women.

Some 21% of elderly men and 18% of elderly women are hospitalised each year. The most important causes for admitting men to hospital are heart and cardiovascular diseases, digestive disorders, eye problems and genital/urinary tract related diseases. Elderly women mainly suffer from diseases related to the heart and blood pressure, eye problems, digestive disorders and accidents (Ministry of Health and Medical Education Iran, 2002).

The national survey shows that some 26% of elderly men and women have heart disease. This trend is greater in cities than villages and though this condition is more prevalent in women, they are hospitalised for it less. Comparison of this result with the previous records (ratio of hospitalisation in women relative to men) shows that there is no health equity between the aged populations of men and women in respect to the utilisation of health care services. The number of elderly women with hypertension is higher than men. Elderly women in villages have twice as likely to suffer from blood pressure disorders than men. While the number of women taking medicine is higher than men, some 11% of both men and women do not take any medication for their high blood pressure. Further, elderly women in the city are afflicted with high blood pressure twice as much as the same group in the villages (Ministry of Health and Medical Education Iran, 2002).

Overall, 15% of the elderly population suffers from diabetes, and the figure for women is much higher than for men. In rural areas more elderly people with this disease remain untreated than urban areas. While most elderly suffer from hearing weakness, only 2.5% uses a hearing aid; again older women access these aids less than elderly men. Vertigo in older women is more widespread than in men. Fifty percent of elderly people suffer from mobility problems. This figure is higher still for women in cities than villages. Sixty-two percent of elderly women and 53% of elderly men have artificial teeth while 10% have no teeth at all. Elderly women in rural areas suffer from depression in greater numbers than women in cities, and old women are more depressed than men (Ministry of Health and Medical Education Iran, 2002).

Overall, 95% of elderly people visit a doctor. While nearly 47% of the elderly frequent district health centres, 34% of those in villages visit local health centres too. More elderly men visit both state and private medical centres than elderly women. The reason elderly women gave for refraining from seeing a doctors was financial difficulty (Ministry of Health and Medical Education Iran, 2002).

Given these statistics, it can be concluded that aged women in rural areas are in especially great need of various social, environmental and health provisions. There

appears to be an essential need for rehabilitative services for the aged population in general. Most importantly, it would also seem that governmental support and institution of preventive programmes including education could contribute to decreasing the financial burden related to ageing issues faced across the population.

## Iranians in Australia

### **History of migration**

Iranians are not new to migration, although the extent which it has taken place in recent decades has surpassed all previous records. As traditional traders, Iranians have had a long history of travelling to the corners of the world to offer their merchandise (Fisher, 2000). Such private adventure became a government initiative in the late 19<sup>th</sup> and 20<sup>th</sup> centuries when individuals were sponsored to study in the West, particularly in Europe (Jupp, 1998). Most of those who completed their education and training abroad eventually returned to Iran to institute their learning. The establishment of the first secular school in Tehran by the returnees is a good example of this practice (Fisher, 2000). Since the 1979 revolution in Iran, there has been a small but steady stream of Iranians migrating to the four corners of the world. While most of these migrants have settled in Western Europe, Canada or the United States, a smaller number have moved to Australia (Jupp, 1998). Unlike the pre-revolution migrants who were able to choose their destination, the newly settled Iranian migrants, particularly the refugees, rarely had the luxury of selecting the time and country of migration (Refugee Resettlement Group, 1994).

There are two distinct periods of modern Iranian migration to the West. During the first period, prior to the 1979 Islamic revolution, so called "pull" factors, such as the attractiveness of European and American lifestyles, drew many middle-class Iranians to western countries (Khavarpour et al., 2003), and those with the educational and financial means to do so took residence in these countries. The revolution in the late 1970s was responsible for creating "push" factors: the Iranian government's persecution of political activists and ethnic and religious minorities forced many Iranians to seek asylum elsewhere. Economic hardship following the revolution and the eight years war with neighbouring Iraq further exacerbated the

exodus process causing a steady stream of Iranians to depart from their homeland (Khavarpour et al., 2000).

The history of Iranian migration to and settlement in Australia may be classified into four stages:

### *1. Migration to Australia prior to 1979*

During the period before the revolution and the establishment of the Islamic Republic of Iran, the majority of Iranians to migrate to Australia were wealthy, retired professionals. They sought to establish a new way of life and set down new economic roots through activities in Australia (Khavarpour & Rissel, 1997).

### *2. Migration to Australia after 1979*

The period in Iranian migration history immediately following the Islamic revolution in 1979 through until the early 1980s was one of “brain drain”. Many intellectuals, particularly those belonging to minority and non-Islamic religious groups and political activists, left the highly unstable environment in Iran to take seek refuge in any country willing to provide sanctuary (Gholamshahi, 1994).

It was during this period that Australia became host to more than 6000 Iranians, who settled in various major cities around the country (Kassis, 1996). Although few were financially well off, the majority of newcomers had the education and skills necessary to be assimilated in the workforce and to establish themselves in various professional fields.

### *3. Migration to Australia during and after the Iran-Iraq War*

In the last five years of the conflict with Iraq which lasted from 1980 to 1988, migration of Iranians became common (Khavarpour et al., 2000). Families concerned about their teenage sons being enlisted in the Iranian army, and in particular in the revolutionary guard units, did their utmost to find a country which would give them residency (United Nations, 1997). Apart from these family migrations, there was a new wave of Iranian refugees seeking residence in Australia. However, despite having professional qualifications, the majority of these new migrants lacked

proficiency in English and consequently experienced difficulty in accessing the Australian job market, settling in and becoming integrated into the Australian social life. While Australian government policies on overseas qualifications existed to protect migrants, they failed to support these newcomers. Due to their sudden and in many cases secret departure from Iran, many lacked of evidence of their qualifications (for Australian authorities) and, in the absence of local experience, many of these refugees were unable to find employment. There were insufficient bridging courses to upgrade and qualify Iranians for employment in the Australian job market and little prospect of changes in federal welfare policy that would provide such assistance in the future (Khavarpour et al., 2000).

#### *4. Migration to Australia due to economic pressure*

Since the late 1980s, the slump in Iran's economy, due to various internal and external pressures, has been responsible for the migration of many Iranian tradesmen and semi-skilled workers to countries around the world. At the same time, the downturn in economic performance, the tightening of immigration laws and the rise of unemployment in Australia dashed the hopes and aspirations of many potential Iranian migrants and refugees wishing to settle on this continent (Gholamshahi, 1994). As a result, the settlement of Iranians has been on a small scale since the early 1990s.

The majority of Iranian newcomers to Australia have been refugees: some as a result of the Iran-Iraq war, many from facing political persecution, and, increasingly, minority groups such as Kurds and Bahais (Khavarpour et al., 2000). In many cases, the new arrivals reached Australia after staying in refugee camps in other countries such as Turkey and Pakistan (United Nations, 1998). The precariousness of their future and the frequently harsh conditions faced in their first host countries has left many of them with mental and psychological scars (Khavarpour & Rissel, 1997) that, despite their professional backgrounds, has made their adaptation to life in Australia extremely challenging (Gholamshahi, 1994).

## **Health status of elderly Iranian migrants**

As the ageing of the population has increased all around the world, one of the concerns of health policy makers is to provide the health and aged health care services required to support this ageing population. While it could be presumed that, since they have undergone a special health examination prior to their visa approval, the immigrant population may be in better health than their Australian-born peers (Australian Institute of Health and Welfare, 1998) there are additional stress and thus health risks that affect elderly migrants, particularly those from non-English speaking countries.

Migration involves varying degrees of change in the physical, cultural and linguistic environment, and in family and economic status. From different studies it appears that even under ideal circumstances international migration is a stressful experience requiring adjustment, change and coping (Ziaian, 2003).

Migration is like moving house; although it might be to a better place, it is still an uncomfortable process. Besides the physical discomfort, it disrupts one's social and psychological wellbeing. Leaving familiar surroundings, with all its positive and negative aspects, for an unfamiliar world is not an easy task, even for those are able to select their new location, even for those who anticipate it with happiness and joy. For those less fortunate, such as refugees and asylum seekers, the change may lead to further mental suffering and psychological distress (Khavarpour et al., 2003). Barnes (2003) confirms these findings, stating that the feeling of being alone and different in the new country, worries about separating from traditional family and patterns of communication, selective mistrust and anger are widespread among elderly Iranian migrants to western countries.

For Iranians who have come to Australia, particularly the elderly, the loss of their extended family networks can be very distressing. Concern about family

members still in Iran is a further cause of stress, especially for those forced to flee because of their religious or political views. Intergenerational conflict, often occurring when children who have grown up in the host country no longer accept the social codes of their parents and grandparents, is another stress factor. Communication even within the family can become a problem when children no longer speak their language of origin and if their older relatives speak little English (Jupp, 2005)

Being an immigrant, learning a new language and way of life can become unbearable for the older population, causing medical conditions and resulting in poor health. Immigration and living in a foreign country is often a very stressful experience (Khavarpour et al., 2003) and stress has been recognised to be the source of many disorders and medical conditions.

Generally, migrants and refugees can be regarded as among the most traumatised and vulnerable group of people since they face struggles that include individual tragedy, loss of or breakdown of family, and racial prejudice and discrimination (Yu, 1997; Hsu, Davies, & Hansen, 2004). Across all cultural groups, the stress of migration and refugee status may be especially severe for elderly people (Carlin, 1990; Bemak & Chung, 2000; Foster, 2001).

Leaving behind a language and a culture that one has grown up in, and adjusting to a new one, will leave its mark on one's mental and psychological wellbeing (Hulewat, 1996). However, the scope of these crises depends on the circumstances under which migration takes place (Khavarpour et al., 2003). It is not the same for everyone but affects different people differently. A range of factors such as age at and time of migration, circumstances before and after, whether the process is voluntary or by force, and the presence of community support before and after the migration will have an effect on the outcome of immigration (Khavarpour & Rissel, 1997; Khavarpour & Hosseinpour, 2003). In other words the effect of new environmental changes on the individual is related to two broad factors: the characteristics surrounding the individual migrant, and those pertaining to the host country's reception and treatment of the newcomers (Khavarpour et al., 2003).

Thus both personal and social factors determine the success with which migrants and refugees effectively deal with the new environment. The degree of acculturation, economic stability, age, and level of education of the newcomers in the host country will have effects on their health and wellbeing (Sundquist, Bayard-Burfield, Johansson, & Johansson, 2000). Furthermore, how the host country and the community embrace the new migrants will have great impact on their health and wellbeing (Karlsen & Nazroo, 2002). An accepting attitude displayed within the host community, one free of aggression and negativity towards the newcomers, will have a significant impact on how well the newcomers are able to adjust to their new environment (Ritsner, Modai, & Ponizovsky, 2000).

As compared with their younger counterparts, older people leave behind many more years' or decades' worth of memories and associations when they migrate. Due to a decline in physical and/or cognitive ability elderly people may be less able to resume prior levels of occupational and social performance in a new environment. Other circumstances such as age discrimination may also affect their employability. Thus, in addition to the common stressors associated with migration, elderly people are likely to face greater difficulties in securing their economic and social survival, let alone flourishing in the new country. This is especially significant in light of the increasing evidence that nearly all elderly immigrants underutilise health and social services despite their high need (Aroian, Khatutsky, Tran, & Balsam, 2001).

It is a fact that little attention has been given to the health of elderly Iranian migrants in Australia by government sectors such as the Department of Human Services, NSW health care system, migrant information centres, the refugee health research centre, multicultural health services, culturally and linguistically diverse (CALD) networks centre, centre for research into aged care services, home and community care (HACC), and even by university research. For example, in "A profile of Victorian seniors from refugee background", a project conducted by the Refugee Health Research Centre (2006) the section regarding health and wellbeing issues of Iranians offers no specific results for those aged 45 years and over.

Results concerning the general population suggest that the specific health problems of Iranian refugees in Australia would include mental illness and that their

willingness to seek help for such disorders will vary according to the level of education and access to information within the family or community (Refugee Health Research Centre, 2006). While this publication indicated that a high proportion of the educated, middle-class Iranian women in northern Sydney made use of health services for mental problems, this may well not be the case for men, or for families from lower socioeconomic backgrounds. The Refugee Health Research Centre's 2006 study did reveal that many physical symptoms, including arthritis and asthma, only developed in the population following migration.

Another project mentioning the Iranian profile and carried out by the Department of Human Services (2004) focussed only on culture and religion. In a qualitative study of Iranian migrants living in Queensland, the concept of health was measured using physical functioning/ SF-36 within a group of 21 Iranian people; the results defined health in terms of holistic, spiritual, social dimensions and the absence of obvious disorders, and demonstrated the extent to which SF-36 captured the diversity of health as a concept when raised in an Iranian sample group (Momenzadeh & Posner, 2003). The study did not, however, cover elderly Iranians but looked at the Iranian population in general.

In some ethno-nursing qualitative research to investigate and analyse the meaning of care and the values, beliefs, and practices of Iranian migrants in New South Wales (Omeri, 1997), it was predicted that the meanings and interpretations they gave would be influenced by their world view, their traditional social structure, their language, and cultural values rooted in their long ethnic tradition and that these would be reflected in their way of life in Australia. Three care themes were identified for Iranian immigrants: Firstly, care as meant by family and kinship ties as expressed in daily ways of life, and interactions with family, friends, and community; secondly, care as expressed in carrying out traditional urban gender roles as well as in fulfilling emerging new role responsibilities for female Iranian immigrants related to equality; and thirdly, care as preservation of ethnic identity, as expressed in traditionally Iranian cultural events and health care practices.

What little research on Iranian migration to Australia exists shows that in the last two decades most Iranian migrants have, in general, been successful. However, a number of Iranians have found adjustment to their new country and culture distressing. According to Khavarpour et al. (2003), the lack of data on the utilisation of health services by Iranians requires reliance on the general pattern of utilisation of health services by NESB people to provide some indication of their use. Evidence from Iranian health service workers tends to show that 1 (Khavarpour et al., 2003). In their study titled “Mental health and service utilisation among the Iranian community in metropolitan Sydney”, Khavarpour et al. (2003) suggest that like most migrants from other countries, the Iranian migrants and refugees in Australia come from diverse religious, socioeconomic and educational backgrounds and thus present different levels of adjustment disorders and different patterns of utilisation of health care services. Nevertheless, they urge that the issue of accessibility and relevance of these services to the needs of either migrants or refugees not be ignored.

Certain needs of the Iranian communities in Australia were defined based on 1985 Australian Bureau of Statistics data, in which a small sample (50 persons from the North Shore of Sydney) were taken to illustrate the features of the Iranian community. The sample was small and represented neither the refugee and asylum seeker groups nor those aged 65 years and over. The results based on interviews with this small group of Iranians showed their need for English language classes to improve their ability to communicate in English, and for reasonably priced housing (Khavarpour et al., 2000).

Although research findings regarding the health of elderly Iranians in other countries are also rare, there are some relevant results from the USA and Sweden. A comparative study was carried out concerning elderly Iranians and elderly Americans and the overall quality of life they expressed in terms of economic security, personal happiness, and self-esteem; it also sought to determine any variance among both sexes of both groups with respect to status and anxiety. According to findings of the study, the Iranian elderly felt lower levels of socioeconomic security and personal happiness in comparison to the American elderly. The Iranian elderly had higher self-esteem; however, the American elderly experienced a higher state of anxiety. No

difference was found in regard to personal happiness or anxiety attributed to what? between Iranian and American women 65 years and over (Niakishargh, 1984).

In a qualitative study conducted in Sweden, Emami & Ekman (1998) demonstrated that because the social networks of those who migrated late in life had a tendency to be very limited; it was thus no surprise that senior Iranian immigrants to Sweden suffered from social isolation and loneliness. Their isolation was found to be due to significant differences between Iranian and Swedish cultures, as well as the migrants' lack of Swedish language proficiency. A later study to develop a socio-cultural health and illness model for Iranian late-in-life immigrants in Sweden was carried out by Emami, Benner & Ekman (2001). For the 15 elderly Iranians aged 55 to 80 who were interviewed, the results demonstrated that their age clearly contributed to their difficulty in learning the language and in adapting to the new culture and lifestyle. Most were unable to understand or speak Swedish, a fact attributed to their limited learning abilities due to age or lack of academic background; and their lack of motivation – they did not require Swedish to work as they were mostly dependent on the Swedish social welfare system (Emami, Benner & Ekman, 2001).

The same study showed that the meaning of health and of healing and prevention in Iranian culture is different to what is common in Sweden. Many Iranian elderly had migrated due to family relationships and for the most part wanted to rely on their children for help and care. They wanted the cultural support they received in Iran to continue and found that their traditional medicine and prevention methods were unavailable in Sweden (Emami, Benner & Ekman, 2001).

In another qualitative study, a “culture-appropriate lens” was applied to study the post-migration situation of late-in-life Iranian immigrants to Sweden (Emami & Torres, 2005). The findings gathered from 60 interviews were interpreted against the conditions suggested by culturally-suited nursing theories. The findings indicated that elderly Iranian immigrants utilised the process of “late-in-life migration” as a point of reference or cause of the illnesses from which they suffered. The study further suggested that the “unusualness” of their explanatory models of illness might be best

understood if the focus was on what they shared as migrants (i.e., the fact that the process of late-in-life migration has made their culture obsolete) as opposed to what they shared as Iranians (i.e., their culture of origin). Emami and Torres (2005) do not suggest any solution to the problems and the ways to attack them.

## **Cultural similarities and division among Iranians in Australia**

The separate waves of Iranian migrants who have come from different socioeconomic, religious and political backgrounds have created an ethnic population that is in itself diverse. Deep suspicion exists between groups with opposing political allegiances and those who fled persecution are often still fearful of those outside their immediate family (Refugee Health Research Centre, 2006).

One unique and common feature of Iranian culture is the strong distinction made between private and public life. The domains of family, beliefs, values and morality are considered distinctly private and almost unrelated to the public and social persona that must be adopted when interacting with the outside world. This feature is considered to facilitate assimilation whilst enabling the maintenance of cultural identity and continuity (Jupp, 2001).

As in many Middle Eastern societies, family bonds in Iranian society are strong, and social networks, which tend to be based around the extended family, are founded on the expectation of loyalty and duty to ones relatives. Elders are traditionally accorded great respect and cared for within the family. Grandparents are often involved with arranging marriages and sometimes in naming grandchildren. Because of the religious beliefs and cultural background, elderly people in Iran are not abused by their families as might happen in other countries; instead, the family is the main source of emotional and financial support for them (Refugee Health Research Centre, 2006).

These aspects of family pride, respect for the elderly and the importance of family privacy make it very unlikely that Iranian families in Australia would seek out

home care services for their frail older relatives. Even where elderly relatives live apart from their families, anecdotal evidence suggests that female relatives will still undertake the role of carer for to do otherwise would be both disrespectful to and shameful for the family.

The experience of having lived under constant surveillance, with telephones tapped and homes inspected, has made many Iranian refugees very wary of strangers in general, and government services in particular. Having care workers come into the home is therefore likely to be very unpopular with certain sections of the Iranian community. Similarly, for refugees who have claimed asylum their experience of interrogation both in Iran and in Australia is likely to make the process of assessment for services additionally stressful (Jupp, 2001).

Divisions within the Iranian community make many reluctant to use interpreter services or the help of community members not personally known to them. Unfamiliarity with the Australian welfare system and the lack of information available in Farsi regarding the services on offer are additional barriers to Iranian refugees accessing home care services. According to available data, there are currently no Iranian senior citizens' groups in Australia and no ethno-specific services for Iranian seniors and (Refugee Health Research Centre, 2006).

## **Section Two: Acculturation and Health Care**

According to a statement by the United Nations,

“Healthy ageing is one of the primary issues that should be identified in the National Strategy in developing and developed countries as part of the work undertaken for the improving health of the ageing population” (United Nations, 1999).

The government’s vision for the expectancy of an additional ten years’ healthy and productive life by 2050 as set out in “Promoting Healthy Ageing in Australia” (Prime Minister's Science, 2003) focuses on recommendations regarding physical activity, nutrition, work and social environment, and the built environment. The need of increasing physical activity in regard to ageing has been highlighted in much recent research and is a major focus of the Healthy Ageing report. The trend towards sedentary behaviour and the well-established link between this behaviour and many health conditions including Type 2 diabetes, heart disease, musculoskeletal disorders, certain cancers, high blood pressure, high blood cholesterol and atherosclerosis has far-reaching implications for the 2.5 million Australians over the age of 65 estimated to be leading a sedentary life by the year 2025 (Bartlett, 2003).

Good health is central to older Australians being able to enjoy a good quality of life, to their being able to live independently and fully participate in the community. Their good health is also essential in moderating the demand for health and aged care services as the country’s population increases in age over the coming decades (Australian Institute of Health and Welfare, 2006). Consequently, Australia has made humanizing older people’s health a national research priority.

While there is no common definition of ageing among developed and developing countries, even within Australia the definition of ageing varies. The following section focuses on the definition of ageing and some key concepts relevant to ageing.

## **Definition of ageing**

There are significant variations among research reports as to how “older Australians” have been defined. Some describe them as people aged over 55, some as 60 and over, while others refer to those 65 and over. To add to the confusion, the terms ‘old old’ or ‘very old’ are used to refer to people 75 and over or, in some cases, 85 and over. As much of the demographic data cited is from the Australian Bureau of Statistics which now refers to ‘older Australians’ as those 65 and over, (McMaugh, 2001), this definition has been used in this study, unless otherwise stated .

## **Independence**

One of the most important aspects of independence is in regard to living arrangements. Generally, as people grow older, their health status deteriorates and their ability to carry out daily living activities without assistance is reduced. They become more dependent on others, such as care givers or family members, for help with daily living activities and for financial support (Mahoney, Clutterbuck, Neary, & Zhan, 2005). For those who become disabled, institutionalisation in nursing homes finally signals their complete loss of independence (Dennison, 2004).

A report prepared by Phelan, Anderson, LaCroix, & Larson (2004) indicates that as Americans grow older, they gradually lose more – their independence, their mobility, their health, friends, and their income. This results in a direct reduction in their quality of life. As they become less mobile (can no longer drive a car, walk to public transport, or find someone to drive them to those places) their access to resources in their environment decreases. Without transportation, they cannot continue to work, be it voluntary or paid, cannot go to social or cultural events, and are unable visit friends and family. Consequently they become more house-bound, socially cut off, and even more dependent on caregivers .

Emami, Benner, Lipson, & Ekman (2000) suggest that in order to understand peoples’ reflections regarding the onset of life stress and ways of coping with it, it is necessary to consider their cultural, historical, and social backgrounds. The lived experience among older people in Asian cultures is likely to reflect dependence

because of the filial culture, while older people in western society tend to be more independent which stands in direct relation to a more comprehensive social security system. Varying cultural practices also inform different expectations of social relationships. For example, the teachings of filial piety require intimate relationships and close bonding between generations, while western cultures focus on privacy and separate living among generations (Glass, 2003).

### **Elderly migrant populations in Australia**

Australia is a culturally diverse nation displaying differing demographic, socioeconomic, cultural and linguistic characteristics (Blignault & Haghshenas, 2005). At the time of the 2006 Census, the total population of Australia was 20.7 million people. 32.9% of Australia's population was living in New South Wales (Australian Bureau of Statistics, 2007).

According to the same census, Australia's, and NSW's population in particular, is ageing. In all states in Australia, the number of people aged 65 years and over has been steadily increasing since 1996. The proportion of people aged 65 and over in 2006 was 13.0% of total population compared with 12.5% in 2001, and 12.0% in 1996. Since 1996, the population in this age group has increased by 484,100 to reach 2.7 million in 2006. Strangely, in 2006, the proportion of people aged 85 years and over in Australia was 1.6% (322,000 people) and had increased by 56,800 in five years; this was a smaller increase than the net 63,300 people entering this group between 1996- 2001. This slowing of the increase in this age group seems at odds with the overall ageing trend and declining mortality rates (Australian Bureau of Statistics., 2007a; Canberra Times, 2006).

In 2006 with 918,900 people aged 65 years and over in NSW, an increase of 7.1% since 2001, older people accounted for 13.5% of the state's population. In Sydney only 12.0% (512,500 people) were older, lower than for the state as a whole. The percentage of the population aged 65 years and over increased in all NSW cities between 2001 and 2006. For Sydney, the highest proportions of older people were

located in the northern metropolitan area of Hunter's Hill (18.3%) followed by Wyong (17.8%), and Gosford (17.7%) on the Central Coast (Australian Bureau of Statistics, 2007).

According to the 2006 Census, 22.2% of Australia's population was born overseas. A small number of non-English speaking countries have contributed significant numbers of immigrants who are now aged 65 years and over (Australian Institute of Health and Welfare, 2007). Older people from non-English speaking backgrounds accounted for around 21% of all older Australians (581,200 people) of which 51,500 were aged 85 years or over. Older people from non-English speaking countries make up 23% of the 65–74 year old population, and 15% of the population aged 85 years or over.

In 2006 there were 22,550 Iranian-born people in Australia, an increase of 19.7% from the 2001 Census (Australian Bureau of Statistics, 2007). The distribution by state and territory showed that New South Wales had the largest number (11,940), followed by Victoria (4430), Western Australia (2190) and South Australia (1760). The median age of those born in Iran was 40.4 years compared with 46.8 years for all overseas-born residents and 37.1 years for the total Australian population. The age distribution showed that 9.0% of Iranian-born residents living in New South Wales were 65 years and over (Australian Bureau of Statistics., 2007)

### **Culture and acculturation stress**

Kleinman, Eisenberg, & Good (1978) define culture as the “integrated pattern of human behaviour that includes thoughts, communications, actions, customs, beliefs, values and institutions of a racial, ethnic, religious or social group”. Friedman (1994) sees culture as the socially transmitted patterns for behaviour characteristics of a particular group. Culture affects the way we define sickness and health, but also as to how we differentiate between the roles of patients and caregivers (Helman, 1994) and the content and meaning of care (Leininger, 1991). Culture is dynamic, changeable, and interrelated with factors such as personality, socioeconomic status,

education, religion, gender, and life changes (e.g. immigration and illness) that mutually influence culture (Emami, Benner, & Ekman, 2001). There is an extremely varied range of cultural factors that influence health risks and health behaviours (Yeo, 1991).

Acculturation is a process by which a cultural group adopts the beliefs and practices of a host culture (Mills & Henretta, 2001). More simply, it is an adaptation to a new or different culture (Laird & Anger, 2002). According to Blomstedt (2007) acculturation is the complex social, cultural, and psychological process of adapting to a different society by which the migrant can take any one of four directions to become:

- 1) Integrated – highly acculturated but at the same time preserving a strong ethnic identity;
- 2) Assimilated – entirely acculturated into the mainstream culture at the expense of ethnic identity and no longer associating oneself with one's ethnic culture;
- 3) Separated – not acculturated and preserving strong ethnic identity; or
- 4) Marginalised – having no strong acculturative pattern or ethnic identity.

The extent of acculturation can be measured by a bi-dimensional approach which views acculturation as a process of adaptation to the mainstream culture while maintaining one's inherited ethnic identity (Ryder, Alden, & Paulhus, 2000). Consequently, studies using the bi-dimensional approach should account for the multiple components of both acculturation and ethnic identity such knowledge about, participation in, and attachment to the ethnic group (Lieber et al., 2001). Although the bi-dimensional approach is complicated, demanding and time-consuming, it also more inclusive, informative and valid (Blomstedt, 2007).

The degree of acculturation is influenced by the length of time during which the migrant is exposed to the new culture and his/her degree of proficiency in the

language spoken in that country; these are posited to be important variables in cultural research (Mahoney et al., 2005). Acculturation is a complex phenomenon that may affect health risks depending on specific behaviours. While it has been shown that poor acculturation causes psychological distress and depression in migrants from the former Soviet Union to Sweden (Blomstedt, 2007), rich acculturation may be associated with behaviours that decrease health risk (Leybas-Amedia, Nuño, & Garcia, 2005). For example, in the study by Balluz, Okoro, & Strine (2004), highly acculturated Hispanic women were more likely to seek out screening and other health care services, compared with their less acculturated peers. The connection between acculturation and depression has been further corroborated by research indicating that less acculturated elderly Hispanic immigrants to America were more likely to be depressed than those who were more acculturated (Gonzalez, Haan, & Hinton, 2001).

The acculturation process is multidimensional and included physical, psychological, financial, spiritual, social, language, and family adjustments. This process can be especially demanding for elderly migrants because, in comparison to non migrants, they usually have less resources, such as income, education, and language proficiency, to assist them in adapting to their new life conditions (Casado & Leung 2001). Recent studies in the United States have showed that, in general, Iranian migrants experience many social, cultural and physical difficulties while adjusting to the new lifestyle (Good et al., 1985). Other results show that employment and language competency are important elements influencing how Iranians adjust to their new culture in the United States (McConatha, Stoller, & Oboudiat, 2001). Although Iranians have high levels of education and income, recent statistics indicate that 31% reported limited proficiency in English; in fact, 16.4% lived in linguistically isolated households .

A few small sample studies of Asian elderly support the notion that migrants who are more acculturated to the host society tend to enjoy better mental health status than those who are less acculturated (Stokes, Thompson, Murphy, & Gallagher-Thompson, 2001). Other correlates of high depression rate in elderly minority groups in the United States include shorter lengths of residency, poorer health, more life

stresses, more financial difficulty, poor proficiency in English, dependency on children, social isolation, and lack of social support (Casado & Leung 2001). Statistics show that depression in elderly migrants may be due to migration stress and grief, adaptation difficulties, poverty, illness, and weakening family support (Ramírez et al., 2005).

Ramírez et al. (2005) suggest that understanding the relationships between acculturation stress and mental health may be able to inform the design of effective intervention programs for older immigrants. However, while it is essential for health providers to have a goal in developing cultural competency, they must neither overemphasise nor underestimate the effects of culture in the healthcare environment but understand the influence of cultural factors on healthcare and health outcomes in order to work with these factors towards optimising the services provided. Although it is important to be aware of various cultures and customs, cultural competence does not require familiarity with every culturally specific belief and behaviour. Rather, it requires that clinicians respect the diversity of cultural perspectives that influence the health of the individuals within their communities (Hunt, 2001). The American Institute of Medicine recommends cultural competency education for all health professionals as a means of reducing healthcare disparities within the United States (Smedley & Stith, 2003).

Cultural competency has been defined as:

“a set of similar behaviours, attitudes, and policies that come together in a system, agency, or amongst professionals and enable that system, agency, or those professionals to work effectively in cross-cultural situations” (Brach & Fraser, 2000).

Cultural competence is not colour blindness; rather, it is the ability to respect and value ethnic and cultural differences. While factors such as education, religion, economic status, acculturation level, sex, age cohort, rural/urban background, and immigration history vary widely from one individual to another within a single cultural group (Xakellis et al., 2004), cultural competency not only acknowledges and

respects such personal differences, it shows awareness of how culture nevertheless shapes a person's values and beliefs (Mahoney et al., 2005).

### **Ethnicity and health care in NESB elderly**

Ethnicity is defined as the group of people to which a person belongs as a result of cultural and other factors including language, diet, religion, ancestry and physical features conventionally linked with race (Bhopal, 2004). According to Mahoney et al. (2005), ethnicity refers to a specific cultural group with its unique language, customs, and attendant beliefs. While race has traditionally been more specifically defined by history and physical or facial features (e.g. skin colour and hair texture) thought to reveal ancestry and geographical origins, the importance of social factors has extended the definition of race to include common social and political customs, hence making it similar to ethnicity (Bhopal, 2004).

In Australia, ethnicity is a term mostly used to refer to people from a non-English speaking background (NESB) and tends to refer to birthplace groupings or primary language spoken (often referred to as "language spoken at home"). Agar (1994) views ethnicity as referring to a particular cultural group, with its exclusive language, customs, and attendant beliefs. However, these definitions may conceal a wide range of differences in religion, customs and historical background. Recently the Australian Government has agreed to use the term culturally and linguistically diverse (CALD) to refer to the diverse cultures in the Australian population (McMaugh, 2001).

NESB people vary in terms of their cultural and linguistic background, the social and economic conditions they come from and live in, their linguistic skills, life experience and migration experiences, and in how recently they arrived in the host country. They vary in terms of geographic and social isolation while the populations to which they belong differ in size, relation and access to support and resources. To add to the complexity, these language and cultural groups also differ in age and gender composition (Australian Bureau of Statistics, 2000). NESB people living in

Australia will be different from their ethnic peers who have stayed in their home country. As groups they will demonstrate different levels of integration into mainstream Australian culture and different degrees of mixing with other cultural groups, both of which will in turn influence their own culture and linguistic ability (Rowland, 1999). At the 1996 Australian Census, 75% of the ethnic aged spoke a language other than English at home. Over one hundred different languages were spoken by these migrants, the most common being Italian, Chinese, Greek and German (Australian Bureau of Statistics, 2000). While these represent some of the larger ethnic communities, there are also many small ethnic communities, some of which may be geographically isolated, have arrived more recently and may not have the networks and support structures of larger communities (Barnett, Hanen, & Karanastasis, 1996).

Little attention has been given to studying the health and wellbeing of migrants in the United Kingdom. Although studies show that the proportion of older people from ethnic minorities continues to rise in the UK, the needs of these people have not been very visible in the research agenda. There is little knowledge about the relationship between elderly health and social care provision appropriate to their needs, or about the cultural and social context of their specific experiences of ageing. Little research has been conducted into understanding of nature and experience of disability and chronic illness and their relationship to specific ethnic minority groups (Harper, 2000).

Studies show that the elderly populations from ethnic minority groups in the United States are growing much more rapidly than in the rest of the world and gives examples of the diversity of the health problems, health beliefs, and the utilisation patterns of health care services among these ethnic elderly (Yeo 1991). Research also suggests that even though they have the same health insurance, ethnic minorities such as Hispanic people receive a lower quality of health care in the United States compared with their non-Hispanic counterparts (Medrano et al., 2005).

While various government documents indicate that migrants to Australia have better health status at the time of their immigration in comparison to the general

population (Australian Institute of Health and Welfare, 1998), this health advantage is reduced with increasing length of residency in Australia (Blignault & Haghshenas, 2005).

Data further suggests that the overseas-born population from non-English speaking countries is ageing more rapidly than the rest of the Australian population (Benham et al., 2000; McMaugh, 2001). It then could be argued that aged migrants should be utilising the relevant aged care services more than the rest of the aged community. However, according to McDonald and Steele (1997), utilisation of the health care services by the migrant communities is far less than by the general population. Rissel, Winchester and Manson (1996) argue that the use of aged care services by migrants has increased.

While the level of acculturation to a western lifestyle varies among migrants to Australia, as acculturation seems to impact on health behaviours both positively and negatively, the health conditions they are expected to incur also differ (Rissel, Winchester, & Manson, 1996). Migration is often associated with major stress before, during and after the event, while the associated problems of economic survival and social mobility in an unfamiliar socioeconomic system are likely to interrupt the migrants' life style (Rice, 1999).

Regarding ethnicity and health, factors such as gender, class, networks, ethnic differences and migration experience all affect the health and wellbeing of people in complex and interactive ways (McMaugh, 2001). To demonstrate this point with regard to the NESB aged, Rowland (1999) has stratified the aged according to recent arrival, proficiency in English and socioeconomic factors, and assessed their service needs accordingly. This classification emphasises the diversity among the ethnic groups of aged. Rowland comments that while multiculturalism has been valuable in recognising the rights of groups to preserve their own cultures, when the aim is to describe the characteristics of a population, the concept of multiculturalism has the potential to create inflated expectations of ethnic pluralism and cultural continuation (Rowland, 1999). Older NESB people encountered many of the same problems as other ageing ESB people, but with additional difficulties related to language and cultural barriers, a reduced number of relatives to provide support (particularly if few

members of the family have immigrated) and fewer social and recreational outlets than are usually available to those from ESB (McMaugh, 2001)

### **Health needs of migrants**

Health status may be an important correlate of health services use in general (Finkelstein, 2001). However, the health needs and utilisation of services by culturally and linguistically diverse (CALD) aged communities are poorly understood and addressed. Lack of knowledge about the needs and utilisation of services means that there is no creation of appropriate policy, nor is there any systematic integration of such policy by the aged care industry. As a result, there is a gap between the needs of these age groups and provision of services by service providers.

As would be expected, perceived health status including the number of health problems is associated with the frequency of visits to primary care physicians and specialists. However, when examining immigrant health status, yet again the migration-related determinants, such as length of time since immigration and mastery of the language of the host country, must be taken into account (Blomstedt, 2007).

As the number of diverse elderly populations continues to grow, their need for health care will increase. With today's restricted health care resources, public policy makers and health professionals need to develop adequate cost-effective and culturally appropriate programs for the country's diverse populations. Thus, it is critical for health care professionals and decision makers to become familiar with the key factors that influence the health status and to understand the health-care-seeking patterns of minority ethnic populations (Pang, Jordan-Marsh, & Silverstein, 2003). In multicultural Australia, wide-ranging and up-to-date information on ethnicity and health is essential to direct policy and service development in the health sector (Blignault & Haghshenas, 2005).

Buisse'(2005) states that the literature on the health needs of immigrants and refugee women of all ethnicities identifies isolation and financial difficulties. Further

barriers to health care are language difficulties, lack of knowledge of the available resources, men's gate keeping, non-sensitive provider relationships, lack of female providers, time constraints (due to family obligations and immigration demands), and transport issues.

The health needs of older minority populations mirror those of the general older public, and for both groups, cancer and cardiovascular diseases are the two leading causes of death (Keppel, Percy, & Wagener, 2002). Since early detection and preventative measures play a key role in managing these illnesses, programs are clearly needed which make information and screening more accessible to elderly migrants.

### **Physical and mental health status of migrants**

One of the major concerns of the elderly is the status of their health. Ageing is associated with an increase in functional limitation and in the occurrence of chronic conditions (O'Connor, 2006). While health status varies in elderly groups, the oldest usually have the poorest health. As people age, they tend to use more hospital services and prescription medicines. Chronic diseases, long-term illnesses that are rarely cured, are the cause of disabilities and diminished quality of life, and are a major contributor to the need for health care services (National Centre for Health Statistics, 2004; O'Connor, 2006).

Studies of the physical health in the Australian population reveal that the ethnic elderly who have spent a considerable part of their lives in Australia and have adopted to Australian culture exhibit risk behaviours common to native Australians. Therefore, elderly migrants are as much at risk of obesity, heart disease, cancer and diabetes (Orb 2002).

### *Physical functioning*

One measure of health status is physical functioning. The incidence of core activity restriction increases significantly after the age of 65 years (Australian Institute of Health and Welfare, 2002). For those aged 65+ years who have a disability, 54% live alone of which 16% have a severe or profound disability (Henderson, 2005). The 1999 Older People's Health Survey (New South Wales Department of Health, 2000) covered several areas of physical functioning, including the SF-36 measure of physical functioning, questions on sight and hearing, experience of pain, ability to carry out activities of daily living, and whether any changes had been made to the home to make it easier to live in. Although the SF-36 measures eight different aspects of health, using different scales, only the physical functioning scale was used in the Older People's Health Survey. The scale comprises questions concerning a person's ability to do various moderate and vigorous activities. Physical functioning, as measured by the SF-36, was better among males than females of all ages. Fifty five per cent of elderly respondents were able to carry out all activities of daily living independently. Two-thirds of Australians over 75 years old reported having activity restriction in communication, mobility or self-care, and for half of these people the core activity restriction was classed as severe or profound (Henderson, 2005). Assistance has been documented as being required with at least one activity of daily living for 77% of people over 75 years old (Australian Institute of Health and Welfare, 2002). A significant proportion (40%) of people aged 75+ have reported their health as fair or poor due to conditions that affected their lifestyle, independence and health status, such as arthritis (for about half of the older population), deteriorating eyesight and hearing loss (36%), hypertension (40%), and 18% heart disease (Henderson, 2005).

### *Chronic illness*

Physical activity is difficult for elderly with chronic diseases. Evidence from the National Health and Nutrition Examination Survey and other population studies conducted in the United States suggests that the prevalence of inactivity is considerable among adults, increasing substantially among those aged 65 and older

(Penhollow, 2006). For individuals with chronic health conditions such as arthritis, other forms of daily activity such as performing household duties may promote wellbeing more effectively than physical activity. Arthritis is the nation's leading cause of disability, limiting activity and resulting in hospitalisation and outpatient visits (National Center for Chronic Disease Prevention and Health Promotion, 2005).

Chronic disease and getting old in themselves often lead to disabilities and becoming increasingly limited in being able to walk, climb stairs, stoop, crouch, and kneel. As such, chronic diseases without doubt lead to limitations in daily living activities, forcing people to rely on home care and/or rehabilitation, and, in many cases, to be institutionalised in assisted living facilities or nursing homes (Sohn, 2004). Thus as the elderly with chronic diseases and disabilities become even older, they usually require long-term care (Federal Interagency Forum on Aging, 2004; O'Connor, 2006).

According to the National Health Survey of Australian Bureau of Statistics (1995), responses to the need for "required assistance in everyday activities" indicated that those 55 and over, born overseas and having a lower command of English were more likely to need assistance than their Australian-born counterparts (Benham, Gibson, Holmes et al., 2000).

A random sample health care study in Australia showed that among those aged 75 years and over, of which 6.4% were from a non-English speaking background, chronic conditions were the most frequent reason for using health care services. These chronic conditions included psychological problems (particularly dementia and Alzheimer's disease), circulatory problems (particularly stroke, heart failure and arterial fibrillation/flutter) and osteoarthritis, while hypertension was the second most common reason (O'Halloran, Britt, & Valenti, 2007).

### *Culturally specific health problems*

Environmental studies using countries as the unit of analysis have helped identify behavioural and cultural differences associated with major health problems (Rice 1999). Researchers have found that members of many minority groups have rates of morbidity and mortality that are higher than those of non-minority control groups. In the United States, the National Centre for Chronic Disease Prevention and Health Promotion (2005) stated that minorities are at greater risk for diabetes. Mexican Americans, for example, were found to have an 80% greater incidence of diabetes mellitus while American Indians, African Americans, and Hispanics are two to three times more likely than others to have diabetes. There is lack of information regarding the health status and healthcare utilisation of the Asian American Pacific Islander (AAPI) population and its subgroups. The lack of national data, due to absent or small sample sizes in the AAPI population and subgroups, makes it difficult to characterise the health of the Asian American community. Older Latinos have a higher incidence of certain diseases and poor self-perceived health. They are also likely to be at higher risk for poor health outcomes due to higher rates of poverty and lower rates of health insurance coverage than non-Hispanics.

