Ageing in a Foreign Land: The Health Experiences of European-Born Post-War Migrants to Australia

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ABSTRACT

It is commonly observed that immigrants display superior health upon arrival, and for some years following settlement, in their adopted country compared to their native-born counterparts. However, with increased years since migration there is a propensity for this health advantage to dissipate and for health trajectories of some migrant groups to reach, and in some cases fall below, the host national averages. This research aimed to explore the health status of older European-born immigrants as the burden and magnitude of disease outcomes in later life is unclear. This is due partly to a large body of dated literature relying on mortality and hospitalisation data to describe the health status of migrant populations and a historical trend to aggregate country of birth (COB) into large groupings ignoring inherent differences within and between birthplace groups.

Using national Australian data, the health status of European and Australian-born groups were explored to provide a descriptive assessment of health outcomes at three points in time. This study illustrated that although both European and Australian-born groups displayed increases in the prevalence of selected chronic conditions, the European-born generally had better health and health-related outcomes. There was also some evidence to suggest that a health advantage may exist for European-born migrants in relation to some chronic conditions.

Cross-sectional data collected from the South Australian Monitoring and Surveillance System (SAMSS) explored differences in chronic conditions and health-related risk factors between selected birthplaces (including those born in Australia, Germany, Italy and Greece). This study demonstrated that significant differences exist in the health profiles of birthplace groups, where Italian and Greeks experience higher prevalence of some chronic conditions and risk factors compared to the Australian and German-born.
Pooled data collected via SAMSS and the Migrant Health Survey described and compared the demographic, health and health-related characteristics of selected birthplace groups at two points in time and examined the magnitude of change in disease outcomes relative to their Australian-born counterparts. Overall, the results indicated that the Greek and Italian-born had poorer health outcomes over time and displayed the largest change in their health and health-related outcomes. These findings suggested there is a considerable divergence in the long-term health outcomes experienced by selected COB groups and highlighted the value in undertaking birthplace specific analysis.

Semi-structured interviews with Greek-born South Australians aged 60 years and over was undertaken to gain a deeper understanding of the health experiences and health-related outcomes of ageing Greek-born South Australians. The findings from this study indicated that 1) health service utilisation may not be an adequate indicator to explain the health differentials experienced by this cohort; 2) children may be Greek-born older migrants most important social resource and act as a vehicle for gaining access to health advice and the support they need in their day-to-day lives; and 3) life-course histories are pivotal in explaining health in later life.

This research allowed for the comparisons of demographic, health and health-related outcomes to be analysed over time and across birthplace groups, providing additional information and insight into the diversity of outcomes within and between birthplace groups and adding depth to existing knowledge around migrant health outcomes.
DECLARATION

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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Constance Kourbelis

22 December 2015
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<td>ABS</td>
<td>Australian Bureau of Statistics</td>
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<tr>
<td>AIHW</td>
<td>Australian Institute of Health and Welfare</td>
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<td>ASCCSS</td>
<td>Australian Standard Classification of Countries for Social Statistics</td>
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<td>ASGC</td>
<td>Australian Standard Geographic Classification</td>
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<td>ASGS</td>
<td>Australian Statistical Geographic Standard</td>
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<td>BMI</td>
<td>Body Mass Index</td>
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<td>CAI</td>
<td>Computer Assisted Interviewing</td>
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<td>CALD</td>
<td>Culturally and Linguistically Diverse</td>
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<td>CATI</td>
<td>Computer Assisted Telephone Interviewing</td>
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<td>Consumer Directed Care</td>
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<td>Chronic Obstructive Pulmonary Disease</td>
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<td>Department of Immigration and Citizenship</td>
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<td>GOCSA</td>
<td>Greek Orthodox Community of South Australia</td>
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<td>GWC</td>
<td>Greek Welfare Centre</td>
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<td>HME</td>
<td>Health Migrant Effect</td>
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<td>HILDA</td>
<td>Household Income and Labour Dynamics in Australia</td>
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<td>HREC</td>
<td>Human Research Ethics Committee</td>
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<td>IPND</td>
<td>Integrated Public Number Database</td>
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<td>K10</td>
<td>Kessler Psychological Distress Scale</td>
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<td>LGAs</td>
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<td>Abbreviation</td>
<td>Full Form</td>
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<td>post-World War II</td>
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<td>Remote Access Data Laboratory</td>
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<td>South Australian Health Commission</td>
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<td>Statistical Package for the Social Sciences</td>
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<td>Statistics and Data</td>
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<td>University of Adelaide</td>
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<td>University of California, Los Angeles</td>
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<td>Voice over Internet Protocol</td>
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<td>Victorian Transcultural Psychiatry Unit</td>
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<td>WAP</td>
<td>White Australia Policy</td>
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<td>WHO</td>
<td>World Health Organisation</td>
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CHAPTER 1: INTRODUCTION

This study aims to describe the health and ageing experiences of people born in Non-English Speaking (NES) European countries who permanently relocated to Australia following World War Two (WWII). A particular focus is paid to those born in Germany, Italy and Greece who were among the largest overseas-born groups settling in Australia and currently make up a large portion of Australia’s older culturally and linguistically diverse (CALD) population.

It is commonly observed that some immigrant groups display superior health upon arrival and for some years following their settlement compared to their native-born counterparts, often explained by the Healthy Migrant Effect (HME) (Anikeeva et al. 2010; Kliewer 1992; Lasseter & Callister 2008; McDonald & Kennedy 2004; Pérez 2002; Singh & De Looper 2002; Strong, Trickett & Bhatia 1998; Young 1986). However, with increased length of residency there is a propensity for this ‘health advantage’ to become less prevalent and for the health trajectories of some migrant groups to reach, and in some cases fall below, the host national averages (Biddle, Kennedy & McDonald 2007; Kippen 1999; Lanari & Bussini 2011; McDonald & Kennedy 2004; Newbold, K 2005, p.1359; Young 1991).

A number of studies exploring the health patterns of Australia’s European-born migrants have found that at the time of their arrival these groups displayed lower rates of disability, chronic diseases and risk factors (such as obesity and high blood pressure) and had lower mortality and hospitalisation rates when compared to their English speaking overseas-born and native-born counterparts (Singh & De Looper 2002; Strong, Trickett & Bhatia 1998; Young 1987). However, as years since migration increases it is not well understood how the health of Australia’s European-born immigrants has changed (Anikeeva et al. 2010). There are three general patterns
which are observed. For example, studies investigating broadly defined European-born groups (i.e. defined as other Europe, Eastern Europe and Southern Europe) indicate that the ‘health advantage’ has been maintained (Mathers 1996; Singh & De Looper 2002; Strong, Trickett & Bhatia 1998; Young 1987), while others indicate there has been a deterioration (Biddle, Kennedy & McDonald 2007; Jatrana, Pasupuleti & Richardson 2013; Jatrana, Pasupuleti & Richardson 2014). Other investigations into specific birthplace groups (i.e. Greeks and Italians) show that health deteriorates with increasing age, as does the prevalence of some chronic conditions and health-related risk factors (Bennett 1993; Dassanayake et al. 2009; Gibberd et al. 1984; Gray, Harding & Reid 2007; Harriss et al. 2007; Hodge et al. 2004; Kouris-Blazos 2002; Taylor et al. 1999; Wahlqvist et al. 1991; Welborn et al. 1995).

However, the burden and magnitude of disease outcomes for the post-WWII cohort in later life is unclear. This is partly due to the fact that a large body of literature on Australia’s post-WWII migrants was produced in the 1980’s and 1990’s which largely relied on mortality and hospitalisation statistics to describe the health of migrant populations (Kliewer & Butler 1995; Singh & De Looper 2002; Strong, Trickett & Bhatia 1998). While these are important indicators, they do not necessarily reflect the burden or magnitude of health outcomes within and between specific birthplace groups at that time or at the current time.

Furthermore, there has been a historical trend in the literature on the post-WWII cohort to aggregate European country of birth (COB) into large groupings such as Northern, Western, Eastern and Southern Europe. This is problematic as some birthplace groups share little more in common than geographical proximity and the heterogeneity within and between groups is consistently overlooked. Aggregating may mask results and lead to an over or under representation of chronic disease and risk factors estimates. Where birthplace groups are
represented in the data collection the sampling strategy and issues with small numbers can make producing reliable and representative estimates on health indicators problematic.

A further limitation of previous studies relates to Australia having had very distinct immigration patterns over the last century and as a result, there has been a shift in focus over time towards understanding the health outcomes of more recent immigrant groups, including those coming as asylum seekers and refugees. Thus, there is a lack of current representative, cross-sectional and longitudinal data on the health profiles of specific birthplace groups in the post-WWII cohort. As this cohort are ageing, with many approaching very old age, there is a growing need to understand the extent of health disparities that exist within and between birthplace groups, what their health needs are and what demands these groups may place on the health and aged care systems into the future.

1.1.1 Research question
This, therefore, sets the context for the development of the research question, which explores the following:

- Australia’s post-WWII immigrants displayed superior health upon arrival and for some years following their settlement (relative to their native-born counterparts). Has this health advantage been maintained into late adulthood?

1.1.2 Study aims and objectives
The research question will be addressed by exploring the following aims:

- To determine if there has been a change in previously identified trends for chronic conditions and health-related risk factors in broadly defined European-born immigrants to Australia compared to their native-born counterparts.
To determine if there are differences in the current prevalence of chronic conditions and health-related risk factors for common European-born birthplace groups compared to their Australian-born counterparts.

To investigate whether immigrant status is a risk factor for poorer health outcomes for common European-born birthplace groups compared with their Australian-born counterparts.

To investigate whether the HME, as discussed in the literature, is reflected in the current prevalence of chronic conditions and risk factors for common European-born immigrant groups compared to their Australian-born counterparts.

The aims of this research will be achieved through four major research objectives:

- **Objective 1**: To describe and compare the demographic, health and health-related outcomes of broadly defined European-born groups to their Australian-born counterparts at specific points in time.

- **Objective 2**: To describe the demographic, health and health-related outcomes of Australian-born and German, Italian and Greek-born immigrants aged 65 years and over. To identify differences in health outcomes of selected birthplace groups and investigate whether migrant status is a risk factor for negative health outcomes in later life.

- **Objective 3**: To describe and compare the demographic, health and health-related characteristics of Australian, German, Italian and Greek-born individuals aged 50 to 69 in 1996/97 and aged 60 to 79 in 2007-2012. To investigate whether the selected birthplace groups had poorer health and health-related outcomes, if these groups were more likely to develop chronic conditions over time compared to their Australian-born counterparts, and to determine the magnitude of change in disease outcomes relative to Australian-born individuals.
• **Objective 4:** To explore and provide a deeper understanding of health experiences and health-related outcomes of ageing Greek-born South Australians through examining quality of life (QoL) indicators and psycho-socio characteristics.

1.1.3 Outline of chapters
Following this introduction in Chapter One, Chapter Two presents a broad overview of the migratory process and other key migration and settlement concepts as well as a discussion of acculturation. This chapter will provide context around how the migration, settlement and acculturation experience can influence psychological, social and physical outcomes. This chapter also discusses Australia’s migration and settlement policies and the social and political circumstances surrounding post-WWII immigration in Australia. In addition, potential factors that can affect an immigrant’s settlement experience will be reviewed.

Chapter Three reviews the relevant health and ageing literature where the health outcomes of Australia’s post-WWII migrants are measured by the presence or absence of chronic conditions and health-related risk factors. This includes a discussion of how various social determinants and QoL indicators, referencing a life-course perspective, can influence health and ageing experiences in later life. This chapter also describes key theories relating to immigrant health such as the HME, salmon bias, cumulative disadvantage and double jeopardy as possible explanations for health and health-related outcomes.

Chapter Four details the study framework, research design and methods. Chapter Five presents the methods, results and a summary of Study One, which aimed to broadly describe, from a national perspective, the health status of European and Australian-born groups over time using the National Health Survey (NHS) and Australian Bureau of Statistics (ABS) survey data from
1989/90, 2001 and 2007/08. This chapter also addresses the limitations associated with using national data to describe immigrant health.

Chapter Six presents the methodology, results and summary of Study Two, which focused on the South Australian context and used data collected between 2004 and 2012 via the South Australian Monitoring and Surveillance System (SAMSS). This study explored differences in chronic conditions and health-related risk factors between selected birthplaces (including those born in Australia, Germany, Italy and Greece). In addition, migrant status as a risk factor for poorer health outcomes in selected birthplace groups was also explored.

The methodology, results and summary for Study Three is presented in Chapter Seven. This study used pooled data collected via SAMSS and the Migrant Health Survey (Migrant HS) to describe and compare the demographic, health and health-related characteristics of Australian, German, Italian and Greek-born persons at two points in time. This chapter examined the probability of selected birthplace groups developing a chronic condition and the magnitude of change in disease outcomes over time relative to their Australian-born counterparts. This study was designed to complement Study Two by using comparable data sources and focusing on the same birthplace groups.

Chapter Eight presents the methodology, results and summary for Study Four. This study undertook a semi-structured data collection on Greek-born South Australians aged 60 years and over to gain a deeper understanding of the health experiences and health-related outcomes of ageing Greek-born South Australians through examining QoL indicators and psycho-socio characteristics. This study drew on relevant literature and the findings from the secondary data analyses undertaken in Study Two and Study Three. Finally, Chapter Nine presents the key
findings, major conclusions and study limitations of this thesis and presents study recommendations.

1.1.4 Summary
Against this background, and in the context of an ageing multicultural population where Australia was, and will continue to be, a major migrant receiving country, there is a lack of understanding regarding the extent to which health disparities exist within and between post-war birthplace groups. It is well understood that migration can be a risk factor for ill health and that health can be moderated, positively and/or negatively, by a range of factors over time. The deterioration of the so-called ‘health advantage’ has been described as an equity issue and raises some questions relating to how the health advantages can be maintained and what the implications are for other recent migrants or permanent settlers as their length of residency increases. The deterioration of the health of some immigrant groups and the structural ageing of Australia’s population creates an immediate and ongoing issue for the increased demand and uptake of health care and services, in addition to managing unique health profiles and catering for the complexity of health care associated with an ethno-diverse population. Post-WWII migrants provide a unique opportunity to investigate how this cohort have approached later life, while taking into consideration their earlier life experiences in Australia.
CHAPTER 2: MIGRATION AND SETTLEMENT

‘The land flourished because it was fed from so many sources because it was nourished by so many cultures and traditions and peoples.’
— Lyndon B. Johnson (p.1038)

2.1 Introduction

Chapter Two presents a broad overview of the migratory process and other key migration and settlement concepts, as well as providing some context around how the migration, settlement and acculturation experience can influence psychological, social and physical outcomes. This chapter also discusses Australia’s migration and settlement policies and the social and political circumstances that framed Australia’s post-war immigration processes. In addition, potential factors that can affect an immigrant’s settlement experience are highlighted.

2.2 A general overview of migration and settlement

2.2.1 The migration process and other key concepts

Migration is defined ‘as a process of social change during which a person moves from one cultural setting to another in order to settle for a long period of time or permanently’ (Kristiansen, Mygind & Krasnik 2007, p.46). The World Health Organisation (WHO) suggests that immigrants can arrive in regular or irregular situations, as well as being refugees, asylum seekers, displaced persons and returnees (WHO 2010). An immigrant, in the context of this thesis, is taken to mean persons born in Europe who permanently re-settled in Australia over the post-WWII period, regardless of their visa category.

Migration is considered a complex and multidimensional process that has over the last century, but particularly from the mid-1970s and onwards, markedly evolved from an almost unidirectional process (WHO 2010); where movement from one destination to the other often resulted in
permanent transnational resettlement (Zimmerman, Kiss & Hossain 2011). Contemporary migration can be better conceptualised as a continuum or a multi-staged cycle of movement characterised by hyper-mobility and transient populations with the scope for immigrants to stay connected to their homelands (Zimmerman, Kiss & Hossain 2011). The changes in the patterns and composition of migration between nations over the years has been described as a function of the globalisation process, and is reflected through the increasing availability and access to global opportunities such as business, economy, technology and the vast improvements in, and the cost of, transportation (Hugo, Rudd & Harris 2001; Misra & Ganda 2007).

There is no single general theory that explains migration completely (Borjas 1989). As Arango (2000) explains, a single theory would be highly impractical and void of function due to the high level of aggregation required, particularly when considering the multitude of variables needed to generate a reasonable theory. There are, however, various fragmented and singular theories that, while not explaining the migration process completely, do attempt to describe why migration occurs and what perpetuates international migration (Ludlow 2003; Massey et al. 1993). Examples of these migration theories include: neoclassical theory; new economic theory; human capital theory; world systems theory (or historical structuralist approach); dual labour market theory; network theory; migration systems theory; and push/pull factors. Analysis can be undertaken at the micro, meso and macro level (Arango 2000).

Criticism of neo-classical theory is that while it goes some way in explaining migration decisions, it does not take into account or consider historical factors and other variables that can influence, positively or negatively, on life trajectories (Kumar 2011). Other theories, such as the migration systems approach, go beyond economics and suggest that at the micro level, broader influences go towards making a decision to leave one’s homeland to move abroad. For example, informal
social networks, family and community linkages play an important role not only in the community of origin but also in the adopted country; furthermore, decisions to migrate can be made either collectively or as a result of personal circumstances (Kumar 2011).

Irrespective of the reasons for migration or the circumstances surrounding the migration (i.e. forced or voluntary), there is a clear motivation to essentially improve material and personal circumstances and overall QoL (Kumar 2011). Ravenstein (1889) clearly highlights this point in his early writing:

> Bad or oppressive laws, heavy taxes, unattractive climate, uncongenial social surroundings and even compulsion all have produced currents of migration but none of these currents compare in volume with those that arise from a desire inherent in men to better themselves in material respects (p.286).

This highlights a salient feature of the post-WWII migration: a turbulent and hectic historical period where a vast number of people were displaced or experienced significant upheaval and homelands were characterised by unstable conditions, limited opportunities and a time where people were motivated by hopes of a ‘better life’ elsewhere. This can be conceptualised in the idea of ‘push-pull’ factors usually determined by economic drivers, in addition to political, cultural and environmental factors (Arango 2000; Lee 1966; Ravenstein 1889). ‘Push-pull’ factors are those that ‘push’ an individual out of their homelands due to unfavourable conditions (i.e. low wages, unemployment, poor living conditions, lack of health care, war, poverty, hunger, political repression) and ‘pull’ them into the recipient country (i.e. high wages, low unemployment, educational opportunities, religious or political freedom) (Arango 2000; Kristiansen, Mygind & Krasnik 2007).

The migratory process includes multiple phases, such as pre-departure, travel, destination, interception and potential return (Zimmerman, Kiss & Hossain 2011). Throughout the migratory process, there are a number of opportunities for exposure to positive and/or negative influences
which can accumulate over the life-course in varying degrees and place individuals at distinctly different risks of subsequent illness in later life (Lasseter & Callister 2008). For example, during the ‘pre-departure’ phase (considered the time before an individual departs from their country of origin), immigrants are exposed to a variety of influences in their homelands which can potentially affect health status and health outcomes (Zimmerman, Kiss & Hossain 2011). These factors may include: ‘biological, demographic and socio-economic characteristics, local chronic disease patterns and pathogens, environmental factors, and political and personal circumstances’ (Zimmerman, Kiss & Hossain 2011, p.2).

The ‘travel’ phase describes the period between the individual leaving their community of origin and arriving at their destination. This phase may comprise multiple stops for varying periods of time (Zimmerman, Kiss & Hossain 2011). Migrants are believed to travel with their own individual health profiles which reflect the values, beliefs, socio-economic, cultural background and prevalence of disease and illness in their homelands (WHO 2010). The WHO suggests that an interactive relationship exists between an immigrant and their place of residence, whether it is their native or adopted country, where for example various conditions can be introduced and/or acquired by a migrant when travelling to or residing in the adopted country. Furthermore, there is the possibility that acquired conditions can be introduced when returning to the community of origin (WHO 2010).

The ‘destination’ phase describes the period of time when an individual settles in their destination location, either permanently or temporarily (Zimmerman, Kiss & Hossain 2011) and undergoes an adjustment period. This period is characterised by many changes in the conditions and circumstances to an individual’s life. For example, immigrant’s socio-economic characteristics will alter, as will family and kinship relationships, along with a loss in social capital. Difficulty can
arise when integrating into a new environment where language and culture are different. Immigrants may have to deal with unfavourable homeland experiences (i.e. war, famine, torture). Women, in particular, may experience disproportionate negative impacts in relation to discrimination, their financial situation and lack of support from family and social networks (Berry 1992; Bhugra 2004; Biddle, Kennedy & McDonald 2007; Lassetter & Callister 2008).

The ‘interception’ phase refers to only a small portion of individuals who during their migratory process encountered temporary detention (i.e. processed through immigration facilities). This, along with homeland experiences, can have a profound effect on mental and physical health in later life (Zimmerman, Kiss & Hossain 2011). Finally, the ‘return’ phase simply refers to these individuals returning to the sending country either temporarily or permanently (Zimmerman, Kiss & Hossain 2011). In the context of this thesis, these last two phases are largely irrelevant, as the migrant groups of interest were not placed in detention and did not display the hyper-mobility seen in contemporary migration. While a number of post-war migrants emigrated back to their homelands or elsewhere, the vast majority permanently re-settled in Australia.

2.2.2 Settlement, acculturation and issues affecting immigrant health
Following long-term or permanent migration, there is a period of adjustment that occurs which is often referred to as ‘settlement’ (Berry 1992, 2005; Schwartz et al. 2010). Relocating to another country can lead to a process of acculturation, which is described as a complex phenomenon resulting in a process of cultural exchange, meaning that when new cultures or ethnic groups are exposed to each other, a change of some description will occur between the dominant group and the minority group (Berry 1992; Bhugra 2004). Unidirectional models of acculturation generally indicate that while the dominant group is subject to some change, the process of change largely affects minority groups due to influences from the dominant group (Celenk & Van de Vijver 2011; Organista, Marin & Chun 2010; Schwartz et al. 2010). Under this model minority groups are seen
to discard or move away from their culture and move towards the dominant (Schwartz et al. 2010); this straight line assimilation was a prominent feature and expectation of Australia’s early post-WWII migration and settlement policies.

As alluded to previously, upon relocation and during the post migratory years, a number of changes occur to the conditions and circumstances of a person’s life (Berry 1992). These changes can occur at the group level (i.e. nation, states, communities, institutions and refers to how different groups engage with each other without conflict) and at the individual level (i.e. how people from different groups relate to each other and live together through negotiation so to avoid conflict) (Berry 2005). While individual changes are most relevant in this context, those occurring at the group level can influence the acculturation experience and subsequent adaptation (Berry 1992).