Epidemiological studies by Canino et al., (1987) have shown higher levels of somatic complaints between Latino-Americans and the Americans regardless of social class. Their findings were confirmed in a recent large-scale study of primary care patients in 14 countries on four continents, which found higher rates of somatic distress in the Latin American countries surveyed (Gureje, 2004). Equally, in a study examining the influence of culture in the presentation of psychiatric symptoms, researchers reported that Mexican American patients with schizophrenia described significantly more somatic symptoms than did Anglo Americans with the disorder. It is unclear whether this phenomenon is a function of actual higher rates of somatic distress in Mexican American culture or if this simply reflects greater verbal acknowledgment of somatic distress (Weisman et al., 2005).

Minorities have more awkward diseases than the general population. African Americans have a 50% greater rate of lung cancer and 35% greater cancer death rate, and Vietnamese American women have a 90% higher rate of cervical cancer than the

general population (Schneider, Zaslavsky, & Epstein, 2002). Smedley and others (2003) also report that minority old people often receive fewer health care services: African Americans are 13% less likely to undergo coronary angioplasty and 33% less likely to undergo bypass surgery. Older Asian American, Hispanic, and African American residents of nursing homes are also less likely to have sensory aids, such as glasses and hearing aids. There are multiple, complex causes and contributing factors, but it is known that older minority adults are more likely to have lived in poverty or to have experienced financial hardship. This characteristic correlates with limited access to health services and poorer health outcomes, but even when factors such as socioeconomic status, medical condition, education level, and health insurance coverage are controlled, older minority adults are less likely to receive a variety of health services than their non-minority counterparts (Smedley, Stith, & Nelson, 2003). In a survey of the health status of older Korean migrants to America, Sohn (2004) found that chronic illnesses resulting from lifestyle behaviours affected the health status of 50%.

A Swedish study analysing the association between migration, socioeconomic status and risk factors for cardiovascular disease found that being an elderly migrant increased the risk of having a disadvantaged lifestyle between 50 to 80%, in comparison to native Swedes (Pudaric, Sundquist, & Johansson, 2000).

### *Perception of health*

Self-rated health, or perception of health, is said to be a powerful independent predictor of future health status and health care use, and has been used as a measure of overall wellbeing (Australian Institute of Health and Welfare, 2004). Self-rated health has been included in many major health studies as it is believed to principally reflect physical health problems (acute and chronic conditions and physical functioning), health behaviours and mental health problems (Henderson 2005). In many studies, self-rated health questionnaires have been the most common method of collecting data on health status and use of health care services. Henderson (2005) found that self-rated health was a strong predictor of remaining independent in the elderly, and that those who aged successfully made noticeably fewer demands on the

health care system. Other studies in the literature have also found a positive association between self-rated health and the use of health care services among the elderly population (Raina et al., 2002).

A study of the older Korean Americans found that 69% of these migrants rated their health status as fair or poor. There are many reasons why the older Korean American adults may perceive that they have a fair or poor health status (Sohn, 2004). Contrary to the “healthy migrant” theory which states that immigrants are healthier than individuals born in the United States (Lai & Chau, 2007), they could have immigrated for socioeconomic reasons and in fact be in poor health.

Australian longitudinal studies too have shown that self-rated health is a strong and independent predictor of subsequent illness and even of premature death (Idler & Benyamini, 1997). For example, a study that followed people aged 60+ for seven years found that elderly women with a fair or poor self-rated health status and old men who self-rated their health as poor at the beginning of follow-up were significantly more likely to die. This association remained after controlling for demographic factors, a range of illnesses, disability, depression and social support (Henderson, 2005). According to the Australian Institute of Health and Welfare (2002), the majority of Australians aged 75 years or older rated their health as good, very good or excellent (66%); however a significant minority (34%) reported their health as fair or poor.

Lower self-rated health has also been associated with higher use of community health and support services (Wang et al., 2001) and nursing home placement (Miller & Weissert, 2000). In the 1999 New South Wales Older People’s Health Survey, 37.6% of older people rated their health as very good or excellent while 30.7% rated their health as fair or poor. The proportion of older people with very good or excellent health declined between 75 and 79 years; however, it increased at 80 years and older. In the same survey, more men reported their health as fair or poor than women.

In a health study of immigrants from the former Soviet Union to Sweden, Blomstedt (2007) reports that Russian men and women rated their health worse than Swedish old people. So migrants from countries with poorer average health may cause a change in services needs and/or health patterns of their host societies. Certainly in the early stages of having migrated, respondents' state of health would naturally correspond more to that of their country of birth than to that of the host country (Blomstedt, 2007). It could then be expected that such aged migrants would be utilising the relevant aged care services more often than the rest of the aged community. Blomstedt confirms that migrants from the former Soviet Union not only listed a large number of health complaints and had poorer mental health, they clearly made more use of social and health services compared with the Swedish population (Blomstedt, 2007).

However, according to McDonald & Steele (1997), utilisation of the health care services by the migrant communities in Australia is far less than the population at large. In a cross-sectional survey which was carried out to assess self-reported consultation of health professionals and admission to hospital among Canadians (Ontario), community-dwelling elderly seniors aged 65+ over-reported contact with general practitioners and physiotherapist or chiropractors, and under-reported contact with general practitioners and other medical specialist (Raina et al., 2002).

### *Mental health*

As people age, they also become concerned with the possibility of becoming disabled. Demographic data highlights an extreme challenge for professional psychologists who provide services to elderly people. To rise to this challenge, those working with elderly immigrant clients must be aware of the major problems and issues they face. Clinicians also need to be familiar with assessment and up-to-date treatment approaches that are effective in helping elderly migrants to better manage their mental health needs. This will include understanding the strains and stresses commonly associated with age-related physical and mental decline, but also that elderly immigrants are often coping with cultural and language barriers that may exacerbate their health problems (Weisman et al., 2005).

Mental health is an important indicator of health status in successful ageing that may be conceptualised quite differently across cultures. Psychological wellbeing of the individual is affected by the degree to which the host country accepts or rejects the presence of the newcomers. Treating the new arrivals as second-class citizens, marginalising them and giving them a minority status decreases their self-esteem. This tends to be highly stressful, and leads to a state of depression and hopelessness (Khavarpour et al., 2003). Numerous studies stress that elderly CALD migrants experience homesickness, depression and conflicts with their families, while isolation and economic dependency have been identified as major concerns (Orb 2002) and regular association with these experiences is marked by a state of psychological and emotional disorder, with consequences as severe as attempted suicide even in older age groups (Sundquist et al., 2000), others claim that there is no significant difference in the occurrence of mental disorders between elderly CALD migrants and native Australians (Orb 2002).

Although analysis of mental health studies among refugees and immigrants does not show significant age-related risk patterns, studies do indicate that older age is most often an independent predictor of mental health (Khavarpour et al., 2003). However, age, gender, marital status, and educational level of the migrant can also function as independent factors that affect mental health outcomes (Ekblad 1996). Several studies indicate there may be differences in emotional and family support for men and women. Older women reported receiving less emotional support from family than men (Patrick, Cottrell, & Barnes, 2001). In one study Paivarinta et al. (1999) report that women with depression were more likely to report fewer contacts with friends and family, whereas depression among older men was associated with physical health problems. Others like Lyons and Zarit (1999) found that when elderly Italian Australian women received little comfort from their families, they turned to medical practitioners for support. (Lyons & Zarit, 1999; Orb, 2002).

In their study of Latino migrants in the United States, many of whom come from poor rural backgrounds with little formal education, Krause and Goldenhar (1992) found psychological stressors to be particularly severe. These immigrants

often arrive with dreams of establishing themselves in the United States and offering their children better opportunities. Challenges such as race or “colour” discrimination, language proficiency, and securing basic needs such as housing, food, transportation and employment may increase their sense of insecurity and unease. Regarding the health status of older Korean migrants to America, about 35% of the older Koreans felt they had “moderate to a lot” of stress in their daily lives. It has been reported that 2.1% of men and women aged over 65 felt that they experienced psychological distress over the past 30 days; percentages were higher in minority groups as compared with the rest of the population (Sohn, 2004).

### *Depression*

Depression is under-recognised in older adults, especially those with chronic conditions such as heart disease and arthritis. Left untreated, depression may progress and have dramatic effects on overall health (Greenberg 2007). From those suffering from Alzheimer about 70% lives at home, where 75% of their care is provided mostly by families (Alzheimer Association, 2001). Depression, mild or severe, is more prevalent than dementia in older people, and has been associated with functional decline, institutionalisation and mortality. Although rates of depression are generally lower in older Australians than in those who are younger, depression is important because it is associated with a high suicide rate for those aged over 75 (Australian Institute of Health and Welfare, 2002).

In a study to determine the association between acculturation, immigration, and depression, Gonzalez et al. (2001) considered that the high prevalence of depression in older Mexican Americans, as the least acculturated group, may be related to cultural barriers encountered by migrants. They examined English language use as a measure of acculturation and found that older Mexican Americans who used more English were at lower risk for depression. Findings also showed that within the higher prevalence of depression among migrants, women were at greater risk than men.

A number of other studies have reported higher rates of depression apparent in Latino caregivers compared with other cultural groups (Gallagher-Thompson et al.,

2003). Clinical studies of depressed elderly Latino patients interviewed both in the United States and in their countries of origin, have found that they also report correspondingly higher levels of unexplained medical symptoms (Escobar, Gomez, & Tuason, 1983; Mezzich & Raab, 1980).

In Australia, depressive disorders are considered one of the most disabling illnesses and a significant contributor to untimely death by suicide, injury and cardiovascular disease or other health problems. Community knowledge about the key risk factors, protective strategies and effective self-help or medical treatments for such disorders is limited (Mackinnon, Jorm, & Hickie, 2004). The National Survey of Mental Health and Wellbeing (2000-2001) used selected items from the Kessler Psychological Distress Scale to establish a National Depression Index for Australia which would measure the depression status of the Australian population. Analysis of the data which took respondents' sex, employment status and income into account showed that the index values were higher in younger people, in females, in the unemployed and in the socioeconomically disadvantaged. This index did not, however, consider specific patterns for elderly 65 years old and over (Mackinnon et al., 2004).

### *Social isolation*

Social isolation is recognised as a significant risk factor for older people developing depression and dementia (Henderson 2005). More frequent social activities have been associated with a reduced risk of functional impairment and mortality, while greater familial support may decrease the likelihood of residential care placement (Henderson, 2005). When individuals retire, they are separated from the social group they used to spend the most time with, namely, their co-workers. If they have a spouse, they tend to spend more time with that person; however, this behaviour could, in turn, further isolate them from other potential social contacts (National Centre for Chronic Disease Prevention and Health Promotion, 2004). Changes in lifestyle such as retirement, associated role changes, and adaptation to these changes, need to be considered among the ageing population. Older adults may compensate for role losses and transition by expanding friendship networks and sources of social support, and creating opportunities for personal growth and role

supplementation (Penhollow, 2006). Those who live in a retirement community can benefit from the recreational and social activities that take place there. Access to recreational facilities is also important in terms of opportunities for physical exercise, which is critical for maintaining health and combating obesity, osteoporosis, and physical disabilities (National Centre for Chronic Disease Prevention and Health Promotion, 2004). Ng, Phillips, & Lee (2002) found that the elderly who were living alone seemed to have the lowest sense of security and expressed greater anxiety about daily life, fearing their adult children would leave them behind. People living with their adult children appeared to receive better emotional support than those living without. Those living alone and whose children were living far away seemed to receive the poorest emotional support from their adult children.

One of the ways to prevent social isolation is to enhance the elderly person's standing in the community and their ability to continue to participate in activities that contribute to their wellbeing. Unlike cultures in which the elderly gain status within the community as they age, western culture tends to devalue individuals as they age (Kochera, Straight, & Guterbock, 2005). Organisations representing the elderly try to counteract these tendencies by focussing considerable effort on promoting the elderly and advocating their need to participate in social activities as they age (diversity resources 2003).

#### *Intervention and recognising stress factors*

One of the most important aspects in addressing the health needs of elderly migrants lies in recognising specific stress factors. For elderly migrant, especially the Iranian elderly, the thought of being separated from their cultural roots, the loss of family, friends, homeland and life style, in addition to extra pressure from the new environment, can cause them severe psychological distress (Barnes, 2003; Coelho & Ahmed, 1980). Most Iranians struggle with unhappiness over their loss of home and culture and are faced with great difficulty in adjusting and adapting to new cultural expectations and the behavioural norms of their new society. For many, this grief and loss are not resolvable, at least for a period, and they fall into depression (Barnes, 2003; Good et al., 1985).

Mental health is known to be a significant issue for those who have come as refugees and have escaped from religious or political persecution. Those subjected to years of living under surveillance with the threat of random arrest and disappearances are likely to suffer from mental disorders such as paranoia, anxiety and depression. The experience of resettlement can also cause stress-related illnesses (Jupp, 2005).

While willingness to seek help for mental illness will vary according to the level of education, and access to information in a family or community, it is essential that psychologists working with elderly immigrants realise the significance of their clients' distressing experiences often related to migration. Current stressors associated with acculturation are in critical need of investigation for immigrant clients, since this could impact on their use of intervention. However, it is crucial to assess for trauma occurring prior to and during the process of immigration, even if clients may not readily volunteer such information owing to potential shame or distress associated with recounting such experiences (Foster, 2001).

To better understand the client's present situation, it is important to understand the client's life in his or her home country and his or her expectations of immigration. Obtaining a "migration narrative" can provide clinicians with way into their client's cultural and migratory history (Weisman et al., 2005).

Clinicians should be aware that cultural factors may influence the perception of health held by elderly immigrants, which may in turn influence their symptom presentation. Elderly Latino migrants to America, for example, tend to define wellbeing in a manner that integrates aspects of physical, mental, and spiritual health (Ailinger & Causey, 1995). Similarly, traditional Southeast-Asian ideas of health involve integration of mind-body and the balance of systems in the body (Gerber, Nguyen, & Bounkeua, 1999). In cultures without widespread recognition and acceptance of western notions of mental illness, distress is often manifested more through somatic presentation such as problems with sleeping, eating, feeling tired, irritability, and general aches and pains, and less in terms of expressed psychological symptoms such as reported sadness, anxiety, or mood swings (Hsu, Davies, & Hansen, 2004). In one study of older Cambodian refugees (Handelman & Yeo, 1996)

for example, headaches were a general physical complaint in both psychiatric patients and non-patient community samples. Interestingly, headaches were found to be a significant predictor of psychiatric patient status, and reports of headache were associated with depression diagnosed by a clinician. This study also found that the majority (60%) of psychiatric patients in this sample attributed the cause of their chief somatic symptom to words translated to mean a “worried, sad, suffering heart” which suggests an integrated notion of emotional and physical health (Hsu et al., 2004).

Another approach to validating elderly clients’ experience and addressing stigma is to provide psychiatric education about the role of stressful life events, such as migration and acculturation, in producing psychological distress. Pin-Riebe et al. (1999) suggest that when working with Southeast Asian elderly clients in the United States, assessing the patients’ own explanatory model of their symptoms is as important as educating them about western notions of the cause, manifestations, and prescribed treatments for their presenting problem (Weisman et al., 2005).

Some definite suggestions have been put forward for working with culturally diverse elderly clients with dementia and their families. For example, Gallagher-Thompson et al. (2003) describe the bicultural efficiency training used by Szapocznik & Kurtines (1993) in which one of the major aims was to empower the family by teaching them new ways to communicate with one another and about coping with memory impairment and care giving issues and demands.

## **Utilisation of health and aged care services in immigrants**

Epidemiological and health services research has increasingly focused on health-care utilisation among the ageing population. These studies have consistently shown strong associations between health problems, ageing, and the use of health care services. However, it remains to be seen whether improved health practices and changes to health care delivery will convert into better individual health for the elderly in the future (Ory & Bond, 1989).

In many industrialised countries, the increasing numbers of elderly people have already placed a growing demand on the health-care system and health services have been at pains to research precise measures of health-care utilisation by the elderly and to understand and predict factors affecting their utilisation of health-care services (Raina et al., 2002).

Not only is each country's health care system unique, the ethnic groups forming its society shape its preferences and ideals and therefore the attitudes and goals of individuals receiving health care (Beunza et al., 1994). To be able to meet the particular needs of people from different ethnic groups, health workers must have knowledge and understanding of specific health beliefs connected to care practices of their particular people's culture (Emerson, 1995).

During the past few years, there has been an increase in knowledge about different ethnic groups' beliefs regarding health and illness and the use of health care services. Studies have included research on Lebanese Muslim migrants (Luna, 1994) and elderly Afghan refugees in the United States (Lipson & Omidian, 1992), Iranian migrants in Australia (Omeri, 1997), Greek Cypriots in London (Papadopoulos, 1999), and Greeks (Davidhizar et al., 1998) and Hispanics (Anderson & Kelley, 1998) in the United States. These studies concentrated on ethnic groups that had recently migrated or whose cultural patterns differed greatly from the majority of the population. Few studies have concentrated on observing how elderly people who have migrated many years before and whose cultural patterns are relatively similar to those of the host country perceive the care they have received. However, findings on the "Health Care Experiences and Beliefs of Elderly Finnish Immigrants in

Sweden” (Heikkila & Ekman, 2000) indicate that ethnic background does not fade away during a long life in the host country but continues to influence beliefs and experiences of care.

Use of Western and non-Western types of health care services by ethnic elders in USA seems to vary by ethnicity, but the patterns of differential use are just beginning to be investigated. Utilisation data are available only for the largest categories of ethnic elders and the most common types of services (Yeo, 1991).

Based on a report by the National Centre for Health Statistics in 2004, in USA society, people over the age of 65 years experienced nearly three times as many hospital days per thousand as the general population. This ratio goes up to nearly four times for people over the age of 75 years. In 2004 the USA Administration on Aging revealed that American-born elderly use more health care services, such as ambulatory care, hospital services, nursing services, and home health care services, than migrants (O’Connor, 2006). Older Americans, in total, are known to use health services in excess of other age groups, accounting for one third of this nation’s total health care expenditure (Wolinsky, 1994).

Research from the United States also demonstrates disparities in utilisation of formal health services between the mainstream population and minority groups, including the older Chinese subpopulation. For example, Pang et al. (2003) found that of all the ethnic groups Asians and Pacific Islanders had the lowest rate of participation in services funded by the Older Americans Act during the financial years 1994 through to 1998. In fact, although Americans overall have grown healthier during the past decade, minority groups did not keep pace with Caucasians. To bridge the gaps in access to health services and to improve the quality of life for current and future elderly, health and human service professionals are beginning to address the issues embedded in the growing diversity of American society. However, attention has usually been directed towards larger ethnic groups rather than to all the different subpopulations of America’s elderly (Kuo & Torres-Gil, 2001).

Regarding utilisation of health care services, studies suggest that the number of elderly people around the world who have previously utilised mental health services is significantly low. Unfortunately, although policies and other recent developments indicate an increase in use of health services in general, there has been insufficient reporting on the utilisation of mental health services by the elderly; thus almost nothing is known about the correlation of mental health needs and service utilisation among older adults (Bradley, 2005). The situation is worse regarding elderly migrants where additional themes of being alone, feelings of being different in the new country, worries about the breakdown in traditional patterns of communication, discrimination and distrust come into the equation (Barnes, 2003).

In Australia, the rapid ageing of different ethnic groups is likely to lead to an increased demand for aged care services especially residential care and home-based services. However, the distribution of different immigrant populations, together with the small size of many these ethnic groups, puts doubt on whether the provision of ethno-specific health services and their utilisation by many older immigrants over the long term will be achievable (Benham et al., 2000).

A study of mental health and service utilisation among the Iranian community in metropolitan Sydney (Khavarpour et al., 2003) found that the accessibility and relevance to their needs meant that government and private mental health care services were used by refugees rather than by migrants. However, the issue of accessibility is not just confined to mental health services –other research suggests that NESB communities underutilise general hospital and community-based services and screening services and that this may occur because NESB people lack easy access to services and thus only seek help in a crisis (McMaugh, 2001). In the Bankstown local government area in New South Wales, Australia, hospitalisation increased by 40% among the culturally and ethnically diverse older population, due to English barriers (Kam Yin Chan et al., 2003).

Research suggests that NESB people underutilise a wide range of services available to them where language or cultural difference may create a particular barrier, and that this is a widespread problem (McMaugh, 2001). Even though there is

no evidence that they have fewer mental health problems (Mitchell, Malak, & Small, 1998), studies have consistently found that minorities to utilise mental health services considerably less frequently than Caucasians, both in terms of use and number of visits. However, when financial obstacles to mental health treatment are removed, the differential effect of ethnicity on the degree of utilisation disappears (Bradley, 2005).

There is also some evidence that NESB people may be over utilising some services in compensation for underutilising other services. For example, NESB people have been shown to be over-represented at hospital outpatient clinics and hospital emergency departments. This behaviour clearly stems from because of a lack of information and understanding regarding community-based services in part also because of a lack of interpreting services (Dollis & Gifford, 1993).

Comprehensive research in Australia has demonstrated that in comparison to ESB old people NESB elderly and their caregivers were less likely to use a range of community services (Australian Institute of Health and Welfare, 1997). NESB elderly with a disability were shown to underutilise health care services, as did their caregivers. Fewer elderly from a NESB inhabited nursing home beds or hostels than elderly from an English speaking background (Barnett, 1997).

The importance of language and communication with regard to health care utilisation can be seen from the results of a study conducted into the Korean migrants population in the USA (Sohn, 2004). Over 90% of the older Korean Americans from the sample had a Korean physician; one reason for choosing a compatriot physician was being able to communicate with him/her. The fact that older Koreans chose their physicians and medical facilities more so for the ease of communication than ease of accessibility and medical qualifications of the provider would indicate that to this older immigrant population the importance of communication is considerable.

However, aside from language, other cultural factors also influence health service use. Again, the Korean American ethnic group demonstrated the influence of cultural tendencies in choosing health care: One-third of the sample had sought oriental or alternative medical care in the last 12 months (Sohn, 2004).

Elderly migrants may be reluctant to seek mental health services because of shame associated with mental illness. For many Southeast Asian elderly immigrants, fields such as psychiatry are generally viewed as “for the crazy” (Gerber et al., 1999; Pin-Riebe et al., 1999). In a nationally representative sample in USA, both Asians and Latinos were more likely to view psychiatric patients as “dangerous” (Whaley, 1997). It is important to understand these beliefs as stemming from within their traditional cultural environment. While psychology and psychotherapy have become more accepted by all cultural groups for a range of problems, this shift is new, and the stigma felt by older generations is still there. Thus, culturally defined labels of deviance associated with being “crazy” become generalised to other mental illnesses and increase reluctance to seek help for such things as depression or anxiety (Weisman et al., 2005).

Usage of health services is not only culturally typical, is also affected by individual characteristics. The personal characteristics of individuals and their environment influence and predict of the extent to which they will utilise services (Andersen & Davidson, 1997). Given the same enabling factors (access to services, comprising family and community factors such as income, transport and geographic proximity) and the same need factors as perceived by the individual in terms of symptoms, level of disability, and as measured by health professionals using symptoms and diagnoses, certain individuals are still more likely to utilise health services than others. Here the factors affecting choice incorporate demographic factors, such as age, gender, marital status, education, religion, ethnicity, family size. They also include past medical history, mobility, social structure, and health beliefs (Denson, 2006).

Andersen defines such health beliefs as “attitudes, values and knowledge that people have about health and health services that might influence their perceptions of need and use of health services” (Andersen 1995, p. 2). In a subsequent study Mitchell and Krout (1998), examined this issue to observe that need factors were particularly important in the prediction of health service usage, for example, accessing acute hospital care where use did not appear optional. However, the

prediction of the use of optional services, such as community care and home meals, required more information about affecting and enabling factor.

Sources indicate that in the USA, Asian and Pacific Islander elderly visit office-based physicians half as often as other Americans of the same age, and had the highest use of emergency room services of all ethnic elderly (Yeo, 1991). As would be expected, the predictors of utilisation of health care services in their study were generally related to income, education, geographic accessibility and medical insurance. All these are factors for which ethnic elderly tend to be at a disadvantage. Some of the greatest variation exists in utilisation of long term healthcare services.

The item “self-rated health care utilised” has been included in the Australian National Health Survey and similar such surveys in the USA, Canada, UK and New Zealand. It is assumed to largely yield data pertaining to physical health problems (acute and chronic conditions and physical functioning), health behaviours and mental health problems (New South Wales Department of Health, 2000). Yet currently little is known about patterns in informal care (unpaid help from family and friends), of health status among some elderly ethnic groups such as disabled older Latinos in the United States at the population level (Weiss, Gonzalez, Kabeto, & Langa, 2005). Although reports have suggested that Latinos receive more informal care (unpaid help from family and friends) than non-Hispanics, there is little data to support the argument that Latinos are more traditional in their family structure and provide more care as a group (Navaie-Waliser et al., 2001).

The results of Weiss et al.’s (2005) study of the difference in the amount of informal care received by non-Hispanics and Latinos in a nationally representative sample of older Americans determined that ethnicity remains the main factor affecting the receipt of informal care. This was the case even after careful adjustment for enablement and need variables. The reasons implied that further examination of psychosocial influencing factors in ethnic groups could yield important information regarding the dynamics of disabilities and care-giving; over time such research might explain why older Latinos used less formal care than non-Hispanics, but used more

organised community-based services such as congregate meals and counselling (Dilworth-Anderson, Williams, & Gibson, 2002) .

### *Home and community care services*

In regard to home and community care services (HACC), research repeatedly finds that NESB people underutilise these services. NESB people are generally less likely to use a range of these services available to aged people with disabilities and their carers than their ESB counterparts. The needs of the fragile aged in ethnic communities are simply not being met by these services. Services planning for the future should consider ethnic diversity and the appropriateness of aged care services to NESB older people as central factors to be incorporated in the programme (McMaugh, 2001).

In a survey conducted into migrant access of services in the southern region of Sydney, an area with a very high NESB aged population, results showed that among the 129 NESB aged surveyed, 91% did not use any aged care services. This was despite the fact that many of them were isolated or had health problems (Zogalis, 1993). In another survey conducted by the Botany Migrant Resource Centre (Loria, 1993) into the effectiveness of service delivery to people of non-English speaking backgrounds in Botany, Randwick and South Sydney in which over 20% of the population was NESB, five hundred NESB from 60 countries were surveyed. The researchers found that use of many services, including HACC services, was low. Results showed only 4.6% of NESB elderly respondents had used home care services (Johnson & Fernandes, 1999). When the NSW Consultative Committee on Ageing, (1994) examined NESB utilisation rates of HACC services in the inner west of Sydney, they too found that a number of services were under-utilised, including home modification and maintenance, home care, respite care, food services and transport services.

The draft for the National Framework for the Development of Culturally Inclusive HACC Services (2001) states that of more than 18% of aged people 65 and over who were born overseas only about 11% utilised HACC services, indicating a

strong unmet need for services such as meals on wheels, home help, personal care, respite care and community transport among ethnic communities of fragile elderly (Australian Bureau of Statistics, 2000).

The project by Western Sydney Health (2003) for frail older people from culturally and linguistically diverse (CALD) backgrounds, reported that the highest percentage of HACC services accessed by CALD elderly was respite/day care centres which offer daily care services for the elderly. This type of service is probably one of the forms of support most accepted by the majority of CALD communities. The survey also confirmed that CALD groups do not have access to many of the HACC services or are in lower number of minority CALD communities in relation to a large ageing population. The survey also reported low utilisation or difficulty in accessing HACC services for people who do not speak English well.

In a comparative study on utilisation of community services between Australian and overseas-born elderly, utilisation of residential aged care by immigrants was significantly lower than by the Australian-born. At ages 65 and over, only 26 people per 1000 from the lower level of English language proficiency used residential care, compared to 62 per 1000 among Australian-born. The proportions remain considerably disparate even at ages 80 and over. This report suggests that English proficiency as an acculturation variable is a possible factor contributing to the lower level of service use (Benham et al., 2000).

### **Barriers to service utilisation**

Many of the barriers older individuals from ethno-cultural minorities encounter in regard to accessing services have already been referred to earlier. It is generally believed that service barriers create a negative impact on health outcomes (Lai & Chau, 2007).

In her report “Access to Home and Community Care Services by the NESB Frail Aged, Younger People with Disabilities and their Caregivers”, McMaugh (2001) discusses a number of linguistic, cultural, structural and socioeconomic

barriers to reasonable services access suggesting that these barriers can be grouped into broad categories: While recent research has provided evidence of the disparities in health and access to health services among ethno-cultural minorities in Canada and the United States (Groeneveld, Laufer, & Garber, 2005; Williams, 2005), the social determinants of health indicate how systemic social and economic barriers are associated with health outcomes for visible minority groups (Williams, 2005). This highlights the importance of examining non health factors when attempting to understand health status and other research confirms that barriers to service access include: language (Talamantes, Lawler, & Espino, 1995), lack of transportation (Morgan & Sampsel, 1994; Tzuling Tsai & Lopez, 1997), inadequate knowledge of services (Richardson, 1992; Tzuling Tsai & Lopez, 1997), and inadequate financial resources (Damron-Rodriguez, Wallace, & Kington, 1994).

#### *Language barrier*

The 2006 Census for Queensland showed that the highest proportion of people who did not speak English well or at all were in the older age groups and 25.8% of people aged 80 years and over were found not to speak English well (Department of Local Government and Planning, 2007). The report did not consider HACC services or users but did offer strategies for providing culturally appropriate care for European and Asian elderly who continue to speak their native languages at home.

As mentioned earlier, in a report on the health status of older overseas-born Australians (Benham et al., 2000) Iran was in the English proficiency group EP3. This group comprises of countries with a rating of at least 50% but less than 80% on the English proficiency index. Men and women in this group had lower levels of self-assessed health and mental health than their Australian-born peers. However, while they also reported a greater need of assistance, their use of residential aged care services was significantly lower than that by Australian-born residents. From the age group of 65 and over, there were only 26 people per 1000 from EP3 using residential care, compared to 62 per 1000 among Australian-born. The proportions remain considerably different even at ages 80 and over. This report suggests that the language barrier clearly contributes to the lower use of available services.

Findings of the Australian National Health Survey (1995) too indicate that the overseas-born elderly who have lower levels of English language proficiency are more likely to need assistance in their daily activity living (ADL) than their Australian-born counterparts. McMaugh (2001) states that the NESB aged people need home support services at least proportionally to ESB people. However, she suggests that their circumstances, such as language barriers, migration leading to reduced family networks, and social isolation, place them at a disadvantage to accessing these services.

Throughout the available research, the recurring factor affecting migrants' health and access to health and aged care services is language proficiency and ability to communicate in their new environment. It is thus important to evaluate fluency in English language when working with elderly migrants, especially if the service provider does not speak the client's preferred language. Integrating older adults who have been relocated from the land of their birth into a new culture presents unique obstacles since older adults do not assimilate into a new social and economic setting by going to school or work as children and younger adults do (Fletcher & Miller, 2004). Older adults are, in fact, often isolated in family homes which makes it all the more difficult adapting to the new culture, to learn a new language, to develop new skills, and to navigate the new environment (Arean, Ayalon, Hunkeler, Lin, & et al., 2005).

It is not surprising then that, in comparison to younger migrants, the elderly are less likely to master the language of their adoptive country (McCaffrey, 2007). In Australia, older NESB people are generally less proficient at English than younger people from a NESB; however, this does depend on the length of stay in Australia and varies greatly among language groups (Australian Bureau of Statistics, 2000). Difficulty in mastering the new language may be further compounded by the fact that languages acquired later in life are often impaired or lost in the early stages of dementia and general cognitive decline.

Since language and communication barriers are such an important facet affecting access to and utilisation of health care services, programmes to educate and inform linguistically isolated elderly could ease or assist with access to care, with promoting good health and disease prevention, and with encouraging social support (Sohn, 2004). Ageing Chinese immigrants to Canada reported difficulties accessing services because of language barriers, lack of cultural competence on the part of service providers, and logistical problems in the service delivery system. These factors may elicit negative perceptions of providers, the system, and the quality of services as inadequate and not useful (Lai & Chau, 2007). McCaffrey (2007) reveals how staff at a senior centre identified the language barrier as the most problematic aspect in running the integration programme which was designed and implemented to welcome older Haitian adults into the centre: Because the Haitian older adults spoke little or no English, communication even about simple things proved difficult.

Communication is not only a means of transmitting knowledge but also of understanding the information passed on. Even among those who speak the same language, communication and comprehension of information is not always straightforward due to barriers such as differing educational backgrounds and cultural differences. Nevertheless, communication is an integral part of the health care provider-patient relationship. While cultural factors also influence use of health care services (Sohn, 2004), language differences increase any sociological and cultural differences, further complicating the communication and decision-making process (Smedley et al., 2003). Consequently, minority ethnic groups, particularly those with limited English proficiency and low income, suffer from a number of difficulties in receiving healthcare and therefore also have less favourable health outcomes. Moreover, language difficulties among older immigrants living in foreign countries have been demonstrated to impede on their ability to enjoy successful ageing (Baldwin, 2003).

### *Unawareness and lack of information*

Ethnic minorities in Australia face many barriers or difficulties to using health services. Apart from language barriers, unawareness of available services and lack of knowledge about them play a considerable part in why elderly migrants do not access these services as readily as their Australian-born counterparts.

Lack of awareness and knowledge of these services is due to several factors. It is linked to language barriers through poor English skills or illiteracy in the mother tongue, to the lack of culturally and linguistically appropriate promotion of these services, and to the fact that for many NESB communities, the very concept of community-based services like those provided in Australia, is completely foreign to them. They may come from countries where no such services have ever existed or where basic community services have been decimated due to poverty or unrest (McMaugh, 2001).

In a literature review conducted by Johnson and Fernandes (1999) poor knowledge and understanding by the customer base of what HACC funded services provide was identified as one of the main barriers to equitable service access. Their survey of NESB consumers from the inner west of Sydney found that consumer awareness of each type of HACC service was limited. Only 19% of those surveyed were aware of dementia support services, and only 26% were aware of personal care services. The most well-known services were home nursing (51%), home care (53%) and community transport (54%).

This level of awareness is clearly lower than that of English-speaking people. Kassis in her study (1996) of Afghan, Iranian, Korean, Former Yugoslavian and Vietnamese communities in the northern Sydney region found here too there was a lack of service awareness and knowledge preventing access to services. Again, this was complicated by language barriers but in some cases, clients did not even feel entitled to ask about services. While the degree of migrant acculturation combined with the length of time in the new country and the degree of proficiency in English are posited to be important variables in cultural research (Coon et al., 2004), the

exploration of cultural influences is critical, since culture affects understanding and thereby utilisation of services (Janevic & Connell, 2001).

An evaluation report of the Central Coast showed that many NESB people in this area were unaware of the many services offered by the Department of Community Services and the HACC program (Wyang Community Centre, 1996). Zogalis (1993) found that 91% of the NESB aged surveyed in the southern Sydney region did not use any aged care services. Most of the people interviewed suffered from poor health and might well have fallen into the HACC target group. While only 47% admitted they had not known these services existed, 81% said they would use them if they knew about them. These responses indicate that lack of knowledge clearly is a barrier. A statistical overview of Department of Human Services (2004) regarding the use of home and community care (HACC) services in Melbourne, Victoria, showed CALD communities had lower rates of use of all services except planned activity groups, and that the differences were greater for home help, property maintenance, meals, nursing and allied health than for personal care and respite.

Lack of awareness of services was also identified as the main reason why NESB elderly did not access dementia support services in the same proportion as their ESB counterparts (Kратиuk, Young, & Rawson, 1992). It has also been identified as a barrier to accessing such services among NESB people with a psychiatric disability (Ziguras, 1993). In their study of small ethnic communities, Barnett, Hanen & Karanastasis, (1996) found that services like respite care are completely unknown to many ethnic communities and that communities need to be made aware of how they operate. No recent studies appear to have been undertaken in this area.

Clearly, there is overlapping of barriers and different barriers may interact with each other to have a compounding effect. For example, barriers related to lack of awareness and knowledge interact with language barriers; language barriers interact with cultural barriers (McMaugh, 2001). According to Kassis (1996) obstacles such as linguistic and cultural barriers, lack of cultural awareness of service providers and

even the erroneous perception of these services by migrants are typical contributors to limited utilisation of these services by the NESB migrants and refugees.

Not surprisingly then, most needs assessments conducted with the NESB communities have resulted in the communities requesting more culturally and linguistically specific service information through ethnic media or translated materials (Johnson & Fernandes, 1999). Kassis (1996) found that lack of service information in languages other than English was a barrier to access of aged care services. Information was poor in many areas concerning health and aged care services. Lack of access to culturally and linguistically appropriate health services information has also been identified as a problem among older Italian speakers in Melbourne (Mackinnon, 1998) where it was found that even community leaders had trouble accessing relevant information. Elderly respondents reported relying heavily on children for information.

Ziguras (2001) concludes that lack of knowledge of services, communication difficulties because of language barriers, greater responsibility taken for caring by family, a restricted range of treatment options for those who do not speak English, and culturally dissonant treatment affect the utilisation of services. Many strategies have been proposed to improve the accessibility and cultural sensitivity of mainstream health and welfare services to people from ethnic minority backgrounds. These include community education, greater use of interpreters, training for health professionals (both as part of undergraduate curricula and post-employment professional development), better links with ethnic communities, the involvement of ethnic communities in service planning and evaluation, and the employment of bilingual/bicultural staff.

## **Conclusion**

This extensive review of literature has provided the basis of the conceptual framework of this research. Acculturation has been shown to play a significant part in whether migrants access health and aged care services. The main focus of this research is the role of acculturation factors in use of health and community aged care services by Iranian elderly as a minority ethnic group. The relevance of acculturation factors such as the language spoken at home, English language proficiency and duration since migration was explained using key concepts identified in the literature. Those same key concepts, namely physical health (activities of daily living, physical functioning) and mental health (psychological distress and well-being) components, social activity, accessing information, and utilisation of health and community aged care services, emerged as relevant for this study and will be examined in detail regarding the target group.

## **CHAPTER THREE: Methodology**

### **Introduction**

The current research has investigated the utilisation of health services and community aged care services by the Iranian elderly over the age of 65 living in the Sydney metropolitan area, in order to ascertain acculturation factors and reasons for potential discrepancies surrounding utilisation of these services. The results of this study are compared with the results of the "New South Wales Older People's Health Survey 1999". Comparisons focus on the health factors such as psychological distress, psychological wellbeing, physical functioning and activity of daily living influencing the utilisation of health services and community aged care services by Iranian elderly and the New South Wales Older People. The purpose of this chapter is to describe and justify the research method used in this study. This chapter offers an overview of the study design and research hypotheses. It describes the study areas, subjects, and sampling strategy. Ethical issues, in particular how the study meets ethical requirements for research, are discussed. It describes the survey instrument, procedures for data processing and computation of composite scores on key dependent variables, and explains bi-variate and multi-variate analysis procedures. It outlines the analysis procedures for the survey method. Finally, reliability and validity of data collection and data management are addressed.

### **Study Design**

The purpose of this survey was to explore the issues surrounding the utilisation of health services, and community aged care services, and identify factors influencing the use of such services by Iranian elderly as one of the minority ethnic groups living in the Sydney metropolitan area.

Surveys are the most commonly used method of data collection in the social sciences (Sarantakos, 1998). According to Yin (1994), for an explanatory study on real life situations over which the researcher has little or no control, a survey is the most appropriate approach. Kothari (1994) outlines advantages in this method: first, the low cost, even when the area is large and is widely spread geographically;

secondly, it is free from the bias of the interviewer, because answers are in the respondent's own words; thirdly, respondents have adequate time to give thought to answers; fourth, respondents who are not easily approachable can also be reached conveniently; finally, the results can be made more dependable and reliable. Considering these advantages, the survey method was used for data collection in the present research.

There are three aims to this study survey:

- 1) To investigate the utilisation of health services and community aged care services by the Iranian elderly living in the Sydney metropolitan area.
- 2) To explore acculturation factors and reasons for potential discrepancies surrounding utilisation of health services and community aged care services in Iranian elderly.
- 3) To examine and compare health factors affecting utilisation of health services and community aged care services by Iranian elderly with results of the "New South Wales Older People's Health 1999" survey findings.

The study addressed two hypotheses pertaining to the Iranian elderly:

- 1) Acculturation impacts on the utilisation of health services and community aged care services among the Iranian elderly.
- 2) There are differences in the utilisation of health services and community aged care services between the Iranian elderly and the elderly population of the state of NSW in general.

## Subjects

Participants in this study were Iranian born migrants aged 65 years and over, of non-English speaking background (NESB) who had lived in the Sydney metropolitan area for at least six months.

## Sample size

Australian census data (Australian Institute of Health and Welfare, 2001), suggest that there were 1,209 Iranian-born immigrants aged 65 and over living in the Sydney metropolitan area at the time of data collection. Rice (1999) suggests that a

sample of 25% (302) would be a good sample size. Power analytical framework was used to estimate an optimal sample size. The power analytical framework determines the sample size on the basis of three factors, such as alpha level, Type I error; power,  $1-\beta$ , where  $\beta$  is the type II error (power=80% is commonly used); and the effect size, that is the degree of relationship between independent and dependent variables (Portney and Watkins, 2008). Using the UCLA web power calculator indicates that with  $\alpha = 0.05$ , a sample of 302 will yield the power of proximately 94%.

## Ethical issues

Maintaining the subjects' anonymity and confidentiality is a primary consideration. The subjects were assured that the information provided in the survey would remain strictly confidential, except as required by law. The answers to the survey questionnaire would be kept under password access on the researcher's personal computer. No reference would be made to their name and identity. In the stored information their name would not appear on any of records, because they were given a code. Subjects were informed that participation was purely voluntary and they were free to withdraw from the research at any time and at any stage without having to give any reason. The Faculty of Health Sciences, University of Sydney, will keep all questionnaires in a secure place for seven years following the completion of the research.

## Research Methods

A quantitative approach was used in this study. Techniques used to collect surveys were: a written survey instrument, telephone interviews, and face-to-face interviews. The choice of face-to-face interview was useful because it helped overcome poor response rates (Morrison, Bowe, & Larkin, 1999) and ensured immediate clarification of the feelings and opinions raised (Maddi & Khoshaba, 1994).

After receiving approval from the University of Sydney Ethics Committee, Iranian elderly were invited to participate in this survey. The invitation was done via Iranian radio station (Payam Pars) and the Iranian newspapers about the "Iranian Older People's Health Survey" and requested people aged 65 years and over to

participate in this survey (Appendix E and F). Meanwhile, a Consent Form (Appendix G and Appendix H) was mailed, attached with the letter, to eligible participants together with the request for those who were willing to participate to return the signed and witnessed consent to the researcher.

In the participant information letter, they were invited to participate in this research because they may be potential users of aged care services (appendix E and appendix F). The interview would last for 40-60 minutes maximum and would be by phone. With those who accepted, the phone interview was held about two weeks after they had received the invitation letter and questionnaire. The package was mailed more than two weeks before the interview date. Participants were requested to return the completed questionnaire by reply paid mail or to give it to the researcher at an Iranian community meeting. Over the phone, the researcher asked for the names, phone numbers and mailing addresses of other elderly Iranian people to contact. Participants were also approached by the researcher attending Iranian community meetings. Face-to-face interviews were also conducted. A total of 358 surveys were collected between November 2005 and July 2006. Of those, 302 were complete enough to be used in this analysis.