At the group level, there are physical and environmental factors (such as housing, pollution, population density), along with biological, political, economic, cultural and social changes (Berry 1992). Individual level changes occur at the psychological level in, for example, values, attitudes, abilities and motives also referred to as behavioural level shifts (Berry 1992). As individuals undergo this process of re-establishing and re-negotiating personal and cultural identity and sense of belonging (Bhugra & Becker 2005; Ghorpade, Lackritz & Singh 2004; Phinney et al. 2001), there is the possibility for ‘acculturative stress’ which can give rise to adverse physical, social and psychological outcomes (Berry 1992). Acculturative stress and behavioural shifts can be moderated by a person’s attributes (among other variables), which are influenced by various pre- and post-migratory factors, characteristics, exposure and experiences (Berry 1992). These include changes to preferred language, eating preferences, familiar dress, familial ties and adaptation of one’s cultural identity (Berry 2005).
Acculturative stress is considered a by-product of the acculturation process and can manifest in reduced ‘mental health, feelings of marginality and alienation, heightened psychosomatic and psychological symptom levels’ (Berry 1992, p.75). Those who experience poor adaptation can also face reduced health status and other physical ailments, in addition to issues with daily life, family, work and school (Berry 1992). It is important to note that unfavourable physical or emotional health is not an inevitable outcome of the acculturation process (Berry et al. 1987). There are varying degrees of outcomes that can range from positive through to negative and this provides a conceptual basis for how health can potentially be undermined.

During the process of acculturation there are a number of strategies (i.e. adjustment, reaction and withdrawal) and outcomes (i.e. assimilation, separation, integration and marginalisation) that can occur which are referred to as adaptation (Berry 1992). In terms of acculturation strategies, reaction and withdrawal imply a retaliation against the environment or withdrawal from the environment that are not congruent with the notion of groups engaging and negotiating in order to live harmoniously and to avoid conflict. These outcomes, while not considered highly plausible outcomes primarily due to the political and social forces surrounding migration, can also manifest through return migration or migrating to another location. Adjustment on the other hand refers to changes in the direction of reduced conflict where harmony can be achieved; as mentioned above, this is the intended outcome of adaptation (Berry 1992).

Essentially, the form that acculturative strategies take are conceptually based upon this cross-section between the values an individual places on maintaining/retaining their cultural identity/characteristics and maintaining relationships with ‘other’ groups (Berry 1992, p.72). As mentioned above, there are four strategies and these include assimilation (‘adopts the receiving culture and discards the heritage culture’), separation (‘rejects the receiving culture and discards...')
the heritage culture’), integration (‘adopts receiving country and retains heritage culture’) and marginalisation (‘rejects both the heritage and receiving culture’) (Schwartz et al. 2010, p.238). Of the four acculturation strategies, integration is said to be the least stressful, while marginalisation is most stressful (Berry 1992).

This so-called four-fold model has been criticised for not accounting for the inherent heterogeneity clearly present within and between groups, and tries to apply a one size fits all approach to the way in which people seek to acculturate (Schwartz et al. 2010; Webster Rudmin, Ferrada-Noli & Skolbekken 2003). Despite these criticisms, the model presented by Berry (1992) is well documented and a highly cited construct that explains this process to an appropriate level for the purpose of this work.

It is important to mention some other overarching variables that can compromise a person’s ability to engage and identify with the recipient country during acculturation. These include the importance of shared common language (Barker et al. 2001; Huntington 2004; Schildkraut 2005), the circumstances of the migration, the settlement objectives (Berry 1992; Nesdale 2002), demographic circumstances, and the political and economic context at the community of origin (Berry 1992; Nesdale 2002).

The social and political nature of the settlement country is also an important factor. This can either positively or negatively influence the acculturation experience through, for example, the nature of welfare, support services and the availability of ethno-specific services, in addition to the settlement policies and settlement services. Other important factors include general attitudes towards migration and newly arrived migrants, the public discourse regarding migration and the
nature of social inclusion (Berry 1992; Schwartz et al. 2010). It is believed that when the society
at large are positively disposed towards immigrants acceptance is enhanced (Nesdale 2002).

Some studies have shown that the degree of acceptance by the dominant majority towards
different ethnic minorities can be moderated by the level of cultural similarity observed (Dijker
1987; Ho et al. 1994; Van Oudenhoven & Eisses 1998). There is also evidence to suggest that
physical similarity can increase levels of acceptance (Nesdale 2002). A two-fold effect exists
here, in the sense that an immigrant’s identification with the host society can also be moderated
by these same factors and if rejection is experienced, it is likely that ethnic groups will gravitate
towards those who are culturally most similar, and those who share similar values and/or a
common language (Nesdale 2002). Furthermore, these factors can give way to discrimination
and hostility in the receiving country, which are known to be factors that can undermine physical
and emotional health.

It is widely accepted that the migratory and settlement process is intrinsically related to health and
wellbeing; where a dynamic relationship exists that is considered to be an interactive and
progressive process (Gushulak & MacPherson 2006). As shown above, it is believed that
multiple opportunities exist for health vulnerabilities to begin to develop following migration and
during the settlement phase (WHO 2010), which can go on to undermine physical and emotional
health (Lanari & Bussini 2011). Further to this, despite the fact that the migratory and
acculturation process is experienced over time (i.e. years since migration), migrant studies
exploring transitions in health often tend to ignore the time dimension (Spallek, Zeeb & Razum
2011).
For instance, along the life-course there are a number of life stages (i.e. gestation, childhood, young adulthood and adult life) where exposure to physical and/or social factors can have health-related effects in later life experiences (Kuh et al. 2003; Spallek, Zeeb & Razum 2011). The clinical manifestation of disease outcomes can be partly explained by exposures experienced in early life, the timing (or the life stage) that the exposure occurred within, coupled with the long-term exposure to or the complex accumulation of interactions across life stages and generations (Kendig et al. 2015; Lynch & Smith 2005). Timing is an important function of a life-course perspective, where critical periods, thought to be ‘time windows’, exist in which intrinsic changes can occur as a result of exposures (whether they be positive or negative) that can go on to affect the development or progression of disease outcomes in later life (Kuh, Shlomo & Ezra 2004).

Life-course can be conceptualised along a trajectory, which is defined as a ‘long-term pattern of stability and change, which usually involves multiple transitions’ (Hutchison 2010, p.12). Along this path, many social, psychological, physiological states are embedded which can alter a person’s life (Hutchison 2010; Kuh et al. 2003). Furthermore, immigrants are exposed to an additional set of factors encountered during the migratory and settlement phase that the dominant majority do not experience (Spallek, Zeeb & Razum 2011). A life-course perspective does not present a fatalistic approach where outcomes along the trajectory are pre-determined without any scope for intervention. Rather, taking a life-course perspective provides a lens of enquiry that helps to bridge the contribution of risks and protective factors occurring across the life-course (Lynch & Smith 2005).

Another point to consider is that there is some debate conceptually around when an immigrant stops being an immigrant and whether the migratory process has an end point (i.e. a specified period of time or following the achievement of a set of objectives) (Morrissey 1984; Wooden et al.
This is pivotal to health and acculturation outcomes because settlement is closely linked to resource allocation and provision of support for migrants and also provides context around the states perceived level of responsibility for immigrants (Burnett 1998). It also frames an understanding of how migration is experienced and puts forward the idea that re-settlement may be a permanent transition that can affect an immigrant over their life-course (Burnett 1998; Lasseter & Callister 2008; Morrissey 1984; Shuval 2007; Wooden et al. 1994). Thus, in the absence of there being identifiable markers signalling the conclusion of settlement, the viewpoint taken in this context is that it is a process experienced over the life-course.

2.3 Migration to Australia: A historical background & policy context

2.3.1 Clarification of Australia’s post-WWII period

Australia has a long standing migration history, tracing back to 1788 when the first British penal settlement was established on the east coast of Australia (Australian Institute of Health and Welfare (AIHW) 1997). It is a country comprising a population of 22.5 million people (in 2011) including those coming from over 200 countries who speak over 250 languages (ABS 2012b). Approximately, 44% of Australians are overseas born or have at least one parent born overseas, and of those born overseas 62% come from a non-English speaking background (NESB) (Department of Immigration and Citizenship (DIAC) 2008). While Australia’s migration has continued to thrive well into the twenty first century (AIHW 1997) an important point in this history was the post-WWII migration. The post-war period accounted for some of Australia’s most impressive population movements and redefined the composition and size of Australia’s population (ABS 2006).

The post-WWII period in this context is defined as the period spanning 1945 to 1975. This timeframe was chosen, because at the top end of this period, there was the establishment of the Australia’s Federal Department of Immigration, in addition to the emergence of the ‘White
Australia Policy’ (see 2.3.2) and the large scale migration program, ‘Populate or Perish’ (see 2.3.3), which triggered the mass re-settlement of persons from Britain and other non-traditional European immigrant sources (Waxman 2000). While the ‘White Australia Policy’ was progressively dismantled over two decades it was not until 1973 that this program was officially abolished (Burnett 1998) and the term ‘race’ was removed as a factor in Australia’s immigration policies (Castles 1992). In 1975, The Racial Discrimination Act 1975 was passed and this ‘outlawed’ discrimination based on race and ethnic origin, holding that those from CALD backgrounds should be given equal treatment. This led to the intake from Asia and other non-traditional immigrant sources and coincided with the slowdown of European immigration to Australia (Castles 1995).

Over the initial post-WWII period, from 1945 to 1960, it was estimated that 1.6 million immigrants arrived in Australia with successive additional waves throughout the 1960’-s and 1970’-s of approximately 1.3 million and 960,000, respectively (DIAC 2011). The significance of this migration can further be reflected in the growth of the Australian population from 1947 to 1971. At the time of the 1947 Census, Australia’s population was almost eight million, with the overseas-born accounting for 10% of the total population, consisting mainly of those born in the United Kingdom and Ireland (Vasta 2005). By 1971, Australia’s population was made up of approximately 13 million people of which 20% had been born overseas and of the overseas-born, 85% came from European countries with only half coming from the United Kingdom (Vasta 2005).

This period is noteworthy, not only for its pace and scale, but for the significant shifts in Australia’s migration and re-settlement policies, which transformed Australia’s migrant receiving patterns and created the platform for the vast cultural diversity experienced today (AIHW 1997; Jordens n.d.; Jupp 2002; Maffia 2008; Toro-Morn & Alicea 2004).
2.3.2 ‘White Australia Policy’
In terms of Australia’s migration program, at the time of Federation the *Immigration Restriction Act 1901 (Act)* was enforced and was the basis of a series of highly restrictive migration policies referred to as the ‘White Australia Policy’. This program was motivated by a strong preference to maintain a ‘white Australia’ and a British homogenous population (Jupp 2002). This value system was reflected in the migrant receiving patterns encouraging the free or assisted passage of those born in the United Kingdom or Ireland. In addition, the Commonwealth’s intention to restrict ‘undesirable’ immigrants from entering Australia was made clear in the Act specifically ‘to place certain restrictions on Immigration and provide for the removal from the Commonwealth of prohibited Immigrants’ (*Immigration Restriction Act* 1901, p.1).

The Act also imposed a compulsory dictation test as another means to restrict potential immigrants from entering Australia (Yarwood 1958). While a number of non-European immigrants and those from NESB were introduced into Australia over the earlier years, in some cases under assisted programs, these intakes largely reflected Australia’s labour demands (DIAC 2009). They also reflected the variable social, economic and political circumstances occurring abroad (DIAC 2009). Essentially, Australia’s population from post Federation to pre-WWII lacked in cultural diversity (Castles 1992).

2.3.3 ‘Populate or Perish’
Following WWII, a large scale migration program, coined ‘Populate or Perish’, was introduced to stimulate population growth through targeted immigration of one percent per year (DIAC 2009). This program aimed to increase an already dwindling population, compensate for labour force shortages and drive the growth and development of the economy and industry (DIAC 2009). There was a growing belief that this migration program would be a suitable and viable solution to ensure the future prosperity of Australia. There was also a strong belief that traditional (British)
migrant sources would provide these desirable increases (Schofield 1995). As such, various recruitment schemes such as the ‘Ten Pound Pom’, ‘Bring out the Britons’ and ‘Nest Egg Scheme’ were implemented to attract these candidates (Hammerton & Thomson 2005). However, immigration quotas were not being met and it was necessary to broaden immigrant intakes to account for these shortfalls (Thomas 2014). The government began recruiting persons from other European countries who in the aftermath of WWII, were either left displaced or experiencing significant upheaval with many of their homelands characterised by unstable conditions and limited opportunities (Kristiansen, Mygind & Krasnik 2007).

Initially, immigrant sources considered favourable by the Department of Immigration were Northern European candidates who were thought to be most similar to their Australian-born counterparts and could be readily absorbed into their adopted country (Castles 1992; Vasta 2005). This is in contrast to, for example, immigrants from Eastern and Southern European countries, who it was initially believed would undermine the existing social structure or pose a threat to national identity (Vasta 2005). Intakes also came from Western European countries and eventually from Southern and Eastern Europe, however these groups were considered to be the least favoured due to their physical dissimilarity from the dominant majority (Castles 1992; Thomas 2014).

In order to encourage the re-settlement of post-war immigrants, the government initiated a number of policies and entered into agreements with European governments and other international organisations. This meant that the free or assisted passages offered previously to residents of the United Kingdom were extended to ex-servicemen or resistance fighters from the United States, The Netherlands, Norway, France, Belgium and Denmark. Other formal migration agreements were also instituted with these countries (DIAC 2009). Informal migration
arrangements were also made with Austria, Greece, Italy and Spain (DIAC 2009) and quotas were established for the re-settlement of displaced persons from European camps (DIAC 2009). Recruitment agreements were made with governments from Southern and Eastern Europeans countries due to the high demand for labour at the time. However, unlike Northern Europeans, those from Southern and Eastern Europe were less likely to receive assisted passages and had no automatic right to family reunion and were, as will be discussed below, directed to undesirable jobs and were generally treated as inferior (Castles 1992).

2.3.4 Placement of migrants
At the time of the post-WWII population movements, the early migration program was predominately settler-based and geared towards meeting Australia’s labour force shortages, boosting population numbers and growth of the economy. Due to the growth of consumer goods and the car, food processing, and service industries there was a high demand for unskilled labour. Those recruited were often young unskilled men with little or no education and limited proficiency in English. The migration program also accommodated family re-union and humanitarian entrants; however, the entry of skilled workers was not yet a priority and formed a limited component of these early intakes (Tierney 1996).

Post-WWII migrants found themselves working as labourers and filling jobs that Australians did not want; for example, in factories, steelwork, mines, rail or shipyards, or construction (Thomas 2014). There were also a number of large-scale projects initiated by the government: a prime example being the Snowy Mountain Scheme (a hydro-electrical project) where 70% of the 100,000 persons employed on this project were born overseas and came from over 30 different countries (Thomas 2014).
It was also common for migrants to work on farms, as cleaners or taxi drivers, and to take on multiple jobs to support their families and afford home ownership (Thomson 2014). Many of those migrating from Southern European countries also worked in or started small businesses (i.e. milk bars, delicatessens, cafes and newsagencies) (Thomson 2014). In addition, many of those arriving to Australia under an ‘Assisted Package Scheme’ who were aged 16 years and over, worked as labourers despite their qualifications. There were difficulties associated with migrants having their academic or professional qualifications recognised, which further forced them into unskilled or manual labour (Burnett 1998).

Many migrant women were employed in a range of jobs in the textile, clothing or footwear industries; with significant numbers also staying at home to care for their families (Colic-Peisker 2011). Those women who were not employed encountered some issues with isolation, in particular the limited opportunities for developing their English language skills. Migrant men, on the other hand, had greater opportunities through employment and recreation to develop their knowledge and use of English and generate broader social networks (Thomson 2014). Migrant children, of school age, would often assist their parents to learn English (Thomson 2014).

2.3.5 Post-1970’s shifts in Australia’s migration policies & intakes
From the mid-1970s, Australia’s migration policies underwent progressive shifts (ABS 2012a). The ‘White Australia Policy’ was officially dismantled and the government took steps towards recognising Australia’s ethnic diversity and implementing a universal migration policy that did not discriminate based on race, colour or creed (Department of Social Services 2007). By 1975, the ‘Assisted Passage Schemes’ had ended and there was a complete slowdown in European settlement with successive waves coming from Asia and other parts of the world (Hugo 2003).
Over recent years, there have been considerable shifts in the Australian migration program. The current program has moved away from attracting unskilled workers and it now divided into four streams of permanent settlement, including skilled workers who are admitted based upon a points assessment test and make up the vast majority of entrants, in addition to family reunion migrants, refugee-humanitarian and others (e.g. the working holiday maker scheme). There has also been a growing number of non-permanent migrants taking up temporary residence in Australia who are recruited to fill short-term demand in the country (Thomas 2014). Under the current program, a large portion of immigrants are young, have greater levels of education and are more likely to be able to speak English, and there is a greater focus on individuals being ‘job ready’ (Thomas 2014).

The changes in Australia’s receiving patterns can be reflected in the numbers of Australians born in European countries declining from 52% in 2001 to 40% in 2011 and the proportion of those coming from Asia increasing from 24% to 33% over the same period (ABS 2012a). According to the 2011 Census, the ten leading overseas birthplace groups included those born in the United Kingdom (20%), New Zealand (9.1%), China (6.0%), India (5.6%), Italy (3.5%), Vietnam (3.5%), Philippines (3.2%), South Africa (2.8%), Malaysia (2.2%) and Germany (2.0%) (ABS 2012a).

Despite there being an overall decrease in the total number of persons born in Europe, the majority of post-WWII migrants permanently resettling to Australia have lived in Australia for up to 60 years and now make up a large portion of Australia’s older population (ABS 1994). For instance, the top five overseas-born birthplace groups of Australia’s older population (aged 65 years and over) include the United Kingdom, Italy, Greece, Germany and New Zealand (ABS 2011). Furthermore, as the post-WWII migrants move into older age, it is estimated from 2011 to 2026 those aged 65 years and over from CALD backgrounds will grow by a rate of 44% and that
by 2026, 22.1% of Australia's older population will be from a CALD background (Gibson et al. 2001).

2.4 Australia’s post-WWII settlement policies

2.4.1 Assimilation & integration

Settlement has been defined as ‘the process by which an immigrant establishes economic viability and social networks following immigration to contribute to, and make full use of, opportunities generally available in the receiving country’ (Queensland Government 2010, p.9). In Australia, it has been the state’s responsibility to provide support for new arrivals into the country (Jupp 2002). The Australian Government considers successful migrant settlement as ‘integral to the achievement of a society which values Australian citizenship and social cohesion, and enables migrants and refugees to participate equitably’ (Australian Survey Research Group 2011, p.5). Over the years, the government policy on settlement has focused on two central ideologies including assimilation (transitioning into integration in the mid-1960s to 1972) and multiculturalism (Burnett 1998).

The official government policy, from 1947 to 1964 for migrants (also referred to as ‘new Australians’) settling in Australia was based upon assimilation (Galligan & Roberts 2003). Samers (2010) outlines the different meanings attached to the term assimilation described in immigration studies during most of the twentieth century:

- Immigrants adapt or adopt the cultural ideas and practices of the dominant culture over time; immigrants achieve the same socio-economic status measured in terms of some ‘mean’ for the ‘native-born’; and immigrants develop a spatial pattern in terms of residence and employment that is indistinguishable from the dominant or more dominant cultural groups (2010, p.270).

There was a popular belief and expectation that these ‘new Australians’ would find work, settle down, be culturally and socially absorbed and become indistinguishable from existing Anglo-
Australians as soon as possible (Vasta 2005). In addition, the Australian government also encouraged new settlers to become Australian citizens. Since 1945, of the 6.5 million people who migrated to Australia, over four million have acquired Australian citizenship (Klapdor et al. 2009). This has been seen as an achievement of the immigration program and in turn of great value to the Australian population in establishing membership to its national community (Klapdor et al. 2009). A significant level of energy was expended on assimilation efforts because at the time there was a genuine fear that European settlers would threaten the national identity by not participating in the Australian way of life or wider community, and that they would create enclaves (Naylor 2010).

Despite these efforts, there was an undercurrent of xenophobia, experiences with racism, residential and labour force segregation and there were difficulties in having the professional qualifications of those from a NESB recognised (Jamrozik, Boland & Urquhart 1995). There was little awareness regarding the welfare needs of immigrants and a lack of government services; generally those implemented focused on accommodation and employment. This is evidenced through the fact that the Department of Immigration was not established until 1960, the Telephone Interpreter Service was not introduced until 1973 and the Committee on Overseas Professional Qualifications was not formed until 1969 (Jamrozik, Boland & Urquhart 1995). Furthermore, no additional services were established during 1951 and 1968, aside from those initially available such as The Good Neighbour Council, the Citizenship Conventions and the Adult Migrant Education Service (Burnett 1998).

While there was support for the assimilation ideology in the public discourse, Lack and Templeton (1995) suggest that immigrants being welcomed to Australia were not being assimilated - rather they were being marginalised – describing assimilation as a ‘one-way process involving little more
than learning English, getting a job, and abandoning an irrelevant past’ and an ‘unwarranted attempt at cultural repression’ (p.77).

The government policy from 1964 to 1972 shifted towards that of integration. This policy upheld the assimilation undertone and core values, and maintained that immigrants were responsible for issues relating to their settlement (Burnett 1998). However it also recognised that immigrants required more support in order for them to achieve their prescribed settlement endeavours. This was an important shift as it acknowledged that with increasing ethno-diversity, an assimilationist ideology would not produce desirable settlement outcomes and that successful integration did not necessarily have to equate to a complete loss of an immigrant’s national identity (Burnett 1998).

2.4.2 Multiculturalism
In 1973, the ‘White Australia Policy’ was officially dismantled and the government moved towards a multicultural approach. Multiculturalism has re-defined Australia’s national identity by recognising, respecting and supporting the cultural diversity present in Australian society (Jordens n.d.). Underlying multiculturalism in Australia are four basic principles: ‘civic duty, cultural respect, social equity and productive density’ (Vasta 2005, p.16). While an individual has the freedom to express and share their cultural values, there is also an expectation that Australians abide by mutual civic obligation underwriting Australia’s democratic society, which includes ‘tolerance and equality, English as the national language and equality of the sexes’ (Vasta 2005, p.14).

Multiculturalism as a concept and policy has evolved from the mid-1970s through to the present day. The early policy direction made reference to ‘ethnic pluralism’ and was geared towards migrant rights and addressing inequalities in terms of welfare and social services. There were also steps towards working with ethno-specific and related community/voluntary organisation, as
part of the reform process, for the provision of support services for immigrant groups (Koleth 2010; Vasta 2005). There was a fundamental shift that occurred during the Fraser Government era which saw multiculturalism became a way for Australia to achieve social cohesion and was later a spring board to ‘productive diversity’. This concept suggests that an ethno-diverse population is better equipped to deal with globalisation (Vasta 2005). There has also been progress in terms of ‘mainstreaming’ migrant services into all of government agencies as a way to provide equity and access to all people (Vasta 2005).

2.5 Demographic challenges associated with a multicultural Australia

Australia, like many other nations, has an ageing population. Population ageing is a long term process, which can be attributed to increases in life expectancy and decreases in fertility (Hugo 2014b; McDonald & Kippen 1999). Over the coming decades there will be an unprecedented number of people moving into older age (Warnes et al. 2004). For example, in 1976, those aged 65 years and over accounted for 9% of the Australian population; in 1996 this rose to 12% and by 2051 it is forecasted that between 6.4 and 6.8 million persons (24% to 26%) will be above 65 years of age (ABS 1998; ABS 2001a; AIHW 1997). The increases in persons aged over 65 reflects in part Australia’s long and sustained period of fertility following the Second World War, also referred to as the ‘baby boom’, and in part the vigorous post-WWII migration program (Hugo 2014a).