### Participant selection

Multivariate sampling techniques were used for recruiting samples of the study, including purposive sampling, convenient sampling and snowball technique. This research targeted areas and places in metropolitan Sydney where older Iranians are most likely to live. Although Iranians are all from the same country, they have a range of cultural and religious practices. Questionnaires were distributed among the target group in different places such as: Iranian religious places (churches, temples, and mosques), clubs (including ladies' clubs and gatherings), doctors' surgeries, schools (where some elderly attend to help the Iranian community or accompany their grandchildren), Iranian community centres, services offices, the Iranian library, as well as Iranian gatherings for poetry reading nights and cultural events. The questionnaires were also distributed at Iranian supermarkets and restaurants.

## **Questionnaire and questions content**

Questions used in this study were drawn from previous surveys, most of the questions were drawn from: "New South Wales Older People's Health Survey 1999" (New South Wales department of health, 2000) and questions regarding medical conditions, needs for support by career, community organisations, community aged care services, public transport, accessing information, communicating in English, and social activity was drawn from both "Needs assessment of the older Spanish living in the Parramatta and Holroyd Local Government Areas, 2004" (Multicultural HACC access project, 2005) and "Needs assessment of the older Maltese community living in the Baulkham Hills Shire, 2005" (Multicultural HACC access project, 2005).

In 1999, the New South Wales Health Department conducted a comprehensive health and wellbeing survey on older people in New South Wales. The target sample comprised New South Wales residents aged 65 and over from each of the 17 New South Wales Health areas. A sample of 8,881 New South Wales elderly people participated. The questionnaire included measures of physical and mental health, wellbeing, health service utilisation, and use of community aged care services.

The questionnaire used in the present study included: closed-ended single response, open-ended and multiple response questions. Responses to the items generally required ticking or circling one or more options. Other items required circling either a "yes" or "no" response.

The survey questionnaire was translated into Farsi (the native language of most Iranians) in line with (Beaton, Bombardier, Guillemin, & Ferraz, 2000) guidelines for cross-cultural adaptation of self-report measures. Two translators (the researcher and the associate supervisor of the time; (Khavarpour)), fluent in Farsi and English, performed the translation from English to Farsi. The translation was performed independently by each translator. A consensus meeting between the two translators was then held in which the independently developed versions were compared. Differences in versions were discussed and a single consensus version was developed. All versions were filed and saved for future reference.

Back-translation from Farsi into English was also performed by the researcher and the associate supervisor of the time (Khavarpour). The back-translation was performed independently by each translator. A consensus meeting between the two back-translators was held in which the independently developed versions were compared, back-translated and checked according to recommended procedures (Guillemin, Bombardier, & Beaton, 1993). Finally, the researcher compared the individually back-translated and final back-translated versions of the Farsi version questionnaire to the English with the aim of preserving the meaning of items. Questionnaires are available in both English (appendix A) and Farsi (appendix B).

The Farsi version of the questionnaire was pre-tested for consistency, test-retest reliability, ceiling and floor effects, and responsiveness by four participants. Participants for pre-testing the survey questionnaire were randomly selected from the Iranian elderly who were introduced by Iranian community members helping to find candidates for this survey. Based on their feedback, the questionnaire was refined for better understanding and for making questions simpler and more readable. Slight modifications in the wording of questions 4, 8, 12, 13, 18, 26, 41, 147, 156 and 182 were carried out. The modified version of the questionnaire then re-tested by two other elderly Iranians, resulting in the final version of the questionnaire.

## Questionnaire Contents

A questionnaire with 188 items was used in this research. The data were collected for the purpose of addressing the aim and the hypothesis of this study. Results have been included in to five chapters:

Chapter Four: Descriptive analyses of health status of Iranian elderly

Chapter Five: The role of acculturation

Chapter Six: Utilisation of health services

Chapter Seven: Utilisation of community aged care services

Chapter Eight: Comparison of health and community aged care service utilisation by Iranian and New South Wales elderly.

A portion of the analysed collected data has been used to address the role of acculturation and utilisation of health and community aged care services. The remainder of this data which was not related to the aim and hypothesis will be published in future in the form of papers and articles so that those interested, such as those who are working on ageing or will undertake research in future, and the policy makers of New South Wales, can access this information.

The survey consists of questions under broad headings which are included in Table 3.1. A copy of the questionnaire is provided in Appendix A

**Table 3.1 Questionnaire Contents on this study**

<b>Section in Questionnaire</b>	<b>Questions</b>
Socioeconomic, demographic and acculturation	1-30
General health status	31 - 35
Sensory screening and loss	36 - 43
Oral health	44 - 47
Psychological distress (K6) & Psychological wellbeing	48 - 63
Perceptions of safety in the home and neighbourhood	64 - 65
Diabetes and high blood sugar	66 - 70
Women's health	71 - 74
Physical functioning (SF-36)	75 - 96
Activity of daily living (ADL)	97 - 103
Use of health services	104 - 111
Use of community aged care services	112 - 129
Transport	130 - 135
Caregiving /carer	136 - 145
Social activity	146 - 153
Perception about lifestyle	154 - 156
Physical activity	157 - 163
Nutrition	164 – 165
Incontinence	166 - 168
Falls	169 – 175
Immunisation	176 - 179
Accessing information	180 - 188

## **Categorisation of variables and development of scales**

The demographic background of the Iranian elderly was explored via questions on age groups, gender, religious, marital status and number of children, and number of children living in Australia. As mentioned earlier, because the questions in the present study were derived mainly from the "New South Wales Older People's Health Survey 1999", the present study categorised variables in the same manner as was done in the New South Wales survey. For example, the age groups in New South Wales elderly were in six categories which started from 65-69 years to 90+ years in five year interval. Since the percentage of older people who were in 90+ in both Iranian and New South Wales populations were few, the item of age groups was recoded into four age group categories: 65-69, 70-74, 75-79 and 80+ years. Categorisation of the background variables, general health, sensory screening and loss, oral health, and communicating in English variables used in the study is discussed in (Supplement).

The next stage of recoding was to change the value of a variable. This was important for developing scales. In order to obtain an interpretable scale score all the items were coded in the same direction, so that the low score of each variable means the same thing in terms of the overall dimension they are meant to measure (De Vaus, 2001)

## **Research Variables**

The variables used in this study are comprised of dependent and independent variables. The variables included in the study are listed below:

### *Independent Variables*

Socioeconomic and demographic characteristics of the participants include the following variables:

- Age in range of 65-80+ : (65-69, 70-74, 75-79, 80+)
- Gender: (female, male)

- Education categories: (Bachelor degree or higher, associate/certificate diploma, secondary/high school, primary, no formal education)
- Economic conditions:
  - § Money situation: (can't make ends meet, just enough to get along, comfortable)
  - § Home ownership: (outright owner of home/paying off home, leasing, purchasing in retirement village, private rent/public housing rent, board free/living with children)
  - § Type of government pension/benefit: (age pension, sickness/disability pension)
  - § Health concession card: (Yes, No)
- Migration and acculturation variables:
  - § Language spoken at home: (Farsi/English)
  - § Communicate in English: (Very well to well, Not well, Not at all)
  - § Duration of migration: (1-5, 6-10 , 11-15, 16+ years)
- Accessing information included:
  - § How to access information: (family and friends, Iranian media, others, doctors, TV, community organisations)
  - § Information accessed by brochures: (only Farsi, only English, both languages, no access at all)
  - § Awareness of available aged care services: (Yes, No)
  - § Awareness of who to contact to ask for help: (Yes, No)
- Social activity self-rated included: (very active, fairly active, not very active, not active at all)
- Physical activity self rated compared to other age groups included: (less active, about as active, more active)
- Medical conditions included: (chronic medical problems, acute medical problems, no problems).

## *Dependent Variables*

- Psychological distress /K6
- Psychological wellbeing
- Physical functioning /SF-36
- Activity of Daily Living (ADL)
- Use of health services
- Use of community (basic and supportive) aged care services/HACC
- Caregiving/carer

Considering a variable as dependent or independent in this study is related to the purpose of the research; therefore a variable was considered dependent in some analyses and in others as independent. For example, psychological distress/K6 was considered as a dependent variable when research planned to find the relationship between psychological distress and Activity of Daily Living (ADL); however, it was considered as an independent variable when finding the effect of ADL on psychological distress.

## **Measurements**

### Measure of health services use

One of the concerns of health policy makers is the ability to supply the health and aged care services required to support people. It is expected that migrant people have better health status than the Australian-born, as only elderly immigrants with a better health profile can obtain a visa. However, there is much evidence that non-English speaking background people underutilise a wide range of health services, where language or cultural difference may construct a particular barrier (Benham et al., 2000).

The use of health services measure is a six-item questionnaire intend to yield a measure of the type of health services used in the last 12 months. For each item, there is a two-level response scale "yes" or "no" in the last 12 months when the person consulted, or was visited by, a health professional regarding a particular health

problem. To measure the type of health services used by respondents the survey asked whether they had consulted a GP or local doctor about their health in the last 12 months; were visited by a community nurse or a private nursing service in the last 12 months; visited by a podiatrist, consulted a chemist, were visited by a physiotherapist or stayed at least one night in hospital in the last 12 months. These questions were developed based on the "New South Wales Older People's Health Survey 1999".

Answers to the six questions were scored, summed up and the total presented as a score out of 6. Scoring of the raw questionnaire was assigned between one and two points to each visit to, or consultation by, a health professional related to health problem frequency. The raw score was then derived by summing across the six questions when respondents answered at least five questions. For analysis, questions were transformed and then computed. The total scale range was from 0-6 representing the total score on the type of health services used scale. Correlation is significant at  $P \leq .05$  levels, inter-item correlation is high (Cronbach's Alpha= .803), Mean = 2.32, SD = 1.26 Higher scores indicate high use of different types of health services, while lower scores indicate less utilisation of different types of health services.

## Measure of community aged care services/HACC

Use of community services only concerns elderly people who cannot do household duties or home maintenance or personal care on their own. Tasks of community aged care services are considered in two particular aspects. The first is basic community aged care services including: household duties (included laundry, vacuuming, dusting/cleaning), personal aged care (included showering, bathing, dressing, getting to the toilet), and preparing or delivering meals at home in the last week (three questions). The second is supportive community aged care services including: home maintenance/modification or gardening, attending a day care centre, receiving respite services at home, staying overnight at any respite services, transportation such as special buses or escorting services for shopping, errands or medical appointments in the four weeks prior to study (five questions).

Utilisation of community services is a 8-item questionnaire intended to yield a measure of individual utilisation of basic maintenance community aged care services in the last week and supportive community aged care services in the four-week period, and the level of aged care services utilised. For each item, there is a two-level response scale from (Yes=1 through to No=2) when the person used specific caregivers from community services. A total score for basic aged care services and supportive care services was derived by summing across the three and five items respectively.

For utilisation of basic community aged care services, answers to the three questions were scored, summed and the total was presented as a score out of 6. Higher scores indicate low level utilisation of basic community aged care services, and lower scores indicate high level utilisation of basic community aged care services in the last week. Correlation is significant at  $P \leq .01$  levels, inter-item correlation is high with a Cronbach's Alpha .870; Mean = 5.87 and SD = .488.

For utilisation of supportive community aged care services, answers to the five questions were scored, summed and the total was presented as a score out of 10. Higher scores indicate low level utilisation of supportive community aged care services, and lower scores indicate high level utilised of supportive community aged care services in the four weeks prior to study. Correlation is significant at and  $P \leq .05$  levels, inter-item correlation Cronbach's Alpha .709, Mean = 9.90, SD = .391.

## Psychological distress/K6

For the purpose of assessing psychological distress among the study population, Kessler (K6) was used in this study. K6 is a modification of the K10, which is a scale measuring non-specific psychological distress (Furukawa, Kessler, Slade, & Andrews, 2003). The K6 and the K10 measures were used for major depressive disorder in the general population. Kessler and colleagues, using general population samples, developed both measures, where they have been widely used in population epidemiologic studies to measure current (1-month) distress (Cairney, Veldhuizen, Wade, Kurdyak, & Streiner, 2007).

The K10 questionnaire yields a measure of questions about negative emotional states experienced by respondents in the four weeks prior to interview. It contains low- through to high-threshold items. For each item, there is a five-level response scale based on the amount of time a respondent reports experiencing the particular problem. The response options are: none of the time; a little of the time; some of the time; most of the time; and all of the time (Australian Bureau of Statistics, 2001).

The K6 is a 6-item subset of the K10 intended to serve as a short-form version of the instrument of non-specific psychological distress in the anxiety-depression spectrum, and seeks to measure the level of current anxiety and depressive symptoms a person may have experienced in the four weeks prior to interview. It covers core depressive symptoms, and has been shown to have good ability to detect non-specific psychiatric distress (as indicated by high values) (Mackinnon et al., 2004). In the present study, depressive symptoms a participant experienced in the last four weeks were assessed. Six questions were asked in this regard. Participants were asked "During the last four weeks, how much of the time did you feel sad, nervous, restless, hopeless, effort, worthless?" Responses by the individuals sampled were on a 5-point scale running from (1) "all of the time", (2) "most of the time", (3) "some of the time", (4) "a little of the time" to (5) "none of the time", and "when the person experienced the particular problem" (New South Wales department of health, 2000).

Generally, each item is scored from (1) for "all of the time" to (5) for "none of the time". Scores for the six items were then summed, yielding a minimum possible score of 6 and a maximum possible score of 30, with low scores indicating high levels of psychological distress, and high scores indicating low levels of psychological distress (Australian Bureau of Statistics., 2001). Therefore, Scores for the six items were summed for each participant and placed in one of three categories: high (6 to 14), moderate (15 to 22), and low psychological distress (23 to 30). The six questions used are numbered 51 to 56 in the questionnaire. The raw score is then derived by summing across the six questions (K6). The total un-weighted continuous variable score range which was from 6-30, representing the total score on the K6 scale, is to identify respondents' level of mental illness. Correlation is significant at P

≤ .01 levels, inter-item correlation is high (Cronbach's Alpha=.803), Mean = 20.42, and SD = 5.67.

## Psychological wellbeing

Psychological wellbeing has been defined and measured in relation to distinct concepts such as: happiness, which is the balance between positive and negative affect; life satisfaction, which represents the cognitive instead of affective dimension of positive functioning; morale and other similar concepts including quality of life and subjective wellbeing (Xie, 2006). The older population is in fact very diverse, and therefore it is important to take into consideration various differences, e.g., culture and age, among older adults. It is crucial to develop and maintain a friendly, social atmosphere that can bring individuals together. This is especially important for older adults, whose social networks and relationships tend to diminish due to age-related changes in their social and personal lives (Borglin, Edberg, & Hallberg, 2005).

Psychological wellbeing scale is a five-item scale intended to yield a measure of "felt happy" and "depressed"; and the level of wellbeing generally in the most recent four-week period. For each item, there is a three-level response scale based on the amount of time from ("most of the time" through to "none of the time") during a four-week period when the person experienced the particular feelings. To measure wellbeing felt by respondents, the survey asked how often the respondent felt happy, calm/peaceful, bored, lonely, and depressed during the previous four weeks. Responses were entered on a three-point scale: (1) "most of the time", (2) "some of the time", and (3) "none of the time". To make a balance between positive and negative affect, which represents the dimension of negative functioning, moral and other similar concepts, the meaning of "feeling happy", and "feeling calm and peaceful" (items in Questions 57, 58) in a three-level response scale were revised and recoded from "none of the time" through to "most of the time" during a four-week period. In order to change the positive aspect of questions to a negative aspect, the order of items was recoded. Therefore, Responses to the negative emotions were reversed as appropriate, and a total score was derived by summing across the five

items. Scoring of the raw questionnaire was assigned between one to three points to each feeling in the direction of declining negative feelings frequency. The raw score was then derived by summing across the five questions when respondents answered at least four questions. Answers to the five questions concerning feelings of wellbeing were scored, summed and the total is presented as a score out of 15. Scores were then classified into the three categories: high (13 to 15), moderate (9 to 12) and low (5 to 8) feeling of well-being. Higher scores indicate feeling happy, and lower scores indicate feeling depressed.

The five questions used are numbered 57 to 61 in questionnaire based on "New South Wales Older People's Health Survey 1999". Missing values for those who answered at least four questions were replaced by the mean score of the non-missing responses. For analysis, questions were transformed and then computed. The total scale range was from 5-15. Correlation is significant at  $P \leq .01$  levels, inter-item correlation is high with Cronbach's Alpha =.801, Mean = 10.42 and SD = 2.48.

### Physical functioning /SF-36

The SF-36 is a standard measure of health status, different from one that targets a specific age, disease, or behaviour group. Accordingly, the SF-36 has proven useful in comparing general and specific populations, estimating the relative burden of different diseases, differentiating the health benefits produced by a wide range of different treatments, and screening individual patients (Gandek, 2002; Ware & Gandek, 1998).

The Older People's Health Survey (1999) covered several areas of physical functioning, including " the SF-36 measure of physical functioning, questions on sight and hearing, ability to carry out activities of daily living, and whether any changes had been made to their home to make it easier to live in". In general SF-36 measures eight different aspects of health, using different scales. The short form 36 questions Health Survey (SF-36) measures overall health and wellbeing by scoring each of dimensions of health: physical functioning, role limitations due to physical

problems, general health perceptions, social functioning, and mental health (New South Wales department of health, 2000, P:28).

Only the physical functioning dimension of the SF-36 was included in "Older People's Health Survey 1999" and this study. The physical functioning scale comprised questions concerning a person's ability to do various moderate and vigorous activities. There are 20 questions of SF-36 that are included in the Questionnaire (questions 75 to 94). Physical functioning was measured using 10 items from the SF-36 (short form 36) Health Survey (Ware, Snow, Kosinski, & Gandek, 1993). Participants were asked the extent to which their health limited them in their ability to engage in various activities (e.g., climbing one flight of stairs) on a 3-point scale (a lot, a little, not at all). Scores were summed for each participant and the total was presented as a score out of 30 and classified as: no limitations (24 to 30), some limitations (17 to 23), or limited physical function (10 to 16). Higher scores indicate better physical functioning as no limitation, and lower scores indicate poorer physical functioning as a high limitation. "The mean scale score is generally used for assessment of population health" (New South Wales department of health, 2000, P:10).

Scoring of the raw questionnaire assigned between one and three points to each health limit in the direction of increasing limitations frequency. The raw score was then derived by summing across the ten questions when respondents answered at least nine questions. All items "Don't know" and "Refused" counted as missing values. Missing values for those who answered at least nine questions were replaced by the mean score of the non-missing responses. For analysis, questions were transformed and then computed. Answers to the questions were scored, summed and the total presented as a score out of 30. The total scale range was from 10-30. Correlation is significant at  $P \leq .01$  levels, inter-item correlation Cronbach's Alpha .918, Mean = 22.02, SD = 5.75.

## Activities of Daily Living (ADL)

The capacity of the individual to perform Activities of Daily Living (ADL) and the Instrumental Activities of Daily Living (IADL) is the key criterion for long-term care. If people can take care of themselves, regardless of physical or mental health, they will not need long-term care. Conversely, if a person cannot take care of themselves, due to any type of physical or mental problems, then that person will require care from another person. The goal of long-term care is to enable the person to maintain the highest possible level of functional independence (Li, 2004). Functional dependence is in turn defined as the inability to perform one or more ADL without assistance. ADLs are the most basic self-care activities (Dunkle, Kart, & Lockery, 1994).

The ADL scale was originally developed by (Katz, Ford & Moskowitz, 1963). The basic activities necessary for personal care in ADL measures usually include dressing, bathing, feeding oneself, toileting, mobility in bed, transferring into and out of a bed and a chair, and walking across the room or outside the home (Dunkle et al., 1994).

The ADL measure is a five-item questionnaire intend to yield a measure of capability of doing daily living activities of old people by themselves and the level of need for supervision in their activity of daily living. Three questions asked whether respondents could perform various activities on their own (e.g., household duties) and two asked whether respondents needed help or supervision to perform personal care activities (e.g., bathing).

To measure activity of daily living conditions of the older Iranian respondents, the survey asked about capability to do household duties like laundry, vacuuming, dusting, prepare meals, home maintenance/gardening by themselves and need help or supervision with personal care such as showering/ bathing/ dressing/ getting to the toilet and also need help cutting toenails (the five questions used are numbered 97 to 100 and question number 103) based on " New South Wales Older People's Health Survey 1999". Scoring of the raw questionnaire was assigned

between one to two points to capability or need help frequency. Since questions were in two categories, in order to achieve homogeneity of scales, responses in two questions regarding needing help or supervision were reversed.

For each item, there is a two-level response scale "yes" or "no" based on capability to do activity of daily living themselves or need supervision (Katz, Ford & Moskowitz, 1963). Answers to the five questions were scored, summed for each participant, yielding an ADL score and the total presented as a score out of 5. ADL scores were classified as high (4 or 5), moderate (2 or 3), or low (0 or 1).

Higher scores indicate less need of supervision or help in their activity of daily living, and lower scores indicate high need of supervision in the activity of daily living.

The raw score was then derived by summing across the five questions when respondents answered at least four questions. For analysis, answers to the questions were transformed and then computed. The total presented as a scale range was from 0-5 representing the total score on the ADL scale, to identify respondents' level of activity of daily living conditions. Correlation is significant at  $P \leq .01$  levels, inter-item correlation Cronbach's Alpha, .852, Mean = 3.42, SD = 1.58,

## **Data Analyses**

There were a number of phases of data preparation and analysis. Data was entered into a computer database (SPSS versions 15.0 for windows). Analysis included univariate, bivariate and multivariate analyses. T tests and one-way ANOVAs were used to identify significant variables.

The first stage of data analysis was involved data entry, editing, and screening. Frequency distribution and univariate analyses of acculturation (language spoken at home, self-assessed English proficiency, and duration of residence in Australia), socioeconomic and demographic variables, use of health services, and utilization of community aged care services were carried out. Data was summarised

for cross-tabulation and checked for inconsistencies and coding errors. This phase of data preparation ensured that few, if any, minor numerical errors in coding would inadvertently be incorporated into later procedures, creating the possibility of misleading results.

In the second stage, bivariate analysis was used to examine associations between independent variables (such as socioeconomic, demographic and acculturation variables) and a range of dependent variables. Correlations, analysis of variance (ANOVA) and chi-square tests were used as appropriate. Levene's homogeneity-of-variance test was used to compare populations with equal variances. This test does not compute pairwise comparison between the groups and is not dependent on the assumption of normality (Hassard, 1991). The Turkey Multiple Comparison Test was used to make pairwise comparisons between groups, and to determine which of the groups were significantly different from each other (Hassard, 1991).

Follow-up one-way ANOVA tests were performed to determine in what categories significant differences occurred between groups (such as age, education, migration, etc.). One-way ANOVAs were also performed within groups to determine the relative importance of, and satisfaction with, each category. Post hoc comparison of means using the Scheffe procedure were used to identify the variables involved, when ANOVA revealed significant effects (Hassard, 1991).

A number of scales were used (e.g., ADL, K6, and SF-36). Inter-item correlations and internal consistency of all scales were computed and the reliability of each scale was tested using Cronbach's alpha. At the next stage of the analysis, the relationships between Kessler (K6), wellbeing, physical function /SF-36, Activities of Daily Living (ADL), social activity variables, use of health services, use of community aged care services, and caregiving were carried out using ANOVA and coefficient of correlation.

The general linear model (regression analysis) was used to test the relationship between a dependent variable and one or more independent or

explanatory variables. In addition, and of particular relevance to this study, is that regression analysis may also play a role in prediction. Multiple regression "describes the joint influence of the various explanatory variables on the outcome variable" and for each explanatory variable, measures "the effect on the outcome variable that is uniquely attributable to the influence of that explanatory variable alone and that is not the possible result of other explanatory variables that happen to have some connection to the first explanatory variable" (Hassard, 1991, P 251). In other words, multiple regression is "a way of untangling the effects of the various explanations and assessing the impact of each explanation after a possible association (confounding) with any or all of the other potential explanations have been eliminated or controlled for" (Hassard, 1991, P 251-252).

Forward stepwise, multiple regression analyses were used to determine the extent to which socioeconomic and demographic variables, acculturation, medical conditions, physical activity, social activity, accessing information, utilisation of health services and community aged care services, and caregiving are associated with each other, and to identify which of them are significant predictors and are regressed onto a single criterion variable. Only variables with a statistically significant ( $P < 0.05$ ) linear regression coefficient were retained in the final multivariate regression analysis model. Various combinations of predictor variables and various methods for including specific variables (dichotomising, continuous, and dummy) were tried. Since the results were not very sensitive to methods of categorisation, dummy variables were generally used to facilitate interpretation.

Multiple regression is used to help identify combinations of two or more predictor variables for some specific criterion variables (Argyrous, 2000). Often, in the process of identifying the best combination of predictor variables, the confounding effects of spurious relationships are eliminated by controlling certain variables (Ellis, 1994). However, in the present research, the selection of variables for inclusion into a multiple regression model was based on prior knowledge, univariate and bivariate analysis results and several significant predictors were found, although some of them were not strong.

In order to carry out a comparative analysis (see result chapter 8) on utilisation of health services, and community (basic and supportive) aged care services; the Iranian data file and New South Wales health survey (1999) were split into separate groups for analysis, based on the values of one or more grouping variables. In selecting multiple grouping variables, cases were grouped by each variable within categories of the preceding variable on the groups based on list. Cases sorted by values of the grouping variables and in the same order that variables were listed in the groups based on list. Once developed, the final model was tested on the records to see if the same variables entered into the equation and provided similar results.

In this analysis, first, a combination of independent variables in all dimensions was computed by multivariate regressions to account for the percentage of the variance. Only the results of significant predictors are mentioned in the following tables. Second, to understand the unique contribution of each of predictors, linear regression analysis was performed. Results are shown under the heading of “Unique variance due to predictor”. Therefore, first, multivariate regression analysis was conducted to help identify combinations of two or more predictor health variables for utilisation of health services and community (basic and supportive) aged care services which utilised criterion variables. Linear regression analysis was then used to evaluate dimensions of health variables: Kessler (K6), Well-being, ADL, SF-36, predicted health services utilised, and community (basic and supportive) aged care services/ HACC in Iranian and New South Wales elderly respondents. Only variables with a statistically significant ( $P < 0.05$ ) linear regression coefficient were retained in the final multiple model.

## Missing data

Missing data resulted in smaller sample sizes than intended, and thus, in most cases, reduced the power of the statistical analysis. Missing data is problematic in social science studies and even more so in multiple data and longitudinal data analysis (Li, 2004). To avoid any ambiguity in results the present research used only

complete returned questionnaires with no missing data (N=302) and those questionnaires with missing data (N=56) that could not be rectified were not included in the survey.

## Validity and reliability

Validity and reliability of the questionnaires are important issues in research. To maintain the validity of the questionnaire, a similar design to the New South Wales survey questionnaire was maintained. To examine the readability of the questions and the appropriateness of the questionnaire for Iranian older people, piloting of the survey questionnaire was carried out and some of the questions were modified. Given that some study subjects had difficulties with reading, the researcher carried out face-to-face interviews with those participants.

Inter-item correlation Cronbach's coefficient and inter-item correlation were computed with all the subscales used in the analysis and Cronbach's alpha was checked before the scale was included in the analysis. Only the scales with high alpha level were used in the analysis.

The researcher had a chance to check some data during interviewing. In many instances, where the respondents were confused or lacking information, the researcher had a chance to clarify and explain to subjects, thus ensuring the quality of the survey data. Moreover, as the subjects were assured by the researcher's position, they provided data without hesitation or doubt. This no doubt also helped to ensure the quality of survey data. The involvement of researcher in all phases of data collection provided confidentiality and greatly helped the subjects to better understand some questions' meaning or phrases. The length and intensity of the interview sessions helped the researcher to observe the subjects more closely. This provided an opportunity to check the validity and reliability of data.

Despite the above measures, the validity of responses could not be totally assured, as is the case with any research of this nature. Although there is no basis to suspect that the data is an inaccurate representation of the Iranian elderly living in the Sydney metropolitan area, the potential biases inherent in the convenient sampling procedures must be kept in mind when considering the feasibility of the study.

### **Limitations of the study**

There were several limitations within the study. Approximately 56 of the total number of surveys received could not be used in the analysis, this was due to missing of more than 50% of the answers and unavailability of information regarding the participants or the participant did not want to give more information. The survey included 188 questions which might have made elderly participants tired. A second limitation was the inaccessibility of mailing addresses and/or telephone numbers for the Iranian elderly. This caused difficulties in contacting eligible participants.

## CHAPTER FOUR: Descriptive Analysis

### Socioeconomic, demographic and migration background

In 2005, according to the Department of Immigration and Multicultural Affairs (DIMIA, 2005) the population of Iranian people in Australia was 18,840 with 10,410 living in the state of New South Wales. Of those, 1209 were aged 65 or older and living in the Sydney metropolitan area (Australian Institute of Health and Welfare, 2001).

According to the information acquired in this study, only 7.3% of the Iranian elderly respondents arrived in Australia before in 1975. The greater proportion of the respondents (46.4%) migrated to Australia between 1985 and 1994, followed by 28.5% of participants who arrived between 1995 and 2006 (Table 4.1).

Table 4.1 Migration of Iranian elderly respondents

<b>Years</b>	<b>N</b>	<b>Percentage</b>
1965 – 1974	22	7.3
1975 – 1984	54	17.9
1985 – 1994	140	46.4
1995 – 2006	86	28.5

Table 4.2 Participant sociodemographic distribution

Variables	Frequency	Percentage
<b>Age groups</b>		
65-69	140	46.4
70-74	63	20.9
75-79	49	16.2
80 +	50	16.6
<b>Gender</b>		
Male	148	49.0
Female	154	51.0
<b>Marital status</b>		
Married	196	64.9
Living with partner	2	0.7
Widowed	72	23.8
Divorced	14	4.6
Separated	17	5.6
Never married	1	0.3
<b>Number of children in Australia</b>		
No children	20	6.7
One child	63	20.9
2 children	105	34.8
3 or more children	114	37.7
<b>Lives in household with</b>		
No-one (alone)	62	20.5
Spouse/partner	135	44.7
Children	84	27.8
Family member/ friends/neighbor	21	7.0

Table 4.2 provides a summary of participant demographic distribution. 46.4% of Iranian elderly were between 65-69 years old. The second largest age group was 70-74 years. Only 16.6% of the Iranian elderly respondents were over the age of 80. 49% of the Iranian respondents were male and 51% were female. According to the 2006 Census, the age distribution recorded 13.0% of Iranian-born living in Australia were 65 years and over. Of the Iranian-born in Australia, there were males (52.4%) and 47.6% females (ABS, 2007).

Most were married or living with a partner; there were about one quarter widowed and about 10% separated or divorced. Nearly all participants had children living in Australia, with over one third having three or more children.

Most of the Iranian elderly respondents (44.7%) lived with their spouse; 20.5% of them lived alone. Nearly one third (27.8%) lived with their spouse along

with one or more of their children. A small percentage (7.0%) lived with a sibling or other relatives.

Table 4.3 Participant sociodemographic distribution

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Language spoken at home</b>		
Persian (Farsi)	257	85.1
English	45	14.9
<b>Communicate in English</b>		
Very well/well	82	27.2
Not well	137	45.4
Not at all	83	27.5
<b>Read English</b>		
Very well/well	83	27.5
Not well	126	41.7
Not at all	93	30.8
<b>Education</b>		
Bachelor or higher degree	53	17.5
Associate/certificate, diploma	100	33.1
Secondary/high school	71	23.5
Primary	50	16.6
No formal education	28	9.3

The greater proportions of the Iranian elderly respondents (85.1%) speak Farsi at home and 14.9% of respondents usually speak English at home.

Regarding the Iranian elderly participants' educational backgrounds, Table 4.3 shows that 17.5% respondents had university degrees (Bachelor degree or higher). A majority of respondents (33.1%) had an associate/certificate or diploma. About one quarter of the Iranian elderly respondents (23.5%) only finished high school or had started, but not completed, high school. 16.6% had only a primary education, and 9.3% respondents had no formal education.

Nearly half of the residents (45.4%) could communicate in English "not well", and about one quarter (27.5%) could communicate in English "not at all". However, over one quarter of the respondents (27.2%) could communicate English "very well /well".

Table 4.4 Economic background in Iranian elderly

<b>Variables</b>	<b>Frequency</b>	<b>percentage</b>
<b>Employed</b>	22	7.3
<b>Retired</b>	280	86.8
<b>Type of pension</b>		
Age pension	235	77.8
Disability/Sickness pension	26	8.6
Had no pension	41	13.6
<b>Monetary situation</b>		
Can't make ends meet	49	16.2
Just enough to get along	203	67.2
Comfortable	50	16.6
<b>Housing type</b>		
Owner or purchasing	75	24.8
Retirement village	29	9.6
Renting	183	60.6
Board free/living with children	15	5.0
<b>Health concession card</b>	262	86.8
<b>Private health insurance</b>	65	21.6

The bulk of the Iranian elderly respondents were retired: 92.7% had no job, and only 7.3% were still working. Among those respondents 86.8% were in receipt of a pension and 13.2% were not receiving a pension. These were the group of Iranian elderly respondents who had not met the requirements for pension payments or were on bridging benefits until they became eligible. Of those Iranian elderly respondents who received a pension, the majority (90.1%) were on the age pension, 8.4% received a disability pension and 1.5% was in receipt of sickness benefits. In relation to monetary situation, 16.6% of the Iranian elderly respondents were living comfortably. A similar proportion (16.2%) of respondents had financial problems and could not make the ends meet. The rest of the respondents (67.2%) were able to manage their financial situation. The greater proportion of the Iranian elderly respondents (60.6%) paid rent to a private landlord or to the government for public housing. However one quarter (24.8%) of respondents was outright owners of their home or paying it off. Meanwhile, 9.6% of respondents were leasing, or purchasing in a retirement village and 5% of elderly respondents were living with their children. Everyone who is on pension receives a health concession card and, as mentioned earlier, a great majority of the Iranian elderly respondents are pensioners, so they had health concession cards as well (86.8%). Only 13.2% respondents who were not in receipt of a pension did not hold this card. Nearly a quarter (21.6%) of the Iranian

elderly respondents were using private health insurance to cope with medical expenses; nevertheless more than three quarters (78.4%) still were relying on the Medicare and health care cards.

## General health and medical conditions

Table 4.5 reports participants' self-rating of general health. Nearly half of the respondents rated their health as fair and about one third claimed that they had poor health status. Most also believed that in comparison to five years ago their health status had deteriorated. Over one third had spent in a week in bed due to an illness in the year prior to this research.

Table 4.6 shows that most participants had at least one chronic medical condition: 21.9% claimed that they were suffering from arthritis; 17.9% had problems with incontinence; and the third most common problem (11.9%) was high blood pressure.

Table 4.5 General health status in the Iranian elderly

General Health variables	Frequency	percentage
<b>Self-rated General Health</b>		
Excellent/very good	19	6.3
Good	55	18.2
Fair	140	46.4
Poor	88	29.1
<b>Health status in general, compared with 5 years ago</b>		
Better now	8	2.6
About the same	107	35.4
Worse now	187	61.9
<b>One week in bed in last 12 month</b>		
Due to an illness	99	32.8
Due to an accident	9	3.0
Due to accident and illness	4	1.3

Table 4.6 Medical conditions in the Iranian elderly

Medical conditions	Frequency	percentage
<b>Medical conditions based on acute/chronic problems</b>		
Acute Medical Condition	49	16.2
Chronic Medical Condition	224	74.2
<b>Medical conditions causes most difficulty</b>		
Arthritis	66	21.9
Depression	3	1.0
Asthma	2	0.7
Diabetes	4	1.3
High blood pressure	36	11.9
Heart disease	13	4.3
Memory problems	10	3.3
Eyesight problems	33	10.9
Problems with sleeping	31	10.3
Headache	21	7.0
Incontinence	54	17.9
Total	273	90.4
No problem	29	9.6

### *Oral health and sensory screening*

Results of an oral health survey showed that 40.7% of the respondents had lost all their teeth and only 7.3% had all their natural teeth. Nearly half of the respondents had had problems with their teeth, mouth and/or their dentures in the last 12 months.

Table 4.7 Oral health in the last 12 months in Iranian elderly

Variables	Frequency	Percentage
<b>Teeth missing</b>		
Yes, but have some natural	157	52.0
Yes, all natural missing	123	40.7
None of natural missing	22	7.3
<b>Had problem with teeth/mouth or dentures, last 12 month</b>		
Often	41	13.6
Sometimes	102	33.8
Hardly ever	43	14.2
Never	116	38.4

### *Women's health*

From the total population of women in the study, 78.6% reported having had a mammogram, while 27.5% of women respondents reported having had a clinical breast examination by a doctor, nurse or other health professional.

Table 4.8 Breast exam in the Iranian elderly women

Women's health	Frequency	Percentage
Ever had mammogram	121	78.6
Ever had a clinical breast examination	83	27.5

## Physical health: Physical functioning, Activity of Daily Living (ADL)

### *Physical Functioning*

Physical functioning distribution in Iranian elderly respondents reveals that the majority of respondents (84.4%) had a health limitation in doing vigorous activities (such as running, lifting heavy objects or participating in strenuous sport); many (69.9%) had moderate limitations in doing activities such as moving a table, pushing a vacuum cleaner, playing lawn bowls or golf or bushwalking; 68.5% respondents had a health limit in lifting or carrying groceries; and about three quarters (73.2%) of elderly respondents had a health limit in climbing several flights of stairs. 69.2% elderly respondents had physical functioning limitation in walking more than one kilometre or about half a mile, followed by a limitation in bending, kneeling or stooping (68.5%). However, only a fifth (20.9%) of respondents had physical functioning limitation in bathing or clothing independently.

The total score range for physical functioning was from 10-30; the raw results were then grouped into classified in the three categories. Higher scores indicate better physical functioning as no limitation, and lower scores indicate poorer physical functioning as a high limitation in doing different types of activities.

Not quite half of the Iranian elderly respondents were rated no limitation in their physical functioning (40.7%). About the same (41.1%) experienced moderate limit in their physical functioning conditions to do moderate and vigorous activities and only one fifth of respondents (18.2%) claimed to suffer from a high level of limitation in their physical functioning.

Table 4.9 Percentage of physical functioning/SF-36 scale rating

Physical functioning rating	Frequency	Percentage
High limitation	55	18.2
Moderate limitation	124	41.1
No limitation	123	40.7

Table 4.10 Physical functioning

Physical functioning variable	Frequency	Percentage
Limit vigorous activities	255	84.4
Limit moderate activities	211	69.9
Limit lifting/carrying groceries	207	68.5
Limit climbing several flights/stairs	221	73.2
Limit climbing one flights/stairs	60	19.9
Limit bending, kneeling/stooping	207	68.5
Limit walking more than one kilometre	209	69.2
Limit walking half a kilometre	173	57.3
Limit walking 100 meters	118	39.1
Limit bathing/dressing	63	20.9

### *Activity of Daily Living (ADL)*

The ADL measure is a five-item questionnaire intended to yield a measure of the capability of doing daily living activities in old people by themselves and the level of supervision needed in their activity of daily living. Distribution of activity of daily living confirms that 64.2% of the Iranian elderly respondents were capable of doing their household duties like laundry, vacuuming or dusting by themselves; also 76.5% said that they could prepare their meals, and 43.7% of respondents could do their home maintenance or gardening. However, 16.9% of elderly respondents claimed to need help or supervision with personal care such as showering or bathing, clothing or getting to the toilet. In the meantime, a quarter of respondents (25.5%) reported the need for help with cutting their toenails. Concerning the use of walking aids among elderly people who cannot do moderate or vigorous activities, 13.6% of respondents used a cane or walking stick, followed by 4.0% who used a frame or walker to do moderate or vigorous activities. However, the greater proportion did not use any aids (80.1%).

The total score range of activity of daily living was 0-5; the raw results were classified into the three categories: high, moderate and less need for supervision or help in their activity of daily living.

Rating outcomes of activity of daily living demonstrate that, in the period of survey, more than half of the Iranian elderly respondents (56.0%) were rated as in the less need for supervision level in their ADL. About one third of respondents (29.8%) rated in the moderate need supervision level, followed by 14.2% who had high need of supervision in their daily living activities.

Table 4.11 Percentage of ADL scale rating

Activity of Daily Living(ADL) rating	Frequency	Percentage
High need for supervision	43	14.2
Moderate need for supervision	90	29.8
Less need for supervision	169	56.0

Table 4.12 ADL and walking aids

Activity of Daily Living(ADL) variables	Frequency	Percentage
Do household duties on their own	194	64.2
Prepare meals on their own	231	76.5
Home maintenance or gardening on their own	132	43.7
Need help with personal care	51	16.9
Need help to cut toenails	77	25.5
<b>Walking aids</b>		
Cane/stick	41	13.6
Walker/frame	12	4.0
Wheelchair	7	2.3
Do not use any aids	242	80.1

### *Physical Activity*

Physical activity has a strong preventive effect on coronary heart disease and stroke, healing of hypertension and avoidance of falls (Mathers, Vos, Stevenson, & Begg, 2001). Health survey studies recommend that major health benefits can result from moderate strength physical activity totalling 30 minutes daily (NSW Health Department, 2000). In the New South Wales Older People's Health Survey (1999), adequate physical activity for elderly 65+ years was defined as doing at least 30 minutes of vigorous or moderate activity or walking on at least five days in the last week.