In addition, from 1976 to 2016 there have been significantly higher growths in the very old cohort compared to the rest of the population (AIHW 1997) and it is anticipated that the number of persons aged over 85 years will almost quadruple as a proportion of the population from 1.3% in 2003 to 5% by 2051 (ABS 2001a). An additional layer of complexity contributing to the issue of population ageing relates to Australia’s multi-ethnic aged who are ageing at a more rapid rate and
have older age structures compared to their native-born counterparts (Cultural and Indigenous Research Centre Australia 2008).

As the total dependency ratio increases governments will be faced with increasing fiscal pressure. For example, older persons, particularly those aged 85 years and over, are among the biggest users of health care services, and public expenditure for older people is estimated to be three times higher per head than expenditure for the young (Fierravanti-Wells 2013; Hugo 2001). The costs of health and welfare will continue to rise as will the challenge associated with the planning, delivery and supply of services to meet the dependency and long term care needs of older persons (Productivity Commission 2011); including those from CALD backgrounds who may encounter disproportionate health outcomes compared to their native-born counterparts.

Australia’s current health care system, despite recent reforms towards consumer directed care (CDC), have been criticised for not accommodating diversity (Migliorino 2013) and not incorporating the perspectives of CALD persons into the delivery of aged care (Shaw 2013). There are also issues associated with patients, their families and/or carers finding it difficult to navigate and understand and the health care system, and to deal with the vast amount and spread of information that currently exists (Migliorino 2013).

Those from CALD backgrounds often prefer to receive information and access services in a language other than English (Colanero 2013). However, the availability and access to such services or interpreters can be limited. Furthermore, the translation of material/resources may not always be culturally appropriate or meaningful (Sawrikar, Katz & Australian Family Relationships Clearinghouse 2008; Walker 2002). There is often a reliance on family members to engage in caring responsibilities and a preference of those from CALD backgrounds to access
and receive care from trusted networks within the family or community (Colanero 2013), which can create discrepancies in the preferences and realities of how care is supplied and received. Furthermore, patterns of caring and caring responsibilities will evolve into the future, as the ‘number of older Australians needing care will increase faster than the numbers of carers available to support them’ (National Aged Care Alliance (NACA) 2012, p.8).

Tailoring a health care system that can meet the needs and engage the CALD community, who are known to under-utilise and under-access health care services (Migliorino 2013), is and will continue to be, a complex and multi-faceted task: a task which is complicated by the diversity that exists within and between CALD groups (FECCA 2015; Hugo 2014a; Productivity Commission 2011). Persons from CALD backgrounds have marked differences in their demographic, socio-economic, cultural and religious characteristics (Goddard 2013). This includes varied language and communication competencies where those from NESB have a tendency to revert back to their native tongue and lose their ability to speak English as they get older and/or with declines in cognitive abilities (Colanero 2013; Goddard 2013; Khoo 2011).

2.6 Summary

This chapter aimed to highlight that migration is a complex phenomenon, which continues to be an influence over the life-course. A number of changes can occur in a migrant’s life which can potentially undermine physical, emotional and social functioning, and lead to the emergence of health-related issues in later life. The acculturation process, coupled with language proficiency, social status, the political landscape, overarching policies and government resources and the public discourse surrounding migration and settlement, can be indicators of how well migrants adapt and experience their adopted country.
Over the last century Australia has witnessed distinct migration flows that have significantly changed Australia's demographic and cultural landscape. The post-WWII migration was the tipping point for the ethno-diversity seen today and many of those coming over this period are now ageing in a foreign land. In Australia, one in five older persons come from a CALD background (FECCA 2015) and the numbers and composition of the population moving through the age structure will continue to increase and present a number of ongoing and multidimensional challenges. Therefore, in light of the dramatic ageing of Australia's population, it is important to also understand how the post-WWII migrants are approaching these later years. Chapter Three will present a literature review of immigrant health and discuss the relationship between health, ageing and QoL along with other health-related migrant concepts.
CHAPTER 3: MIGRANT HEALTH & AGEING – A REVIEW OF THE LITERATURE

3.1 Introduction

Health and ageing concern most individuals and some groups are potentially more at risk of poorer physical, psychological and/or social health as they age compared to others (Aday 1994). There are a number of circumstances which can determine whether people are healthy or not (WHO 2012). These include various biomedical factors, genetics, demographic, socio-economic and environmental determinants, social and psychosocial dimensions, health behaviours and includes knowledge, attitudes and beliefs, personal and behavioural coping skills (WHO 2012). Additional stressors can be found in the case of the migrant, as migration is in itself considered a significant life event and a determinant of health (Warnes & Williams 2006; WHO 2012).

Immigrant health can be influenced by a range of factors in the receiving country, but also those in the community of origin. For instance, homeland experiences with war, famine and poverty and the demographic, social, political and cultural characteristics in their country of origin can contribute to poorer health outcomes in later life (Kristiansen, Mygind & Krasnik 2007; WHO 2010). Furthermore, the age at migration, the context and process of their migration and the processes of acculturation and social integration can also be significant indicators of health and mental health outcomes (Angel, Buckley & Sakamoto 2001; Berry 1992; Bhugra 2004; Bhugra & Becker 2005).

Immigrants are faced with establishing a new life in a ‘foreign land’, which can bring with it considerable sacrifice and changes to many of the conditions and circumstances of a person’s life (Berry 1992; Evans 1987; Lasseter & Callister 2008): for example, occupational and socio-
economic changes (Williams & Collins 1995); modification of diet and barriers accessing familiar food (Gilbert & Khokhar 2008); adaptation and breakdown of social networks and family role modifications (Bhugra & Becker 2005; Shuval 2007); exposure to varying degrees of racism (Biddle, Kennedy & McDonald 2007; Kristiansen, Mygind & Krasnik 2007; Lassetter & Callister 2008); and potential issues associated with accessing health services, information and resources (Nazroo et al. 2009; Newbold, K 2005; Saldov 1991). Those from a NESB may also experience language/communication breakdowns and cultural differences, which can create barriers in many aspects of their lives (Chu 1998; Khoo 2011; Saldov 1991).

Thus, there are a range of pre-migratory and post-migratory factors that immigrants are faced with which can positively and/or negatively impact upon their health and ageing experiences (Berry 1992). As such, health and ageing outcomes will be varied, complex and unequally distributed (WHO 2010; WHO 2012; Young 1991) and individuals will be at distinctly different risks of subsequent illness due to varied experiences over their life course (Dunn & Dyck 2000; Williams & Collins 1995). This chapter aims to provide a conceptual background on factors that can influence immigrants’ health and ageing experiences and in doing so, explores active ageing and QoL from the life-course perspective. This chapter also discusses existing migrant concepts commonly used to describe immigrant health outcomes and health differentials and presents a review on the health status of Australia’s European-born immigrants, as measured by chronic conditions and risk factors. In this context, chronic conditions are considered to be long-term or permanent illnesses that affect a ‘person’s ordinary physical, psychological, or social functioning’ (Sidell 1997).
3.2 Relationship between health and ageing: quality of life, life-course and active ageing

One view of ageing is as a biological process where a number of changes occur to the physical function of an individual that are considered to be a normative part of the ageing process (Schulz & Heckhausen 1996). Individuals are subject to increased risks of subsequent disease, disability and death as they age (Viña, Borrás & Miquel 2007), implying that growing older will result in the gradual loss of independence and autonomy. Defining ageing as a biological process moderated by the loss of physical function dichotomises individuals into diseased and non-diseased states and fails to acknowledge the ability of humans to function in less than ideal physical circumstances (Rowe & Kahn 1997; Schulz & Heckhausen 1996). Countering this view of ageing as a time of merely biological decline, the epidemiological and demographic evidence over time have highlighted longer life expectancies; and as such, ageing should be framed in positive terms, emphasising increases in the quality and number of healthy years of life that can be achieved (Peel, McClure & Bartlett 2005; WHO 2002).

Ageing should be thought of as a long-term process, occurring over the whole life-course, where extended exposure to external factors can impede on function and lead to disease outcomes (Kendig et al. 2015; WHO 2002). Over the life-course all individuals are exposed to varying degrees of risks and opportunities which can shape how they approach their later years, the quality of their lives, and subsequently how they experience ageing and illness. Immigrants carry with them a unique set of characteristics influenced by their homeland experiences, which can trigger additional challenges that accumulate over time, as they engage in day-to-day life in the society of settlement (WHO 2010).

While there is no standard way to define ageing, the process has been described by various constructs like active ageing, successful ageing, positive ageing and productive ageing - all of
which commonly include dimensions of enquiry and analysis relating to the adaptation of physical, social and psychological factors over time (Peel, Bartlett & McClure 2004). The model discussed below is that devised by the WHO and refers to ‘active ageing’ (WHO 2002). The term active ageing is defined as ‘the process of optimising opportunities for health, participation and security in order to enhance QoL as people age’ (WHO 2002, p.12).

As people get older, the absence or presence of disease does not necessarily equate to a positive QoL and ageing experiences can be better described through the use of non-medical terms (Bowling & Iliffe 2011). For example, through an individual’s ability to maintain autonomy and independence where finances, housing and standards of living are important aspects, as is the maintenance and creation of social and family relationships, and taking part in recreational activities or pursing other goals (Bajekal et al. 2004; Bowling 1995; Peel, Bartlett & McClure 2004; Stanaway et al. 2011; Wahlqvist, Kouris-Blazos & Hsa-Hage 1997; WHO 2002).

QoL aims to capture self-perceptions of current state of life and health (Ginieri-Coccossis et al. 2009). This can be a problematic construct to define because individuals place value and importance in different things and often find it difficult to realise what is important or valuable to oneself until it is lost (for example loss or decline in physical or functional status) (Bowling 1995; Farquhar 1995). QoL can be measured through a number of subjective and objective domains for example, health (in terms of physical, psychological and functional status), socioeconomic status (SES), life satisfaction and self-esteem (Bowling & Iliffe 2011), in addition to personal beliefs, social networks and resources, and salient features of the individual’s environment (WHOQol Group 1994). While not fully exploring all measurable possibilities, these domains are known to be important dimensions in people’s lives as they grow older and in one way or another are linked to health.
The active ageing framework, as illustrated in Figure 3.1, reflects a complex and multidimensional concept that can be influenced by a range of cultural, social, physical, personal, behavioural, and economic determinants that occur and accumulate over the life-course (WHO 2002). In the active ageing framework the life-course is described as transitions and experiences occurring at different life stages with opportunities to enhance health, participation and security, which are pillars of this framework (WHO 2002). This framework encourages continued participation, throughout the life-course, taking into account the needs, desires and capacities of the individual and reflects the notion that ageing well is greater than a person’s ability to remain physically active and engage in employment (WHO 2002).

Figure 3.1: Active ageing framework

Source: adapted from WHO 2002 (p.19)
A brief description of the components within the active ageing model (refer to Figure 3.1) and their association with health is provided below. It is important to mention here that ageing is a universal condition and as such, immigrant and non-immigrant groups will undergo the same process of ageing. Overberg (1985) suggests that one of the biggest differences or challenges for those from a CALD backgrounds is their ability to cope with the conditions of ageing within the broader social context of being part of a minority group. Therefore how migration, which is known to change a number of the conditions and circumstance of a person's life and can potentially impact on various dimensions within this model, will also be explored.

### 3.2.1 Personal and behavioural determinants

Health behaviours (such as tobacco or alcohol use, physical activity, dietary patterns and oral health) develop across the life-course and can influence the onset of disease, disability and functional decline and reduce longevity and years of healthy life (Lynch & Smith 2005; WHO 2002). Other personal factors such as biology and genetics, in addition to a person’s psychological ability to problem-solve and adapt to changes, can influence how an individual ages. Furthermore, coping mechanisms and self-efficacy are strong indicators for both active ageing and longevity (Cohen, Janicki-Deverts & Miller 2007; Marmot & Wilkinson 2005; Thoits 2010; WHO 2002).