Table 4.13 Physical activity in the Iranian elderly

Compared to the peers group of same age	Frequency	Percent
A bit, to much less active	184	60.9
About as active	78	25.8
A bit, to much more active	40	13.2
<b>Days in last week, walked at least half an hour</b>		
Had no walking as physical activity	108	36.5
1-2 days	69	23.3
3-4 days	50	16.9
5+ days	69	23.3
<b>Days in last week had moderate activities for at least half an hour</b>		
Had no moderate activities	97	32.6
1-2 days	63	21.1
3-4 days	59	19.8
5+ days	79	26.5
<b>Days in last week had vigorous activities for at least half an hour</b>		
Had no vigorous activities	203	67.7
1-2 days	61	20.3
3-4 days	26	8.7
5+ days	10	3.3
<b>Have heard of exercise/physical activity campaign</b>	47	15.6
<b>Any reasons for not being physically active</b>	223	73.8
<b>Reasons to keep being more physically active</b>		
Health/pain problem	123	40.9
Weather/feel unsafe streets/worried about dogs	11	3.7
Don't like exercise alone	112	37.2
Afraid of falling over	39	13.0
Transportation problem	16	5.3

The Iranian elderly respondents compared their physical activity to other nationalities of the same age groups as: a bit, to much less active (60.9%), and 25.8% respondents rated their physical activity about as active. In contrast, only 13.2% of respondents self-rated themselves a bit, to much more active. Many elderly residents (36.5%) did not walk at all for at least half an hour in the last week prior to this study. Only 23.3% the Iranian respondents walked at least five days or more for at least half an hour in the last week as adequate physical activity. Based on the definition of physical activity, just 26.5% of respondents had moderate activities on at least five days or more for at least 30 minutes in the last week as adequate physical activity. However, the greater part of the Iranian elderly respondents (32.6%) had no moderate activities, such as dancing, golf, lawn bowls, for at least 30 minutes in the last week. The following results demonstrated that 67.7% of the respondents had no vigorous activities such as gardening or yard work for at least half an hour in the last week, and only 3.3% of elderly respondents had vigorous activities at least five days or more for at least half an hour in the last week as an adequate physical activity measure. 84.4%

of Iranian elderly respondents had not heard of the exercise and physical activity campaigns. The largest percentage (73.8) of respondents had reasons that keep them from being more physically active. Of those, 40.9% claimed pain and health problems such as arthritis, heart problem, bad knees, walking problem and incontinence which kept them from being more physically active. “Don’t like to exercise alone” (37.2%) was the second major reason that the Iranian elderly residents gave for not being physically active.

### *Incontinence*

Regarding urinary symptoms in the preceding four weeks—a common problem in elderly people—the results of the study show that about half of the respondents did not have to unexpectedly rush to the toilet to urinate during the day or night; however nearly one third (27.9%) of them had to unexpectedly rush to the toilet to urinate during the day or night in the last four weeks prior to this research. In this regard 28.8% of Iranian elderly sometimes leaked urine when they were physically active or exerted themselves or when they coughed or sneezed, in the last month. 27.4% who were suffering from urine leak had talked with a health professional about this problem.

Table 4.14 Urinary symptoms in the last 4 weeks in Iranian elderly

<b>Incontinence</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Unexpectedly rush to toilet to urinate, during the day or night</b>		
Most of the time	69	23.2
Some of the time	83	27.9
None of the time	146	49.0
Don't know	4	1.3
Total	302	100.0
<b>How often urine leak when physically active, during the day or night</b>		
Most of the time	33	11.0
Some of the time	86	28.8
None of the time	180	60.2
Don't know	3	1.0
Total	302	100.0
<b>Talked with a health professional about incontinence</b>	82	27.4

### *Falls*

More than one third (34.4%) of Iranian elderly respondents had a fall within the last 12 months and just 16.2% required medical treatment for injuries caused by falling. Only 6.3% of the Iranian elderly respondents were using a personal alarm for falling or other types of emergency. To prevent falling, 20.9% of respondents considered doing some sort of program or a gentle type of exercise to strength their physique, while only 4.3% were doing exercise in order to reduce chances of falling.

Table 4.15 fall in the last year in Iranian elderly

<b>Falls</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Had a fall</b>	104	34.4
<b>Had a fall, required medical treatment for injuries</b>	49	16.2
<b>Using personal alarm in case of a fall</b>	19	6.3
<b>Consider doing a program of gentle exercise to reduce falling</b>		
Yes	63	20.9
Already do exercise	13	4.3

### *Immunisation*

Although 72.2% of respondents reported they that they had been advised by a health professional to be vaccinated against flu. Only 60.9% were immunised against flu in the last 12 months.

Health professionals gave advice to 5.3% of Iranian elderly respondents to be vaccinated against pneumonia, but only 3.0% of respondents were vaccinated against pneumonia in the last 12 months.

Table 4.16 Immunisation in the last 12 months in the Iranian elderly

<b>Immunisation</b>	<b>Frequency</b>	<b>Percentage</b>
Advised to be vaccinated against flu	218	72.2
Flu vaccination	184	60.9
Advised to be vaccinated against pneumonia	16	5.3
Vaccinated against pneumonia	9	3.0

## Mental health: Psychological distress and psychological wellbeing

### *Psychological distress (Kessler/K6)*

The Kessler K6 comprises six self-rating questions about the level of anxiety and depressive symptoms in the most recent four-week period prior to the survey. The majority (18.9%) of Iranian older people reported feeling they needed effort most of the time, followed by feeling so sad and nervous (17.2%) most of the time in the last four weeks.

The total score range of psychological distress was 6-30; raw scores were classified into three categories: high, moderate and less distress. Scoring of 6 to 14 is considered as high, 15 to 22 as moderate and 23+ as less distress. A lower score means a higher psychological distress level, and a higher score means lower psychological distress level.

In the most recent four-week period prior to the survey, a small percentage of the Iranian respondents (15.6%) were rated as having a high level of anxiety and depressive symptoms. The majority (44.0%) of respondents had moderate distress. The rest of the Iranian respondents (40.4%) had a low level of anxiety and depressive symptoms.

Table 4.17 Percentage of psychological distress /K6 scale rating

<b>Psychological distress(K6) rating</b>	<b>Frequency</b>	<b>Percentage</b>
High distress	47	15.6
Moderate distress	133	44.0
Less distress	122	40.4

Table 4.18 Psychological distress /K6

K6 variables	Frequency	Percentage
<b>How often feel sad</b>		
All of the time	16	5.3
Most of the time	52	17.2
Some of the time	115	38.1
A little of the time	70	23.2
None of the time	49	16.2
<b>How often feel nervous</b>		
All of the time	20	6.6
Most of the time	52	17.2
Some of the time	108	35.8
A little of the time	83	27.5
None of the time	39	12.9
<b>How often feel restless</b>		
All of the time	20	6.6
Most of the time	44	14.6
Some of the time	108	35.8
A little of the time	72	23.8
None of the time	58	19.2
<b>How often feel hopeless</b>		
All of the time	13	4.3
Most of the time	32	10.6
Some of the time	103	34.1
A little of the time	73	24.2
None of the time	81	26.8
<b>How often feel needed effort</b>		
All of the time	22	7.3
Most of the time	57	18.9
Some of the time	90	29.8
A little of the time	73	24.2
None of the time	60	19.9
<b>How often feel worthless</b>		
All of the time	18	6.0
Most of the time	42	13.9
Some of the time	67	22.2
A little of the time	67	22.2
None of the time	108	35.8

### *Psychological Wellbeing*

The psychological wellbeing measure is a five-item questionnaire intended to yield measures of feeling happy and depressed, and the level of wellbeing generally, in the most recent four-week period. From the negative aspect of wellbeing, the highest rates among Iranian elderly surveyed in the four weeks preceding this study were: feeling lonely (22.2%), feeling bored (19.9%), and feeling depressed (17.5%) most of the time. However, from the aspect of positive concepts of wellbeing, only 11.6% of respondents were feeling happy followed by feeling calm and peaceful (12.3%) most of the time in the last four weeks.

Wellbeing scores were classified in the three categories. Higher scores indicate better or high feeling of wellbeing, and lower scores indicate poorer or no feeling of wellbeing.

In the most recent four-week period prior to the survey, more than half of the Iranian elderly respondents (57.9%) were rated in the moderate level of wellbeing; about one quarter of respondents (21.2%) had no feeling of wellbeing; followed by high feeling of wellbeing (20.9%) in the last four weeks proceeding this study.

Table 4.19 Percentage of psychological wellbeing scale rating

<b>Psychological wellbeing rating</b>	<b>Frequency</b>	<b>Percentage</b>
No feeling of wellbeing	64	21.2
Moderate feeling of wellbeing	175	57.9
High feeling of wellbeing	63	20.9

Table 4.20 Psychological wellbeing

<b>Wellbeing</b>	<b>Frequency</b>	<b>Percentage</b>
<b>How often feel happy</b>		
Most of the time	35	11.6
Some of the time	200	66.2
None of the time	67	22.2
<b>How often feel calm and peaceful</b>		
Most of the time	37	12.3
Some of the time	173	57.3
None of the time	92	30.5
<b>How often feel bored</b>		
Most of the time	60	19.9
Some of the time	199	65.9
None of the time	43	14.2
<b>How often feel lonely</b>		
Most of the time	67	22.2
Some of the time	152	50.3
None of the time	83	27.5
<b>How often feel depressed</b>		
Most of the time	53	17.5
Some of the time	154	51.0
None of the time	95	31.5

## Utilisation of health services and community aged care services

### *Utilisation of health services*

The use of health services measure is a six-item questionnaire intended to measure different types of health services used in the preceding 12 months when the person consulted, or was visited by, a health professional regarding their particular health problem. The distribution of those who consulted a GP or local doctor about their health problem in the last 12 months among the Iranian elderly respondents was 91.7%, followed by those who consulted a chemist (65.6%). In contrast, only 8.3% of respondents visited or had been visited by a community nurse or a private nursing service. The percentage of respondents who had visited or been visited by a podiatrist or chiropodist in the last 12 months was 15.6%.

The total score range was 0-6; the raw results were then analysed and classified in the three categories. Higher scores indicated a high-use of health service, lower scores indicated a lower-use of health service, and score of 0 was considered as no use of health services in the last 12 months proceeding to the survey.

In the last 12 months before the survey, more than half of the Iranian respondents (59.9%) were rated in lower-use level of health service. This means respondents visited or consulted one or two types of health services. About one third of respondents (36.4%) visited or consulted three or more than three types of health professional service as high use of health services, followed by only 3.6% who did not use any of health services.

Table 4.21 Health services utilised scale rating

<b>Health services utilised rating</b>	<b>Frequency</b>	<b>Percentage</b>
No use of health service	11	3.6
Less use type of health services	181	59.9
High use type of health services	110	36.4

Table 4.22 Health services used in the Iranian elderly

Use of health services	Frequency	Percentage
Consulted GP	277	91.7
Community nurse	25	8.3
Visited podiatrist	47	15.6
Consulted chemist	198	65.6
Visited physiotherapist	74	24.5
One night in hospital	81	26.8

### *Utilisation of community (basic and supportive) aged care services*

Utilisation of community services relates to old people who cannot do household duties or maintenance, or personal care on their own. It is composed of a eight-item questionnaire to measure individual utilisation of basic maintenance and supportive community aged care services in the last week and the last four weeks preceding the survey (see Methodology chapter also for further questions). Tasks of community aged care services were considered to fall into two particular categories. The first is basic maintenance services, which includes: household duties (laundry, vacuuming, cleaning); personal aged care (showering, bathing, dressing, getting to the toilet); and meals at home. The second is supportive aged care services which include: home maintenance/modification or gardening; day care services; special transport (shopping, errands, and medical visits); and respite services.

On the subject of who is in charge of helping elderly respondents who could not do household duties, home maintenance or personal care by themselves, the results demonstrated 19.2% of respondents “Don't need any help”. 22.5% of the Iranian elderly received different types of assistance, being private, governmental or voluntary community aged care services. However, 14.9% of the Iranian elderly respondents were not receiving any help with household duties, home maintenance or personal care, although they were incapable of doing it. Of the 22.5% of respondents who utilised an organised community service (private, public or voluntary), (5.3%) of respondents received services to help with household duties such as laundry, vacuuming, dusting between 1-4 hours (3.3%) in the last week preceding the survey, followed by 5.0% respondents who utilised community services to help with personal care at home with an average of 1-4 hours (4.6%) in the last week preceding to

survey. Moreover, 2.6% of respondents' utilised community aged care services to deliver or prepare meals at home, between 1-3 times (2.3%) in the last week preceding the survey. From those old people who utilised supportive community aged care services/HACC in the last four weeks prior to the study, only special buses to take the respondents for shopping, errands or medical appointments were utilised more (5.3%). All elderly respondents who reported not receiving any help in activities that they were incapable of doing, 14.9% claimed to need help with community services or aged care tasks at home (15.0%). From 14.9% of elderly respondents who were not receiving any help in daily activities that they were incapable of doing, 22.8% reported the need for more help with household duties, meals at home, and home maintenance, followed by need for more help in personal care (11.6%).

22.5% of respondents used organised community services such as home care, meals on wheels, home nursing, private, public or voluntary services. The main reason why respondents who used community aged care services/HACC (home care, meals on wheels, home nursing, private, public or voluntary services) did not receive more help with tasks was because of language and cultural barriers (71.4%). Furthermore, on the subject of knowledge about availability of aged care services for older people and caregivers in their area, just 7.9% respondents had awareness, and also only 8.9% residents were familiar enough with a responsible contact person to ask for support.

The total score range was 3-6 for community basic aged care services utilised in the last week, and the total score range was 7-10 for community supportive aged care services utilised in the last four weeks prior to the study; the raw results have then been analysed and have been classified in the two categories (high and low) for each basic and supportive community aged care services utilised.

A vast percentage of the Iranian elderly respondents (95.7%) were in the low level of utilisation of basic maintenance aged care services and only 4.3% were in high level of community basic aged care services utilised in the last week preceding the study.

An enormous percentage of the Iranian elderly respondents (98.0%) were in the low level of utilisation of supportive aged care services and only 2.0% were in high level of community supportive aged care services utilised in the last four weeks preceding the study.

Table 4.23 Percentage of community (basic aged care) services scale rating **in the last week**

<b>Community (basic aged care) services utilised rating</b>	<b>(N)</b>	<b>%</b>
High utilise basic aged care services	13	4.3
Low utilise basic aged care services	289	95.7

Table 4.24 Percentage of community (supportive aged care) services scale rating **in last 4 weeks**

<b>Community (supportive aged care) services utilised rating</b>	<b>(N)</b>	<b>%</b>
High utilise supportive aged care services	6	2.0
Low utilise supportive aged care services	296	98.0

Table 4.25 Community aged care services

Utilisation of Community aged care services	Frequency	Percentage
<b>Who helps to do basic or supportive aged care</b>		
Spouse/partner	53	17.5
Children	73	24.2
Other family, friends or neighbours	5	1.7
Services (private, public or voluntary)	68	22.5
No one helps	45	14.9
Don't need any help	58	19.2
<b>Awareness of available aged care services</b>	24	7.9
<b>Awareness who to contact to ask for help</b>	27	8.9
<b>Services to help with household duties, in last week</b>	16	5.3
<b>Hours of household services, in last week</b>		
1- 4	10	3.3
5+	6	2.0
<b>Services to help with personal care at home, in last week</b>	15	5.0
<b>Many times services help with personal care, in last week</b>		
1- 4	14	4.6
5+	1	0.3
<b>Services deliver/prepare meals, in last week</b>	8	2.6
<b>Many meals delivered by services, in last week</b>		
1-3	7	2.3
4+	1	0.3
<b>Home maintenance/gardening services, in last four weeks</b>	3	1.0
<b>Attend a day care centre, in last four weeks</b>	4	1.3
<b>Home visit by respite services, in last four weeks</b>	3	1.0
<b>Stay overnight at any respite services, in last four weeks</b>	3	1.0
<b>Transport by special buses services, in last four weeks</b>	16	5.3
<b>Need help with any services/tasks at home</b>	45	15.0
<b>Type of tasks need to help</b>		
Not need more help	25	54.0
Household duties, meals at home, home maintenance	10	22.8
Personal care	5	11.6
Day care service, respite services	1	2.6
Special transport	4	8.9
<b>Main reason did not receive help with tasks from community aged care services/HACC</b>		
Did not know of available	2	3.2
Unable to arrange service	3	4.8
No service is available	4	6.3
Not eligible	2	3.2
Does not provide sufficient hours	8	11.1
Language cultural barriers	49	71.4

## Caregivers/Caregiving

Caregiving people usually are the main persons responsible for caring for someone who has a long-term illness, disability or other problem; such a problem would prevent caregivers from managing their household tasks of personal care independently.

Results show that 14.9% of the Iranian elderly respondents had the main responsibility in caring for someone who had a long-term illness, disability or other

problem. 7.6% of respondents were responsible for looking after their husbands; 5.3% of them cared for their wives. During the week prior to the study, only very few (N= 4, 1.3%) respondents used special transport services for shopping, errands, or medical visits. Regarding utilisation of caregivers' support services, only a very small number (N= 3, 1.0%) of elderly carer respondents used day care services, and no-one used respite care services at home in the four weeks prior to study. Among elderly respondents who claimed to "need more help with carer support services" (12.3%), "need help with special transport to do shopping, run errands or attend medical visits" (5.6%) was the most common respondent need, followed by home nursing services (2.3%) such as treatments, wounds dressing, monitoring/checkups. Respondents reported the main reasons that they did not receive carer support/help services were: lack of awareness of availability of carer services (8.3%); and inability to arrange carer services (2.3%); followed by costs of carer services (2.3%).

Table 4.26 Caregivers/caregiving in the Iranian elderly

Caregiving/Caregivers	Frequency	Percentage
<b>Being main person responsible for caring for someone</b>	45	14.9
<b>The person cared for:</b>		
Husband	23	7.6
Wife	16	5.3
Daughter	1	0.3
Mother	5	1.7
No-one	257	85.1
<b>Used services at home to help carer in the last week</b>		
Personal care	2	0.7
Deliver meals to home	1	0.3
Home maintenance/gardening	3	1.0
Special transport services	4	1.3
None of services	292	96.7
<b>Used carer support services in last 4 weeks</b>		
Day care centre	3	1.0
Respite care at home	0	0.0
<b>Need more help with carer support</b>	37	12.3
<b>Need help with:</b>		
Household duties	5	1.7
Meals at home	3	1.0
Home maintenance/gardening	5	1.7
Special transport	17	5.6
Home nursing	7	2.3
None of carer services	265	87.7
<b>Main reasons did not receive help with services</b>		
Did not know of services	25	8.3
Need not important enough now	5	1.7
Unable to arrange service	7	2.3
Service costs too much	8	2.6

## Social activity, housing arrangement, and accessing information

### *Social activity*

In terms of social activities among the Iranian elderly, results revealed that the greater part of respondents spent their days reading books and magazines (46.2%), followed by listening to the radio, and watching television/videos (17.3%). Moreover 16.3% of elderly respondents in the daytime were visiting their families. Also the results show the major favourite social activity preferred by the Iranian elderly respondents in their free time was watching television (75.2%), meeting other people or other Iranian people, and/or having a meal together (12.3%).

Self-rated social activity questions reveal, unfortunately, that about one third (32.4%) of the Iranian elderly respondents were not very active, and 30.7% not active

at all; the rest (31.4%) were fairly active. 22.8% of the Iranian elderly respondents had a health problem which kept them from being more socially active; however, about the same percentage (23.8%) had no problem which kept them from being more socially active.

In terms of the social relations with their family members and friends, more than half of the Iranian elderly respondents had contact with friends (58.3%) by telephone and 16.9% respondents had contact by phone with their family in the last weeks. Regarding being socially active and getting out of their homes for any reason, the majority of respondents (46.7%) were socially active every day or most days of the week; only 7.0% never or less than once a month got out of their homes for any reason. Generally, the Iranian elderly respondents (35.4%) left their homes for any reason at least once a week.

Table 4.27 Social activity background of the Iranian elderly

<b>Spend day</b>	<b>Frequency</b>	<b>Percentage</b>
Housework, shopping, doing craft, minding grandchildren	28	9.3
Listening to radio, watching TV/videos	52	17.2
Going to clubs, church/mosque, Iranian groups, friends	33	10.9
Visiting family	49	16.2
Reading books/ magazines	140	46.4
<b>Do the most in free time</b>		
Stay at home	8	2.6
Meet other people/Iranian or have a meal	37	12.3
Do activities together, study, information sessions, attend church/mosque	30	9.9
Watching TV	227	75.2
<b>Self-rated social activity</b>		
Very active	16	5.3
Fairly active	93	30.8
Not very active	102	33.8
Not active at all	91	30.1
<b>Things that keeps from being more socially active</b>		
Health problem	69	22.8
Not enough time, can't be bothered, no friends/ family close by	53	17.5
No transport, not safe	49	16.2
Costs of activities or transport	41	13.6
Don't like going out/ shy/language barrier	18	6.0
Nothing keeps them from being more socially active	72	23.8
<b>Socialising in the weeks prior to this survey</b>		
Gone out to visit family/had family to visit them	17	5.6
Had contact by phone with family	51	16.9
Gone out to visit friends/had friends to visit them	29	9.6
Had contact by phone with friends	176	58.3
No contact with family or friends	29	9.6
<b>How often they get out of their home for any reason</b>		
Almost never/ less than once a month	21	7.0
1 to 3 times a month/ Once a week	107	35.4
A few times a week	33	10.9
Every day or most days of the week	141	46.7

### *Housing arrangements*

On the subject of housing arrangements, making any changes to their home to make it easier to live in, since the Iranian elderly respondents were 65 years old or over, more than three quarter (76.0%) of respondents did not make any changes in their homes to make it easier to live in, although 12.0% respondents increased lighting in their house, followed by 7.0% who put a bath seat, hand shower or special non-slip mats in their bathrooms.

Table 4.28 Change home to easier live in the Iranian elderly

<b>Change home to make it easier to live in</b>	<b>Frequency</b>	<b>Percentage</b>
Installed grab bars/rails and improved paths/steps	11	3.7
Put in a bath seat, hand shower/special non-slip mats	21	7.0
Increased lighting	36	12.0
No changes made	228	76.0
No changes needed	4	1.3

### *Accessing Information*

As shown in table 4.29, the majority of the Iranian elderly respondents indicated that they get their medical information mostly through their doctors (43.3%). Among those who got health-related information from their doctor, only 2.3% got it from English speaking doctors and the rest got information from Iranian doctors. TV as a medium was the most important source for access to information (16.7%), followed by family and friends (16.3%). The least used source for information among the Iranian elderly respondents was Iranian media (15.7%), Iranian newspapers, radios and brochures.

The Iranian elderly who responded to this research claimed that when they needed help to find out about the services available to them, the most relied on their family members and their friends (71%), and 18.9% of respondents asked their health care services for help. 43.4% of respondents felt confident that they could access information over the phone, while only 20.2% accessed the required information through brochures that had been published by relevant organisations in the Farsi language, and no more than 18.5% acquired relevant information by reading brochures in English.

Table 4. 29 Accessing information by the Iranian elderly

<b>Access Information</b>	<b>Frequency</b>	<b>Percentage</b>
Family and friends	49	16.3
Iranian media	47	15.7
Doctors	130	43.3
TV	50	16.7
Community organisations	15	5.0
Others	9	3.0
<b>Need help to find service</b>		
Family and friends	211	71.0
Community organisations	30	10.1
Health care services	56	18.9
<b>Feel confident to access information over phone</b>	131	43.4
<b>Access information, brochures in English</b>	56	18.5
<b>Access information, brochures in Farsi</b>	61	20.2

## CHAPTER FIVE: The Role of Acculturation

### Associations between acculturation and utilisation of health services

A one-way ANOVA test was performed to determine whether there were significant associations between independent variables and type of health services used as a dependent variable. Variables found to have significant relationship with utilisation of different types of health services were used as a multivariate analysis to determine predictors of health services utilised.

Associations between acculturation characteristics, and health services used were measured by one-way ANOVA.

Table 5.1 ANOVA for comparing acculturation variables with health services utilised

Acculturation components	N	Mean k6	Std k6	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Language spoken at home</b>						1	1.52	.218
Farsi	257	2.36	1.268	2.21	2.52			
English	45	2.11	1.191	1.75	2.47			
<b>Communicate in English</b>						2	6.85	.001**
Very well to well	82	1.96	1.261	1.69	2.24			
Not well	137	2.33	1.237	2.12	2.54			
Not at all	83	2.67	1.201	2.41	2.94			
<b>Duration of migration</b>						3	.665	.574
1-5 years	29	2.28	1.645	1.65	2.90			
6-10 years	57	2.16	1.099	1.87	2.45			
11-15 years	65	2.48	1.288	2.16	2.80			
16+	151	2.33	1.221	2.13	2.53			

With regard to acculturation components, only communication in English was significant relationship with the type of health services utilised by Iranian elderly ( $F=6.85$ ,  $P = .001$ ). Elderly respondents who could communicate in English “very well” to “well” were less likely to use different types of health services ( $M=1.96$ ). Therefore, English proficiency was the only acculturation variable that had a significant relationship with respondents’ health service utilisation.

## Associations between acculturation and utilisation of community aged care services/HACC

With regard to acculturation components (language spoken at home, communication in English and duration of migration), the results of the one-way ANOVA test revealed that there were no significant associations between any acculturation components and community basic and supportive aged care services/HACC ( $P \geq .05$ ) used by Iranian elderly respondents.

## Associations between acculturation and psychological distress/K6

The result shows, with regard to acculturation factors, Iranian elderly respondents who did not speak English at home due to lack of English language proficiency usually were more likely to experience high levels of psychological distress ( $F= 4.88$ ,  $P = .028$ ). In other words the research shows that elderly people who could communication in English “very well” to “well” had low levels of psychological distress ( $F= 18.27$ ,  $P = .000$ ). There is no association between length of stay in Australia as a measure of acculturation and psychological distress at  $P \geq .05$ . Therefore, the level of English language proficiency accounts for the significant portion of acculturation among the Iranian elderly respondents.

Table 5.2 ANOVA for comparing acculturation variables with Psychological distress/K6

Acculturation components	N	Mean k6	Std k6	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Language spoken at home</b>						1	4.88	.028*
Farsi	257	20.12	5.820	19.40	20.83			
English	45	22.13	4.398	20.81	23.45			
<b>Communicate in English</b>						2	18.27	.000***
Very well to well	82	22.31	5.003	21.21	23.41			
Not well	137	21.05	5.311	20.15	21.94			
Not at all	83	17.50	5.802	16.23	18.77			
<b>Duration of migration</b>						3	2.192	.089*
1-5 years	29	18.51	6.225	16.14	20.88			
6-10 years	57	19.61	5.598	18.12	21.09			
11-15 years	65	20.43	5.905	18.96	21.89			
16+	151	21.08	5.414	20.21	21.95			

## Associations between acculturation and psychological wellbeing

With regard to acculturation factors, the language spoken at home in Iranian elderly respondents had a significant relationship with participants' feelings of wellbeing ( $F= 5.56, P = .019$ ). Those elderly respondents who did not speak English at home had a lower feeling of wellbeing ( $M=10.28$ ). Results show significant association between communicating in English and psychological wellbeing ( $F= 22.34, P = .000$ ), and demonstrate considerable differences between level of communicating in English among elderly respondents with feeling of wellbeing. Those elderly who communicate in English very well or well, had high levels of wellbeing and happiness ( $M=11.40$ ); however, respondents who could not communicate in English at all had the lowest feeling of wellbeing ( $M=9.06$ ). Results also, show length of stay in Australia has no significant relationship with the feeling level of wellbeing in Iranian elderly.

Table 5.3 ANOVA for comparing acculturation variables and Well-Being in Iranian elderly respondents

Acculturation components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Language spoken at home</b>						1	5.56	.019 *
Farsi	257	10.28	2.529	9.97	10.59			
English	45	11.22	2.021	10.61	11.82			
<b>Communicate in English</b>						2	22.34	.000 ***
Very well to well	82	11.40	2.397	10.87	11.92			
Not well	137	10.66	2.213	10.29	11.03			
Not at all	83	9.06	2.416	8.53	9.58			
<b>Duration of migration</b>						3	1.56	.197
1-5 years	29	9.82	3.174	8.62	11.03			
6-10 years	57	10.05	2.286	9.44	10.65			
11-15 years	65	10.40	2.626	9.74	11.05			
16+	151	10.68	2.318	10.31	11.06			

## Associations between acculturation and physical functioning/SF-36

As an acculturation component, language spoken at home and communication in English in the Iranian elderly respondents has a significant relationship with their levels of physical functioning ( $F= 6.47, P = .011$  &  $F= 22.66, P = .000$  respectively). For instance, Iranian elderly who spoken Farsi at home were more likely to have a

greater limitations in their physical functioning ( $M=21.67$ ), followed by respondents who could not communicate in English at all ( $M=18.87$ ). Therefore, the level of English language proficiency is counted as a significant factor in physical functioning conditions among the Iranian elderly respondents, although there was no significant association between duration of migration and physical functioning conditions at  $P \geq .05$

Table 5.4 ANOVA for comparing acculturation variables in the Iranian elderly respondents with physical functioning/SF-36

Acculturation components	N	Mean k6	Std k6	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Language spoken at home</b>						1	6.47	.011*
Farsi	257	21.67	5.810	20.96	22.39			
English	45	24.02	5.051	22.50	25.54			
<b>Communicate in English</b>						2	22.66	.000***
Very well to well	82	24.39	5.534	23.17	25.60			
Not well	137	22.51	5.169	21.64	23.39			
Not at all	83	18.87	5.573	17.66	20.09			
<b>Duration of migration</b>						3	.388	.762
1-5 years	29	22.34	6.066	20.03	24.65			
6-10 years	57	21.33	5.484	19.87	22.78			
11-15 years	65	21.95	5.874	20.49	23.40			
16+	151	22.25	5.780	21.32	23.18			

## Associations between acculturation and Activities of Daily Living (ADL)

As acculturation components, language spoken at home and length of stay in Australia had no significant relationship with ADL at  $P \geq .05$ . However, English language proficiency had a significant relationship with their activities of daily living and level of supervision need ( $F= 20.05, P = .000$ ). This means that those who have more difficulty with activities of daily living and need higher level of supervision in their daily living activities could not communicate in English at all ( $M=2.60$ ).

Table 5.5 ANOVA for comparing acculturation variables in the Iranian elderly respondents with Activities of Daily Living (ADL)

Acculturation components	N	Mean k6	Std k6	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Language spoken at home</b>						1	3.07	.081
Farsi	257	3.35	1.594	3.16	3.55			
English	45	3.80	1.455	3.36	4.24			
<b>Communicate in English</b>						2		
Very well to well	82	4.04	1.461	3.72	4.36		20.05	.000***
Not well	137	3.55	1.475	3.30	3.80			
Not at all	83	2.60	1.538	2.27	2.94			
<b>Duration of migration</b>						3	.672	.570
1-5 years	29	3.14	1.827	2.44	3.83			
6-10 years	57	3.30	1.658	2.86	3.74			
11-15 years	65	3.58	1.424	3.23	3.94			
16+	151	3.45	1.569	3.20	3.70			

## Multiple regression analysis of acculturation characteristics

A series of univariate analyses was followed by linear bivariate and multivariate regression analyses. The linear bivariate regression analysis was carried out to examine the proportion of the variance in the dependent variable is explained by each independent variable. While the multivariate regression analyses included all independent variables in the model to analyse the variance explained in each of the dependent variable. The acculturation variables (independent variables) including language spoken at home, English proficiency and duration of migration were used to predict each of the dependent variable (use of health services, utilization of community basic and supportive aged care services/HACC, Psychological distress/K6, wellbeing, physical function/SF-36, and Activity of Daily Living (ADL)). The results are shown in Table 5.6. The results (only R ) of the linear bivariate regression analysis are shown under the heading of “unique variance due to predictor’ indicating the proportion of the variance in the dependent variable/s is explained by independent variable (communicate in English).

Results revealed that use of health services, community aged care services, and health factors did not predict the language spoken at home. Therefore, there was no relationship between utilisation of health services, community aged care

services/HACC, health components, and language spoken at home among Iranian elderly respondents.

Communication in English was predicted by five variables: use of health services ( $\beta = .209$ ), K6 ( $\beta = -.314$ ), wellbeing ( $\beta = .350$ ), ADL ( $\beta = .336$ ), SF-36 ( $\beta = .355$ ) which explained 20.1% of the variance. This means that those who used health services were more likely to have a higher level of English language proficiency. However, findings revealed that there was no relationship between utilisation of community basic and supportive aged care services/HACC with level of proficiency in communicating in English language. Regarding predicting of health factors, inverse relationships were found between psychological distress and communicating in English. This suggests that Iranian elderly who had more anxiety and depressive symptoms were more likely to have a lower level of English language proficiency. Participants who could communicate in English more had a greater feeling of wellbeing. Being independent or more active in daily living was a positive predictor for communicating in English, followed by physical functioning.

Regarding duration of migration, data revealed that length of stay in Australia was not predictor for use of health services, community aged care services, and health factors.

Table 5.6 multiple regression analysis of acculturation and utilisation health services/community aged care services, and health predictor's variables

Criterion	Significant predictor	$\beta$ - regression coefficient	F	Unique variance due to predictor
<b>Communicate in English</b>	Use of health services	.209	13.74	4.4%
	Psychological distress/K6	-.314	32.92	9.9%
	Well-being	.350	41.86	12.2%
	Activity of Daily Living (ADL)	.336	38.25	11.3%
	Physical function/SF-36	.355	43.16	12.6%
[F =10.56 , P = .000, R <sup>2</sup> = 20.1%]				

## CHAPTER SIX: Utilisation of Health Services

This study identified different types of health services used by Iranian elderly in the 12 months prior to the study. Participants rated six items in use of health services including: consulted, visited, or having been visited by a GP; community nurse or a private nursing services; podiatrist; chemist; physiotherapist; and stayed at least one night in hospital (see Methodology chapter).

### Inter-item correlation between different types of health services used

For each of the six items of health services used, there were two levels of response based on types of health services used by participants. The correlation between the scale (use of health services) items and the use of health services scale was computed (see Table 6.1).

The table shows that the items included in the scale (use of health services) are significantly correlated with the scale (use of health services) at  $P \leq .001$ ,  $P \leq .005$  levels. Strong correlation were found between visited physiotherapist ( $r = .668$ ) followed by visited podiatrist ( $r = .638$ ). The result of the reliability measurement confirmed the reliability of health services utilised measurement was in accordance with Cronbach's alpha .803

Table 6.1 Correlation types of health services used items

Variables	1	2	3	4	5	6	7
<b>Use of health services</b>	—	.384**	.525**	.638**	.504**	.668**	.558**
consulted GP		—	.090	.129*	.086	.115*	.101
Visited community nurse			—	.302**	.117*	.248**	.198**
Visited podiatrist				—	.100	.456**	.173**
Consulted chemist					—	.105	.046
Visited physiotherapist						—	.211**
Stayed one night in hospital							—

## Associations between health services utilised and sociodemographic characteristics

A one-way ANOVA test was performed to determine whether there were significant associations between independent variables and types of health services used as a dependent variable. Variables found to have a significant relationship with utilisation of type of health services were used as in multivariate analysis to determine predictors of health services utilised.

Associations between socioeconomic, demographic, acculturation characteristics, and health services used were measured by the one-way ANOVA (see Table 6.2 and Table 6.3).

Table 6.2 Result of ANOVA test in comparing health services utilised with demographic variables

Demographic components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Age</b>						3	3.318	.020*
65-69	140	2.13	1.199	1.93	2.33			
70-74	63	2.33	1.320	2.00	2.67			
75-79	49	2.43	1.137	2.10	2.76			
80+	50	2.76	1.364	2.37	3.15			
<b>Gender</b>						1	14.74	.000***
Male	148	2.05	1.139	1.86	2.23		1	
Female	154	2.59	1.312	2.38	2.80			
<b>Education</b>						4	3.306	.011*
Bachelor degree or higher	53	2.06	1.117	1.75	2.36			
Associate/certificate diploma	100	2.10	1.283	1.85	2.35			
Secondary/ high school	71	2.45	1.274	2.15	2.75			
Primary	50	2.62	1.338	2.24	3.00			
No formal education	28	2.79	.995	2.40	3.17			

The results demonstrate that there was a significant association between age group and form of health services used in the Iranian elderly respondents ( $F = 3.31$ ,  $P = .020$ ). Those who were in the oldest age group (80+) were more likely to use different types of health services ( $M = 2.76$ ). Use of health services was more prevalent among women ( $F = 14.74$ ,  $P = .000$ ). It could be seen that females were more likely to use different types of health services ( $M = 2.59$ ). Level of education in

respondents had no significant relationship with different type of health services utilised at  $P \geq .05$

Table 6.3 Result of ANOVA test in comparing health services utilised with economic variables

Economic components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Money situation</b>						2	1.84	.160
Can't make ends meet	49	2.45	1.191	2.11	2.79			
Just enough to get along	203	2.37	1.307	2.19	2.55			
Comfortable	50	2.02	1.078	1.71	2.33			
<b>Home ownership</b>						3	1.48	.219
Outright owner of home/paying off home	75	2.13	1.189	1.86	2.41			
Leasing, purchasing in retirement village	29	2.69	1.561	2.10	3.28			
Private rent/ public housing rent	183	2.36	1.218	2.18	2.53			
Board free/living with children	15	2.20	1.373	1.44	2.96			
<b>Type of government pension/benefit</b>						2	13.41	.000***
Age pension	235	2.37	1.164	2.22	2.52			
Disability/sickness pension	26	3.08	1.495	2.47	3.68			
Had No pension	41	1.56	1.266	1.16	1.96			
<b>Health concession card</b>						1	22.53	.000***
Yes	262	2.45	1.224	2.31	2.60			
No	40	1.48	1.154	1.11	1.84			

With regard to the economic situation of the Iranian elderly respondents, the result revealed money situation and home ownership has no significant relationship with different type of health services utilised at  $P \geq .05$ . However, use of government pension or other allowance in Australia had a significant relationship with different type of health services utilised ( $F = 13.41$ ,  $P = .000$ ). This shows that elderly respondents who were receiving sickness benefit or disability pension were more likely to use different types of health services ( $M = 3.08$ ). Elderly respondents who received a health concession card (86.8%) were more likely to use different types of health services ( $M = 2.45$ ) in comparison to those who had no health care concession card.

## Associations between health services utilised and medical problems

The results of ANOVA test revealed that medical problems of the Iranian elderly respondents had a significant relationship with different types of health services utilised ( $F = 12.30$ ,  $P = .000$ ). It showed that elderly respondents who had chronic medical problems were more likely to use different type of health services ( $M = 2.51$ ) in comparison with elderly who had acute medical problems ( $M = 2.02$ ).

Table 6.4 ANOVA for comparing health services utilised with medical problems in the Iranian elderly respondents

Medical components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Medical problems</b>						2	12.30	.000***
Chronic Medical problems	224	2.51	1.256	2.34	2.67			
Acute Medical problems	49	2.02	1.010	1.73	2.31			
No Problems	29	1.41	1.181	.96	1.86			

## Associations between health services utilised and physical activity

The association results between self-rated physical activity and use of health services demonstrated that elderly respondents who were not active or less active ( $M = 2.56$ ) in comparison to most of the other people in their age groups, were more likely to use a different types of health services ( $F = 8.69$ ,  $P = .000$ ).

Table 6.5 ANOVA for comparing health services utilised with physical activity in the Iranian elderly respondents

Physical activity components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Self rated to compare other age groups</b>						2	8.69	.000***
Less active	184	2.56	1.366	2.36	2.76			
About as active	78	1.94	.931	1.73	2.15			
More active	40	2.00	1.038	1.67	2.33			

## Associations between health services utilised and social activity

With regard to “describe general social activity”, results demonstrated that elderly who were not socially active at all ( $M = 2.86$ ) were more likely to use different types of health services ( $F = 10.35$ ,  $P = .000$ ) in comparison to elderly respondents who were very socially active ( $M = 1.81$ ).

Table 6.6 ANOVA for comparing health services utilised with social activity in the Iranian elderly respondents

Social activity components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Self rated social activity</b>						3	10.35	.000***
Very active	16	1.81	.544	1.52	2.10			
Fairly active	93	1.92	1.045	1.71	2.14			
Not very active	102	2.29	1.199	2.06	2.53			
Not active at all	91	2.86	1.419	2.56	3.15			

## Associations between health services utilised and accessing information

Generally, the results of accessing information components in Iranian elderly respondents revealed significant association between most accessing information variables and use of health services. With regard to the subject of accessing information about aged care services through brochures in English and Farsi, respondents who had access to aged care information through brochures in the Farsi language were less likely to use different types of health services ( $M=1.43$   $F = 6.51$ ,  $P = .000$ ). With regard to the items of awareness of available aged care services, and also awareness of who to contact to ask for help, results were statistically significant ( $F = 48.34$ ,  $P = .000$  and  $F = 63.54$ ,  $P = .000$  respectively). This shows that elderly respondents who were informed of available aged care services and also knew who to contact to ask for help, were more likely to use different types of health services ( $M = 3.92$ ,  $M = 4.0$  respectively). However, there was no significant association between different ways to access information and use of health services at  $P \geq .05$

Table 6.7 ANOVA for comparing health services utilised with accessing information in the Iranian elderly respondents

Accessing information components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>How access Information</b>						5	.259	.935
Family and friends	49	2.31	1.402	1.90	2.71			
Iranian media	47	2.49	1.349	2.09	2.89			
Others	9	2.44	.882	1.77	3.12			
Doctors	130	2.31	1.133	2.11	2.50			
TV	50	2.22	1.389	1.83	2.61			
Community organisations	15	2.40	1.404	1.62	3.18			
<b>Information access by brochures</b>						3	6.51	.000 ***
Only Farsi	30	1.43	1.165	1.00	1.87			
Only English	25	2.12	.971	1.72	2.52			
Both languages	31	2.35	1.112	1.95	2.76			
No access at all	216	2.47	1.272	2.30	2.64			
<b>Awareness of available aged care services</b>						1	48.3 4	.000 ***
Yes	24	3.92	1.530	3.27	4.56			
No	278	2.19	1.134	2.05	2.32			
<b>Awareness who to contact to ask for help</b>						1	63.5 4	.000 ***
Yes	27	4.00	1.414	3.44	4.56			
No	275	2.16	1.116	2.03	2.29			

## Associations between health services utilised and utilisation of community aged care services/ HACC

A one-way ANOVA test was used to determine association between categorical community services data and use of health services.

Table 6.8 ANOVA for comparing health services utilised with use of community aged care services in the Iranian elderly respondents

Use of community services components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Ever used of Community Aged Care Services/HACC</b>						1	31.70	.000***
Interpreters	60	2.53	.747	2.34	2.73			
Organised community services	33	3.91	1.608	3.34	4.48			
<b>Need more help with any community aged care services/HACC</b>						1	.095	.759
Yes	45	2.38	1.370	1.97	2.79			
No	257	2.32	1.240	2.16	2.47			
<b>Type of tasks need to help</b>						2	25.05	.000***
No need more help	163	1.91	1.005	1.75	2.06			
Basic maintenance services <sup>1</sup>	104	2.94	1.306	2.69	3.20			
Supportive services <sup>2</sup>	35	2.43	1.420	1.94	2.92			

1) Basic maintenance services included: household duties, personal care, meals at home

2) Supportive services included: Home maintenance, day care service, respite services, special transport

On the subject of organised community services/HACC for elderly who cannot do their household duties or home maintenance or personal care on their own, the result shows that there were significant differences between the three types of tasks which respondents need help for ( $F = 25.05$ ,  $P = .000$ ). This shows that Iranian elderly respondents who need help for basic maintenance services (household duties, personal care, meals at home) were more likely to use different type of health services ( $M = 2.94$ ), followed by elderly who need help for supportive services (home maintenance, day care service, respite services, special transport) ( $M = 2.43$ ). Moreover, there were significant differences between utilisation of interpreter services and organised community aged care services, ( $F = 31.70$ ,  $P = .000$ ). This shows that individuals who continuously use any kind of aged care services or an organised community aged care service (such as community nursing, home care, respite care, day care services, Meals on Wheels, home visiting, home maintenance and transportation) were more likely to use different types of health services ( $M = 3.91$ ) in comparison to elderly who used only interpreter services ( $M = 2.53$ ).