In the case of the post-WWII migrant, with increased duration of residence in the adopted country, changes in health and health-related behaviour may be influenced by adopting less healthy lifestyles and health-related behaviours, also referred to as health assimilation or acculturation (Antecol & Bedard 2006; Joshi et al. 2014; Kobayashi, Prus & Lin 2008; Lassetter & Callister 2008). It is believed that the gradual and accumulated changes that occur over time are associated with the development of age-specific disease patterns similar to those of the native-born (Kuh et al. 2003; Lassetter & Callister 2008).
Examples of transitions in health and health behaviours include dietary and caloric alteration (i.e. adaptation to a western diet, changes to dietary intake, higher energy dense foods), weight gain, decrease in physical activity, and increased salt consumption, or use of tobacco, alcohol or other substances (Harding 2004; Smith, Kelly & Nazroo 2011; WHO 2010). In addition, this can also potentially be compounded by the loss of initial protective factors such as culturally-based healthier lifestyles, stronger social and family bonds, and support from their country of origin (Malmusi, Borrell & Benach 2010; Viruell-Fuentes 2007). It has been argued that those who are more acculturated tend to be in poorer health because they have acquired more risk factors for chronic diseases, while on the other hand those less acculturated have higher rates of social isolation and adverse health outcomes (Angel, Buckley & Sakamoto 2001; Treas & Batalova 2009). Furthermore, Hull (1979, p.27) hypothesised that the degree of ‘health change parallels cultural change’, and the ‘risk of illness is dependent on the similarity of the destination to home’.

### 3.2.2 Social and economic determinants

Social determinants such as social support, absence of violence and abuse, education and literacy are known to promote health, participation and security as people age (Nutbeam 2008; WHO 2002). Furthermore, age-friendly physical environments can enhance independence and can help older people engage in the community, remain active and reduce social isolation (Paúl, Ribeiro & Teixeira 2012). It is well known that social resources are thought to positively influence health by giving people the emotional support they need (Braveman, Egerter & Williams 2011; Östberg & Lennartsson 2007; Smith & Christakis 2008). It is also believed that membership to social networks characterised by communication and mutual obligation have protective effects on health by making individuals feel cared for, loved, esteemed and valued (Heaney & Israel 2008), with supportive relationships linked to healthier behaviour patterns (Berkman 1995; Seeman et al. 2001; Umberson, Crosnoe & Reczek 2010). Marital status is also considered an important
As a result of migration individuals experience the modification of social structures through, for example, the loss of traditional social supports and networks, changing status within the community and family, and intergenerational changes to family structures mediated by cultural change; these factors can affect how ageing is experienced and can impact on health outcomes (Bhugra 2004; Bhugra & Becker 2005). Social isolation is a risk factor associated with not having social and emotional support and can be associated with premature death, reduced wellbeing, increased chronic conditions and disability (Cornwell 2009; Hawton et al. 2011). Other specific mechanisms related to migration that may result in health inequalities include discrimination, racism and ‘othering’ (being treated as ‘the other’).

Educational attainment is another important social and personal determinant that can contribute to both longevity and QoL in later life through its effects on health, health literacy and SES. Lower levels of educational attainment have been associated with poorer health, more stress, lower self-confidence and poorer health literacy (Braveman, Egerter & Williams 2011; Nutbeam 2008). Proficiency in the dominant language of the adopted country is an indicator of an individual’s ability to engage in society and create social networks beyond their own ethnic community (Van Tubergen & Kalmijn 2005). Communication difficulties have been associated with migrants encountering issues associated with accessing and interpreting health information or not using or accessing health services at the same rate as their native-born counterparts, perhaps due to a lack of awareness (Ng, Pottie & Spitzer 2011; Rao, Warburton & Bartlett 2006).
Other barriers people from CALD backgrounds face include difficulties associated with the appropriate translation of information and reference material, and the ability to deliver culturally appropriate health and aged care services (Orb 2002; Rao, Warburton & Bartlett 2006). Furthermore, those with language difficulties often rely on children or other support networks including interpreting services, to engage as a mediator which can result in a misinterpretation of information due to a lack of comfort in freely expressing issues and concerns in front of family or interpreters (Jefferies 2006; Sawrikar, Katz & Australian Family Relationships Clearinghouse 2008; Tsianikas et al. 2011). It is postulated that while many immigrants have done well in their adopted countries, a number have struggled and spent many years undertaking manual labour or working in low paid jobs due to their poor proficiency of the English language (Schappi 1991; Thomas 2003). It is also documented that immigrants from a NESB are less likely to participate in voluntary work compared to their native-born counterparts and this has been partly attributed to a lack of confidence in speaking the dominant language (Khoo 2011; Quine 1999). Other noteworthy issues include language regression, which can occur with advancing age and the misconception that increased length of residency equates to increased language proficiency (Dolk 1985; Rowland 1991).

Economic determinants considered to be important to active ageing include income, social protection and work (Paúl, Ribeiro & Teixeira 2012; WHO 2002). Economic independence allows persons to be more able to afford independent living, require less support from family and allows for greater control over one’s life (Khoo 2011). Further to this, as documented by the WHO ‘migrant health is closely linked with the unequal distribution of socio-economic determinants including income status, housing, education, nutrition and employment’ (p.55). Evidence suggests that being from a less privileged social class and poorer socio-economic conditions in childhood and across the life-course can account for the poorer health outcomes of individuals
(Kendig et al. 2015; Malmusi, Borrell & Benach 2010; Marmot & Wilkinson 2005; Myers 2009; Smith, Kelly & Nazroo 2011). Rapid declines in health despite improvement in socio-economic conditions can be attributed to the late-effect of cumulative inequality, which points to an accumulation of negative factors occurring over the life-course, exposing individuals to varying degrees of risk for poorer health outcomes in later life (Lanari & Bussini 2011). These factors can be experienced in the place of origin, which can be characterised by poorer socioeconomic environment in childhood and in the place of destination, where chronic exposure to work hazards, poor living conditions, hardship and discrimination have all been recognised as causal factors for racial and ethnic inequalities in health (Malmusi, Borrell & Benach 2010).

Another way to conceptualise this cumulative disadvantage is through the lens of double jeopardy theory, which hypothesises that the negative effects of being aged and a member of an ethnic or racial minority gives rise to a double negative effect (Dowd & Bengtson 1978). Membership to two stigmatised statuses has greater effects than membership to one status alone (Carreon & Noymer 2011). For example, lower attainment in, and access to, various socio-economic factors such as income, education and employment, over the life-course are associated with risk of poverty and illness in later life (Angel, Buckley & Sakamoto 2001; WHO 2012). Furthermore, experiencing early life socio-economic adversity can impact on health behaviours and subsequent health trajectories in adulthood (Ben-Shlomo & Kuh 2002).

Thus, it is theorized that older migrants have increased risk of burden compared to other older individuals because of the social, economic and psychological disadvantage they experience (Dowd & Bengtson 1978). Socio-economic variables have previously been overlooked as valuable explanatory factors contributing to high mortality among some ethnic minority groups, due to controlling data for various socioeconomic variables (Smith et al. 2000). However studies
have shown that disparities in health between ethnic minorities and the native majority have been partly explained by low SES (Kington & Smith 1997; Lindström, Sundquist & Östergren 2001; Nazroo 1998; Read & Gorman 2006; Smith et al. 2000).

While this model offers a way to think about age, ethnicity and socio-economic position, there are some limitations associated with this concept. For example, identifying appropriate methods for controlling for SES can be problematic (Kaufman, Cooper & McGee 1997) as can the broad classification of COB which quite often ignores the heterogeneity and inequalities experienced within ethnic groups (Lorant, Van Oyen & Thomas 2008). There are also issues with explaining patterns across generations and in the presence of adaptation (Phillipson 2015). Despite these issues, there is evidence that links SES to immigrant health inequalities and the double jeopardy hypothesis goes some way to explaining the observed health differentials experienced by some ethnic minorities.

3.3 The health of Australia’s post-war immigrants

This next section describes three constructs, namely the Healthy Migrant Effect, the salmon bias effect and the unhealthy re-migration hypothesis, which are commonly used to describe immigrant health. In addition, a literature review on the health status of Australian and European-born immigrants, as measured by the presence of chronic conditions, mental health, health-related behaviours, self-rated health and socio-economic patterns of wellbeing, is presented. It is noted that in Australia a number of studies have explored the health patterns of Australia’s European-born immigrants. However, year of arrival is often not taken into account making it difficult to explicitly ascertain whether these groups arrived over the post-WWII period. Despite this, the vast majority of these birthplace groups did arrive over the post-WWII period (Khoo 2012) and it is assumed that they reflect the broader post-WWII cohort. In other studies COB has been broadly classified into large aggregated groups, (i.e. overseas-born, non-English speaking
immigrants vs English-speaking immigrants, Other Europe or categorised into Southern, Western, Eastern and Northern Europe) with limited scope to drill down to specific birthplace groups. This is a limitation of many migrant studies and something that needs to be taken into consideration when examining research into immigrant health.

3.3.1 Healthy Migrant Effect (HME), salmon bias effect and unhealthy re-migration hypothesis
The HME describes a health advantage observed in immigrants upon arrival, and for some years following their settlement (Anikeeva et al. 2010; Biddle, Kennedy & McDonald 2007; Jatrapa, Pasupuleti & Richardson 2014; Krupinski 1984; Mathers 1996; Schofield 1995; Singh & De Looper 2002; Strong, Trickett & Bhatia 1998; Young 1987). It is hypothesised that this health advantage is contributed to by a selection bias in the people who choose to migrate (Lassetter & Callister 2008; Smith et al. 2000). For example, immigrants are often healthier and younger than the majority remaining in their homelands and are most likely to be physically and financially able to relocate; and more likely to meet the screening criteria of their adopted country (Kristiansen, Mygind & Krasnik 2007; Lassetter & Callister 2008; McDonald & Kennedy 2004). This selection bias is said to engender healthier migrant stock; who in turn display lower incidence of chronic conditions, mortality and hospitalisation rates despite some groups having a higher prevalence of some risky health behaviours and in some instances, comparatively lower socio-economic characteristics (Anikeeva et al. 2010; Khoo 2011).

However, the nature and the application of the HME is not well understood as there is a propensity for health advantages to become less prevalent with increasing years since migration.

In Australia, health differences between the foreign and native-born groups have been observed in a number of studies (Mathers 1996; Singh & De Looper 2002; Strong, Trickett & Bhatia 1998; Young 1987) where health indicators shift towards, or in some cases fall below, the host national averages (Biddle, Kennedy & McDonald 2007). The Canadian literature also points to a lack of
agreement about the existence of the HME (McDonald & Kennedy 2004). This is also supported by a study undertaken by Dunn and Dyck (2000), who did not find a consistent relationship between immigrant health outcomes and their characteristics. Kliewer (1992) also reported that if the HME was operating, it was not a strong effect as almost all the immigrant groups experienced increases in mortality rates.

Treas and Batalova (2009) point out that the ‘immigrant advantage’ can be inflated by the fact that unhealthy persons are less likely to migrate and those choosing to relocate will be relatively healthier and younger than their native-born counterparts. In contrast to this, Messias and Rubio (2004) suggest that immigrants are not successful in their homelands and migrate out of desperation; with migrant groups not necessarily in good health and facing challenges associated with the migratory process, which can result in deteriorating health. Furthermore, lower migrant mortality could partly be explained by the ‘salmon bias effect’, which sees those becoming ill returning to their place of origin to die or older persons emigrating due to a desire to die in their birthplace (Smith et al. 2000; Treas & Batalova 2009).

The ‘unhealthy remigration hypothesis’ suggests there is a tendency for those who experience health or adaptation challenges to emigrate back to their country of origin, contributing to a perceived immigrant advantage and lower mortality rates (Razum et al. 1998; Uitenbroek & Verhoeff 2002). Harding (2004) goes on to suggest that there is a latency period in the expression of some diseases which are more likely to impact in the later life stages and at the time of reporting, sufficient time had not passed for changes in health to have occurred.

3.3.2 Chronic conditions and risk factors
In Australia, it was observed that those from NES European countries had lower prevalence of disability, chronic diseases and risk factors such as obesity and high blood pressure compared to
the Australian-born population (Anikeeva et al. 2010; Biddle, Kennedy & McDonald 2007). Those from Southern European regions experienced comparatively lower mortality and hospitalisation rates than other foreign and native-born groups (Strong, Trickett & Bhatia 1998; Young 1987). Furthermore, those from NES countries had better health outcomes compared to their overseas-born English-speaking counterparts whose health outcomes were most similar to the Australian-born population (Biddle, Kennedy & McDonald 2007).

The narrowing of positive health outcomes for immigrants was observed in a study undertaken by Biddle, Kennedy and McDonald (2007), which examined health assimilation patterns of Australia’s immigrant population (defined as those born in English-speaking countries including Canada, Ireland, New Zealand, the United Kingdom and the United States of America; and non-English speaking countries including European countries and other overseas-born groups from the Middle East and Asia). Year of arrival was taken into consideration in this study with four arrival cohorts defined, including those arriving prior to 1971, between 1971 to 1980, between 1981 to 1990 and after 1990 (Biddle, Kennedy & McDonald 2007).

In this study it was found that the probability for immigrant groups to report a chronic condition rapidly increased in the first 10 to 20 years following settlement and then plateaued to a level below that of the Australian-born population. While all immigrant groups were found to report a higher incidence of chronic disease, as years since migration increased, the assimilation patterns were not consistent across birthplace groups. For example, NES European-born groups who arrived prior to 1971 maintained a relatively lower incidence of chronic conditions compared to their native and other English-speaking born counterparts (Biddle, Kennedy & McDonald 2007). It should be noted that these data were highly aggregated and refer to all persons born in Europe (excluding United Kingdom and Ireland) from NES countries. As such, the high levels of
heterogeneity that exist within and between groups may have been overlooked resulting in deflated/inflated estimates.

Jatrina, Pasupuleti and Richardson (2014) examined nativity, duration of residence and chronic health trends using data from the Household Income and Labour Dynamics in Australia (HILDA) survey over three different periods. This study examined differences between native-born and foreign-born groups from English-speaking and NES countries (Jatrana, Pasupuleti & Richardson 2014). It was found that irrespective of migrant status, there was an increase in the presence and average number of any chronic condition reported across all three periods. Initially, the overseas-born reported lower rates of chronic conditions; however after 20 years in Australia, the number of chronic conditions converged. While overseas-born groups were highly aggregated (i.e. English-speaking groups versus NES), this study highlights the general trend of declining health with increased length of stay (Jatrina, Pasupuleti & Richardson 2014).

Anikeeva et al. (2010) carried out a literature review which summarised the findings of studies undertaken between 1980 and 2008 relating to the health status of Australia’s overseas-born. The findings from this study highlighted that Australia’s overseas-born, in the early years following their migration, had lower rates of asthma compared to their Australian-born counterparts. In addition, the previously mentioned study undertaken by Biddle, Kennedy and McDonald (2007) showed that immigrant cohorts from NES European countries had lower rates of asthma upon arrival. Furthermore, a study undertaken by Strong, Trickett and Bhatia (1998) using data from 1994 to 1996 showed that those from ‘Other Europe’ (defined in this study as those born in Western and Eastern Europe, the former USSR and the Baltic States) had lower standardised hospital separation rates for asthma compared to those born in Australia.
Biddle, Kennedy and McDonald (2007), showed that there have been clear assimilation patterns for asthma prevalence with increased length of residency. While little is known about the asthma prevalence trends in different migrant groups over time, it is documented that estimates for the overseas-born do shift towards those of the host population over time (Anikeeva et al. 2010; Biddle, Kennedy & McDonald 2007). However, it should be noted that the results presented in the review paper undertaken by Anikeeva et al. (2010) were from three articles of which two focused specifically on migrant children and the other on Asian immigrants. Furthermore, studies undertaken by Biddle, Kennedy and McDonald (2007) and Strong, Trickett and Bhatia (1998) reported on broad COB classifications, which ignore the inherent heterogeneity that exists within and between birthplace groups.

Cardiovascular disease (CVD) is one of the leading causes of morbidity and mortality in Australia (AIHW 2011). In a range of studies undertaken on Australian immigrant populations it has been found that CVD mortality and hospitalisation is generally lower in European-born groups compared to Australian-born (Gibberd et al. 1984; Gray, Harding & Reid 2007; Harriss et al. 2007; Taylor et al. 1999). The overseas-born population, particularly those coming from Greece, Italy and the former Yugoslavia, had lower mortality rates for CVD despite reporting a number of CVD-related risk factors such as high blood pressure and diabetes (Kouris-Blazos 2002). In contrast, a systematic review on literature published between 1986 and 2006 on heart disease in Australian immigrants found that those from Middle Eastern, other European (undefined) and South Asian countries had a higher prevalence of actual CVD morbidity and mortality (Dassanayake et al. 2009). However, more evidence is required in order to draw additional distinct conclusions.
In the same study, CVD-related risk factors, including high blood pressure, plasma lipids, high cholesterol, smoking and alcohol use were investigated. It was found that a number of these risk factors were more prevalent in males and females from the Middle East and Southern European countries (Dassanayake et al. 2009). Greek-born Australians were found to have lower blood pressure when compared to their Australian-born counterparts whereas the Italian-born had the highest prevalence (Dassanayake et al. 2009). In terms of plasma lipids, objectively measured total cholesterol was significantly higher among those born in Western Europe compared to those born in Australia. Italian women, Greek-born, Middle Eastern-born, and those from Southern Europe and Asian countries had significantly lower levels of high-density lipoprotein cholesterol (Dassanayake et al. 2009). Furthermore, the smoking prevalence was higher among Greek, Italian and Western European men compared to those born in Australia (Dassanayake et al. 2009). Alcohol use was found to be higher among Western and Eastern European groups compared to the native-born population (Bennett 1993; Dassanayake et al. 2009).

Studies have shown that Southern European females and Greek-born persons were more likely to be overweight or obese compared to their native-born counterparts (Kouris-Blazos 2002; Kouris-Blazos et al. 1996). Greeks and Italians were found to have higher BMI and abdominal fat distribution, which are known to be risk factors for CVD and diabetes (Kouris-Blazos 2002). In addition, Southern European males and Eastern European females were less likely to be physically active compared with their native-born counterparts (Bennett 1993; Singh & De Looper 2002).

Wahlqvist, Kouris-Blazos and colleagues have examined the dietary patterns and behaviours of Greek-born Australians residing in Melbourne who were involved in the Food Habits in Later Life Project commissioned by the International Union of Nutritional Sciences (Wahlqvist, Kouris-
Blazos & Hsa-Hage 1997; Wahlqvist et al. 1991). Studies following on from those mentioned above have observed that a dissociation exists between disease-specific mortality and risk factors (Kouris-Blazos 2002; Kouris-Blazos & Wahlqvist 1999; Wahlqvist et al. 1991). In other words, there appeared to be a lower mortality from CVD despite the presence of a number of CVD-related risk factors (Wahlqvist et al. 1991). Kouris-Blazos and Wahlqvist (1999) found that Greeks had a 30% lower mortality from CVD compared to Anglo-Celts, despite having a two to three times higher prevalence rate for obesity, diabetes, hyperlipidaemia, inactivity and smoking. Explanations for this paradox have been attributed to the protective mechanisms present in the Mediterranean diet, which could potentially counteract the risks associated with CVD risk factors and mortality (Kouris-Blazos & Wahlqvist 1999). Kouris-Blazos and Wahlqvist (1999) have presented a notion of a ‘benign’ form of obesity; suggesting that different groups experience varying dietary factors and as a result overweight or obesity can have different outcomes and meanings. For example, a traditional Greek diet is rich in antioxidants and protective foods and a typical western diet is high in saturated fat and animal fat.

While various studies relating to CVD have been undertaken many focus on Australia’s Southern European-born populations and pay little attention to other European-born groups (Anikeeva et al. 2010). There is limited information regarding the overall prevalence, morbidity, mortality and risk factors associated with CVD outcomes in various migrant sub-populations (Dassanayake et al. 2009). However, it is also acknowledged that risk factors will vary between ethnic groups and factors that may interplay include birthplace, age, SES, education, culture, and genetic composition, in addition to English proficiency, satisfaction with life and employment (Kliewer & Jones 1997; Rissam, Kishore & Trehan 2001). Due to the implications of CVD, there is a growing need to understand the relationship between migrant characteristics, the associated risk factors and CVD.
The review paper by Anikeeva et al. (2010) also reported on Type 2 diabetes, where it was found that some overseas-born groups have higher rates than their Australian-born counterparts. A study undertaken by Welborn et al. (1995) used data collected as part of the 1989/90 NHS in Australia, to estimate the prevalence of self-reported diabetes. It was found that migrants from Southern Europe had a significantly higher age-standardised self-reported prevalence of type 2 diabetes compared with the Australian-born population. The results from a study undertaken by McKay, McCarty and Taylor (2000) found that those self-reporting diabetes in Victoria were most likely to be older males, those who were overweight and of Mediterranean ethnicity. In addition, the results from a large community survey undertaken on South Australian adults born in a NES country found that those born in Greece or Cyprus, Western and Northern Europe, and Poland reported higher rates of diabetes compared to people born in United Kingdom/Ireland (Taylor et al. 1997).

Hodge et al. (2004) undertook a study examining the diabetes incidence of Greek and Italian migrants using data from the Melbourne Collaborative Cohort Study, which is a prospective cohort of 41,528 people aged between 27 and 75 years including 5425 Italian and 4535 Greek-born individuals. Over a four-year follow-up period, the cumulative incidence of type 2 diabetes for those born in Greece (2.6%) and Italy (2.4%) was three times that found in the Australian-born population (0.7%); where the risk associated with a diabetes outcome was positively associated with Body Mass Index (BMI) and waist hip ratio. The higher incidence of diabetes in the Greek and Italian populations is in line with findings from other cross-sectional studies (McKay, McCarty & Taylor 2000; Welborn et al. 1995).

Strong, Trickett and Bhatia (1998) used the 1995 NHS to obtain prevalence estimates on self-reported diabetes. In this study, it was found that the diabetes prevalence was also higher for
migrants born in Asia, ‘Other Europe’ (defined as those born in Western and Eastern Europe, the former USSR and the Baltic States) and for other overseas-born countries. In the same study, hospitalisation information was obtained from the AIHW and it was determined that these groups had fewer hospital separations for diabetes, raising some concern regarding the management of diabetes in these groups (Strong, Trickett & Bhatia 1998). In terms of the mortality patterns, the standardised mortality ratios for type 2 diabetes was much higher for those born in ‘Other Europe’ compared to those born in Australia, United Kingdom and Ireland (Strong, Trickett & Bhatia 1998). However, there was limited information on type 2 diabetes in minority groups over time (Anikeeva et al. 2010) and the data were often dated and generally drew on mortality or hospitalisation statistics.

Very few studies have assessed migrants in respect to musculoskeletal conditions (Anikeeva et al. 2010). In a South Australian cross-sectional study of non-English speaking migrants aged 18 years and over, the prevalence of osteoporosis was examined and it was found there were no significant differences between migrant groups and those born in the United Kingdom/Ireland, although, arthritis prevalence was found to be higher in people born in Italy, Yugoslavia, Germany and the USSR/Baltic States (Taylor et al. 1997). No significant differences were found between arthritis prevalence those born in the United Kingdom/Ireland and those from a NESB.