However, there was no significant association between need more help with any community aged care services and use of health services at  $P \geq .05$ .

### **Associations between health services utilised and caregiving**

ANOVA results showed that there was no significant association between main responsibility in caring for someone with long-term illness/disability and use of different types of health services; this was followed by need more help with carer support at  $P \geq .05$

### **Multiple regression analysis of health services utilised**

A series of univariate analyses was carried out, followed by linear and multivariate regression analyses. Multivariate regression analysis was conducted to evaluate the dimension of sociodemographic, medical conditions, physical activity, social activity, accessing information, and use of community aged care services/HACC predicted utilisation of different type of health services. In this analysis, first, a combination of independent variables in all dimensions was computed by multivariate regressions to account for the percentage of the variance. Only the results of significant predictors of health services utilised are mentioned (see Table 6.9). Secondly, to understand the unique contribution of predictors, linear regression analysis was performed. Results are shown under the heading of “unique variance due to predictor”.

Table 6.9 multiple regression analysis of health services utilised and predictor's variables

Criterion	Significant predictor	$\beta$ - regression coefficient	F	Unique variance due to predictor
<b>Sociodemographic</b>	Age 65-69	-.145	6.44	2.1%
	Gender	-.216	14.74	4.7%
	Education: higher degree	-.098	2.93	1.0%
	Education: associate/certificate diploma	-.126	4.82	1.6%
	Education: primary	.105	3.33	1.1%
	Pension: disability/sickness	.184	10.50	3.4%
	Health concession card	-.264	22.53	7.0%
				[F =9.94 , P = .000, R <sup>2</sup> = 19.1%]
<b>Medical problems</b>	Acute problem	-.107	3.44	1.1%
	Chronic problem	.249	19.81	6.2%
				[F = 12.30, P = .000, R <sup>2</sup> = 7.6%]
<b>Physical activity</b>	Self rated :a bit to much less active	.234	17.37	5.5%
	Self rated :about as active	-.183	10.35	3.3%
				[F = 8.69, P = .000, R <sup>2</sup> = 5.5%]
<b>Social activity</b>	Self rated : being fairly social active	-.212	14.16	4.5%
				[F = 10.35, P = .000, R <sup>2</sup> =9.4 %]
<b>Accessing information</b>	Access only to Farsi brochures	.236	17.64	5.6%
	Awareness of available aged care services	.373	48.34	13.9%
	Awareness who to contact to ask help	.418	63.54	17.5%
				[F =20.65, P = .000, R <sup>2</sup> =21.9 %]
Utilisation of community aged care services/ HACC	Interpreters/ An organised community services*	.508	31.70	25.8%
				[F = 10.79, P = .000, R <sup>2</sup> = 26.7%]

\* An organised community services: e.g. Home care, Meals on wheels, Home nursing

A combination of five sociodemographic variables predicted different types of health services utilised: age groups 65-69 ( $\beta = -.145$ ), gender ( $\beta = -.216$ ), a higher educational level ( $\beta = .203$ ), associate or certificate diploma background education ( $\beta = -.126$ ), primary educational level ( $\beta = .105$ ), disability or sickness pension ( $\beta = .184$ ), health concession card ( $\beta = -.264$ ) which explained 19.1% of the variance. These variables indicate negative predictors for use of health services except of pension benefit variable. This means that those females in lower age group (65-69) were more likely to use health services. Educational background was a negative predictor for use of supportive aged care services ( $\beta = -.123$ ) indicating those with a lower level of education were more likely to use health services more. Elderly who received disability/sickness pension were more likely to use health services. However, elderly who had only a health concession card were less likely to use health services.

Chronic problems were a positive predictor for use of health services ( $\beta = .249$ ); however, acute medical problems ( $\beta = -.107$ ) was a negative predictor which accounted for 7.6% of the variance.

Self-rated physical activity and social activity were negative predictors for use of health services. Therefore, Iranian elderly who were more physically and/or socially active were less likely to use health services. Accessing information was predicted with three variables: access only to Farsi brochures ( $\beta = .236$ ), awareness of available aged care services ( $\beta = .373$ ), awareness of who to contact to ask for help ( $\beta = .418$ ). These three variables accounted for 21.9% of the variance. This means that the elderly who had access only to Farsi brochures, and had a lack of awareness regarding aged care services, were less likely to use health services.

Utilisation of health services was predicted with one community aged care variable: use of interpreter services and/or an organised community services such as home care, Meals on Wheels or home nursing ( $\beta = .508$ ), which accounted for 26.7% of the variance. Therefore, elderly people who used more interpreter services and/or any other community aged care service were more likely to use health services.

## Multiple regression analysis of health services utilised and health predictors

A series of univariate analyses was carried out, followed by linear and multivariate regression analyses. Multivariate regression analysis was conducted to evaluate the dimension of health factors which predicted use of different types of health services.

In this analysis, first a combination of independent variables in all dimensions was computed by multivariate regressions to account for the percentage of the variance. Only the results of significant predictors of health services used are mentioned (see Table 6.10). Secondly, to understand the unique contribution of predictors, linear regression analysis was performed. Results are shown under the heading of “unique variance due to predictor”.

Use of health services was predicted by four health variables: psychological distress/ K6 ( $\beta = -.293$ ); wellbeing ( $\beta = -.289$ ); physical function/SF-36 ( $\beta = -.546$ ); Activity of Daily Living (ADL) ( $\beta = -.482$ ). An inverse relationship was found between these variables and health services utilised. This means that elderly who had psychological distress or feeling a lower level of wellbeing or had a lower level of physical functioning and a lower level of daily living activity, were less likely to use health services.

Table 6.10 multiple regression analysis of health services utilised and health predictors variables

Criterion	Significant predictor	$\beta$ - regression coefficient	F	Unique variance due to predictor
<b>Health factors</b>	Psychological distress/K6	-.293	28.09	8.6%
	Well-being	-.289	27.37	8.4%
	Physical function/ SF-36	-.546	127.59	29.8%
	Activity of Daily Living (ADL)	-.482	90.67	23.2%
				[F=34.44 , P = .000, R <sup>2</sup> = 31.7%]

## **CHAPTER SEVEN: Utilisation of Community Aged Care Services**

This section only deals with Iranian elderly who cannot do household duties or maintenance or personal care on their own. Utilisation of community aged care services is an eight-item questionnaire intended to yield a measure of individual utilisation of basic maintenance and supportive community aged care services, and the level of utilised aged care services in the previous week and in the four weeks preceding the study. Tasks of community aged care services are considered in two particular ways: The first concerns basic maintenance services and included:

- 1- Household duties such as laundry, vacuuming, cleaning,
- 2- Personal aged care such as showering, bathing, dressing, getting to the toilet
- 3- Meals at home.

The second concerns community supportive aged care services and included:

- 1- Home maintenance/modification or gardening
- 2- Day care services,
- 3- Special transport to (shopping, errands, medical visits), and
- 4- Respite services.

(Note: To reduce the number of tables and to avoid repetitive explanations, only the significant tables are mentioned.)

### **Inter-item correlation of utilisation community aged care services scale**

Regarding community basic aged care services, for each three items there is a two-level response based on utilising basic aged care services, including household duties, personal care and meals at home in the last week prior to the study. The correlation between the scale (basic community aged care services) items and the basic aged care services scale was computed (see Table 7.1).

The table shows that all the items included in the scale (basic community aged care services) are significantly correlated with the scale (basic community aged care services) at  $P \leq .001$  levels. Strong correlations were found between aged care services

to help in household duties (laundry, vacuuming, dusting) and services to help with personal care at home ( $r = .876$ ). The result of the reliability measurement confirmed the reliability of community aged care services utilised measurement in accordance with Cronbach's alpha .870

Table 7.1 correlation of community (basic) aged care services utilised in the **last week** items

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Basic aged care services</b>	————	.876**	.876**	.632**
<b>Services to help household duties: laundry, vacuuming, dusting</b>		————	.694**	.329**
<b>Services to help with personal care at home</b>			————	.342**
<b>Services delivered/prepared meals at home</b>				————

In community supportive aged care services, for each five items there is a two-level response based on utilisation including: home maintenance, day care, respite services at home, stayed overnight in respite services, and special transport services in the four weeks prior to the study. The correlation between variable items and the community supportive aged care services scale was computed (see Table 7.2).

The table shows that the items included in the variables are significantly correlated with the scale (community supportive aged care services) at  $P \leq .001$ ,  $P \leq .005$  levels. Strong correlations were found between: delivered services for shopping/errands/medical appointment ( $r = .849$ ), followed by attended a day care centre ( $r = .638$ ). The reliability measurement confirmed that the community supportive aged care services utilised the measurement in accordance with Cronbach's alpha .709

Table 7.2 correlation of community (supportive) aged care services utilised in the **last 4 weeks** items

Variables	1	2	3	4	5	6
Supportive aged care services	—	.488**	.638**	.402**	.402**	.849**
Services to help home maintenance/gardening		—	-.012	-.010	-.010	.423**
Attended a day care centre			—	.280**	.280**	.361**
Delivered respite services				—	-.010	.125*
Stayed overnight at respite services					—	.125*
Delivered services for shopping/errands/medical appointment						—

### Associations between utilisation of community aged care services and sociodemographic characteristics

A one-way ANOVA test was performed to determine whether there were significant associations between independent variables and utilisation of community (basic and supportive) aged care services as a dependent variable. Variables found to have significant relationship with utilisation of community (basic and supportive) aged care services were used as a multivariate analysis to determine predictors of community services (basic and supportive). Associations between utilisation of community (basic and supportive) aged care services and socioeconomic, demographic characteristics were measured by one-way ANOVA.

Table 7.3 ANOVA for comparing utilisation of community (basic & supportive) aged care services with demographic variables in the Iranian elderly

Demographic components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Supportive services:</b>								
<b>Education</b>								
Bachelor degree or higher	1	2.00	.	.	.	4	3.583	.029 *
Associate/certificate diploma	6	1.00	.000	1.00	1.00			
Secondary/high school	9	1.44	.726	.886	2.00			
Primary	2	2.50	.707	-3.85	8.85			
No formal education	3	1.00	.000	1.00	1.00			

The results demonstrate that there was a significant association between levels of education and community supportive aged care services utilised in the four weeks

prior to the survey data collection ( $F = 3.583, P = .029$ ). There was a low level of utilisation of supportive aged care services in higher educated and lower educated old people. However, there were no significant associations between community basic/supportive aged care services and other demographic components at  $P \geq .05$

Table 7.4 ANOVA for comparing utilisation of community (basic & supportive) aged care services with economic variables in the Iranian elderly

Economic components	N	Mean	Std	95% Confidence		Interval for Mean		
				Lower Bound	Upper Bound	df	F	P
<b>Basic services:</b>								
<b>Monetary situation</b>						2	4.682	.021*
Can't make ends meet	3	2.66	.577	1.23	4.10			
Just enough to get along	19	1.52	.611	1.23	1.82			
Comfortable	1	2.00	.	.	.			

ANOVA results revealed that there were no significant associations between community supportive aged care services and economic components in the last four weeks at  $P \geq .05$ . However, there was a significant association between community basic aged care services and money situation in the last-week prior to this survey ( $F = 4.682, P = .021$ ). This shows that elderly respondents who could not make ends meet were more likely to utilise community basic aged care services ( $M = 2.66$ ).

There were no significant associations between acculturation variables (language spoken at home, communication in English and duration of migration), and community basic and supportive aged care services  $P \geq .05$

Same holds true for one way ANOVA on medical conditions, physical activity, social activity, accessing information, caregiving, and community services used by the Iranian elderly was carried out. This could be due to the small proportion (7%) of the Iranian elderly who used the community basic and supportive aged care/HACC services (community basic services  $N=23$  and community supportive services  $N=21$ ).

## Associations between utilisation of community aged care services and health factors

### Associations between utilisation of community aged care services and psychological distress /K6

A one-way ANOVA test was used to determine any association between categorical community aged care services data and level of anxiety and depressive symptoms.

Table 7.5 ANOVA for comparing use of community aged care services with psychological distress in the Iranian elderly respondents

Use of community services components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Ever used of community aged care services/HACC</b>						1	6.47	.013*
Interpreters	60	19.36	5.210	18.02	20.71			
An organised community services	33	16.39	5.711	14.36	18.41			
<b>Need more help with any community aged care services/HACC</b>						1	.504	.478
Yes	45	19.86	5.979	18.07	21.66			
No	257	20.51	5.621	19.82	21.20			
<b>Type of tasks need to help</b>						2	10.46	.000***
No need more help	163	21.73	5.275	20.91	22.54			
Basic maintenance services <sup>1</sup>	104	18.63	5.625	17.54	19.72			
Supportive services <sup>2</sup>	35	19.62	6.131	17.52	21.73			

1) Basic maintenance services included: household duties, personal care, meals at home

2) Supportive services included: home maintenance, day care service, respite services, special transport

With regard to organised community services/HACC for elderly who cannot do their household duties, home maintenance or personal care on their own, the result shows that there are significant differences between the three types of tasks for those respondents who need help ( $df= 2, F = 10.46, P = .000$ ). This shows that the Iranian elderly who need help for community basic maintenance aged care services (household duties, personal care, meals at home) were more likely to have a high psychological distress level ( $M = 18.63$ ), followed by elderly who need help for community supportive aged care services (home maintenance, day care service, respite services, special transport) ( $M = 19.62$ ).

Moreover, there are significant differences between use of interpreters services and organised community services/HACC ( $df = 1, F = 6.47, P = .013$ ). This result reveals that for those individuals who continuously use any kinds of community organised aged care services or community services (such as community nursing, home care, respite care, day care services, meals on wheels, home visiting, home maintenance and transportation), the level of anxiety and depressive symptoms were higher ( $M = 16.39$ ) than elderly who used only interpreter services ( $M = 19.36$ ).

### Associations between utilisation of community aged care services and wellbeing

A one-way ANOVA test was used to determine association between categorical community aged care services data and feeling of wellbeing.

Table 7.6 ANOVA for comparing use of community aged care services with wellbeing in the Iranian elderly respondents

Use of community services components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Ever used of community aged care services/HACC</b>						1	5.37	.023*
Interpreters	60	9.93	2.098	9.39	10.47			
An organised community services	33	8.78	2.583	7.87	9.70			
<b>Need more help with any community aged care services/HACC</b>						1	.725	.395
Yes	45	10.13	2.360	9.42	10.84			
No	257	10.47	2.501	10.16	10.78			
<b>Type of tasks need to help</b>						2	10.79	.000***
No need more help	163	11.00	2.445	10.62	11.38			
Basic maintenance services <sup>1</sup>	104	9.63	2.389	9.16	10.09			
Supportive services <sup>2</sup>	35	10.05	2.235	9.28	10.82			

1) Basic maintenance services included: household duties, personal care, meals at home

2) Supportive services included: home maintenance, day care service, respite services, special transport

With regard to organised community aged care services/HACC for elderly who cannot do their household duties, home maintenance or personal care on their own, the result shows that there are significant differences between the three types of tasks for which respondents need help ( $df = 2, F = 10.79, P = .000$ ). This shows that the Iranian elderly who need help for community basic maintenance aged care services (household duties, personal care, meals at home) were more likely to have a lower feeling of wellbeing ( $M = 9.63$ ), followed by elderly who need help for

community supportive aged care services (home maintenance, day care service, respite services, special transport) ( $M = 10.05$ ). Moreover, there are significant differences between interpreters services and organised community services, in the item “used community aged care services /HACC” ( $df = 1, F = 5.37, P = .023$ ). This shows that for those individuals who continually used any kind of aged care services or organised community services (such as community nursing, home care, respite care, day care services, meals on wheels, home visiting, home maintenance and transportation), the level of wellbeing was less ( $M = 8.78$ ) than for elderly who used only interpreters services ( $M = 9.93$ ).

### Associations between utilisation community aged care services and physical functioning /SF-36

A one-way ANOVA test was used to determine associations between categorical community services data and physical functioning limitation.

Table 7.7 ANOVA for comparing use of community aged care services with physical functioning in the Iranian elderly respondents

Use of community services components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Ever used community aged care services/HACC</b>						1	9.66	.003**
Interpreters	60	19.95	4.428	18.80	21.09			
An organised community services	33	16.63	5.710	14.61	18.66			
<b>Need more help with any community aged care services/HACC</b>						1	.048	.827
Yes	45	22.20	5.833	20.44	23.95			
No	257	21.99	5.754	21.28	22.70			
<b>Type of tasks need to help</b>						2	23.64	.000** *
No need more help	163	23.83	5.285	23.01	24.65			
Basic maintenance services <sup>1</sup>	104	19.20	5.246	18.18	20.22			
Supportive services <sup>2</sup>	35	22.00	6.068	19.91	24.08			

1) Basic maintenance services included: household duties, personal care, meals at home

2) Supportive services included: home maintenance, day care service, respite services, special transport

With regard to organised community services/HACC for elderly who cannot do their household duties, home maintenance or personal care on their own, the result shows that there are significant differences between the three types of tasks for which

respondents need help ( $F = 23.64, P = .000$ ). This shows that Iranian elderly respondents who need help for community basic maintenance services (household duties, personal care, meals at home) were more likely to have a high limitation in their physical functioning ( $M = 19.20$ ), followed by elderly who need help for community supportive services (home maintenance, day care service, respite services, special transport) ( $M = 22.00$ ). Additionally, there were significant differences between utilisation of interpreters services and organised community aged care services, ( $F = 9.66, P = .003$ ). This shows that individuals who continually used any kind of aged care services or an organised community aged care services (such as community nursing, home care, respite care, day care services, meals on wheels, home visiting, home maintenance and transportation), were more likely to have a more limited physical functioning ( $M = 16.63$ ) in comparison to elderly who used only interpreters services ( $M = 19.95$ ).

### Associations between utilisation of community aged care services and Activities of Daily Living (ADL)

A one-way ANOVA test was used to determine association between categorical community services data and ADL.

Table 7.8 ANOVA for comparing use of community aged care services with Activities of Daily Living (ADL) in the Iranian elderly respondents

Use of community services components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Ever used of community aged care services/HACC</b>						1	9.63	.003**
Interpreters	60	2.77	1.407	2.40	3.13			
An organised community services	33	1.76	1.659	1.17	2.35			
<b>Need more help with any community aged care services/HACC</b>						1	.000	.994
Yes	45	3.42	1.422	2.99	3.85			
No	257	3.42	1.609	3.22	3.62			
<b>Type of tasks need to help</b>						2	33.31	.000***
No need more help	163	3.99	1.329	3.78	4.19			
Basic maintenance services <sup>1</sup>	104	2.52	1.601	2.21	2.83			
Supportive services <sup>2</sup>	35	3.46	1.379	2.98	3.93			

1) Basic maintenance services included: household duties, personal care, meals at home

2) Supportive services included: home maintenance, day care service, respite services, special transport

With respect to organised community services/HACC for old people who cannot do their household duties, home maintenance or personal care on their own, the result showed significant differences between types of tasks respondents need help with ( $F = 33.31, P = .000$ ). This shows that Iranian elderly respondents who need help from community basic maintenance aged care services (household duties, personal care, meals at home) were more likely to need high supervision in their activities of daily living ( $M = 2.52$ ). Furthermore there were significant differences between utilisation of interpreters services and organised community aged care services, ( $F = 9.63, P = .003$ ). This shows that individuals who continually use any kind of aged care services or an organised community aged care service (such as community nursing, home care, respite care, day care services, meals on wheels, home visiting, home maintenance and transportation) were more likely to need a higher level of supervision in their activities of daily living ( $M = 1.76$ ) in comparison to elderly who used only interpreter services ( $M = 2.77$ )

### Associations between utilisation of community aged care services and health services utilised

A one-way ANOVA test was used to determine association between categorical community services data and use of health services.

Table 7.9 ANOVA for comparing use of community aged care services with health services utilised in the Iranian elderly respondents

Use of community services components	N	Mean	Std	95% Confidence Interval for Mean		df	F	P
				Lower Bound	Upper Bound			
<b>Ever used of community aged care Services/HACC</b>						1	31.70	.000***
Interpreters	60	2.53	.747	2.34	2.73			
An organised community services	33	3.91	1.608	3.34	4.48			
<b>Need more help with any community aged care services/HACC</b>						1	.095	.759
Yes	45	2.38	1.370	1.97	2.79			
No	257	2.32	1.240	2.16	2.47			
<b>Type of tasks need to help</b>						2	25.05	.000***
No need more help	163	1.91	1.005	1.75	2.06			
Basic maintenance services <sup>1</sup>	104	2.94	1.306	2.69	3.20			
Supportive services <sup>2</sup>	35	2.43	1.420	1.94	2.92			

1) Basic maintenance services included: household duties, personal care, meals at home

2) Supportive services included: home maintenance, day care service, respite services, special transport

With regard to organised community services/HACC for old people who cannot do their household duties, home maintenance or personal care on their own, the result shows that there are significant differences between the three types of tasks for which respondents need help ( $F = 25.05$ ,  $P = .000$ ). This shows that Iranian elderly respondents who need help for community basic maintenance services (household duties, personal care, meals at home) were more likely to use different types of health services ( $M = 2.94$ ), followed by elderly who need help for supportive services (home maintenance, day care service, respite services, special transport) ( $M = 2.43$ ). Moreover, there were significant differences between utilisation of interpreter services and organised community aged care services ( $F = 31.70$ ,  $P = .000$ ). This shows that individuals who continually use any kind of aged care services or an organised community aged care service (such as community nursing, home care, respite care, day care services, meals on wheels, home visiting, home maintenance and transportation), were more likely to use different types of health services ( $M = 3.91$ ) in comparison with elderly who used only interpreter services ( $M = 2.53$ ). However, there was no significant association between need more help with any community aged care services and use of health services at  $P \geq .05$

### **Multiple regression analysis of utilisation community aged care services**

A series of univariate analyses was followed by liner and multiple regression analyses. Multiple regression analysis was conducted to evaluate sociodemographic dimensions, medical conditions, physical activity, social activity, accessing information, use of community services/HACC, and caregiving which predicted community (basic and supportive) aged care services.

In this analysis, first a combination of independent variables in all dimensions was computed by multiple regressions to account for the percentage of the variance. Only the results of significant predictors of community (basic and supportive) aged care services are mentioned (see Table-7.10). Secondly, to understand the unique

contribution of predictors, linear regression analysis was performed. Results are shown under the heading of “Unique variance due to predictor”.

Table 7.10 multiple regression analysis of utilised community (basic & supportive) aged care services and predictors variables

Criterion	Significant predictor	$\beta$ - regression coefficient	F	Unique variance due to predictor
<i>Basic services:</i>				
Utilisation of community aged care services/HACC	Interpreters and an organised community service*	.312	.147	9.8%
[F =3.975, P = .035, R <sup>2</sup> =28.4 %]				

\* An organised community service: e.g. Home care, Meals on wheels, Home nursing

A combination of sociodemographic variables did not predict community (basic and supportive) aged care services.

Self-rated physical activity and self-rated social activity were not predicted by utilization of community basic and supportive aged care services.

A combination of three variables of accessing information did not predict use of community basic and supportive aged care services.

Use of community basic aged care services was predicted with one variable: use of interpreters and an organised community service (such as home care, meals on wheels, home nursing) which explained 9.8% of the variance. This shows that Iranian elderly who used interpreters’ services and home care, meals on wheels and home nursing were more likely to use community basic aged care services.

Finally, the result of multiple regression analysis did not reveal any combination of caregiving variables to predict use of community aged care.

## **Multiple regression analysis use of community aged care services and health predictors**

Multiple regression analysis was conducted to evaluate dimension of health factors and interpreters/an organised community basic and supportive services which predicted utilisation of community aged care services.

In this analysis, first a combination of independent variables in all dimensions was computed by multivariate regressions to account for the percentage of the variance. Only the results of significant predictors of community aged care services are reported (see Table 7.11). Secondly, to understand the unique contribution of predictors, linear regression analysis was performed. Results are shown under the heading of “unique variance due to predictor”.

Use of community basic and supportive aged care services were not predicted by four variables of health components.

Interpreters and organised community services was predicted with five variables: K6 ( $\beta = -.258$ ), ADL ( $\beta = -.236$ ), SF-36 ( $\beta = -.310$ ), wellbeing ( $\beta = -.309$ ), and use of health services ( $\beta = .508$ ). These five variables accounted for 27.9% of the variance. Inverse relationships were found between all health factors and utilisation of interpreters, organised community services. This shows that Iranian elderly who had psychological distress, lower level feelings of wellbeing, had a lower level of physical functioning and daily living activity, were less likely to use interpreters, home care, meals on wheels, and home nursing services.

Results show use of health services was a positive predictor for utilisation of interpreters, home care, meals on wheels, and home nursing services. This means that elderly respondents who used more health services were more likely to utilise interpreters and other services of organised community.

Table 7.11 multiple regression analysis of community (basic & supportive) aged care services and health predictors' variables

Criterion	Significant predictor	$\beta$ - regression coefficient	F	Unique variance due to predictor
<b>Interpreters/ organised community services* :</b>				
K6	Psychological distress/K6	-.258	6.47	6.6%
Wellbeing	Well-being	-.236	5.37	5.6%
SF-36	Physical function/ SF-36	-.310	9.66	9.6%
ADL	Activity of Daily Living (ADL)	-.309	9.63	9.6%
Use of health services	Use of health services	.508	31.70	25.8%
[F = 6.72, P = .000, R <sup>2</sup> = 27.9%]				

\* An organised community service: e.g. Home care, Meals on wheels, Home nursing

## **CHAPTER EIGHT: Comparison of Health and Community Aged Care Service Utilisation by Iranian and New South Wales Elderly**

### **Bivariate analyses of utilisation of health services by Iranian and New South Wales elderly**

In the first stage, the frequency distribution of health services and community (basic and supportive) aged care services in both elderly respondents was computed. The results demonstrate that similar percentages of elderly respondents in both communities had not used any of the health services in the 12 months period prior to the survey. The percentage of those who had used one or two types of health services in the 12 months prior to the survey were higher among the NSW elderly but the percentage of those that had used more than three kind of services in the 12 months prior to the survey was about double among the Iranian elderly. Generally, the high rate of health services utilised by Iranian respondents was double that of NSW respondents.

Table 8.1.1 Rated percentage of health services utilised by Iranian and NSW elderly

<b>Utilisation of health services rating</b>	<b>Iranian</b>		<b>NSW</b>	
	<b>(N)</b>	<b>%</b>	<b>(N)</b>	<b>%</b>
Not used any of health services	12	4.0	318	3.7
Low rate of health services utilised	180	59.8	6745	77.9
High rate of health services utilised	110	36.5	1596	18.4

### **Bivariate analyses of utilisation of community basic aged care services by Iranian and New South Wales elderly**

The result shows that a huge percentage of the Iranian elderly respondents (92.1%) have never used any community basic aged care services. Only 1.0% (N = 3) of Iranian respondents had used all available community basic aged care services (including household duties, personal care, meals at home) in the week prior to the

study. Of the remainder (6.9%) 21 respondents utilised one or two types of community basic aged care services in the week prior to the survey. In comparison, 77.8% of the NSW respondents did not using any type of basic community aged care services, 2.6% used all available basic services and 19.6% had used one or two types of basic services in the week prior to the survey.

Table 8.2.1 Rated percentage of community basic aged care services/HACC utilised by Iranian and NSW elderly

<b>Utilisation of community basic aged care services rating</b>	Iranian		NSW	
	(N)	%	(N)	%
Not used any of community basic aged care services	278	92.1	6911	77.8
Low rate of community basic aged care services utilised	21	6.9	1736	19.6
High rate of community basic aged care services utilised	3	1.0	234	2.6

### **Bivariate analyses of utilisation of community supportive aged care services in Iranian and New South Wales elderly**

Results show that only 0.7% (N = 2) of Iranian elderly had used all community supportive aged care services (including home maintenance, day care service, respite services, special transport) in the four weeks prior to the study. The low rate of utilisation of community supportive aged care services in NSW respondents were more than triple that of the Iranians. Regarding those elderly who had used one or two community supportive services, the percentage of NSW users was three times higher than the Iranians (20.4% and 6.6% respectively).

Table 8.3.1 Rated percentage of community supportive aged care services/HACC utilised by Iranian and NSW elderly

<b>Utilisation of community supportive aged care services rating</b>	Iranian		NSW	
	(N)	%	(N)	%
Not used any of community supportive aged care services	280	92.7	6923	78.0
Low rate of community supportive aged care services utilised	20	6.6	1811	20.4
High rate of community supportive aged care services utilised	2	.7	147	1.6

## Descriptive statistics of health services and community aged care services utilized in Iranian and New South Wales elderly

Psychological distress was found in a majority of the participants: 16% had a high level of distress; 44% had a moderate level of distress; and 40% had a low level of distress. In comparison, a significantly lower proportion ( $t(9096) = -52.42, p < .001$ ) of the 8,881 NSW residents aged 65 and older who participated in the 1999 Older People's Health Survey (Public Health Division, 2000) reported symptoms: only 3% had a high level of distress; 30% had a moderate level of distress; and 68% had a low level of distress.

Low feelings of wellbeing were found with 21% of the elderly Iranian participants; more than half of the respondents (58%) reported a moderate level of wellbeing; and 21% had scores that indicated a high level of wellbeing. On the individual measures of wellbeing, 22% reported feeling lonely, 20% reported feeling bored, 18% reported feeling depressed, 12% of respondents reported feeling happy, and 12% reported feeling calm and peaceful most of the time. In contrast, the NSW Department of Health (Public Health Division, 2000) findings showed significantly higher wellbeing scores ( $t(8911) = 26.9, p < .001$ ): only 2% had low feeling of wellbeing; 25% reported moderate wellbeing; and 73% reported a high level of wellbeing. Of the NSW Department of Health sample, only 6% reported feeling lonely, 5% reported feeling bored, 3% reported feeling depressed, 76% reported feeling happy, and 72% reported feeling calm and peaceful most of the time.

Most participants reported at least some difficulties in physical functioning: 18% had limited physical function, and 41% had some limitations; the remaining 41% reported no limitation in physical functioning. In contrast, a significantly smaller proportion of the NSW Department of Health sample of elderly people reported limitations in physical function ( $t(8299) = 11.16, p < .001$ ): 8% had limited function, 20% had some limitations, and 72% reported no limitation in physical functioning (Public Health Division, 2000).

More than half of the respondents (56%) had ADL scores indicating a low need for help or supervision with their ADL; 30% had a moderate need, and 14% had a high need for help or supervision with their ADL. With respect to individual activities, 64% reported they could perform household duties by themselves; 77% reported that they could prepare their own meals; and 44% reported that they could do their home maintenance or gardening. Only 17% of the respondents reported a need for help or supervision with personal care. The NSW Department of Health sample had significantly better ADL scores ( $t(9029) = 12.62, p < .001$ ), with 80% indicating a low need for help or supervision with their ADL; 17% had a moderate need, and 3% had a high need for help or supervision with their ADL (Public Health Division, 2000). With respect to individual activities, 88% of the broader sample reported they could perform household duties by themselves; 94% reported that they could prepare their own meals, and 71% reported that they could do their home maintenance or gardening only 3% of the respondents reported a need for help or supervision with personal care (Public Health Division, 2000).

Table 8.4.1 Descriptive statistics of health variables by Iranian and NSW elderly

Mental and physical health components	Iranian Data		NSW Data		Range
	Mean	STD	Mean	STD	
Psychological distress /K6	20.4	5.67	27.13	3.59	6 - 30
Psychological wellbeing	10.42	2.48	13.34	1.87	5 - 15
Physical functioning /SF-36	22.02	5.75	25.29	4.96	10 - 30
Activity of Daily Living (ADL)	3.42	1.58	5.76	1.09	0 - 5

Few Iranian elders reported using any form of basic or supportive aged care services. Only 7.6% had received basic services (assistance with household duties, personal care, or meal delivery) during the previous week. The NSW Department of Health (Public Health Division, 2000) reported greater use of these services ( $t(932) = -3.28, p < .05$ ), with 10.3% of the broader sample using those basic services in the previous week. Similarly, while few Iranian elders (7%) used supportive aged care

services (e.g., respite, transportation) during the previous month, the NSW Department of Health (Public Health Division, 2000) reported significantly greater use of these services ( $t(1106) = -2.15, p < .001$ ), with 12.2% of the broader sample using one or more supportive services during the previous month.

Iranian elders reported using a range of health care services; 96.4% had used one or more health care services ( $M = 2.32; SD = 1.26$ ) in the previous year. Similarly, 96.4% of the overall NSW Department of Health (Public Health Division, 2000) sample had used one or more health care services ( $M = 1.75; SD = 1.26$ ) in the previous year.

Table 8.4.2 Descriptive statistics of health services and community (basic & supportive) aged care services utilised by Iranian and NSW elderly

Utilization of health and community aged care services	Iranian Data		NSW Data		T-value	P
	Mean	STD	Mean	STD		
Use of health services	2.32	1.258	1.74	1.010	-9.716	<.0001
Use of community basic aged care services	1.69	.449	1.31	.558	-2.145	<.0001
Use of community supportive aged care services	1.38	.669	1.17	.703	-3.281	<0.05

### **Multiple regression analysis of utilisation of health services, community basic and supportive aged care services**

In this stage, a series of bivariate analyses was followed by linear and multivariate regression analyses of Iranian and NSW elderly respondents.

Regarding utilisation of health and aged care services, first a multiple regression analysis was conducted to evaluate dimensions of psychological distress /K6, psychological wellbeing, Activity of Daily Living (ADL), physical functioning/SF-36, community basic maintenance aged care services/HACC in the

week prior to the survey, community supportive aged care services/HACC in the four weeks prior to the data collection for this survey, which predicted health services utilised by Iranian and NSW elderly respondents.

Secondly, multiple regression analysis was conducted to evaluate dimensions of K6, psychological wellbeing, ADL, SF-36, use of health services, community supportive aged care services/HACC in the four weeks preceding data collection, which predicted community basic maintenance aged care services/HACC by Iranian and NSW elderly respondents.

Thirdly , multiple regression analysis was conducted to evaluate dimensions of K6, psychological wellbeing, ADL, SF-36, use of health services, community basic maintenance aged care services/HACC in the week prior to the survey, which predicted community supportive aged care services/HACC in Iranian and NSW elderly respondents.

In this analysis, first, a combination of independent variables in all dimensions was computed by multivariate regressions to account for the percentage of the variance. Only the results of significant predictors are mentioned in the following tables. Secondly, to understand the unique contribution of predictors, linear regression analysis was performed. Results are shown under the heading of “unique variance due to predictor”.

Table-8.5-1 Multiple regression analysis of health services utilised and predictor’s variables

Criterion	Significant predictor	β- regression coefficient	F	Unique variance due to predictor
<b>Iran</b>	Psychological distress /K6	-.133	5.42	1.8%
	Psychological wellbeing	-.089	2.39	0.08%
	Activity of Daily Living (ADL)	-.198	12.18	3.9%
	Physical function/SF-36	-.210	13.89	4.4%
				[F = 4.22,P = .000,[R <sup>2</sup> = 5.4%]
<b>New South Wales</b>				
	Psychological distress /K6	-.015	1.92	0.00%
	Psychological wellbeing	.021	3.65	0.00%
	Activity of Daily Living (ADL)	-.003	.098	0.00%
	Physical function/SF-36	-.007	.363	0.00%
				[F = 1.03,P = .387,[R <sup>2</sup> = 0.1%]

The combination of results for four health variables demonstrated that only psychological wellbeing did not predict use of health services in Iranian elderly ( $\beta = 0.08\%$ ). Three factors, psychological distress/K6 ( $\beta = -.133$ ), Activity of Daily Living (ADL) ( $\beta = -.198$ ), and physical function/SF-36 ( $\beta = -.210$ ) were negative predictors for use of health services by elderly respondents, which explained 5.4% of the variance. In other words, Iranian respondents who had more psychological problems had more dependency in doing their daily activity, and also had less ability to do various moderate and vigorous activities, so they were less likely to use health services.

With regard to the New South Wales elderly population, the findings show that none of the health components were predictor of the use of health services.

Table 8.5-2 multiple regression analysis of community basic aged care services/HACC utilised and predictor's variables

Criterion	Significant predictor	$\beta$ - regression coefficient	F	Unique variance due to predictor
<b>Iran</b>	Psychological distress /K6	-.027	.217	.01%
	Psychological wellbeing	.007	.015	0.00%
	Activity of Daily Living (ADL)	.088	2.33	0.8%
	Physical function/SF-36	-.077	1.77	0.6%
[F = .921, P = .452, [R <sup>2</sup> = 1.2%]				
<b>New South Wales</b>				
	Psychological distress /K6	-.161	51.4 0	2.6%
	Psychological wellbeing	.138	36.3 8	1.9%
	Activity of Daily Living (ADL)	.001	.001	0.00%
	Physical function/SF-36	-.370	270. 23	13.7%
[F = 63.06, P = .000, [R <sup>2</sup> = 13.7%]				

Findings show that none of health factors predicted community basic aged care services/HACC utilised by Iranian elderly respondents. However, three health components: psychological distress/K6 ( $\beta = -.161$ ), psychological wellbeing ( $\beta = .138$ ) and physical function/SF-36 ( $\beta = .370$ ), predicted utilisation of community basic aged care services/HACC in the week prior to the study in NSW elderly population, which explained 13.7% of the variance. It means that NSW respondents,

who had more anxiety and depression symptoms and less ability to do various moderate and vigorous activities, were less likely to use community basic aged care services/HACC (data collected for the week prior to the study). Findings also show a positive relationship between a feeling of wellbeing and use of aged care services. This shows that NSW elderly respondents who had a greater feeling of wellbeing were more likely to utilise community basic aged care services.

Table-8.5-3 multiple regression analysis of community supportive aged care services/HACC utilised and predictors' variables

Criterion	Significant predictor	$\beta$ - regression coefficient	F	Unique variance due to predictor
<b>Iran</b>				
	Psychological distress/K6	-.017	.090	0.00%
	Psychological wellbeing	-.006	.011	0.00%
	Activity of Daily Living (ADL)	-.109	3.56	1.2%
	Physical function/SF-36	-.026	.205	0.1%
				[F = 1.38, P = .240, [R <sup>2</sup> = 1.8%]
<b>New South Wales</b>				
	Psychological distress /K6	-.111	23.92	1.2%
	Psychological wellbeing	-.114	24.57	1.3%
	Activity of Daily Living (ADL)	-.001	.001	0.00%
	Physical function/SF-36	-.170	50.55	2.9%
				[F =13.70 , P = .000, [R <sup>2</sup> = 3.3%]

Among Iranian elderly respondents, community supportive aged care services/HACC were predicted by only one health variable: Activity of Daily Living (ADL) ( $\beta = .109$ ). This means that Iranian respondents who could not do daily living duties independently were less likely to utilise community supportive aged care services/HACC. However, this variable did not predict use of aged care services in NSW respondents.

In the New South Wales elderly population, health factors such as psychological distress/K6 ( $\beta = -.111$ ), psychological wellbeing ( $\beta = .114$ ) and physical function/SF-36 ( $\beta = -.170$ ) predicted use of community supportive aged care services/HACC in the four weeks prior to the study, which explained 3.3% of the variance. This shows that NSW elderly respondents who had more psychological distress or had less feelings of wellbeing, and less ability to do various moderate and

vigorous activities were less likely to utilise community supportive aged care services.

## **Summary of Main Findings**

This section presents a summary of the results from the survey conducted into health and acculturation among Iranian migrants in Australia.

Regarding the general health of Iranian migrants, most of the respondents claimed to be suffering from arthritis, incontinence, and high blood pressure. Half of them also cited problems with their mouth, their teeth or dentures. More than a third of elderly respondents had suffered a fall within the previous 12 months and a small percentage of them carried a personal alarm in case of a fall or for other emergencies.

In terms of early detection and preventative health measures, the majority of women respondents had had a mammogram. More than half of the respondents had been immunised against flu but only a small percentage of them had been vaccinated against pneumonia.

More than half of the Iranian elderly respondents described themselves as less physically active as compared to peers of the same age group, while a similar number reported being not very or not at all socially active .

Regarding the relationship between the use of basic community basic and supportive aged care services and acculturation specific components, the only factor shown to be significant was English language proficiency. There were no significant associations between any of the other acculturation factors and the types of health services utilised. . Communication in English was correlated with all physical and mental health components: Participants who did not speak English at home were more likely to experience psychological distress and suffer greater limitations in their physical functioning. Elderly Iranians more proficient at English had lower levels of

anxiety, less depressive symptoms and reported less need for help and supervision in activities of daily living; they were also more likely to access health care services.

According to the data available from the most recent census, Iranian elderly form a minority group in the state of NSW. Apart from proficiency in English, no other acculturation factors, such as duration of immigration or the language spoken at home, showed significant correlation with utilisation of health and community aged care services. This suggests that community interpreter services have helped those who suffer from lack of proficiency in English language to utilise health and community aged care services when necessary.

The results did show that there were strong associations between the utilisation of health services and gender, type of pension, health concession card, as well as other dimensions such as physical activity, social activity, and accessing information. Use of health services was also predicted by all mental and physical health components.

Migrants' level of education predicted their use of community supportive age care service while the use of community basic aged care services was predicted by the financial situation these Iranian elderly found themselves in.

Utilisation of interpreters and organised community services were predicted by all physical and mental health components.

Comparative results showed that use of health services by the Iranian elderly respondents was double that of the general population of elderly in NSW. However, the percentage of NSW respondents who used community basic aged care services was more than triple that of Iranian elderly, the majority of whom did not utilise these services at all. Results also revealed that the low rate of utilisation of community supportive aged care services in NSW respondents was more than triple that of the Iranian respondents.

Use of health services in Iranian elderly respondents was also predicted by psychological distress, Activity of Daily Living (ADL), and physical function. However, for the general population of elderly in NSW, physical and mental health

components did not predict use of health services. Instead, psychological distress, wellbeing, and physical function among the larger group did predict utilisation of basic community aged care services. For Iranian respondents, utilisation of community supportive aged care services was only predicted by ADL, while in the elderly population of NSW, health factors like psychological distress, wellbeing, and physical function predicted the use of these aged care services. Thus, even though Iranian migrants had higher levels of psychological distress, more limited physical functioning, a greater need for help or assistance with activities of daily living, and a lower sense of wellbeing, they were much less likely to use aged care services than the general population of older Australians.

Generally, elderly Iranian migrants had higher levels psychological distress, more limited physical function, greater need for help or assistance with activities of daily living, and lower feelings of wellbeing, but were much less likely to use aged care services than the general population of older Australians. Participants who did not speak English at home were more likely to experience psychological distress and had greater limitations in their physical functioning. Elderly Iranians with better English proficiency had lower levels of anxiety and depressive symptoms, reported less need for help and supervision in activities of daily living, and were more likely to access health care services.

English proficiency and language spoken at home did not show any significant association with utilisation of basic or supportive aged care services. This might be attributed to a lack of knowledge about the availability of Home and Community Care (HACC) services; however, cultural factors such as the traditional Iranian belief that elders should be looked after by their children might also be affecting this behaviour.

To summarise, the results suggest that although elderly Iranian immigrants experience higher levels of psychological distress and lower levels of physical function than the general population of older Australians, they are much less likely to access aged care services and have a greater need for health care services. Those with limited proficiency in English are at the greatest risk.

## **Chapter Nine: Discussion and Conclusions**

This chapter discusses the implications of the results presented in Chapters Four, Five, Six, Seven and Eight. It is arranged into four sections. The first section discusses the descriptive findings of the study. The second section discusses the main findings according to the aims and hypotheses, while Sections Three and Four present the conclusions of the thesis and practical suggestions.

### **Section One: Discussion of the Descriptive Findings**

The results regarding the demographic age distribution of Iranian elderly respondents demonstrate that nearly half of the respondents were between 65 and 69 years old. Since the demographic data from the Australian Bureau of Statistics (2007) found that 13.0 % of Iranian-born people living in Australia were 65 years and over, the sample in this study was relatively young.

Regarding acculturation components, the findings of this study demonstrate that the majority of Iranian elderly sampled migrated to Australia more than 10 years ago and that few of them are recent migrants. This finding matches the statistics of Australian Bureau of Statistics (1997) according to which most Iranian migration occurred between the 1960 and 1990.

The majority of Iranian elderly were found to speak Farsi at home. Nearly half of the respondents chose “not well” to describe their ability to communicate in English, and about a third of them felt they were unable to communicate in English at all. However, one third of the respondents judged their ability to communicate in English as “well or very well”. In a study by Khavarpour, Gholamshahi, & Bicer (2000) profiling the Iranian migrant community in Australia, the majority most of Iranian migrants reported their level of English proficiency in the “not well/not at all” category which also confirmed the report by the Australian Bureau of Statistics (1996) stating that many people aged over 65 years do not have good English skills.

The results of this study clearly contrast those of Benham et al. (2000) who, regarding relationship between level of English language proficiency and the health status of older overseas-born Australians in Victoria from 1996 to 2004, classified Iran in the EP3 group, i.e., with between 50% and 80% of arrivals speaking English well.

In terms of self-rated general health, the findings show that nearly half of the respondents rated their health as fair, while about one third claimed that they suffered from poor health. These findings corroborate the report by Australian Institute of Health and Welfare (2002) stating that a significant minority (34%) of people aged 75 years or older rated their health as fair or poor.

Results of this study show that most participants suffered from at least one chronic medical condition. The most common conditions were arthritis, incontinence and high blood pressure. These findings support those of Orb (2002) on the general Australian population who suggests that elderly migrants are at risk of heart disease and diabetes – conditions associated with high blood pressure. The results also confirm those from a study by Penhollow (2006) in the United States, in which arthritis was found to be a common chronic disease among elderly migrants.

Concerning preventative health measures, results reveal that the majority of older Iranian women respondents had had a mammogram and that more than a quarter of them had undergone a clinical breast examination by a doctor or other health professional.

Self-rated physical activity results show that the majority of Iranian elderly respondents compared their physical activity as a bit less active than their peers of other nationalities; only 13.2% of respondents rated themselves slightly more active. These results are in accord with Penhollow's (2006) findings that the predominance of inactivity is on the increase among migrants aged 65 and older.

On the subject of accessing information, the majority of the Iranian elderly respondents indicated that they got their medical information mostly through their doctors. Of those did, only a few consulted English speaking doctors; the rest got

information from Iranian or Farsi-speaking doctors. Television emerged as the most important medium for accessing information; this was followed by family and friends. The least used source of information among the respondents was the Iranian-specific media composed of Farsi newspapers, radio and brochures.

## **Section Two: Discussion of the Main Findings**

This section discusses the findings of the study with regard to its aims and hypotheses relating to the Iranian elderly, i.e., the effect of acculturation on the utilisation of health services and community aged care services, and the differences in utilisation of such services between Iranian elderly and the general elderly population living in the state of New South Wales. Altogether, two hypotheses were tested using linear and multivariate regression analyses to examine the relationships between acculturation, utilisation of health services, use of community aged care services, and the effect of mental and physical health components on utilisation of services.

### **Utilisation of health services and community aged care services**

The findings on the utilisation of health and community aged care services demonstrate that sociodemographic and acculturation variables are significant predictors of utilisation of health services among Iranian elderly. These include variables such as age, gender, having a health concession card, receiving disability or sickness benefits, lacking English language proficiency, and education. However, only level of education and financial situation were shown to be significant predictors of community basic and supportive aged care services.

English proficiency and language spoken at home did not show any significant association with the utilisation of basic or supportive aged care services. This could be attributed to a general unawareness of the availability of Home and Community Care (HACC) services among elderly Iranian migrants but also to cultural tradition by which elders should be looked after by their children and not require assistance from outside the family.

English language proficiency was a predictor of health service utilisation among Iranian elderly and findings of this study support both Benham et al.'s (2000) suggestion that English language proficiency is an acculturation variable that contributes to low levels of service use and McMaugh's (2001) findings that a non-English speaking background are associated with underutilisation of HACC services by frail aged people in northern Sydney.

This study found that sociodemographic factors clearly affect utilisation of community basic and supportive aged care services. Important predictors were age, gender, level of education and financial situation.

Age was found to be positively related to use of health services, a finding supported by other research, for example, by O'Connor (2006). In a study of the health status of American elderly, O'Connor found that people over the age of 65 years spent nearly three times as many days in hospital than the general population, a ratio that increased to nearly four times for people over the age of 75 years. This study also supports findings by Rochon (2003) on the utilisation of health care systems by Canadian elderly, which found that those over 65 years were far more likely to undertake one or more visits to a specialist.

This survey also found that among elderly Iranians females utilise health services more than males. This result is consistent with Jupp's research project (2005) among educated, middle-class Iranian women in northern Sydney which revealed that the use of health services for mental health problems among this group was higher than for Iranian men.

This survey also shows that education level is a negative predictor in use of health services, indicating those with a lower level of education were more likely to use health services more. This finding fit with Rochon (2003) that there was strong positive association in that more educated Canadian seniors use less health care services.

The results of this research show that English language proficiency is a strong predictor of utilisation of health services among Iranian elderly. This means that those who use health services are more likely to have a higher level of English language proficiency. This is in harmony with many other findings discussed in the literature review such as by Benham et al. (2000), who suggest that English language proficiency as an acculturation variable is one possible factor contributing to the lower level of service used; by McMaugh (2001), who demonstrates that older people from non-English speaking backgrounds underutilise the health services available to them; and by Sohn (2004), whose study of older Korean migrants indicated that language barriers are an important factor in relation to access to health care services and utilisation of health services. This study confirms that limited proficiency in English is potentially the most significant barrier to the use of health services.

### **Medical problems and physical and social activity**

The findings from this study show that those with chronic medical problems are more likely to utilise health services. This finding is supported by O'Halloran et al.'s (2007) study that among NESB people aged 75 years and over, chronic conditions like hypertension and osteoarthritis were the most frequent reason for using health care services.

Self-rated physical and social activity measures were found to be negative predictors of health service use. Thus, Iranian elderly who were more physically and or socially active were less likely to use health services.

### **Accessing information**

Three interlinked dimensions pertaining to accessing information were found to be predictors of utilisation of health services among Iranian elderly. These were: access to official information only through Farsi brochures, awareness of available aged care services, and knowledge of who to contact to ask for help. The results

showed that elderly whose only access to information on health services was via Farsi brochures or information passed on by family members or their friends were unaware of the aged care services available and also less likely to use health services. This finding is supported by McMaugh's study (2001) showing that people who speak a language other than English have a low level of awareness of aged care services, disability and carer support services. Their level of awareness is also clearly lower than that of English-speaking people. Evidence presented in the review of literature identified that lack of knowledge and poor understanding of aged care services was one of the main barriers to accessing services.

### **Utilisation of community aged care services**

Findings in this research show that initial use of community services was the major predictor of utilisation of other services. Thus, Iranian elderly who used an interpreter, received home care, home nursing, or meals on wheels were more likely to access community basic and supportive aged care services and even health services. This finding is supported by a report on the health care of immigrants suggesting that certain community services such as interpreters, bilingual staff and multilingual information improve access to services for people from non English speaking backgrounds (Ferguson & Browne, 1991). The findings also support the Department of Health, Housing and Community Services' report suggesting that there is some evidence that NESB people may be underutilising certain community-based services because of a lack of interpreting services available in their community (Dollis, 1993). The report on Iranian elderly living in Victoria supports this research, finding that Iranian elderly would use a doctor who spoke their language if possible, but would take a family member along to appointments to translate if not (Department of Human Services, 2004; Jupp, 2001).

## **Effect of mental and physical health**

The findings in this study demonstrate that use of health services by Iranian elderly is predicted by mental and physical health variables. The results suggest that elderly with higher levels of anxiety and depressive symptoms, a lower sense of wellbeing, more limited physical function, and unable to perform daily living activities, were more likely to use health services. This finding is supported by studies conducted in other immigrant communities, for example, in the United States where older Mexican immigrants are more likely to present to an emergency room than use mental clinic services due to anxiety and depression problems (Gonzalez, et al. 2001).

In Iranian elderly respondents utilisation of community aged care services too is predicted by mental and physical health status. The results suggest that Iranian migrants who were suffering higher levels psychological distress, who were more limited in physical function, in greater need of help or assistance with activities of daily living, and whose sense of wellbeing was lower, were less likely to use community aged care services. This finding is confirmed by the report of the Australian Institute of Health and Welfare (1997) stating that elderly from NESB with physical problems or other disabilities were underutilising a range of community services such as nursing homes or hostels.

## **Acculturation factors and potential discrepancies regarding utilisation of services**

The overall results show that acculturation factors such as language spoken at home, level of English language proficiency, and duration of immigration have no effect on the utilisation of community aged care services by the Iranian elderly living in the Sydney metropolitan area. In this, the findings do not support the hypothesis that acculturation factors have an effect on the utilisation of community aged care services among Iranian elderly. However, other data collected in this study suggests that Iranian elderly might have adopted to Australian culture in their utilisation of

community aged care services (see Results in Chapter Five). This would confirm the views of Mills and Henretta (2001) that acculturation is a process by which one cultural group adopts the beliefs and practices of a host culture. Laird and Angeles (2002) confirm the finding. This finding is in agreement with the study of Mahoney et al. (2005) that the degree of immigrant acculturation is influenced by the duration of migration and the degree of proficiency in the language spoken in that country.

This study reveals that level of English language proficiency as an acculturation variable, have a significant relationship with Iranian migrants' utilization of health services. Elderly respondents who were able to communicate "well" to "very well" in English were less likely to use different types of health services.

This confirms the result in research by Benham et al, (2000), that English Language proficiency as an acculturation variable is one possible factor contributing to lower levels of service use.

Therefore, findings support the hypothesis that acculturation factors have an effect on the utilisation of health services among Iranian elderly. The cause of effect was not the intention of this study and further research in the future is recommended to examine the causes of current findings.

### **Comparative service utilisation between Iranian and New South Wales elderly**

Findings from this study support the hypothesis that there are differences in the utilisation of health and community aged care service by Iranian elderly and the general population of older people in New South Wales. Iranian respondents accessed health services twice as frequently as the NSW respondents. The majority of Iranian elderly respondents did not use any of the community basic aged care services at all, whereas NSW respondents used such services three times more. The rate of utilisation of community supportive aged care services by NSW respondents was also three times higher than by Iranian respondents.

This is in line with Zogalis' (1993) findings from a study in the southern Sydney region showing that 91% of the aged from NESB did not use any aged care services. Benham et al., (2000) also support this finding that use of residential aged care services in overseas-born Australians was significantly lower than that for the Australian-born.

The results from this study suggest that elderly Iranian immigrants experience higher levels of psychological distress and lower levels of physical function than the general population of older Australians. However, even though this would indicate that they are more dependent on others in regard to activities of daily living and experience lower feelings of wellbeing, and thus have a greater need for health care services than the general population of older Australians, they are far less likely to access aged care services. Those with limited proficiency in English are at greater risk.

In relation to the utilisation of health services, this study found that Iranians who had more psychological problems, were more dependent on others regarding activities of daily living or were less able to perform various moderate and vigorous physical activities, were more likely to use health services. However, these same health components do not appear to affect the utilisation of health services among New South Wales old people. Khavarpour and Hosseinpour (2003) support this finding, stressing that the community of Iranian people living in metropolitan Sydney are more likely to utilise health care services due to psychological or mental problems. A comparative study on Iranian elderly migrants in Sweden confirms that, in comparison with elderly citizens of Sweden, the Iranian elderly have poorer health and make more use of health and social services and consume more medication (Emami et al., 2000).

This study found that none of the health factors studied predicted use of community basic aged care services, such as assistance with household duties, personal care and meals at home, by Iranian elderly. In contrast, health factors such as psychological distress or well being, and physical functioning are significant

predictors regarding the use of community basic aged care service by old people in New South Wales. In a comparative study between Australian and overseas-born (including Iranian) elderly, Benham et al. (2000) have shown that the utilisation of residential aged care services by migrants was significantly lower.

In regard to the utilisation of community supportive aged care service, including home maintenance, day care services, respite services and special transport, only one health variable, the ability to perform activities of daily living, was predicted in Iranian elderly respondents. Iranian respondents unable to independently perform daily living duties were more likely to utilise community supportive aged care service. However, other health factors such as psychological distress, psychological wellbeing and physical functioning did not predicted use of community supportive aged care services. This finding is not supported by the results of the “Survey 1999 NSW Old People” (NSW Department of Health, 2000) which showed that NSW elderly respondents who had more psychological distress or lower feelings of wellbeing, and who were less able to do various moderate and vigorous activities, were more likely to utilise community supportive aged care service.

### **Section Three: Conclusions**

This section will draw conclusions from the results presented in this study on the utilisation of health and community aged care service among elderly Iranian-born migrants in the Sydney metropolitan area who have been living in Australia for at least six months.

Iranians are a very proud people who like to boast about their culture. A central characteristic of Iranian culture is that the elderly are looked after by and kept in the family when they become fragile with old age (Jupp, 2001). This factor, corroborated by the data collected in this study, explains why Iranian elderly are more reliant on help from their sons and daughters than from services available to them through the community.

In this thesis, it has been demonstrated that acculturation factors such as duration of immigration and the language spoken at home have no significant bearing with on utilisation of health services. Proficiency in English, on the other hand, was found to have a relationship and be a clear predictor of health service utilisation. This would suggest that community interpreting services have helped those with difficulties in communicating in English to utilise health and community aged care service when necessary.

Data collected in this survey were also used to analyse a number of factors not related to the hypotheses. These results have been placed in the supplementary section. Other relevant data analysis has been presented in the respective results chapters. In this section, only factors found to be a significant predictor will be discussed. While these predictors are related to the aims and hypotheses of the thesis, they do not relate to all the collected information.

With regard to acculturation components, Iranian elderly respondents able to communicate in English were less likely to use certain types of health services (e.g., seen by a GP or local doctor, spent at least one night in hospital). Therefore the level of English language proficiency accounts for a significant part of the health services utilised among them. The results show that Iranian elderly who could communicate in English had less psychological distress symptoms, consequently, those experiencing more anxiety and depressive symptoms were more likely to have a lower level of English language proficiency. Participants who could communicate in English expressed greater feelings of wellbeing and happiness. Those who could not communicate in English at all were more likely to need a higher level of supervision in their activity of daily living. Respondents who used health services were more likely to have a higher level of English language proficiency. However, findings revealed that there was no relationship between utilisation of community (basic and supportive) aged care services and English language proficiency.

The results demonstrate that there was a significant association between age groups and the health services used by Iranian elderly respondents. Those in the oldest age group of 80+ were more likely to use certain types of health services.

Utilisation of health services was more prevalent among women. With regards to their financial status, elderly receiving a government pension, sickness benefit or disability pension were more likely to use different types of health services, and those who had a health concession card were more likely to use certain health services.

With regard to medical conditions, elderly respondents with chronic medical problems were more likely to use different types of health services than those with acute medical problems. Self-rated physical and social activity results show that those who were not active or less active in comparison to most other people in their age group were more likely to use certain types of health services while the more physically and or socially active were altogether less likely to use health services. Utilisation of health services was predicted by one community aged care services variable: use of interpreter services and/or an organised community service. This indicates that the more elderly Iranians used interpreters and/or any of the other community aged care services the more likely they were to access health services. Moreover, individuals who continually used some form of community aged care service (community nursing, home care, respite care, day care services, meals on wheels, home visiting, home maintenance or transportation) were more likely to use different types of health services than those who only used interpreter services. Furthermore, respondents who needed help with community basic aged care services/HACC (household duties, personal care, meals at home) were more likely to use different types of health services than those who sought help from community supportive aged care services/HACC (home maintenance, day care service, respite services, special transport). Results reveal that there is a significant relationship between the accessing information components and use of health services. However, there was no significant association between different ways of accessing information and use of health services.

Generally, in the relationship between physical and mental health status of the Iranian elderly and their utilisation of health services, findings show that those who suffered psychological distress, felt a lower level of wellbeing or had a lower level of physical functioning and daily living activity were more likely to use health services.

With regard to utilisation of community (basic and supportive) aged care services for elderly unable to perform household duties, home maintenance or personal care on their own, there was a significant association between age groups and community basic aged care service utilised in the week prior to data collection. There was a low level of utilisation of community basic aged care service in all age groups. Significant associations were found regarding gender in that older male respondents were less likely to utilise community basic aged care services. There were significant associations between use of community basic aged care service and self-rated physical activity in that respondents who were not active, or less active in comparison to most of the other Iranian elderly in their age group, were more likely to utilise community basic aged care services. Results also demonstrate that those who were very socially active were less likely to utilise these services.

Use of health services was shown to be a positive predictor for use of interpreters and other organised community services. This means that elderly respondents who used more health services were also more likely to utilise interpreters and other services such as home care, meals on wheels and home nursing.

Regarding the relationship between physical and mental health status and utilisation of community basic and supportive aged care services, the findings show that Iranian elderly unable to do household duties/home maintenance on their own or who needed help with personal care were more likely to suffer from anxiety and depressive symptoms, experience a lower level of wellbeing and greater limitations to their physical functioning (were more likely to need higher supervision in their activities of daily living).

Generally, use of interpreters and organised community services were predicted by physical and mental health components. Thus Iranian elderly who had more psychological problems, felt lower levels of wellbeing and had a lower level of physical functioning and daily living activity were more likely to use interpreters, home care, meals on wheels, and home nursing services.

In comparing the findings regarding the utilisation of health and community aged care services by Iranian and by New South Wales elderly, rates indicated that Iranian respondents utilised health services twice as much as NSW respondents.

The majority of Iranian elderly respondents did not use any form of community basic and supportive aged care service while overall, NSW respondents used such services three times more frequently. Further research is required to establish why such a big gap should exist in the utilization of such services by different communities in New South Wales.

Three factors, namely psychological distress, Activity of Daily Living (ADL), and physical functioning, were negative predictors for respondents' use of health services. Thus Iranian elderly with more psychological problems, greater dependency on others in completing their daily activities, and those less able to do various moderate and vigorous activities were less likely to use health services. However, with regard to the New South Wales elderly population, findings show that none of these health components were associated with the use of health services.

None of the health factors predicted community basic aged care service utilisation among the Iranian elderly respondents. However, in NSW elderly population three health components psychological distress /K6, wellbeing and physical functioning/SF-36 were found to predict utilisation of these services in the week prior to the study. This means that NSW elderly respondents who had more anxiety and depressive symptoms, had a lower feeling level of wellbeing, and who were less able to do various moderate and vigorous activities, were more likely to utilise community basic aged care services.

In Iranian elderly respondents, community supportive aged care service was only predicted by Activity of Daily Living. Thus Iranian respondents unable to perform daily living duties independently were more likely to utilise community supportive aged care services. However, in the NSW elderly population, health factors such as psychological distress/K6, wellbeing and physical functioning/SF-36 also predicted the use of community supportive aged care service in the four weeks

prior to the study. This means that NSW elderly respondents who had more psychological distress, lower feelings of wellbeing, and needed more help or supervision in doing daily living duties, were more likely to utilise these services.

## **Section Four: Practical Suggestions**

The results of this study provide valuable information to Iranian elderly, their families, and aged health care service providers such as Home and Community Care Services (HACC). For the New South Wales Government and the Department of Health in particular, this study of Iranian elderly living in NSW as a small minority group of NESB can provide information vital to programme planning and resource commitments. It could help in the implementation of preventative programmes and in expanding and optimising utilisation of aged care services. The information presented here might encourage the New South Wales Government to develop their policies, programmes and services to better meet the particular needs of the Iranian elderly, and to conduct further research into this and other minority needs.

This study shows that the utilisation of aged care services among Iranian elderly is associated with individual health status factors such as psychological distress/K6 and wellbeing, Activity of Daily Living/ADL, physical functioning/SF-36 and health behaviour factors. The comparison of the data collected from Iranian elderly and of that collected in New South Wales (NSW Health Department, 2000) shows that elderly Iranian immigrants underutilise general hospital and community aged care services, including basic maintenance and supportive aged care facilities. These findings suggest that the following could assist elderly Iranian migrants in becoming familiar with and using the available services thereby enabling them to enjoy a healthier and happier old age:

- GPs conversant in Farsi
- Health care professionals conversant in Farsi
- Facilities such as Farsi-speaking aged care services

- Information regarding health and community aged care services in Farsi
- Special English classes for the elderly throughout the Iranian community
- Discussion of health issues in the Iranian media operating in NSW
- Presentation of new procedures or services for the elderly in the Iranian media
- Translation of health brochures into Farsi and distribution of these throughout the Iranian community
- Encouragement to use available services via introductory services through Iranian community organisations

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# Appendices

# Appendix A



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**IRANIAN OLDER PEOPLE'S HEALTH SURVEY 2005**  
Sydney Metropolitan Area

**Dear Participant**

Thank you for agreeing to participate in this survey. The purpose of this survey is found out about health status, attitude and behaviour of the Iranian elderly towards health and their utilization of the current aged care services. Please have a look at these questions and think about the responses you like to put forward. All responses will be treated confidentially, with your answers being entered anonymously into a computer. This survey will be destroyed after the seven years, according to the requirements by the University of Sydney's Ethics Committee. **You do not have to answer all or any questions, particularly (Questions; 16-18-19-187-188) if you wish to do so at any time.**

Please put a circle around the number under each question.

## Demographics

1- Could you tell me how old are you?

\_\_\_\_\_ Years → Q3

777 don't know

999 refused.

2- Could you tell me which age group you belong to?

Are you between:

1. 65-69 years → Q3
2. 70-74 years → Q3
3. 75-79 years → Q3
4. 80-84 years → Q3
5. 85-89 years → Q3
6. 90 years and over → Q3
7. don't know → end
8. Refused → end.

3- Are you male or female?

1. Male
2. Female
3. Refused.

4- What is your Religious background?

1. Islam
2. Christianity (Western Catholic)
3. Baha'i
4. Zoroastrian
5. Judaism (Jewish)
6. Armenian
7. Assyrian
8. Other religious
9. No religious
10. Refused.

5- What is your marital status? Are you:

1. Married → Q7
2. Living with a partner/ de facto → Q7
3. Widowed
4. Divorced
5. Separated
6. Never married → Q10
7. Not stated → Q10
8. Don't know → Q10
9. Other (specify) → Q10 \_\_\_\_\_

10. Refused → Q10

6- About how long ago were you (widowed/divorced/separated)?  
\_\_\_\_\_ (years)

0 if less than 1 year

777 Don't know

999 refused.

7- Do you have any children?

1. Yes

2. No

3. Don't know

4. Refused.

8- Currently, how many children do you have in Australia?

1. One child

2. Two children

3. Three and more children

4. Don't know

5. Refused.

9- What is the sex of your children?

1. Girl only

2. Boy only

3. Boy and girl

4. Don't know

5. Refused.

10- Who else lives in your household? (**Multiple Response**)

1. No-one, I live alone (*if only one person in household, skip and insert 1*)

2. Spouse/ partner

3. Children

4. Brothers/ sisters

5. Other relatives (family members)

6. Non-family members (friends, neighbors)

7. Anyone else (specify) \_\_\_\_\_

8. Don't know

9. Refused.

11- In which country were you born?

1. Australia
2. Iran
3. Don't know
4. Refused.

12- If you born in Iran, When did you first arrive in Australia?  
19 \_\_\_\_\_

- 777 Don't know
- 999 Refused.

13- What language do you usually speak at home?

1. Persian (Farsi) only
2. English only
3. Persian and English equally
4. Other \_\_\_\_\_
5. Refused.

14- How well can you communicate in English?

1. Very well
2. Well
3. Not well
4. Not at all

15- What is your highest qualification?

1. Bachelor degree or higher
2. Associate diploma
3. Certificate/ diploma
4. Secondary (year 10-12)
5. Secondary (year 7-9)
6. Primary
7. No formal education
8. Don't know
9. Refused.

16- Are you currently in paid employment?

1. Yes
2. No → Q18
3. Don't know → Q18
4. Refused → Q18

17- Are you employed full-time or part-time?

1. Full-time
2. Part-time
3. Don't know
4. Refused

18- How many years ago did you retire in Iran (completely)?

\_\_\_\_\_ Years ago

222 not applicable

777 don't know

999 refused.

19- Do you currently receive any government pension or other allowance in Australia?

1. Yes
2. No
3. Don't know
4. Refused.

20- What kind of pension or benefit is that? (**Multi Response**)

1. Age pension
2. Invalid or Disability allowance pension
3. Sickness allowance
4. Other (Specify) \_\_\_\_\_
5. Don't know
6. Refused

21-Do you and your husband/ wife now have a health concession card?

*(PROMPT: this does not include a Medicare card)*

1. Yes
2. No → Q23
3. Don't know → Q23
4. Refused → Q23

22- Which card do you have? Is it a: (**Multiple responses**)

1. Pensioner Concession Card (Pale blue)
2. Health care Card (maroon & cream)
3. Commonwealth seniors' health card (green)
4. Don't know
5. Refused.

23- Do you have any private health insurance?

1. Yes
2. No → Q25
3. Don't know → Q25
4. Refused → Q25

24- Does this include: **(Multiple Response)**

1. Ambulance cover
2. Hospital cover
3. Dental cover
4. Extras like physiotherapy
5. Don't know
6. Refused.

25- Thinking about your money situation, would you say:

1. You can't make ends meet
2. You have just enough to get along
3. You are comfortable
4. Don't know
5. Refused.

## **HOME OWNERSHIP, HOUSING TYPE**

*I would like to ask some questions about your housing arrangements.*

26- Are you:

1. The outright owner of your home
2. Paying off your home
3. Leasing, purchasing (or other financial plan) in a retirement village
4. Paying rent or board to a private landlord
5. Paying rent to the government for public housing
6. Living here rent or board free
7. Anything else (specify) \_\_\_\_\_
8. Don't know
9. Refused.

27- What type of accommodation do you live in?

1. Separate house
2. Semi-detached/ town house/ terraced house
3. Villa
4. Unit or flat
5. Granny flat
6. Unit in a Retirement village (excluding nursing home or hostel)
7. Hostel accommodation
8. Don't know
9. Refused
10. Other (specify) \_\_\_\_\_

28- Since you were 65 years old, have you made any of the following changes to

your home to make it easier to live there?

Have you (**Multiple Response**)

1. Installed grab bars or rails
2. Put in a bath seat, hand shower or special non slip mats
3. Had doors widened or made them swing the other way
4. Improved paths or steps
5. Increased lighting
6. Any other changes (specify) \_\_\_\_\_
7. No changes made
8. No changes needed
9. Don't know
10. Refused.

29- Have you moved house in last five years?

1. Yes
2. No
3. Don't know
4. Refused

30- What are the main reasons for your move? (**Multiple Response**)

1. To live closer to family/friends
2. Home too big
3. Save money/ cheaper
4. Closer to services/ facilities
5. Safer environment
6. Old age or condition
7. Other (specify) \_\_\_\_\_
8. Don't know
9. Refused.

## GENERAL HEALTH STATUS

31- In general, would you say your health is:

1. Excellent
2. Very good
3. Good
4. Fair
5. Poor
6. Don't know
7. Refused.

32- Compared with five years ago, how you would rate your health in general:

1. Better now
2. about the same
3. Worse now
4. Don't know
5. Refused.

33- Do you have any health problems that cause you difficulty in getting around and doing things for yourself?

1. Yes
2. No
3. Don't know
4. Refused

34- Which health problem causes you the most difficulty?

\_\_\_\_\_

777 don't know  
999 refused.

35- In the **last 12 months**, have you spent more than a complete week in bed at

home because of illness or accident?

*(Prompt for reason illness or accident)*

1. Yes, illness
2. Yes, accident
3. Yes, both
4. No
5. Don't know
6. Refused.

## SENSORY SCREENING AND LOSS

36- Have you ever had your hearing tested?

1. Yes
2. No → Q38
3. Don't know → Q38
4. Refused → Q38

37- When did you last have your hearing checked?

1. Less than 1 year ago
2. 1 year ago to less than 2 years ago
3. 2 years to less than 5 years ago
4. 5 or more years ago
5. Never
6. Don't know
7. Refused.

38-Do you currently use a hearing aid?

1. Yes
2. No
3. Don't know
4. Refused.

39-Is your hearing [with your hearing aid] excellent, good, fair or poor?

1. Excellent
2. Good
3. Fair
4. Poor

40- When did you last have your eyesight checked?

1. Less than 1 year ago
2. 1 year ago to less than 2 years ago
3. 2 years to less than 5 years ago
4. 5 or more years ago
5. Never
6. Don't know
7. Refused.

41- Do you currently wear glasses: **(Multiple Response)**

1. for reading
2. for distance vision
3. No glasses
4. Don't know
5. Refused.

42-Is your eyesight for reading [with your glasses] excellent, good, fair or poor?

1. Excellent
2. Good
3. Fair
4. Poor
5. Don't know
6. Refused.

43-Is your long distance eyesight [with your glasses] excellent, good, fair or poor?

1. Excellent
2. Good
3. Fair
4. Poor
5. Don't know
6. Refused.

## **ORAL HEALTH**

44- Are any of your natural teeth missing?  
(*Natural teeth does not include dentures*)

1. yes--- have some of my natural teeth missing
2. yes--- have all my natural teeth missing → Q46
3. no--- have none of my natural teeth missing
4. Don't know
5. Refused.

45-In the **last 12 months**, how often have you had a toothache?

1. Very often
2. Often
3. Sometimes
4. Hardly ever
5. Never (during the last 12 months)
6. Don't know

7. Refused.

46-In the **last 12 months**, how often have you had a problem with your mouth or dentures?

1. Very often
2. Often
3. Sometimes
4. Hardly ever
5. Never (during the last 12 months)
6. Don't know
7. Refused.

47-In the **last 12 months**, how often have you had to avoid eating some foods because of problems with your teeth, mouth or dentures?

1. 1. Very often
2. Often
3. Sometimes
4. Hardly ever
5. Never (during the last 12 months)
6. Don't know
7. Refused.

## **PSYCHOLOGICAL DISTRESS & WELL-BEING**

48- Do you often see/ visit friends/ families?

1. Yes
2. No
3. Don't know
4. Refused.

49- How often do you see/ visit friends/ family?

1. Weekly
2. Fortnightly
3. Monthly
4. Other (specify) \_\_\_\_\_
5. Don't know
6. Refused.

50-Do you regularly participate in activities organized by:

1. Iranian community
2. The council
3. Church
4. Mosque

5. Community Health Center
6. Other (specify) \_\_\_\_\_
7. None of them

51-In the **last 4 weeks**, about how often did you feel so sad that nothing could cheer you up?

1. All of the time
2. Most of the time
3. Some of the time
4. a little of the time
5. None of the time
6. Don't know
7. Refused.

52- In the **last 4 weeks**, about how often did you feel nervous?

1. 1. All of the time
2. Most of the time
3. Some of the time
4. a little of the time
5. None of the time
6. Don't know
7. Refused.

53-In the **last 4 weeks**, about how often did you feel restless or fidgety?

1. All of the time
2. Most of the time
3. Some of the time
4. a little of the time
5. None of the time
6. Don't know
7. Refused.

54-In the **last 4 weeks**, about how often did you feel hopeless?

1. All of the time
2. Most of the time
3. Some of the time
4. a little of the time
5. None of the time
6. Don't know
7. Refused.

55- In the **last 4 weeks**, about how often did you feel that everything was an effort?

*If necessary, prompt: how often did you feel everything was hard and difficult to do?*

1. All of the time
2. Most of the time
3. Some of the time
4. a little of the time
5. None of the time
6. Don't know
7. Refused.

56- In the **last 4 weeks**, about how often did you feel worthless?

1. All of the time
2. Most of the time
3. Some of the time
4. a little of the time
5. None of the time
6. Don't know
7. Refused.

57- In the **last 4 weeks**, about how often did you feel happy?

1. Most of the time
2. Some of the time
3. None of the time
4. Don't know
5. Refused.

58- In the **last 4 weeks**, about how often did you feel calm and peaceful?

1. Most of the time
2. Some of the time
3. None of the time
4. Don't know
5. Refused.

59- In the **last 4 weeks**, about how often have you felt bored?

1. Most of the time
2. Some of the time
3. None of the time
4. Don't know
5. Refused.

60- In the **last 4 weeks**, about how often have you felt lonely?

1. Most of the time
2. Some of the time
3. None of the time
4. Don't know
5. Refused.

61- In the **last 4 weeks**, about how often have you felt depressed?

1. Most of the time
2. Some of the time
3. None of the time
4. Don't know
5. Refused.

62- In the **last 4 weeks**, how many times have you seen a doctor or other health professional about these feelings?

- 
- 777 Don't know
  - 999 Refused.

*(If 'none of the Time' to Q51- Q62 then → Q64)*

## **SLEEP**

63- How often do you feel really rested when you wake up in the morning?  
Would you say:

1. Most of the time
2. Some of the time
3. None of the time
4. Don't know
5. Refused.

## **PERCEPTIONS OF SAFETY IN THE HOME AND NEIGHBOURHOOD**

64-Do you feel safe in your home:

1. All of the time
2. Most of the time
3. Some of the time
4. None of the time

5. Don't know
6. Refused.

65-Do you feel safe in your [neighborhood/local area]:  
(Use 'local area' for non-urban areas)

1. All of the time
2. Most of the time
3. Some of the time
4. None of the time
5. Don't know
6. Refused

## DIABETES AND HIGH BLOOD SUGAR

66- Have you ever been told by a doctor or at a hospital that you have diabetes?

1. Yes → Q68
2. No
3. Only during pregnancy → Q71
4. Don't know → Q71
5. Refused → Q71

67- Have you ever been told by a doctor or at a hospital that you have high blood sugar?

1. Yes
2. No → Q71
3. Borderline
4. Only during pregnancy → Q71
5. No longer have high blood sugar → Q71
6. Don't know → Q71
7. Refused → Q71

68- How old were you when you were first told you had diabetes/ high blood sugar?

\_\_\_\_\_ Years

777 Don't know  
999 refused.

69- In the **last 12 months**, how many times has a health professional checked your feet

for signs of ulcers, infections and abnormalities?

\_\_\_\_\_ Number of times

777 Don't know  
999 Refused.

70- In the **last 12 months**, how many times has a health professional placed drops in your eyes and checked the back of your eyes for diabetes- related eye problems?

\_\_\_\_\_ Number of times

777 Don't know

999 Refused.

## **WOMEN'S HEALTH ( *For Women only* )**

71- Have you ever had a mammogram?

1. Yes
2. No → Q73
3. Don't know → Q73
4. Refused → Q73

72- When did you last have a mammogram?

1. Less than 1 year ago
2. 1 year ago to less than 2 years ago
3. 2 years to less than 5 years ago
4. 5 or more years ago
5. Never
6. Don't know
7. Refused.

73- A clinical breast examination is when a doctor, nurse or other health professional

feels the breast for lumps. Have you ever had a clinical breast examination?

1. Yes
2. No → Q75
3. Don't know → Q75
4. Refused → Q75

74- When did you last have a clinical breast examination?

1. Less than 1 year ago
2. 1 year ago to less than 2 years ago
3. 2 years to less than 5 years ago
4. 5 or more years ago
5. Never
6. Don't know
7. Refused.

## **PHYSICAL FUNCTIONING**

75- Does your health limit you in doing vigorous activities such as running, lifting

heavy objects or participating in strenuous sports?

1. Yes
2. No → Q77
3. Don't know → Q77
4. Refused → Q77

76-Does your health limits you a lot or limits you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

77- Does your health limit you doing moderate activities such as moving a table,  
pushing a vacuum cleaner, playing lawn bowls or golf or bushwalking?

1. Yes
2. No → Q79
3. Don't know → Q79
4. Refused → Q79

78-Does your health limits you a lot or limits you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

79-Does your health limits you lifting or carrying groceries?

1. Yes
2. No → Q81
3. Don't know → Q81
4. Refused → Q81

80- Does your health limits you a lot or limits you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

81-Does your health limit you climbing several flights of stairs?

1. Yes
2. No → Q85 (Enter 2 in Q83)
3. Don't know → Q83

4. Refused → Q83

82-Does your health limits you a lot or limits you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

83-Does your health limit you climbing one flight of stairs?

1. Yes
2. No → Q85
3. Don't know → Q85
4. Refused → Q85

84-Does your health limits you a lot or limits you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

85- Does your health limit you bending, kneeling or stooping?

1. Yes
2. No → Q87
3. Don't know → Q87
4. Refused → Q87

86- Does your health limits you a lot or limits you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

87- Does your health limit you walking more than one kilometer (that's about half a mile)?

1. Yes
2. No → Q93 (Enter 2 in Q89 and Q91)
3. Don't know → Q89
4. Refused → Q89

88- Does your health limit you a lot or limit you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

89- Does your health limit you walking half a kilometer (that's about 500 yards)?

1. Yes
2. No → Q93 (Enter 2 in Q91)
3. Don't know → Q91
4. Refused → Q91

90- Does your health limit you a lot or limit you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

91- Does your health limit you walking 100 meters?

1. Yes
2. No → Q93
3. Don't know → Q93
4. Refused → Q93

92- Does your health limits you a lot or limits you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

93- Does your health limits you bathing or dressing yourself?

1. Yes
2. No → Q96
3. Don't know → Q96
4. Refused → Q96

94- Does your health limits you a lot or limits you a little?

1. Limited a lot
2. Limited a little
3. Not limited at all
4. Don't know
5. Refused.

95- Do you suffer from any of the following conditions, which restrict your independence or can restrict it in the future? **(Multiple Response)**

1. Arthritis
2. Osteoporosis
3. Depression
4. Asthma
5. Diabetes
6. High blood pressure
7. High cholesterol
8. Heart disease
9. Memory problems
10. Eyesight problems
11. Problems with walking
12. Problems with getting up & down
13. Problems with sleeping
14. Hearing difficulties
15. Headache
16. Incontinence
17. Other (specify) \_\_\_\_\_

## **WALKING AIDS**

**(Only asked of people who cannot do moderate or vigorous activities).**

96- Do you currently use:

1. A cane or walking stick?
2. A walker or frame?
3. A wheelchair?
4. Do NOT use any aids
5. Don't know
6. Refused.

## ACTIVITIES OF DAILY LIVING

97- Can you do household duties like laundry, vacuuming, or dusting on your own?

1. Yes
2. No
3. Don't know
4. Refused.

98- Can you prepare all your meals on your own?

1. Yes
2. No
3. Don't know
4. Refused.

99- Can you do home maintenance or gardening tasks on your own?

1. Yes
2. No
3. Don't know
4. Refused.

100- Do you need help or supervision with personal care such as showering or bathing, dressing, or getting to the toilet?

1. Yes
2. No
3. Don't know
4. Refused.

101- Do you need help or supervision with personal care such as housework, meal preparation, washing?

1. Yes
2. No
3. Don't know
4. Refused.

102- Do you need help or supervision with personal care such as shopping, transport?

1. Yes
2. No
3. Don't know

4. Refused.

103- Do you need help cutting your toenails?

1. Yes
2. No
3. Don't know
4. Refused.

## USE OF HEALTH SERVICES

104-In the **last 12 months**, have you consulted a GP or local doctor about your health?

1. Yes
2. No → Q106
3. Don't know → Q106
4. Refused → Q106

105-In the **last 2 weeks**, have you consulted a GP or local doctor about your health?

1. Yes
2. No
3. Don't know
4. Refused.

106-In the **last 12 months**, have you visited or been visited by a community nurse or a private nursing service?

1. 1. Yes
2. No → Q108
3. Don't know → Q108
4. Refused → Q108

107-In the **last 2 weeks**, have you visited or been visited by a community nurse or a private nursing service?

1. Yes
2. No
3. Don't know
4. Refused.

108-In the **last 12 months**, have you visited or been visited by a podiatrist or chiropodist? A podiatrist/ chiropodist are a person who is specially trained to provide foot care.

1. Yes
2. No
3. Don't know
4. Refused.

109- In the **last 12 months**, have you consulted a chemist for advice about a health problem?

1. Yes
2. No
3. Don't know
4. Refused.

110- In the **last 12 months**, have you visited or been visited by a physiotherapist?

1. Yes
2. No
3. Don't know
4. Refused.

111- In the **last 12 months**, have you stayed for at least one night in hospital?

1. Yes
2. No
3. Don't know
4. Refused.

## **USE OF COMMUNITY SERVICES**

*( Only asked of people who cannot do household duties or maintenance or personal care on their own).*

112- Who helps you with household duties, home maintenance or personal care which you cannot do on your own? **(Multiple response)**

1. I do (*Proxy interview only*)
2. Spouse/ partner
3. Son/ daughter
4. Other family
5. Neighbors or friends
6. An organized community service (e.g. Home Care, Meals on Wheels, Home Nursing)
7. Private services (not a government or voluntary agency).

8. Services (don't know if public or private)
9. No one helps (*Exclusive option*)
10. Don't need any help
11. Don't know
12. Refused.

*(If 'no' to 6 and 7 and 8) skip Q126*

113-Do you know what services for older people and carers are available in your area?

1. Yes
2. No
3. Don't know
4. Refused

114- Do you know who to contact to ask for support/ help?

1. Yes
2. No
3. Don't know
4. Refused

115 – Have you ever used any of these services: **(Multiple Response)**

1. Interpreter
2. Telephone interpreting service
3. Community transport
4. Community nursing
5. Home care
6. Respite/ Day care
7. Meals on wheels
8. Dementia support
9. Neighbor Aid/ Home visiting
10. Podiatry
11. Lawn moving
12. in home respite
13. Home maintenance & modification
14. Care link
15. Respite for carer
16. Other \_\_\_\_\_

116- Did you have any services to help with household duties such as laundry, vacuuming, dusting in the **LAST WEEK**?

1. Yes
2. No → Q118
3. Don't know → Q118
4. Refused → Q118

117- How many hours of household services did you have in the **LAST WEEK**?

\_\_\_\_\_ Hours last week

- 777 Don't know  
999 Refused.

118- Did you have any services to help you with personal care at your home in the **LAST WEEK**?

1. Yes
2. No → Q120
3. Don't know → Q120
4. Refused → Q120

119- How many times did services help you with personal care in the **LAST WEEK**?

\_\_\_\_\_ Times last week

- 777 Don't know  
999 Refused.

120- Did any services deliver or prepare meals for you at home in the **LAST WEEK**?

1. Yes
2. No → Q122
3. Don't know → Q122
4. Refused → Q122

121- How many meals did a service deliver or prepare for you in the **LAST WEEK**?

\_\_\_\_\_ Meals last week

- 777 Don't know  
999 Refused.

122- In the **LAST FOUR WEEKS** did you have any services to help with home

maintenance or gardening?

1. Yes
2. No
3. Don't know
4. Refused.

123- In the **LAST FOUR WEEKS** did you attend a day care centre?

1. Yes
2. No
3. Don't know
4. Refused

124- In the **LAST FOUR WEEKS** did you have any respite services come to your

home to look after you?

1. Yes
2. No
3. Don't know
4. Refused.

125- In the **LAST FOUR WEEKS** did you stay overnight at any respite services?

*(Prompt if necessary: Respite services provide supervision or company to someone who cannot manage on their own)*

1. Yes
2. No
3. Don't know
4. Refused.

126- In the **LAST FOUR WEEKS** did you have any services to help take you out for

shopping, errands, or medical appointments (e.g. special buses or escorting services)?

1. Yes
2. No
3. Don't know
4. Refused.

127- Do you think you need *[more if Q112 ne 9(no one helps)]* help with any household duties, personal care, or other tasks at home?

1. Yes
2. No → Q130
3. Don't know → Q130
4. Refused → Q130

128- What tasks do you need *[more if Q112 ne 9(no one helps)]* help with?  
**(Multiple Response)**

1. Household duties (includes laundry, vacuuming, cleaning)
2. Personal care (showering, bathing, dressing, getting to the toilet)
3. Meals at home
4. Home maintenance/ modification or gardening
5. Day care services
6. Special transport to shopping, errands, medical visits
7. Respite Services
8. Any other tasks (specify)
9. Don't know
10. Refused.

129- What is the main reason you are not receiving *[more if Q112=6 or 7 or 8]* help

with these tasks from community services?

1. Did not know community services were available
2. Need not important enough now
3. Won't ask – too proud
4. Unable to arrange service
5. No service is available
6. Not eligible for service
7. Service costs too much
8. Service doesn't provide sufficient hours
9. Language/ Cultural barriers
10. Other (specify) \_\_\_\_\_
11. Don't know
12. Refused.

## **TRANSPORT INCLUDING DRIVING AND PUBLIC TRANSPORT**

130- Can you get to places by car, bus or train on your own?

1. Yes
2. No
3. Don't know
4. Refused.

131- In the **last 4 weeks** which of the following types of transport did you use?  
**(Multiple Response)**

1. Car- as a driver
2. Car- as a passenger
3. Government or private bus service
4. Train
5. Taxi
6. Community transport provided by the local council or health service
7. Anything else (specify) \_\_\_\_\_
8. Didn't use any transport
9. Don't know
10. Refused.

132- Do transport problems limit you with any of the following activities?  
**(Multiple Response)**

1. Your social activities
2. Going shopping

3. Getting to and from health services such as GPs or hospitals
4. No problems with transport
5. Don't know
6. Refused.

133- Do you have problems in using public transport?

1. Yes→ Q134
2. No
3. Don't know
4. Refused.

134- What are your problems in using public transport?  
(Multiple Response)

1. Health problems
2. Mobility problems
3. Disability
4. Lack of confidence
5. Inconvenient timetable
6. Very limited public transport in your area
7. Other \_\_\_\_\_

135-What would make it easier for you to get to and from health services?

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## CAREGIVING

136-Do you have the main responsibility in caring for someone who has a long-term illness, disability or other problem?

*Prompt if necessary: Such a problem would prevent then from managing their household tasks of personal care independently.*

1. Yes
2. No → Q144
3. Don't know→ Q144
4. Refused → Q144

137- Who do you care for?

*(If cares for more than one person, select the person they spend most of their time caring for)*

1. Husband
2. Wife
3. Partner
4. Son

5. Daughter
6. Grandchild
7. Friend
8. Mother
9. Father
10. Other (specify) \_\_\_\_\_
11. Don't know
12. Refused.

138- What main disability or illness does your [*main care recipient Q137*] have?

Is it a: (**Multiple Responses**)

1. Physical illness or disability (Include Frailty and Blindness)
2. A memory problem or intellectual disability (including dementia/Alzheimer)
3. Other (Specify) \_\_\_\_\_
4. Don't know
5. Refused.

139- During the last week, have you had any of the following services at home to help you care for [*main care recipient Q137*]? (Services include public, private, and community services).

Did you have ... (**Multiple Response**)

1. Services to help with household duties
2. Services to help with their personal care
3. Services that deliver meals to your home
4. Services to help with home maintenance or gardening
5. Special transport services to shopping, errands, medical visits)
6. Home nursing services (e.g. Treatments, wound dressing, monitoring/ checkup, etc., excluding personal care)
7. None of the above services
8. Don't know
9. Refused.

140- Did you have any carer support from any of the following services over the last

four weeks? (**Multiple Response**)

1. Day care centre
2. Respite care at home
3. Any other carer support (specify) \_\_\_\_\_
4. No carer support (exclusive option)
5. Don't know
6. Refused.

141- Do you need any more help with carer support, household duties, personal care,

or other jobs around the house?

1. Yes
2. No → Q144
3. Don't know → Q144
4. Refused → Q144

142- Do you need [more] help with: **(Multiple Response)**

1. Household duties
2. Personal care
3. Meals at home
4. Home maintenance or gardening
5. Special transport to do shopping, run errands or attend medical visits
6. Home nursing (e.g. treatments, wounds dressing, monitoring/ checkup)
7. Anything else (specify) \_\_\_\_\_
8. Don't know
9. Refused.

143-What is the main reason you are not receiving this help?

1. Did not know of service
2. Need not important enough now
3. Won't ask – pride
4. Unable to arrange service
5. No service available
6. Not eligible for service
7. Service costs too much
8. Service doesn't provide sufficient hours
9. Other (specify) \_\_\_\_\_
10. Don't know
11. Refused.

144- In the **last month** or so have you helped anybody by doing:  
**(Multiple response)**

1. Child minding?
2. Shopping or errands?
3. Housekeeping? (If Q 97 = 1)
4. Doing maintenance or gardening around their house? (if Q 97= 3)
5. Giving lifts to people in the car? (If Q131= 1)
6. Prepared meals for someone outside your household?
7. Hasn't helped anyone (exclusive response)
8. Don't know
9. Refused.

145- In the **last six months** or so have you: **(Multiple Responses)**

1. Looked after anyone who was ill in bed?
2. Done any volunteer work for an organization?
3. Done neither (exclusive option)
4. Don't know
5. Refused.

## **SOCIAL ACTIVITY**

146- How do you usually spend your day?

1. Doing housework
2. Cooking
3. Gardening
4. Minding grandchildren
5. Going to church/ mosque
6. Listening to radio
7. Doing shopping
8. Watching TV/ videos
9. Doing craft
10. Going to clubs
11. Going to other Iranian groups
12. Visiting friends
13. Visiting family
14. Reading books/ magazines
15. Other \_\_\_\_\_

147- What would you like to do the most in your free time?

1. Stay at home
2. Meet with other people
3. Meet with other Iranian people
4. Have a meal together
5. Do activities together (play games/ do craft)
6. Attend church/ mosque
7. Have information sessions on different health topics
8. Other \_\_\_\_\_

148- There are many ways people may be socially active, including visiting family and friends, going on outings, and belonging to churches or clubs. How would you describe your general social activity? Are you....

1. Very active
2. Fairly active
3. not very active
4. Not active at all
5. Don't know
6. Refused.

149-What things keep you from being more socially active?  
(Multiple Response)

1. Health problems
2. Not enough time
3. Can't be bothered
4. No friends/ family close by
5. No transport
6. Not safe
7. Costs of activities or transport
8. Shy/ don't like going out
9. Anything else (specify) \_\_\_\_\_
10. Nothing keeps me from being more socially active
11. Don't know
12. Refused.

150- Are there people with whom you can enjoy joint activities and outings?

1. Yes
2. No
3. Don't know
4. Refused

151- Is there someone you confide in about things that are important to you?

1. Yes
2. No
3. Don't know
4. Refused

152- In the **last weeks** have you: (Multiple Responses)

1. Gone out to visit family
2. Had family to visit you
3. Had contact by phone with family
4. Gone out to visit friends
5. Had friends to visit you
6. Had contact by phone with friends
7. No contact with family or friends
8. Don't know
9. Refused.

153- Regarding to develop health services for people who spend much of their time at home I'm now going to ask you a question about how often you get out.

About how often do you get out of your home for any reason?  
(If asked: 'home' includes a garden or yard).

1. Never or almost never
2. Less than once a month
3. 1 to 3 times a month
4. Once a week
5. A few times a week
6. Every day or most days of the week
7. Don't know
8. Refused.

## **PERCEPTION ABOUT LIFESTYLE**

154- Would you say that the way you live your life these days is:

1. Very healthy
2. Fairly healthy
3. Not so healthy
4. Don't know
5. Refused.

155- Do you do anything at the moment to keep yourself healthy or improve your health?

1. Yes
2. No → Q157
3. Don't know → Q157
4. Refused → Q157

156- What are the **two most important** things you do to keep you healthy or improve your health?

1. Walking
2. Other physical activity
3. Healthy eating
4. Social activity
5. Positive attitude
6. Healthy living habitués
7. Other (Specify) \_\_\_\_\_
8. Don't do anything to keep healthy
9. Don't know
10. Refused.

## PHYSICAL ACTIVITY

157- How physical active are you compared to most other *[men (if male)/ women (if female)]* your age?

1. much less active
2. A bit less active
3. About as active
4. A bit more active
5. Much more active
6. Don't know
7. Refused.

158-How many days in the last week have you walked for at least half an hour in total?

\_\_\_\_\_ Days in last week

- 777 Don't know  
999 refused.

159-How many days in the last week did you do moderate activities such as dancing, golf, lawn bowls for at least half an hour in total?

\_\_\_\_\_ Days in last week

- 777 Don't know  
999 Refused.

160- How many days in the last week did you do vigorous gardening or yard work for at least half an hour in total?

\_\_\_\_\_ Days in last week

161-Have you heard of the exercise and physical activity campaign, 'Exercise-you only have to take it regularly not seriously?'

1. Yes
2. No
3. Don't know
4. Refused.

162-Are there any reasons that keep you from being more physically active?

1. Yes
2. No → Q164
3. Don't know → Q164
4. Refused → Q164

163-What are they? **(Multiple Response)**

1. Health problems, e.g. Arthritis, heart problems, bad knees
2. Weather- too hot, too cold, too wet
3. Don't like exercising alone
4. Pain problems
5. Feel unsafe on the streets
6. Worried about the dogs in the area
7. Afraid of falling over
8. Transport problems
9. Anything else (specify) \_\_\_\_\_
10. Don't know
11. Refused.

## NUTRITION

164-How many serves of vegetables do you usually eat each day? A serve is half cup cooked vegetables or one cup of salad vegetables.

Prompt: potatoes are vegetables.

1. \_\_\_\_\_ serves per day
2. \_\_\_\_\_ serves per week
3. Don't eat vegetables
4. Don't know
5. Refused.

165-How many serves of fruit do you usually eat each day? A serve is 1 medium piece or 2 small pieces of fruit or 1 cup of diced or canned fruit pieces.

1. \_\_\_\_\_ serves per day (0, 1, 2, etc)
2. \_\_\_\_\_ serves per week
3. Don't eat fruit
4. Don't know
5. Refused.

## INCONTINENCE

*The next few questions are about urinary symptoms which are a common problem in the community. If you feel uncomfortable with any question, just tell me and I will move on to the next question.*

166-In the **last four weeks**, how often did you have to unexpectedly rush to the toilet to urinate, during the day or night?

1. Most of the time
2. Some of the time
3. None of the time

4. Don't know
5. Refused.

167- In the **last month**, how often did urine leak when you were physically active, exerted yourself, coughed or sneezed, during the day or night?

1. Most of the time
2. Some of the time
3. None of the time
4. Don't know
5. Refused.

*[If Q 166= 3, 4 or 5 and Q167= 3, 4 or 5 then skip to Q169]*

168- Have you talked with a health professional about it?

1. Yes
2. No
3. Don't know
4. Refused.

## **FALLS**

169- In the last 12 months have you had a fall?

1. Yes
2. No → Q171
3. Don't know → Q171
4. Refused → Q171

170- In the **last 12 months** have you had a fall which required medical treatment for injuries?

1. Yes
2. No
3. Don't know
4. Refused

171- Are you afraid of falling?

1. Yes
2. No → Q173
3. Don't know → Q173
4. Refused → Q1723

172- Would you say you are somewhat, fairly, or very afraid of falling?

1. Not at all
2. Somewhat afraid
3. Fairly afraid

4. Very afraid
5. Don't know
6. Refused

173- Do you currently use any personal alert or alarm in case you have a fall or other emergency?

1. Yes
2. No
3. Don't know
4. Refused

174- Would you consider doing a program of gentle exercise in order to reduce your chances of falling?

1. Yes
2. No → Q176
3. Already do exercise → Q176
4. Don't know → Q176
5. Refused → Q176

175- would you consider: **(Multiple Response)**

1. Walking?
2. Gentle exercises at home?
3. Gentle exercises in a group?
4. Dancing
5. Any other exercise which you would like to do? (Specify)

- 
6. Don't know
  5. Refused

## **IMMUNISATION**

176- Has a health professional ever advised you to be vaccinated against 'flu?

1. Yes
2. No
3. Don't know
4. Refused

177- Were you vaccinated or immunized against 'flu in **the last 12 months**?

1. Yes
2. No
3. Don't know
4. Refused

178- Has a health professional ever advised you to be vaccinated against pneumonia?

1. Yes
2. No
3. Don't know
4. Refused

179- Were you vaccinated or immunized against pneumonia in the last 12 months that is since [month] 2004?

1. Yes
2. No
3. Don't know
4. Refused

### **ACCESSING INFORMATION:**

180- Can you speak English?

1. Very well
2. Well
3. Not well
4. Not at all

181- Can you read English?

1. Yes, very well
2. Yes, well
3. Yes, not well
4. No

182- How do you usually access information? (**Multiple response**)

1. Iranian Herald
2. Local newspaper
3. Family
4. Friends
5. Group or community leaders
6. Brochures in English
7. Brochures in Farsi
8. SBS Radio
9. Iranian Radios (Community Radio)
10. Church/ Mosque
11. Iranian Community (Organization)
12. Your doctor
13. Other \_\_\_\_\_

183- If you need help who would you contact to find out about services for older

people?

**(Multiple response)**

1. Family
2. Friends
3. The council
4. Care link
5. Community/ group leader
6. Priest
7. Hospital
9. The hills community care
10. carer Respite/ Resource centre
11. The hills community health care
12. Your doctor
13. Other \_\_\_\_\_

184 -Do you feel confident in accessing this information over the phone?

1. Yes
2. No
3. Don't know
4. Refused

185 - Would you access this information through brochures in English?

1. Yes
2. No
3. Don't know
4. Refused

186- Would you access this information through brochures in Farsi?

1. Yes
2. No
3. Don't know
4. Refused

187- Can you tell me you're Postcode now?

\_\_\_\_\_

- 777 Don't know  
999 Refused

188- What suburb / locality do you live in now?

---

777 Don't know

999 Refused

**END**

That ends my questionnaire. Thank you for taking the time to complete this questionnaire. The information will be used to help improve health services for people 65 years and over from Non-English Background in your local area and across the state. Thanks once again. Goodbye.

# Appendix B

## پرسشنامه بررسی وضعیت بهداشت و سلامت سالمندان ایرانی مقیم سیدنی

### مصاحبه شونده گرامی

ضمن تشکر از همکاری شما در این پرسشگری، هدف از این بررسی تعیین وضعیت سلامت دوران سالمندی شما، نگرش و رفتارهای شما در دوران سالمندی و میزان استفاده شما از خدمات سالمندی موجود در کشور استرالیا میباشد.

### لطفاً سوالات زیر را خوانده و به آنها با کشیدن دایره دور سوالات پاسخ دهید.

لازم به ذکر است که کلیه پاسخ های شما محرمانه بوده و بدون نام وارد کامپیوتر میشوند. بر اساس نظر کمیته اخلاق در تحقیق دانشگاه سیدنی نتایج این بررسی پس از هفت سال از بین خواهد رفت.

### سوالات عمومی

1- چند سال دارید؟

سال \_\_\_\_\_

نمیدانم

خودداری از جواب

2- در کدام میانه سنی زیر هستید؟

الف - 65-69 سال

ب- 70-74 سال

ج- 75-79 سال

د- 80-84 سال

ه- 85-89 سال

و- 90 سال و بیشتر

ذ- نمیدانم

ک- خودداری از جواب

3- جنسیت:

الف- مرد

ب- زن

ج- خودداری از جواب

4- مذهب شما چیست؟

الف- مسلمان

ب- مسیحی

- ج- بهائی
- د- زرتشتی
- ه- یهودی
- و- ارمنه
- ذ- آشوری
- ک- سایر
- ل- بدون مذهب
- م- خودداری از جواب

5- وضعیت تاهل:

- الف- متاهل
- ب- زندگی با شخص دیگر بدون ازدواج رسمی
- ج- بیوه
- د- مطلقه
- ه- جدا شده از همسر
- و- هرگز ازدواج نکرده
- ذ- نامشخص
- ک- نمیدانم
- ل- سایر ( ذکر شود) \_\_\_\_\_
- م- خودداری از جواب

6- اگر جدا شده یا بیوه هستید چه سالی این اتفاق افتاد؟  
سال \_\_\_\_\_

کمتر از یک سال  
نمیدانم  
خودداری از جواب

7- آیا فرزند دارید؟

- الف - بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

8- اگر دارای فرزند هستید؛ در حال حاضر با چند فرزند در استرالیا زندگی میکنید؟

- الف- یک فرزند
- ب- دو فرزند
- ج- سه فرزند و بیشتر
- د- نمیدانم
- ه- خودداری از جواب

9- جنسیت فرزند یا فرزندان که با شما زندگی میکنند چیست؟

الف- فقط دختر

- ب- فقط پسر
- ج- دختر و پسر
- د- نمیدانم
- ه- خودداری از جواب

10- در منزل با چه کسی یا کسانی زندگی میکنید؟

- الف- هیچکس / تنها زندگی میکنم
- ب- همسر
- ج- فرزندان
- د- خواهر و برادر
- ه- اعضا خانواده و فامیل
- و- دوستان و همسایگان
- ذ- سایر (ذکر شود) \_\_\_\_\_
- ک- نمیدانم
- ل- خودداری از جواب

11- در کدام کشور بدنیا آمده اید؟

- الف- استرالیا
- ب- ایران
- ج- - نمیدانم
- د- خودداری از جواب
- ه- سایر \_\_\_\_\_

12- اگر در ایران بدنیا آمده اید، چه سالی اولین تاریخ ورود شما به استرالیا بوده است؟  
سال \_\_\_\_\_  
نمیدانم  
خودداری از جواب

13- معمولا به چه زبانی در منزل صحبت میکنید؟

- الف- فقط فارسی
- ب- فقط انگلیسی
- ج- فارسی و انگلیسی با هم
- د- فارسی و انگلیسی با هم فقط زمانی که بچه ها و نوه ها باشند
- ه- سایر
- و- خودداری از جواب

14- سطح صحبت کردن انگلیسی شما در چه حد است؟

- الف- خیلی خوب
- ب- خوب
- ج- نه چندان
- د- اصلا (بد)

15- آخرین مدرک تحصیلی شما چیست؟

- الف- لیسانس یا بالاتر
- ب- فوق دیپلم
- ج- دیپلم
- د- دبیرستان یا سیکل
- ه- راهنمایی یا متوسطه
- و- ابتدایی
- ز- بدون تحصیلات رسمی
- ک- نمیدانم
- ل- خودداری از جواب

16- آیا در حال حاضر کار میکنید؟

- الف - بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

17- اگر بله, در حال حاضر به چه شکلی کار میکنید؟

- الف- تمام وقت
- ب- نیمه وقت
- ج - نمیدانم
- د- خودداری از جواب

18- چند سال قبل در ایران بازنشسته شده اید؟  
سال \_\_\_\_\_

- خانه دار
- بازنشست نشده
- نمیدانم
- خودداری از جواب

19- آیا حقوق بازنشستگی یا هر گونه مقرری دیگری از دولت استرالیا دریافت میکنید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

20- حقوق بازنشستگی یا مقرری شما از چه نوعی است؟

- الف- Age pension (سالمندی)
- ب- Disability allowance pension (ناتوانی/معلولیت)
- ج- Sickness allowance (بیماری)
- د- Carer pension (مراقبت از فرد سالمند)
- ه- سایر (ذکر شود) \_\_\_\_\_
- و- نمیدانم
- ز- خودداری از جواب

21- آیا شما و همسر تان کارت تخفیف بهداشتی بازنشستگی دارید؟ (بجز کارت مدیگر)

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

22- کارت شما از چه نوعی است؟ (شما میتوانید چند گزینه انتخاب کنید)

- الف- Pensioner Concession Card (کارت تخفیف بازنشستگی به رنگ کارت آبی کم رنگ)
- ب- Health Care Card (کارت بیمه بهداشتی به رنگ زرشکی و کرم)
- ج- Commonwealth Seniors Health Card (کارت بیمه تامین اجتماعی به رنگ سبز)
- د- نمیدانم
- ه- خودداری از جواب

23- آیا کارت بیمه خصوصی دارید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

24- آیا این کارت شامل خدمات : (شما میتوانید چند گزینه انتخاب کنید)

- الف- آمبولانس
- ب- بیمارستان
- ج- دندانپزشکی
- د- خدمات اضافی مثل فیزیوتراپی
- ه- نمیدانم
- و- خودداری از جواب

25- در مورد وضعیت مالی و پولی تان ؛ آیا میتوان گفت:

- الف- به راحتی نمی توانید امورات تان را بگذرانید
- ب- فقط امورات تان میگذرد
- ج- در آمد شما کافی است و راحت هستید
- د- نمیدانم
- ه- خودداری از جواب

## ملک و نوع خانه

26- آیا شما :

- الف- مالک خانه خود هستید؟
- ب- خانه مال شما است ؛ اما قسط میدهید؟
- ج- مستاجر در خانه های مسکونی سالمندان هستید؟
- د- محل شخصی اجاره کرده ه اید؟
- ه- در خانه های دولتی زندگی میکنید و به دولت اجاره میدهید؟

و- در خانه های رایگان زندگی میکنید؟

ذ- سایر (ذکر کنید) \_\_\_\_\_

ک- نمیدانم

ل- خودداری از جواب

27- نوع خانه شما چیست؟

الف- خانه مستقل

ب- طبقه مجزا در یک خانه

ج- خانه ویلایی

د- آپارتمان

ه- ساختمان مجزا از یک خانه

و- واحدی در خانه سالمندان (بجز خانه های مراقبت پرستاری سالمندان)

ذ- خانه شبانه روزی سالمندان

ک- سایر (ذکر شود) \_\_\_\_\_

ل- نمیدانم

م- خودداری از جواب

28- از زمانیکه به سن 65 سالگی رسیده اید ، برای اینکه راحت تر در منزلتان زندگی کنید؛ آیا

تغییری در منزلتان داده اید؟

(شما میتوانید چند گزینه انتخاب کنید)

الف- نصب دستگیره یا نرده

ب- گذاشتن صندلی در وان یا دوش تلفنی دستی یا کف پوش برای سر نخوردن

ج- بزرگ کردن درهای ورودی یا گذاشتن درهای متحرک

د- تعمیر پله ها و راه پله ها

ه- نصب لامپ های اضافی برای افزایش نور خانه

و- هر تغییر دیگری (ذکر کنید) \_\_\_\_\_

ذ- هیچ تغییری نداده ایم

ک- خانه نیاز به تعمیر ندارد

ل- نمیدانم

م- خودداری از جواب

29- آیا در 5 سال گذشته تغییر مکان منزل داشته اید؟

الف- بله

ب- خیر

ج- نمیدانم

د- خودداری از جواب

30- دلایل شما برای تغییر مکان چه بوده است؟ (شما میتوانید چند گزینه انتخاب کنید)

الف- دور بودن راه از خانواده یا دوستان

ب- بزرگ بودن خانه

ج- گران بودن

د- دور بودن از امکانات (خرید و اتوبوس ....)

ه- نداشتن امنیت (امن نبودن)

و- بخاطر کهولت

ذ- سایر (ذکر کنید) \_\_\_\_\_

ک- نمیدانم  
ل- خودداری از جواب

## سلامت و بهداشت عمومی

31- بطور کلی وضعیت سلامتی شما چگونه است؟

- الف- عالی
- ب- خیلی خوب
- ج- خوب
- د- بد نیست
- ه- خوب نیست
- و- نمیدانم
- ذ- خودداری از جواب

32- در مقایسه با 5 سال قبل، سلامت خود را بطور کلی چگونه ارزیابی میکنید؟

- الف- در حال حاضر بهتر است
- ب- فرقی نکرده
- ج- بدتر شده
- د- نمیدانم
- ه- خودداری از جواب

33- آیا مشکل سلامتی یا بیماری خاصی دارید که در انجام کارهای شما مشکل ایجاد کند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

34- بیشترین مشکل سلامتی شما چیست؟

نمیدانم  
خودداری از جواب

35- ظرف مدت یک سال، آیا بادلیل بیماری یا تصادف یک هفته کامل در رختخواب در منزل خوابیده اید؟

- الف- بله؛ بیماری
- ب- بله؛ تصادف
- ج- بله؛ هر دو
- د- خیر
- ه- نمیدانم
- و- خودداری از جواب

## مشکلات حواس چند گانه

36- آیا تا بحال آزمایش شنوایی انجام داده اید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

37- آخرین زمان انجام آزمایش شنوایی شما چه موقع بوده است؟

- الف- کمتر از یک سال قبل
- ب- کمتر از دو سال
- ج- دو سال قبل
- د- پنج سال قبل یا بیشتر
- ه- هیچوقت
- و- نمیدانم
- ذ- خودداری از جواب

38- آیا در حال حاضر از سمعک استفاده میکنید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

39- وضعیت شنوایی شما با سمعک چطور است؟

- الف- عالی
- ب- خوب
- ج- متوسط
- د- ضعیف

40- آخرین زمانی که شماره چشمتان را آزمایش کردید؛کی بوده است؟

- الف- کمتر از یک سال
- ب- کمتر از دو سال- حدود یک سال قبل
- ج- کمتر از پنج سال-حدود دو سال قبل
- د- پنج سال گذشته یا بیشتر
- ه- هیچوقت
- و- نمیدانم
- ذ- خودداری از جواب

41- آیا در حال حاضر عینک طبی دارید؟ (شما میتوانید چند گزینه انتخاب کنید)

- الف- برای مطالعه
- ب- برای دید دور
- ج- برای هر دو دید
- د- عینک ندارم
- ه- نمیدانم

و- خودداری از جواب

42- بینایی شما برای خواندن با عینک (فاصله نزدیک) چطور است؟

الف- عالی

ب- خوب

ج- متوسط

د- ضعیف

ه- نمیدانم

و- خودداری از جواب

43- بینایی شما برای دیدن با عینک (فاصله دور) چطور است؟

الف- عالی

ب- خوب

ج- متوسط

د- ضعیف

ه- نمیدانم

و- خودداری از جواب

## بهداشت دهان و دندان

44- آیا هیچ کدام از دندانهایتان را از دست داده اید؟ (بجز دندان مصنوعی)

الف- بله؛ بعضی از آنها افتاده اند

ب- بله؛ همه آنها افتاده اند

ج- خیر؛ همه آنها هستند

د- نمیدانم

ه- خودداری از جواب

45- ظرف یک سال گذشته، چه مدت دندان درد داشته اید؟

الف- بیشتر اوقات

ب- خیلی اوقات / اغلب

ج- گاهی / بعضی اوقات

د- بندرت

ه- هیچوقت (در طول سال گذشته)

و- نمیدانم

ذ- خودداری از جواب

46- ظرف یک سال گذشته، چقدر با دندان مصنوعی یا دهان مشکل داشته اید؟

الف- بیشتر اوقات

ب- خیلی اوقات / اغلب

ج- گاهی / بعضی اوقات

د- بندرت

ه- هیچوقت (در طول سال گذشته)

و- نمیدانم

ذ- خودداری از جواب

47- ظرف یک سال گذشته؛ چقدر از خوردن غذا بخاطر مشکلات دندان؛ دهان یا دندان مصنوعی خودداری کره اید؟

الف- بیشتر اوقات

ب- خیلی اوقات / اغلب

ج- گاهی/ بعضی اوقات

د- بندرت

ه- هیچوقت (در طول سال گذشته)

و- نمیدانم

ذ- خودداری از جواب

### مشکلات روحی و بر خورداری از رفاه

48- آیا غالباً خانواده /دوستان خود را می بینید؟

الف- بله

ب- خیر

ج- نمیدانم

د- خودداری از جواب

49- چند وقت یکبار دوستان یا خانواده خود را ملاقات میکنید؟

الف- هر هفته

ب- دو هفته یکبار

ج- ماهانه

د- سایر (ذکر شود) \_\_\_\_\_

ه- نمیدانم

و- خودداری از جواب

50- آیا معمولاً در فعالیتهای زیر شرکت دارید؟

الف- کانون ایرانیان

ب- کلیسا

ج- مسجد

د- مرکز بهداشت

ه- سایر (ذکر شود) \_\_\_\_\_

و- هیچکدام (خیر)

51- ظرف یک ماه گذشته؛ چند بار احساس کردید که آنقدر غمگین هستید که هیچ چیز شما را شاد نمیکند؟

الف- همیشه

ب- بیشتر اوقات

ج- گاهی اوقات

د- بندرت

ه- هیچوقت

و- نمیدانم  
ذ- خودداری از جواب

52- ظرف یک ماه گذشته؛ چند بار احساس کردید که عصبی هستید؟

الف- همیشه  
ب- بیشتر اوقات  
ج- گاهی اوقات  
د- بندرت  
ه- هیچوقت  
و- نمیدانم  
ذ- خودداری از جواب

53- ظرف یک ماه گذشته؛ چند بار احساس اضطراب و بی قراری داشته اید؟

الف- همیشه  
ب- بیشتر اوقات  
ج- گاهی اوقات  
د- بندرت  
ه- هیچوقت  
و- نمیدانم  
ذ- خودداری از جواب

54- ظرف یک ماه گذشته؛ چند بار احساس ناامیدی و بی‌اس داشته اید؟

الف- همیشه  
ب- بیشتر اوقات  
ج- گاهی اوقات  
د- بندرت  
ه- هیچوقت  
و- نمیدانم  
ذ- خودداری از جواب

55- ظرف یک ماه گذشته؛ چند بار احساس کردید که انجام هر کاری سخت و دشوار است؟

الف- همیشه  
ب- بیشتر اوقات  
ج- گاهی اوقات  
د- بندرت  
ه- هیچوقت  
و- نمیدانم  
ذ- خودداری از جواب

56- ظرف یک ماه گذشته؛ چند بار احساس بی‌ارزشی و پوچی کردید؟

الف- همیشه  
ب- بیشتر اوقات  
ج- گاهی اوقات  
د- بندرت

ه- هیچوقت  
و- نمودانم  
ذ- خودداری از جواب

57- - ظرف یک ماه گذشته؛ چند بار احساس خوشحالی و شادی داشته اید؟

الف- بیشتر اوقات  
ب- گاهی اوقات  
ج- هیچوقت  
د- نمودانم  
ه- خودداری از جواب

58- - ظرف یک ماه گذشته؛ چند بار احساس آرامش و راحتی کرده اید؟

الف- بیشتر اوقات  
ب- گاهی اوقات  
ج- هیچوقت  
د- نمودانم  
ه- خودداری از جواب

59- ظرف یک ماه گذشته؛ چند بار احساس یکنواختی و حوصله سر رفتن داشته اید؟

الف- بیشتر اوقات  
ب- گاهی اوقات  
ج- هیچوقت  
د- نمودانم  
ه- خودداری از جواب

60- ظرف یک ماه گذشته؛ چند بار احساس تنهایی داشته اید؟

الف- بیشتر اوقات  
ب- گاهی اوقات  
ج- هیچوقت  
د- نمودانم  
ه- خودداری از جواب

61- ظرف یک ماه گذشته؛ چند بار احساس افسردگی داشته اید؟

الف- بیشتر اوقات  
ب- گاهی اوقات  
ج- هیچوقت  
د- نمودانم  
ه- خودداری از جواب

62- ظرف یک ماه گذشته؛ بخاطر اینگونه احساسات تان چند بار به پزشک یا کارکنان بهداشتی  
مرآعه کرده اید؟

بار \_\_\_\_\_  
نمودانم  
خودداری از جواب

## خواب

63- چند بار وقتی که صبح از خواب برخاستید، حس کردید که خوب خوابیده و استراحت کرده اید؟

- الف- بیشتر اوقات
- ب- گاهی اوقات
- ج- هیچوقت
- د- میدانم
- ه- خودداری از جواب

## احساس امنیت از محل مسکونی و همسایگان

64- آیا در خانه خود احساس امنیت میکنید؟

- الف- همیشه
- ب- بیشتر اوقات
- ج- گاهی اوقات
- د- هیچوقت
- ه- میدانم
- و- خودداری از جواب

65- آیا احساس امنیت بابت همسایگان و محله ایی که در آن زندگی میکنید؛ دارید؟

- الف- همیشه
- ب- بیشتر اوقات
- ج- گاهی اوقات
- د- هیچوقت
- ه- میدانم
- و- خودداری از جواب

## بیماری دیابت و بالا بودن قند خون

66- آیا تا بحال پزشک یا کسی در بیمارستان به شما گوشزد کرده اند که به بیماری قند/ دیابت دچار هستید؟

- الف- بله
- ب- خیر
- ج- فقط در دوران بارداری/حاملگی
- د- میدانم
- ه- خودداری از جواب

67- آیا تا بحال پزشک یا کسی در بیمارستان به شما گوشزد کرده که قند خون شما بالا است؟

- الف- بله

- ب- خیر
- ج- نزدیک مرز است
- د- فقط در دوران حاملگی
- ه- اخیراً/ بتازگی قند خونم بالا رفته
- و- نمیدانم
- ذ- خودداری از جواب

68- چند سال داشتید وقتی که برای اولین بار به شما گفتند که بیماری دیابت/ قند خون دارید؟  
سال \_\_\_\_\_

نمیدانم  
خودداری از جواب

69- ظرف یک سال گذشته چند بار پزشک یا کارکنان بهداشتی پاهای شما را از نظر علائم زخم، عفونت یا هر علامت غیر عادی معاینه کرده اند؟  
بار \_\_\_\_\_

نمیدانم  
خودداری از جواب

70- ظرف یک سال گذشته چند بار پزشک یا کارکنان بهداشتی قطره در چشمتان ریخته و ته چشمتان را از نظر دیابت معاینه کرده است؟  
بار \_\_\_\_\_

نمیدانم  
خودداری از جواب

### سلامت زنان (مختص خانم ها)

71- آیا تا بحال ماموگرافی ( آزمایش سلامت پستانها) انجام داده اید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

72- آخرین زمانیکه تست سلامت پستانها ( ماموگرافی) کرده اید، چه زمانی بوده است؟

- الف- کمتر از یک سال
- ب- کمتر از دو سال- بیشتر از یک سال
- ج- کمتر از پنج سال- بیشتر از دو سال
- د- پنج سال قبل یا بیشتر
- ه- هیچوقت
- و- نمیدانم
- ذ- خودداری از جواب

73- آیا تا بحال معاینات یا آزمایشات پزشکی از نظر وجود توده در پستانها از سوی پزشک /پرستار داشته اید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

74- آخرین زمان معاینه پزشکی سینه ها کی بوده؟

- الف- کمتر از یک سال
- ب- کمتر از دو سال- بیشتر از یک سال
- ج- کمتر از پنج سال- بیشتر از دو سال
- د- پنج سال قبل یا بیشتر
- ه- هیچوقت
- و- نمیدانم
- ذ- خودداری از جواب

### عملکرد فیزیکی بدن

75- آیا وضعیت جسمانی تان شما را از انجام فعالیتهای شدید مثل دویدن، بلند کردن اجسام سنگین یا ورزشهای سنگین باز میدارد؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

76- چه اندازه این حالت وضعیت سلامت جسمانی شما را محدود میکند؟

- الف- خیلی زیاد
- ب- تا حدودی
- ج- اصلا محدود نمیکند
- د- نمیدانم
- ه- خودداری از جواب

77- آیا وضعیت جسمانی تان، شما را از انجام فعالیتهای متوسط مثل جابجایی میز؛ کشیدن جارو برقی یا قدم زدن باز میدارد؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

78- چه اندازه این حالت وضعیت سلامت جسمانی تان، شما را محدود میکند؟

- الف- خیلی زیاد
- ب- تا حدودی
- ج- اصلا محدود نمیکند

د- نمیدانم  
ه- خودداری از جواب

79- آیا وضعیت جسمانی تان شما را در انجام خرید و حمل وسایل محدود میکند؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

80- این حالت وضعیت سلامت جسمانی تان ؛ شما را چقدر محدود میکند؟

الف- خیلی زیاد  
ب- تا حدودی  
ج- اصلا محدود نمیکند  
د- نمیدانم  
ه- خودداری از جواب

81- آیا وضعیت جسمانی تان شما را در بالا رفتن پله ها محدود میکند؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

82- چه اندازه وضعیت سلامت جسمانی تان ؛ شما را محدود میکند؟

الف- خیلی زیاد  
ب- تا حدودی  
ج- اصلا محدود نمیکند  
د- نمیدانم  
ه- خودداری از جواب

83- آیا وضعیت جسمانی تان شما را در بالا رفتن حتی یک پله هم محدود میکند؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

84- چه اندازه وضعیت سلامت جسمانی تان ؛ شما را محدود میکند؟

الف- خیلی زیاد  
ب- تا حدودی  
ج- اصلا محدود نمیکند  
د- نمیدانم  
ه- خودداری از جواب

85- آیا وضعیت جسمانی تان شما را در خم کردن زانو، زانو زدن، دولا شدن یا خم شدن محدود میکند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

86- چه اندازه وضعیت سلامت جسمانی تان ؛ شما را محدود میکند؟

- الف- خیلی زیاد
- ب- تا حدودی
- ج- اصلا محدود نمیکند
- د- نمیدانم
- ه- خودداری از جواب

87- آیا وضعیت جسمانی تان شما را در راه رفتن بیش از یک کیلومتر (مثلا چهار خیابان) محدود میکند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

88- چه اندازه وضعیت سلامت جسمانی تان ؛ شما را محدود میکند؟

- الف- خیلی زیاد
- ب- تا حدودی
- ج- اصلا محدود نمیکند
- د- نمیدانم
- ه- خودداری از جواب

89- آیا وضعیت جسمانی تان شما را در راه رفتن نیم کیلومتر (مثلا دو خیابان) محدود میکند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

90- چه اندازه وضعیت سلامت جسمانی تان ؛ شما را محدود میکند؟

- الف- خیلی زیاد
- ب- تا حدودی
- ج- اصلا محدود نمیکند
- د- نمیدانم
- ه- خودداری از جواب

91- آیا وضعیت جسمانی تان شما را در راه رفتن 100 متر (مثلا یک خیابان) محدود میکند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

92- چه اندازه وضعیت سلامت جسمانی تان ؛ شما را محدود میکند؟

- الف- خیلی زیاد
- ب- تا حدودی
- ج- اصلا محدود نمیکند
- د- نمیدانم
- ه- خودداری از جواب

93- آیا وضعیت جسمانی تان شما را در حمام کردن یا تعویض لباس محدود میکند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

94- چه اندازه وضعیت سلامت جسمانی تان ؛ شما را محدود میکند؟

- الف- خیلی زیاد
- ب- تا حدودی
- ج- اصلا محدود نمیکند
- د- نمیدانم
- ه- خودداری از جواب

95- شما به کدامیک از بیماریها یا مشکلات زیر مبتلا هستید که در نحوه زندگی مستقل شما موثر است؟

(شما میتوانید چند گزینه انتخاب کنید)

- الف- آرتروز
- ب- پوکی استخوان
- ج- افسردگی
- د- آسم
- ه- دیابت
- و- فشار خون
- ذ- چربی خون
- ک- بیماری قلبی
- ل- مشکل حافظه
- م- مشکل بینایی
- ن- مشکل راه رفتن
- ر- مشکل در نشستن و برخاستن
- ز- مشکل خواب
- د- مشکل شنوایی
- ذ- سردرد
- س- بی اختیاری ادرار
- ش- سایر (ذکر شود)

## وسيله كمكى براى راه رفتن

96- در صورتىكه قادر به انجام فعاليتهاى شديد يا متوسط نيسديد؛ آيا از وسيله كمكى زير براى راه رفتن استفاده ميكنيد؟

- الف- عصا يا چوب زير بغل
- ب- واكر يا عصا چرخ دار
- ج- صندلى چرخدار
- د- از هيچ وسيله كمكى استفاده نميكنم
- ه- نميدانم
- و- خوددارى از جواب

## فعاليتهاى روزانه

97- آيا شما قادر به كارهاى روزمره خانه مثل رختشويى؛ جاروبرقى يا گردگيرى هستيد؟

- الف- بله
- ب- خير
- ج- نميدانم
- د- خوددارى از جواب

98- آيا قادر به پخت و پز و تهيه غذا براى خودتان هستيد؟

- الف- بله
- ب- خير
- ج- نميدانم
- د- خوددارى از جواب

99- آيا قادر به انجام كارهاى منزل و باغبانى حياط منزل خود هستيد؟

- الف- بله
- ب- خير
- ج- نميدانم
- د- خوددارى از جواب

100- آيا نياز به كمك فرد ديگرى در انجام كارهاى شخصى مثل حمام كردن؛ رفتن به توالت يا تعويض لباس داريد؟

- الف- بله
- ب- خير
- ج- نميدانم
- د- خوددارى از جواب

101- آيا نياز به كمك فرد ديگرى در انجام كارهاى شخصى مثل كارهاى خانه؛ پخت و پز يا شستشو داريد؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

102- آیا نیاز به کمک فرد دیگری در انجام کارهای شخصی مثل خرید یا بردن شما با ماشین به جایی دارید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

103- آیا برای کوتاه کردن ناخن های پاهای تان نیاز به کمک دارید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

### استفاده از خدمات بهداشتی

104- آیا ظرف مدت یک سال گذشته برای آزمایشات پزشکی سالیانه به پزشک مراجعه کرده اید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

105- آیا در مدت دو هفته قبل به پزشک مراجعه کرده اید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

106- ظرف مدت یک سال گذشته؛ آیا به مرکز سالمندان / خدمات پرستاری خصوصی سالمندان مراجعه کرده اید یا آنها برای ویزیت به دیدن شما آمده اند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

107- آیا در مدت دو هفته قبل؛ به مرکز سالمندان یا خدمات پرستاری خصوصی مراجعه کرده اید یا آنها برای ویزیت به دیدن شما آمده اند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

108- ظرف مدت یک سال گذشته؛ آیا توسط فرد متخصص در مراقبت از پاها / تهیه وسیله کمکی برای پا ویزیت شده اید یا آیا آنها برای ویزیت به دیدن شما آمده اند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

109- ظرف مدت یک سال گذشته؛ آیا برای مشکل خاص به داروخانه مراجعه کرده اید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

110- آیا ظرف مدت یک سال گذشته؛ به فیزیوتراپیست مراجعه کرده یا آنها به دیدن شما آمده اند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

111- آیا ظرف مدت یک سال گذشته؛ حتی یک شب هم در بیمارستان بستری بوده اید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

### استفاده از خدمات پرستاری جامعه

این قسمت مختص افرادی است که قادر به انجام کارهای شخصی و مراقبت از خود و امورات منزل **نمی باشند**

112- برای انجام کارهای خانه؛ نگهداری منزل یا کارهای شخصی که شما قادر به انجام آن نیستید؛ چه کسی به شما کمک میکند؟  
(شما میتوانید چند گزینه انتخاب کنید)

- الف- خودم
- ب- همسرم
- ج- پسر یا دخترم
- د- سایر اعضا خانواده
- ه- دوستان یا همسایه ها

- و- خدمات پرستاری جامعه مثل مراقبت در منزل؛ خدمات پرستاری در منزل
- ذ- خدمات خصوصی (بجز خدمات دولتی و خیریه )
- ک- خدمات (من نمی دانم که دولتی است یا خصوصی)
- ل- هیچکس کمک من نمی کند
- م- احتیاجی به کمک ندارم
- ن- نمیدانم
- ر- خودداری از جواب

113- آیا میدانید که چه سرویسهای خدمات سالمندی برای افراد سالمند و مراقبین آنها در محله شما وجود دارد؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

114- آیا میدانید برای درخواست این گونه کمک ها با چه کسی یا کجا باید تماس بگیرید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

115- آیا تا بحال از خدمات زیر استفاده کرده اید؟  
(شما میتوانید چند گزینه انتخاب کنید)

- الف- مترجم
- ب- ترجمه تلفنی
- ج- وسیله حمل و نقل/ ماشین یا مینی بوس
- د- خدمات پرستاری
- ه- خدمات مراقبت در منزل
- و- مراکز مراقبت روزانه
- ذ- دریافت غذا برای افرادی که در صندلی چرخدار هستند
- ک- خدمات حمایتی برای افراد دچار فراموشی/ مشکل حافظه
- ل- کمک همسایه ها
- م- افراد متخصص برای مراقبت از پاها
- ن- چمن زنی
- ر- مراقبت در منزل
- ز- نگهداری خانه
- د- تماس تلفنی با پیغام گیر اورزانس
- ذ- خدمات پرستاری در منزل برای افرادی که برای چند روز بطور موقت از خانه سالمندان مرخص شده اند
- س- سایر \_\_\_\_\_
- ش- هیچکدام
- ص- نمیدانم

116- آیا در هفته گذشته از خدمات این مراکز برای انجام کارهای خانه مثل رختشوی، جارو برقی و گردگیری استفاده کرده اید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

117- چند ساعت از این خدمات در هفته گذشته استفاده کرده اید؟  
ساعت در هفته قبل \_\_\_\_\_

- نمیدانم
- خودداری از جواب

118- آیا در هفته گذشته از خدمات این مراکز برای انجام کارهای شخصی/فردی در منزل استفاده کرده اید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

119- در هفته گذشته چند بار این سرویس ها/خدمات در انجام کارهای فردی به شما کمک کرده اند؟  
بار در هفته قبل \_\_\_\_\_

- نمیدانم
- خودداری از جواب

120- آیا در هفته گذشته این خدمات یا سرویس ها غذای آماده در منزل به شما داده اند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

121- در هفته گذشته ؛چند دفعه به شما غذای آماده داده اند؟  
وعده غذا در هفته قبل \_\_\_\_\_

- نمیدانم
- خودداری از جواب

122- در یک ماه گذشته ؛آیا این سرویس ها/خدمات در انجام کارهای منزل یا باغبانی حیاط کمک کرده اند؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

123- در یک ماه گذشته ؛آیا به مراکز روزانه نگهداری خدمات سالمندان رفته اید؟

- الف- بله
- ب- خیر

ج- نمیدانم  
د- خودداری از جواب

**اگر شما نمیتوانید از خود مراقبت کنید و نیاز به کمک دارید؛ لطفاً به 6 سوال بعدی پاسخ دهید.**

124- در یک ماه گذشته؛ آیا فردی از طرف این مراکز برای مراقبت از شما در منزل آمده؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

125- آیا در یک ماه گذشته؛ آیا برای مراقبت شبانه در شب در این مراکز بستری شده اید؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

126- آیا در یک ماه گذشته؛ آیا این سرویس ها/خدمات در بردن شما با ماشین یا اتوبوس برای خرید یا رفتن به دکتر کمک کرده اند؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

127- در صورتیکه کسی را ندارید که به شما کمک کند؛ آیا نیاز به کمک کسی در انجام کارهای خانه، کارهای شخصی یا سایر کارهای منزل دارید؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

128- در صورتیکه کسی را ندارید که به شما کمک کند؛ در چه مواردی نیاز به کمک دارید؟  
(شما میتوانید چند گزینه انتخاب کنید)

- الف- کارهای خانه مثل رختشویی، نظافت و جارو برقی
- ب- کارهای شخصی مثل حمام کردن، دستشویی و لباس عوض کردن
- ج- غذا پختن
- د- نگهداری خانه/ حیات
- ه- خدمات مراقبتی روزانه
- و- ماشین برای رفتن خرید و مطب دکتر
- ز- خدمات مراقبتی در منزل برای افرادی که به تازگی از خانه سالمندان مرخص شده اند
- ک- سایر \_\_\_\_\_
- ل- نمیدانم
- م- خودداری از جواب

129- دلایلی که شما از خدمات سالمندی (ذکر شده در بالا) استفاده نمی کنید؛ چیست؟

الف- عدم اطلاع از وجود و دسترسی به این خدمات

ب- نداشتن نیاز مبرم

ج- نپرسیدم ام /چون بدرد نمیخورد

د- بلد نبودن چگونه قرار گذاشتن یا استفاده از آنها

ه- هیچ سرویسی در دسترس نیست

و- واجد شرایط استفاده نیستم

ذ- گران بودن

ک- ساعت کار آنها کم است

ل- مشکل زبان انگلیسی

م- سایر \_\_\_\_\_

ن- نمیدانم

و- خودداری از جواب

### ایاب و ذهاب/وسیله حمل و نقل

130- آیا خودتان قادر هستید با ماشین، اتوبوس یا قطار به جایی بروید؟

الف- بله

ب- خیر

ج- نمیدانم

د- خودداری از جواب

131- ظرف یک ماه گذشته از کدامیک از وسایل حمل و نقل استفاده کرده اید؟

(شما میتوانید چند گزینه انتخاب کنید)

الف- ماشین/رانندگی توسط شما

ب- ماشین/رانندگی توسط فرد دیگری

ج- اتوبوس

د- قطار

ه- تاکسی

و- ماشین مرکز بهداشت منطقه یا شورای محل

ذ- سایر (ذکر شود) \_\_\_\_\_

ک- از هیچ وسیله ای استفاده نمی کنم

ل- نمیدانم

م- خودداری از جواب

132- مشکل حمل و نقل شما را در انجام کدامیک از فعالیتهای زیر محدود میکند؟

(شما میتوانید چند گزینه انتخاب کنید)

الف- فعالیتهای اجتماعی

ب- رفتن به خرید

ج- رفتن به مطب دکتر یا بیمارستان

د- مشکلی با وسایل حمل و نقل ندارم

ه- نمیدانم

و- خودداری از جواب

133- آیا مشکلی در استفاده از وسایل حمل و نقل عمومی دارید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

134- اگر بله، چه مشکلی در استفاده از وسایل حمل و نقل عمومی دارید؟  
(شما میتوانید چند گزینه انتخاب کنید)

- الف- مشکل بیماری
- ب- مشکل حرکتی/راه رفتن
- ج- معلولیت
- د- نداشتن اعتماد به نفس کافی
- ه- مناسب نبودن ساعات حرکت
- و- کم بودن /محدود بودن تعداد شان و تنوع شان
- ذ- سایر \_\_\_\_\_

135- در صورتیکه بخواهید از خدمات بهداشتی سالمندان استفاده کنید؛ چه چیزی نیاز دارید که دسترسی شما را به این خدمات راحت تر کند؟

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## فرد مراقب

136- آیا شما مسئول مراقبت طولانی مدت از فرد بیمار یا ناتوان دیگری هستید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

137- از چه کسی مراقبت میکنید؟  
(اگر بیشتر از یک نفر هستند، لطفاً کسی را بگوئید که بیشترین ساعات مراقبت را از او دارید)

- الف- شوهر
- ب- همسر/ زن
- ج- شریک زندگی
- د- پسر
- ه- دختر
- و- نوه
- ذ- دوست
- ک- مادر
- ل- پدر
- م- سایر \_\_\_\_\_
- ن- نمیدانم
- و- خودداری از جواب

138- فرد یکه از او مراقبت میکنید چه بیماری یا معلولیتی دارد؟  
(شما میتوانید چند گزینه انتخاب کنید)

- الف- بیماری جسمی یا معلولیت (شامل مشکل روحی و نابینایی)
- ب- مشکل حافظه یا هوشیاری (فراموشی)
- ج- سایر \_\_\_\_\_
- د- نمیدانم
- ه- خودداری از جواب

139- آیا ظرف هفته گذشته، کدامیک از سرویسهای خدماتی زیر اعم از دولتی یا خصوصی برای کمک به بیمار تان به منزل شما آمده اند؟  
(شما میتوانید چند گزینه انتخاب کنید)

- الف- خدمات کمکی در انجام کارهای منزل
- ب- خدمات کمکی در انجام کارهای فردی/شخصی
- ج- خدمات کمکی در تحویل غذا در درب منزل
- د- خدمات کمکی در انجام نگهداری خانه حیاط و باغچه
- ه- خدمات ایاب و ذهاب برای خرید و رفتن دکتر
- و- خدمات پرستاری در منزل (شامل درمان، پانسمان زخم، معاینات)
- ذ- هیچیک از خدمات فوق
- ک- نمیدانم
- ل- خودداری از جواب

140- آیا ظرف یک ماه گذشته، فردی از پرسنل مراکز زیر برای مراقبت به دیدن شما آمده است؟  
(شما میتوانید چند گزینه انتخاب کنید)

- الف- مرکز مراقبت روزانه
- ب- مراقبت موقت در منزل برای افرادی که از خانه سالمندان بطور موقت مرخص شده اند
- ج- سایر خدمات مراقبتی (ذکر شود) \_\_\_\_\_
- د- هیچ /عدم دریافت خدمات مراقبتی
- ه- نمیدانم
- و- خودداری از جواب

141- آیا به خدمات حمایتی مراقبتی برای انجام کارهای منزل و شخصی نیاز دارید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

142- آیا نیاز به کمک بیشتر در موارد زیر دارید؟  
(شما میتوانید چند گزینه انتخاب کنید)

- الف- کارهای منزل
- ب- کارهای شخصی
- ج- غذا
- د- نگهداری خانه و حیاط/باغبانی
- ه- بردن شما با ماشین برای خرید یا دکتر

و- خدمات پرستاری در منزل شامل درمان، پانسمان و معاینات  
ذ- مورد دیگر \_\_\_\_\_  
ک- نمیدانم  
ل- خودداری از جواب

143- دلیل استفاده نکردن از این خدمات چه هستند؟

الف- عدم اطلاع از وجود و دسترسی به این خدمات  
ب- نداشتن نیاز مبرم  
ج- نپرسیدن ام /چون بدرد نمیخورد  
د- بلد نبودن چگونه قرار گذاشتن یا استفاده از آنها  
ه- هیچ سرویسی در دسترس نیست  
و- واجد شرایط استفاده نیستم  
ذ- گران بودن  
ک- ساعت کار آنها کم است  
ل- سایر (ذکر شود) \_\_\_\_\_  
م- نمیدانم  
ن- خودداری از جواب

144- آیا ظرف یک ماه گذشته، به کسی در موارد زیر کمک کرده اید؟  
(شما میتوانید چند گزینه انتخاب کنید)

الف- نگهداری از بچه  
ب- خرید  
ج- کارهای خانه  
د- نگهداری خانه و حیاط و باغچه  
ه- بردن فرد تا داخل ماشین  
و- تهیه غذا برای فردی غیر از اعضا خانه خود  
ذ- کمک به کسی نداده ام  
ک- نمیدانم  
ل- خودداری از جواب

145- آیا ظرف شش ماه گذشته، موارد زیر را انجام داده اید؟  
(شما میتوانید چند گزینه انتخاب کنید)

الف- مراقبت از فرد بیمار در رختخواب  
ب- انجام کارهای خیریه  
ج- کاری انجام نداده ام  
د- نمیدانم  
ه- خودداری از جواب

## فعالتهای اجتماعی

146- معمولاً روز خود را چگونه می گذرانید؟

الف- انجام کارهای خانه  
ب- آشپزی  
ج- باغبانی و گلکاری

- د- نگهداری از نوه ها
- ه- رفتن به کلیسا/مسجد
- و- گوش دادن به رادیو
- ذ- رفتن به خرید
- ک-تماشای تلویزیون/ویدئو
- ل- انجام کارهای دستی
- م- رفتن به کلوپ/باشگاه
- ن- رفتن به انجمن /گردهمانی های ایرانیان
- و- دیدن دوستان
- ر- دیدن فامیل
- ز- خواندن کتاب/روزنامه و مجله
- د- سایر \_\_\_\_\_

147- بیشتر، دوست دارید در اوقات فراغت چکار کنید؟

- الف- بودن در خانه
- ب- دیدن دیگران
- ج- دیدن ایرانی ها
- د- خوردن غذا با دیگران
- ه- داشتن سرگرمی و تفریح با آنها مثل بازی/کارهای دستی
- و- رفتن به کلیسا/مسجد
- ذ- داشتن جلسات آموزشی در زمینه مسائل بهداشتی
- د- مطالعه
- ر- تماشای تلویزیون
- ک- سایر \_\_\_\_\_

148- فعالیتهای اجتماعی خود را چگونه ارزیابی میکنید؟ در فعالیتهای اجتماعی آیا شما فردی

- الف- بسیار فعال
- ب- نسبتاً فعال
- ج- نه زیاد فعال
- د- اصلاً فعال نیستم
- ه- نمیدانم
- و- خودداری از جواب

149- چه مواردی مانع فعالیتهای اجتماعی شما میشوند؟  
( شما میتوانید چند گزینه انتخاب کنید)

- الف- مشکل بیماری
- ب- نداشتن وقت
- ج- نمی خواهم دیگران را به زحمت و دردسر بیندازم
- د- نداشتن دوست یا فامیل و بستگان نزدیک
- ه- نداشتن ماشین/مشکل رفت و آمد
- و- امن نبودن /امنیت
- ذ- هزینه داشتن رفت و آمد یا شرکت در جلسات
- ک- دوست نداشتن رفتن به اینجور جاها/خجالتی بودن
- ل- سایر \_\_\_\_\_
- م- هیچ چیز مانع فعالیتهای من نمی شود
- ن- نمیدانم

و- خودداری از جواب

150- آیا کسانی در اطراف شما هستند که با آنها سرگرم شده و یا بیرون بروید؟

الف- بله

ب- خیر

ج- نمیدانم

د- خودداری از جواب

151- آیا فرد مورد اعتمادی در موقع احتیاج، در دسترس شما هست؟

الف- بله

ب- خیر

ج- نمیدانم

د- خودداری از جواب

152- در هفته گذشته، کدامیک از فعالیتهای زیر را انجام داده اید؟  
( شما میتوانید چند گزینه انتخاب کنید)

الف- رفتن بیرون برای دیدن فامیل

ب- فامیل برای دیدن شما آمدند

ج- تلفنی با فامیل صحبت کردید

د- رفتن بیرون برای دیدن دوستان

ه- دوستان برای دیدن شما آمدند

و- تلفنی با دوستان صحبت کردید

ذ- هیچ تماس یا ارتباطی با کسی نداشته ام

ک- نمیدانم

ل- خودداری از جواب

153- در رابطه با بهبود خدمات بهداشتی برای افرادی که بیشتر وقتشان را در خانه میگذرانند؛

معمولا چند بار از منزل خارج میشوید؟

الف- هیچوقت با اکثرا هیچوقت

ب- کمتر از یکبار در ماه

ج- یک تا سه بار در ماه

د- هفته ای یکبار

ه- بندرت در طول هفته

و- هر روز یا بیشتر روزهای هفته

ذ- در صورت نیاز

ک- نمیدانم

گ- خودداری از جواب

## شیوه زندگی

154- آیا میتوانید اذعان کنید که شیوه زندگی شما این روزها

الف- کاملا بهداشتی و سالم است

- ب- نسبتا بهداشتی و سالم است
- ج- خیلی بهداشتی و سالم نیست
- د- نمیدانم
- ه- خودداری از جواب

155- آیا میدانید که در حال حاضر برای بهبود شیوه زندگی بهتر و سالم تر چکار میتوانید بکنید؟

- الف- بله
- ب- خیر
- ج- نمیدانم
- د- خودداری از جواب

156- فکر میکنید دو نوع کار مهمی که میتوانید برای بهبود شیوه زندگی بهتر و سالم تر انجام دهید؛ کدامند؟

- الف- راه رفتن/پیاده روی
- ب- سایر فعالیتهای جسمانی/ورزشی
- ج- مراقبت در خوردن و غذا
- د- فعالیتهای اجتماعی
- ه- نگرش مثبت به زندگی و دوران سالمندی
- و- داشتن/رعایت عادات صحیح بهداشتی برای حفظ سلامت
- ز- اعتقاد به خدا
- ذ- سایر (ذکر شود)
- ک- نیاز به انجام کاری برای حفظ سلامت نیست
- ل- نمیدانم
- م- خودداری از جواب

### فعالتهای جسمانی/ورزشی

157- فعالتهای جسمانی/ورزشی خود را در مقایسه با سایر زنان یا مردان همسن و سال خود چگونه می بینید؟

- الف- خیلی کم فعال هستم
- ب- کمی فعال هستم
- ج- تقریبا فعال هستم
- د- کمی بیشتر فعال هستم
- ه- خیلی بیشتر فعال هستم
- و- نمیدانم
- ذ- خودداری از جواب

158- در طول هفته گذشته؛ چند روز حداقل بمدت نیم ساعت پیاده روی/راه رفته اید؟

روز در هفته گذشته \_\_\_\_\_  
نمیدانم  
خودداری از جواب

159- در طول هفته گذشته؛ چند روز فعالیتهای متوسط مانند قدم زدن در پارک، مراجعه برای خرید روزنامه محلی؛ کلا حداقل نیم ساعت را داشته اید؟

روز در هفته گذشته \_\_\_\_\_

نمیدانم

خودداری از جواب

160- در طول هفته گذشته؛ چند روز فعالیتهای شدید مثل کار در حیاط و باغچه یا چمن زنی؛ کلا حداقل نیم ساعت را داشته اید؟

روز در هفته گذشته \_\_\_\_\_

نمیدانم

خودداری از جواب

161- آیا تا بحال در مورد بسیج همگانی فعالیتهای جسمانی و ورزشی (در حد عادی و معمولی) چیزی شنیده اید؟

الف- بله

ب- خیر

ج- نمیدانم

د- خودداری از جواب

162- آیا دلایل خاصی دارید که شما را از انجام فعالیتهای جسمانی / ورزشی بیشتر باز دارد؟

الف- بله

ب- خیر

ج- نمیدانم

د- خودداری از جواب

163- به چه علت؟ ( شما میتوانید چند گزینه انتخاب کنید)

الف- مشکل بیماری مثل آرتروز، بیماری قلبی، زانو درد

ب- مشکل آب و هوا (خیلی گرم/سرد یا رطوبت)

ج- دوست ندارم تنهایی ورزش کنم

د- به علت درد و دردناک بودن قسمتهای بدن

ه- عدم امنیت در خیابان ها

و- ترس از سگ ها در خیابان

ز- ترس از زمین خوردن

ک- مشکل وسیله نقلیه

ل- سایر (ذکر شود) \_\_\_\_\_

م- نمیدانم

ن- خودداری از جواب

## تغذیه

164- چند وعده سبزیجات در روز مصرف میکنید؟ ( به میزان نصف لیوان پخته شده یا یک لیوان سالاد/سبزیجات)

الف- ----- بار در روز

ب- ----- بار در هفته

ج- سبزیجات/ سالاد نمی خورم

د- نمیدانم  
ه- خودداری از جواب

165- - چند وعده میوه در روز مصرف میکنید؟ (به میزان یک عدد متوسط یا دو عدد میوه کوچک یا یک لیوان میوه خرد شده یا کمپوت میوه)

الف- ----- بار در روز (0،1،2؛...)  
ب- ----- بار در هفته  
ج- میوه نمی خورم  
د- نمیدانم  
ه- خودداری از جواب

### بی اختیاری ادرار

چند سوال زیر در مورد مشکلات بی اختیاری ادرار است که معمولاً مشکل شایع در بین سالمندان میباشد؛ هر لحظه که احساس ناراحتی کردید، به من بگوئید تا به سوال بعدی برویم.

166- در هفته گذشته چند بار بطور ناگهانی احساس ادرار کردن و نیاز به دستشویی در طی روز یا شب داشته اید؟

الف- بیشتر اوقات  
ب- گاهی اوقات  
ج- هیچوقت  
د- نمیدانم  
ه- خودداری از جواب

167- در هفته گذشته چند بار، در طی روز یا شب با انجام کار سنگین، سرفه یا عطسه دچار بی اختیاری ادرار شده و خود را خیس کردید؟

الف- بیشتر اوقات  
ب- گاهی اوقات  
ج- هیچوقت  
د- نمیدانم  
ه- خودداری از جواب

168- در مورد این مشکل، آیا تا بحال با پزشک یا پرستار صحبت کرده اید؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

### زمین خوردن

169- آیا در یک سال گذشته زمین خورده اید؟

الف- بله  
ب- خیر

ج- نمیدانم  
د- خودداری از جواب

170- در صورتیکه در یک سال گذشته زمین خورده اید؛ آیا نیاز به دارو و درمان پزشکی پیدا کرده بودید؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

171- آیا از زمین خوردن می ترسید؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

172- چقدر از زمین خوردن می ترسید؟

الف- اصلا نمی ترسم  
ب- تا اندازه ای می ترسم  
ج- در حد معقول (نسبتا) ترس دارم  
د- خیلی می ترسم  
ه- نمیدانم  
و- خودداری از جواب

173- آیا در حال حاضر از وسیله زنگ اخباری یا هر وسیله شخصی دیگری برای خبر دادن در صورت موارد اورژانس و افتادن استفاده میکنید؟

الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

174- آیا برنامه ائی برای انجام ورزشهای سبک و ملایم برای جلوگیری از احتمال زمین خوردن دارید؟

الف- بله  
ب- خیر  
ج- در حال حاضر ورزش میکنم  
د- نمیدانم  
ه- خودداری از جواب

175- آیا برنامه ائی برای انجام ورزشهای زیر دارید؟  
( شما میتوانید چند گزینه انتخاب کنید)

الف- پیاده روی  
ب- انجام ورزشهای سبک در منزل

- ج- انجام ورزشهای سبک گروهی / دسته جمعی  
د- قدم زدن/راه رفتن  
ه- هر نوع حرکت ورزشی دیگری که در نظر دارید (ذکر شود)  
ر-خیر  
و- نمیدانم  
ذ- خودداری از جواب

## واکسیناسیون

176- آیا تا بحال پزشک به شما توصیه برای تزریق واکسن آنفولانزا کرده است؟

- الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

177- آیا در یک سال گذشته، واکسن آنفولانزا تزریق کرده اید؟

- الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

178- آیا تا بحال پزشک به شما توصیه برای تزریق واکسن سیاه سرفه (پنومونی) کرده است؟

- الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

179- آیا در یک سال گذشته، واکسن سیاه سرفه (پنومونی) تزریق کرده اید؟

- الف- بله  
ب- خیر  
ج- نمیدانم  
د- خودداری از جواب

## دسترسی به اطلاعات

180- در چه حدی میتوانید انگلیسی صحبت کنید؟

- الف- خیلی خوب  
ب- خوب  
ج- نه چندان خوب  
د- (خیر) اصلا

181- آیا میتوانید نوشته انگلیسی را بخوانید؟

- الف- خیلی خوب
- ب- خوب
- ج- نه چندان خوب
- د- (خیر) اصلا

182- معمولا از چه طریقی به اطلاعات مورد نیازتان دسترسی پیدا میکنید؟  
( شما میتونید چند گزینه انتخاب کنید)

- الف- روزنامه های ایرانی
- ب- روزنامه های محلی استرالیا
- ج- اعضا خانواده
- د- دوستان
- ه- از طریق مسئولان کانون/انجمن ایرانیان
- و- بروشورهای انگلیسی
- ذ- بروشورهای فارسی
- ک- رادیو اس بی اس
- ل- رادیو ایرانی (فارسی زبان)
- م- مسجد/کلیسا
- ن- از طریق کانون/انجمن ایرانیان
- ر- تلویزیون
- ز- پزشک ایرانی یا فارسی زبان
- و- پزشک
- د- سایر (ذکر شود) \_\_\_\_\_ -

183- در صورت نیاز به کمک ، برای دریافت خدمات سالمندی با چه کسی تماس میگیرید؟  
( شما میتونید چند گزینه انتخاب کنید)

- الف- اعضا خانواده
- ب- دوستان
- ج- شور/ انجمن
- د- سیستم خدمات تلفنی Care Link
- ه- اعضا گروه /کانون
- و- رهبر مذهبی کشیش /آخوند
- ذ- بیمارستان
- ک- سازمان خدمات سالمندی و ناتوانی ( The hills Community Care )
- ل- پرستار مراقب در منزل برای افراد یکه مرخصی موقت از خانه سالمندان گرفته اند
- م- The hills Community health care (سازمان خدمات دولتی کلیه خدمات بهداشتی)
- ن- پزشکستان
- و- سایر (ذکر شود) \_\_\_\_\_

184- آیا فکر میکنید پرسیدن سوال از طریق تلفن روش مناسب و مطمئنی است؟

- الف- بله
- ب- خیر
- ج- نه چندان
- د- نمیدانم

ه- خودداری از جواب

185- آیا به اطلاعات مورد نیاز از طریق بروشور انگلیسی دسترسی دارید؟

الف- بله

ب- خیر

ج- نمیدانم

د- خودداری از جواب

186- آیا به اطلاعات مورد نیاز از طریق بروشور فارسی دسترسی دارید؟

الف- بله

ب- خیر

ج- نمیدانم

د- خودداری از جواب

**در خاتمه ممکن است بگویند:**

187- کد پستی شما چیست؟

نمیدانم

خودداری از جواب

188- در چه منطقه /محلّه زندگی میکنید؟

نمیدانم

خودداری از جواب

در خاتمه از همکاری صادقانه و صبورانه شما و صرف وقت تان در تکمیل این پرسشنامه تشکر میکنم. و امیدوارم پس از استخراج نتایج این بررسی بتوانیم گامی در جهت گسترش و دسترسی به خدمات سالمندی مناسب را برای کهنسالان جامعه ایرانی فراهم سازیم.

**مجدداً از همکاری شما کمال امتنان را دارم**

*با آرزوی سلامتی روزافزون برای شما*



# Appendix C



# The University of Sydney

School of Behavioural Sciences

Faculty of Health Sciences  
College of Health Sciences

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## *Acculturation Aged care Survey*

ADVERTISEMENT

*Are you interested*

**In helping out**

With a *research* an

*Use of Health Care Services*  
*By Iranian of 65 years and over?*

If **yes**, *please call*

School of Behavioural Sciences

---

Mahtab Alizadeh Khoei, the PhD candidate

University of Sydney, **02 9351 9814**

**OR**

**Iranian Community Organisation (ICO)**

*The project has the approval of the University's Human Ethics Committee.*

# Appendix D

## پرسشنامه بررسی وضعیت بهداشت و سلامت سالمندان ایرانی مقیم سیدنی

سلام من مهتاب علیزاده، دانشجوی دکترا در رشته سالمندان (پیر شناسی) از دانشگاه سیدنی هستم. و قصد دارم تحقیق در مورد وضعیت سلامت و بهداشت افراد سالمند ایرانی 65 سال به بالا و میزان استفاده شما از خدمات سالمندی موجود در استرالیا و یا دلایل عدم استفاده از این خدمات را ارزیابی و نتایج را به مراکز خدمات مولتی کال چرال کشور استرالیا ارائه دهم، تا شاید راهی باشد جهت ارائه خدمات بهتر و بیشتر به ایرانیان سالمند مقیم و نیز خدمتی باشد از سوی اینجانب به هموطنان عزیزم به عنوان پدران و مادران گرانقدرم.

### این پرسشگری فقط مخصوص افراد 65 سال و به بالا میباشد.

لذا خواهشمندم افراد با ویژگی سنی بالا، آدرس پستی و تلفن تماس خود را مرقوم فرمایند.

زیرا در اولین مرحله پرسشگری اینجانب پرسشنامه را برای شما با پست ارسال خواهم کرد تا شما فرصت کافی برای فکر کردن و انتخاب پاسخها داشته باشید. بعد از یک هفته به شما تلفن میکنم تا پرسشگری را با همدیگر تلفنی انجام دهیم.

در ضمن شما میتوانید با این شماره با اینجانب تماس بگیرید:

93519814

دانشکده:

0423928793

موبایل:

از همکاری شما کمال امتنان را دارم

با آرزوی سلامتی روزافزون برای شما

# Appendix E



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<a href="mailto:L.Lee@fhs.usyd.edu.au">L.Lee@fhs.usyd.edu.au</a>	Email:

### PARTICIPANT INFORMATION SHEET

You are invited to participate in the following study, Assessing factors influencing the utilization of aged health care services among the Iranian elderly in Metropolitan Sydney: Acculturation aged care survey. The purpose of the study is to explore the issues which surround the health status, attitude and behavior of the Iranian elderly towards health and their utilization of the current aged care services.

This study is being conducted to meet the requirements for the degree of PhD by Mahtab Alizadeh Khoei under the supervision of Professor Mark Mathews, School of Behavioural and Community Health, Faculty of Health Sciences, the University of Sydney.

If you agree to participate in this study, you will be asked to take part in a phone interview or face to face interview session and or mail survey, which will take approximately 40-60 minutes. The time for the phone or face to face interview will be arranged so as to be most suitable to you. You will be asked a number of questions relating to your health status, and your attitude and behavior surrounding utilization of aged care services. This important information will be used to offer suggestions to aged care service providers, multicultural services and related agencies in relation to meeting the special needs of Iranian elderly people.

Any information you supply will be strictly confidential and only the researcher will have access to the data collected. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report. Whether, you are not happy with some demographic questions such as

current employment, how many years ago you retired in Iran, current status of pension in Australia and living address/phone in the questionnaire (questions; 16-18-19-187-188), **there is no way obliged to answer to those questions.** The Ethics Committee in School of Behavioural and Community Health Science, University of Sydney will keep your questionnaire in a secure place for 7 years following the completion of the research. The questionnaires will be kept under password access on the researcher's personal computer. No reference is made to your name and identity. In the stored information your real name



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does not appear on any records of the phone interview or in the questionnaire because you will be given a code.

Participation in this study is entirely voluntary. You are in no way obliged to participate and if you do decide to take part, you have the right to be free to withdraw from the research at any stage without having to give any reason. Whether or not you have attended a phone or face to face interview session and or mail survey, your wishes will be respected and any information you have given will not be used. If you wish to receive an Executive Summary of the study, this will be provided upon completion of the project.

**Should you agree to participate in the research, you might choose one of the three options:**

- 1- Phone the researcher or Iranian Community Organization (ICO) leaders to give your phone number to participate in telephone interview. You have two weeks to think about the questions and your possible answers. After then, the researcher will call you for a phone interview.**
- 2- In any suitable place and or time give your mail address/phone to researcher or ICO leaders to mail and delivering of the questionnaire and participant consent form.**

**3- Call to researcher or ICO leaders to apply for booking a suitable time for a face to face interview meeting.**

When you have read this information, Mahtab Alizadeh Khoei, the PhD candidate,

02 9351 9814 will discuss it with you further and answer any questions that you may have. If you would like to know more at any stage, please feel free to contact **Professor Mark Mathews, supervisor of this project on 02 9351 9119.**

**If you have any concerns about the conduct of this research project or complaints then please contact the Manager for Ethics Administration, University of Sydney on 02 9351 4811.**

This information sheet is for you to keep.

# Appendix F

## فرم اطلاع رسانی شرکت در تحقیق

از شما دعوت می شود تا در طرح تحقیق " بررسی عوامل موثر در میزان استفاده از خدمات سالمندی کشور استرالیا در بین ایرانیان سالمند مقیم سیدنی شرکت بعمل آورید.

هدف از انجام این بررسی؛ تعیین وضعیت سلامت و بهداشت، نگرش و رفتارهای سالمندان ایرانی مقیم سیدنی در استفاده از خدمات سالمندی میباشد.

نتایج این تحقیق جهت ارائه پیشنهادات و ملاحظات در برآوردن نیازهای ایرانیان 65 سال به بالا، به سازمانهای متولی ارائه خدمات سالمندی کشور استرالیا ارائه خواهد گردید.

این تحقیق برای دریافت درجه دکترا جهت خانم مهتاب علیزاده؛ از دیپارتمان بهداشت، دانشگاه سیدنی تحت نظارت جناب پرفسور پیر شناسی؛ مارک متیوس انجام میشود.

در صورت موافقت شما میتوانید در این پرسشگری به صورت تلفنی بمدت 40-60 دقیقه شرکت نمایید. زمان پرسشگری تلفنی پس از تماس شما و بر اساس نظر شما هماهنگ خواهد شد.

لازم به ذکر است که:

- شرکت شما در این پرسشگری داوطلبانه بوده و در صورت عدم تمایل در هر زمان قادر به انصراف خواهید بود.
- کلیه اطلاعات بهداشتی که شما در اختیار محقق خواهید گذاشت کاملاً محرمانه باقی می ماند.
- همچنین هنگام چاپ و انتشار نتایج تحقیق اطلاعات هیچ شخصی بصورت فردی به هیچ جایی ارائه نخواهد شد.
- در صورت نیاز شما به نتایج بررسی؛ خلاصه ای از نتایج برای تان ارسال خواهد شد.
- نتایج این طرح بمدت هفت سال در دانشگاه سیدنی، تحت نظارت کمیته تحقیق و اخلاق حفظ خواهد شد.

**حال؛ در صورت تمایل به شرکت در تحقیق؛ لطفاً با شماره تلفن 93519814 (مهتاب علیزاده) تماس گرفته و آدرس پستی خود را اعلام دارید تا پرسشنامه و سایر ضمائم آن برای شما پست گردند.**

شما دو هفته فرصت برای مطالعه سوالات و انتخاب جواب خواهید داشت. سپس محقق جهت انجام پرسشگری تلفنی به شما تلفن خواهد کرد.

ضمناً اینجانب آماده پاسخگویی به سوالات شما خواهم بود  
و اگر

مشکل و یا سوالی در رابطه با این طرح دارید؛ می‌توانید با کمیته تحقیق اخلاق انسانی، دانشگاه سیدنی،  
تلفن 93514811 تماس بگیرید.

این برگه متعلق به شما بوده و نیازی به برگشت آن نمی‌باشد.  
قبلاً از همکاری شما کمال امتنان را دارم

# Appendix G



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PARTICIPANT CONSENT FORM

I, ..... , give consent to my participation  
Name (please print)

In the research project:

***TITLE:*** Assessing factors influencing the utilization of aged health care  
Services among the Iranian elderly in the Metropolitan Sydney:  
Acculturation aged care survey

In giving my consent I acknowledge that:



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Facsimile: +61 2 9351 9540  
Email: L.Lee@fhs.usyd.edu.au

1. I have read the participant information sheet regarding the research. The researcher has explained the nature and the aim of the study, and any questions I have about the project have been answered to my satisfaction. I understand and agree to take part.
2. I have been given the opportunity to discuss the information and my involvement in the project with the researcher/s.
3. I understand that I can withdraw from the study at any time and that withdrawal will not affect me or my relationships with the researcher(s) in any way now or in the future.
4. I understand that my involvement is strictly confidential and no information about me will be used in any way that reveals my identity. In this regards, answer to questions about my current employment, how many years ago I retired in Iran, current government pension in Australia and living my address/phone **is not** compulsory (Questions;16-18-19-187-188).

**Please read and chose any preferable options in recruitment:**

- 5.1. I understand that the interview during the phone interviewing session in which I participate may take time and may have to be repeated
- 5.2. I understand that the face to face interview during the interviewing session in which I participate may take time and may have to ask a detail questions.  
If I wish to do so answer questions about my mail address.
- 5.3. I understand that distribution and or mail a questionnaire may need to access my name address and phone number. If I wish to do so accept the questionnaire.
- 5.4. I understand that receiving and delivering the questionnaire by community leaders may need enlisting my mail address. If I wish to do so accept the questionnaire.
- 5.5. I understand that writing my name and signed of this Form is a protocol of the Human Research Ethics Committee, University of Sydney. If I wish to do so accept the questionnaire.

Name: \_\_\_\_\_  
 Signed: \_\_\_\_\_  
 Date: \_\_\_\_\_

# Appendix H

## فرم رضایت نامه

اینجانب ..... رضایت به شرکت در پرسشگری تحقیق ذیل را دارم :

بررسی عوامل موثر در میزان استفاده از خدمات سالمندی کشور استرالیا در بین ایرانیان سالمند مقیم سیدنی .

اینجانب اعلام میدارم که :

- 1- فرم اطلاع رسانی تحقیق را خوانده ام. توضیحات محقق در مورد اهداف بررسی را دریافت کرده و موافقت دارم.
- 2- اینجانب امکان و فرصت بحث و یا پرسش سوالات را از محقق داشته ام.
- 3- اینجانب مطلع شده ام که در صورت عدم تمایل به ادامه پرسشگری در هر زمان قادر به انصراف میباشم.
- 4- اینجانب مطلع شده ام که پاسخ ها محرمانه بوده و نتایج اطلاعات بهداشتی شخصی من تنها نزد محقق خواهد بود.
- 5- اینجانب مطلع شده ام که پرسشگری تلفنی انجام خواهد شد و ممکن است نیاز به زمان بیشتر و یا در پاره ای از قسمت ها نیاز به تکرار داشته باشد.

نام .....

امضا .....

تاریخ .....

# Supplement

## Methodology

### *a. Categorization of the background variables*

- In Question 4 “*Religious background*” since the number of participants in some religions was few, the items were combined into 6 items (see Table- 5.1.3).
- In Question 8 “*Number of children in Australia*” the item “*No child*” was added to items.
- In Question 10 “*who else lives in your household*” the items of 5, 6, and 7 were combined and recoded to 5 items (See Table- 5.1.3).
- In Question 12 “*when did you first arrive in Australia*” was recoded into four groups with almost equal distribution (See Table-5.1.2).
- In Question 13 “*language spoken at home*”, items were combined and recoded into two categories Farsi and English.
- In Question 14 “*communicate in English*” items 1, 2 were combined into one item.
- In Question 15 “*highest qualification*”, seven items changed to five items; the items of 2, 3 and 4, 5 were combined into two items (See Table- 5.1.3).
- In Question 20 “*kind of pension or benefit*”, items 2, 3 were combined into one item.
- Regarding type of health concession card (Question 22), since all the different types of card mentioned in 1999 survey have been combined into one card, as a concession card, therefore at the moment there is only one type of medication health concession card.
- In Question 26 “*home ownership*”, the new item ‘*living with children*’ was added to item 6 ‘*boarded free*’.
- In Question 28 “*since you were 65+ old, made any changes to home, made it easier to live there*”, items 1, 4 were combined into one item.

- Some of the questions; 6, 9, 11, 17, 18, 24, 27, 29, and 30 were omitted from the analysis due to the scope of the thesis and non relevancy of these to the research hypothesis.
- In all questions in both studies, the items of “*don’t know*” and “*refused*” were accounted as missing data.

As the aims of this study were to compare the results of utilization health services and community aged care services in this survey with the NSW survey 1999, some of the questions which were not relevant to the hypothesis were omitted from the analysis stage of this thesis but the information collected can be used in some other papers and articles in future.

***b. Categorization of the general health, sensory screening and loss, oral health, and communicating in English variables***

- In Question 31 “*in general, would you say your health is:*”, based on the original source of NSW survey, the five categories (excellent, very good, good, fair and poor) firstly, were recoded into four categories (very good, good, fair and poor) and then recoded again into three categories (good, fair and poor) due to low numbers in the categories” *excellent and very good* “. Therefore, these categories were cut and converted to “*Good*” category.
- Due to non relevancy to hypothesis of the study, some of the questions of this section (36, 37, 39, 42, 43, 45, and 47) were omitted. However, the information collected can be used in other papers and articles in future.
- In Question 46 “*had a problem with mouth or dentures in the last 12 months* “, items of ‘*very often*’ and ‘*often*’ were combined and recoded.
- Answers to question 180, ‘Can you read English?’ were recoded. Items 1 and 2 were recoded to one item.
- The question concerning communicating in English (Question 188) also was recoded. The items of “*very well*’ and ‘*well*” were collapsed into one item.