3.3.3 Mental health
New South Wales Mortality data, obtained from the ABS Registry of Births, Deaths and Marriages, showed that country of birth differentials were observed in suicide rates (Taylor et al. 1998). Immigrant males from Southern Europe, the Middle East and Asia had the lowest suicide rates and those from Northern and Eastern European countries had the highest rates compared to those born in Australia (Taylor et al. 1998). In the same study, it was also found that those with low SES who were born in Northern Europe were more likely to have a suicide outcome.
compared to those born in the United Kingdom, Northern Europe, New Zealand, Asia and Australia (Taylor et al. 1998). Immigrants were seen to have higher rates of age-adjusted suicide rates when compared to their community of origin (Anikeeva et al. 2010). Evidence also suggested that immigrant males had less risk of suicide outcomes than Australian-born males while female migrants had a significantly higher risk than Australian-born females (Anikeeva et al. 2010). Possible factors contributing to higher migrant suicide rates include poor command of English language, unemployment, limited social resources, and the unavailability of mental health services catering for CALD populations (Anikeeva et al. 2010).

In a study undertaken by Bruxner et al. (1997), admission data from Western Australian public hospitals (including mental health facilities) were obtained from 1990 to 1992 to describe the characteristics of those migrants with a mental illness in hospital settings. It was found that immigrants generally had similar or lower age-adjusted admission rates than those born in Australia. Furthermore, there were significantly lower rates found in those from the United Kingdom, Western European males, Eastern European females and those born in an Asian country. Southern Europeans were seen to have similar admission rates to the Australian-born, where females had higher admission rates of age-standardised functional psychosis (Bruxner et al. 1997).

A study undertaken by Stuart, Klimidis and Minas (1998) examined the rates of mental disorder in immigrants (United Kingdom/Ireland, Greece, Italy, Western Europe, Eastern Europe, Southern Europe, Middle East and South Asia) compared to the Australian-born. This study used data collected from the 1989/90 National Health Survey via the Victorian Transcultural Psychiatry Unit (VTPU) Census. Women were generally more likely to experience a mental disorder across all birthplace groups. For example, Greek and Italian females had a higher rate of taking some
health-related action for a mental health disorder in the two weeks prior to being involved in the NHS, than Australian-born females; this pattern persisted even after controlling for age (Stuart, Klimidis & Minas 1998). Furthermore, the results from the VTPU Census indicated that Greek-born participants had a higher prevalence of a treated mental disorder than those born in the United Kingdom/Ireland and South East Asia.

Kiropoulos, Klimidis and Minas (2004) undertook a study examining anxiety and depressive illness in Greek-born Australians from Melbourne compared to Anglo-Australians using the Beck Depression Inventory-II and the State Trait Anxiety Inventory. The authors claim that despite there being international evidence that Greek-born immigrants experience higher rates of psychiatric morbidity (where this is particularly the case for Greek-born women) (Bilanakis, Madianos & Liakos 1995; Löfvander & Papastavrou 1993; Stuart, Klimidis & Minas 1998), there is still uncertainty regarding the rate of mental disorders within this group. In this study it was found that Greek-born individuals had a higher relative risk of being classified in the upper two categories of measured depressive severity (measured from minimal, mild, moderate and severe) compared to the Anglo-Australians. Furthermore, Greek-born participants also had higher scores of anxiety (where a minimum score of 20 and maximum score of 80 could be achieved); 13% of Greek-born participants scored above 50 compared to 3.5% of the Anglo-Australians (Kiropoulos, Klimidis & Minas 2004).

3.3.4 Socio-economic patterns of wellbeing
A study undertaken by Khoo (2011) examined a range of socio-economic indicators (including English proficiency, education levels, personal income, home ownership and need for assistance with daily activities of living) and found that the post-WWII migrant cohort have discrepancies in these outcomes when compared to their Australian-born counterparts. It was found that a higher proportion of those born in NES countries (such as Greece, Italy, Macedonia) reported being
married compared to those born in Australia, Western and Eastern European countries who were more likely to be divorced or separated. In terms of living arrangements, it was found that Southern European women, aged 80 years and over, were two times more likely to be living with other family members when compared to women born in Australia, Germany and the Netherlands at the same age. Furthermore, older CALD persons born in Western and Eastern European countries were more likely to live alone compared to those born in Asia and Southern Europe (Khoo 2011).

It has been reported that those from Western Europe were more proficient in English and those from the Netherlands and Germany no longer spoke their native tongues at home (Khoo 2011), whereas those coming from Southern and Eastern European countries were less likely to report being able to speak English well, despite living in Australia for a number of years. Rowland (1986) suggests that length of residency does not necessarily equate to proficiency in English and that with increased years since migration, older CALD adults may lose their capability to speak English and tend to revert back to their native languages. Overall, it was found that older CALD adults had a lower proportion of post-school qualifications compared to the Australian-born and other English-speaking migrants (Khoo 2011). Those born in Southern Europe were found to have a very low proportion of post-school qualifications, which is in contrast to those born in Western and Eastern European countries who were relatively well educated. Furthermore, those born in a Northern European country shared similar educational levels and employment opportunities to the Australian-born (Kelley & McAllister 1984; Khoo 2011).

In the same study, economic independence was measured through weekly personal income and home ownership. It was found that older CALD adults from NESB were less likely than their English-speaking and Australia-born counterparts to have a personal weekly income of more than
CALD adults generally had higher rates of home ownership than immigrants from English-speaking countries but on average lower rates than their Australian-born counterparts, while those born in Southern European countries had higher rates of home ownership than those born in Australia (Khoo 2011).

Lastly, an indicator of personal independence is a person’s ability to perform activities of daily living and self-care. CALD adults had a higher proportion of needing assistance with these activities than adults born in Australia; with those coming from Western and Eastern European countries having better physical health by comparison (Khoo 2011). The results from this study suggest that in terms of socio-economic wellbeing, those from NESB are not doing as well as their Australian-born counterparts and those from English-speaking countries. Immigrants from Southern European countries had lower language proficiency, lower personal income and educational attainment but had a higher proportion of home ownership, whereas those from Western and Eastern European countries had social-economic indicators most similar to their Australian-born counterparts.

3.4 Summary
This chapter has presented literature examining the relationship between migration, health and ageing, and identified a number of factors that can affect physical, mental and social functioning, and socio-economic wellbeing over the life-course. Various concepts have been addressed, such as ageing as a biological process and active ageing. Active ageing is an important concept because it takes into account QoL and the life-course transitions and frames ageing in a positive sense, where autonomy and independence are encouraged and increased quality and healthy years of life are a priority. These concepts along with acculturation theory, as discussed in Chapter 2, have informed the theoretical framework of this thesis and offer conceptual models or pathways for declines in immigrant health (further discussed in Chapter 4).
This chapter has also presented a discussion of the health and ageing experiences of Australia’s post-WWII migrants. It is well documented that the post-WWII immigrants experienced initial health advantages upon arrival and for some years following their migration; but evidence suggests that with increased length of residency this health advantage narrows and in some circumstances, declines below the Australian-born averages. However, there is a lack of cross-sectional and longitudinal data, in addition to a tendency to highly aggregate COB or exclude birthplace groups, from investigations when undertaking secondary analyses. This makes it difficult to understand how the health profiles of the different birthplace groups within the post-WWII cohort have changed over time and what the burden of disease is in this cohort. There is also a propensity for studies exploring immigrant health to reference the HME and attribute initial health advantages to the selection criteria and selection bias that existed at the time of the post-WWII migration. While this is not altogether an unhelpful construct, there is little evidence supporting the HME in this capacity and in some ways produces a ‘false negative’ or a false sense of understanding of how immigrants are actually faring in relation to their health.

This study is concerned with broadly describing the health status of Australia’s post-war immigrants and focuses on three overseas-born birthplace groups, those born in Germany, Italy and Greece, who still make up the largest proportion of older Australians born overseas. This thesis further narrows its focus on Greek-born Australians as they are an example of a post-WWII immigrant group who experienced most, if not all, of the social and health aspects discussed in this chapter. It is observed that those born in Greece were among immigrants reporting a health advantage upon arrival and for some years following their migration (Mathers 1996; Singh & De Looper 2002; Strong, Trickett & Bhatia 1998; Young 1987). However, it appears that Greek-born Australians have had shifts in their health/disease profiles reflecting deterioration in health (Anikeeva et al. 2010; Kouris-Blazos 2002). As such, Greek-born post-WWII migrants are a
focus in the analytical aspects of this thesis and are investigated in relation to a number of domains known to influence their health and ageing experiences.
CHAPTER 4: STUDY FRAMEWORK, RESEARCH DESIGN AND METHODS

4.1 Introduction

This chapter sets out the theoretical orientation and methodological aspects of the work undertaken. Section 4.2 presents a description of the framework on which this thesis is based. Section 4.3 details the research aims, objective and hypotheses and Section 4.4 describes the research rationale. The methods and results of each study are detailed in Chapters 5 through 8.

4.2 Framework determinants

The framework, detailed in Figure 4.1, conceptualises migrant health and forms the basis for the analytical investigation undertaken. This framework has been influenced by the work of Berry (1992) who describes how the migratory and settlement process can give rise to a range of changes in an immigrant’s life at the individual and group level where a range of exposures (positive or negative) can influence an individual’s physical, social and emotional health over time.

At the centre of this model is ‘immigrant health’, which in this context refers to the health of Australia’s post-WWII migrants. Health has been defined by the WHO ‘as a state of complete physical, mental and social well-being; and not solely as the absence of disease or infirmity’ (WHO 2006). Health is measured against self-reported health status, the presence of chronic conditions and participation in risky health behaviours. Self-rated health generally reflects an individual’s perception of his or her physical and emotional state, providing a global indicator of well-being. This measure is robust in predicting mortality, disability, expectations for health services and psychological well-being (Angel, Buckley & Sakamoto 2001).
Chronic conditions are considered to be long-term or permanent illnesses that affect a ‘person’s ordinary physical, psychological, or social functioning’ (Sidell 1997). In the Australian context, it is estimated that approximately 85% of the total burden of disease is related to chronic conditions (AIHW 2014). Chronic conditions are costly, largely avoidable and among the most common of all health problems (NHPAC 2006). They can lead to, and are associated with, the development and progression of other illnesses and conditions, and are the most common cause of premature death (NHPAC 2006). Various chronic conditions (i.e. arthritis and musculoskeletal conditions, asthma, cardiovascular disease, diabetes mellitus, mental health and obesity) were examined as part of this research agenda.

Social, psychological and environmental determinants of human behaviour also affect the development and outcome of chronic disease. These determinants are commonly referred to as ‘risk factors’ and can include smoking, risky alcohol consumption, poor nutrition, physical inactivity, high BMI, high blood pressure and high cholesterol among other demographic, socio-demographic, socioeconomic and socio-cultural factors (Sidell 1997; Singh & De Looper 2002).

In Figure 4.1, the lines emerging from the immigrant health box represent health trajectories. The dotted line along the health trajectory represents pre-migratory health, which in this context is not measureable due to data limitations. However, this is an important part of the model because health is influenced by homeland and early life experiences, which continue to impact over the life-course. The dotted line intersecting the health trajectory figuratively represents the point of migration (different for each individual) and reflects post-migratory health experiences. The health trajectory intersects various outcome variables including health status, chronic conditions and risk factors and depending upon life-course exposures and opportunities, the line diverges into three separate lines indicating that one of three probabilistic outcomes (as indicated by the
dotted line) can occur, namely health improves, stays the same or deteriorates. Figuratively speaking, paralleling these outcomes are the health trajectories of the Australian-born population, who are considered a benchmark (or reference population) for health outcomes in this study.

Surrounding immigrant health are a range of determinants which can either positively or negatively impact upon health and in turn contribute to one of the three outcomes as described above. These determinants are broken into pre-migratory factors and post-migratory factors. Pre-migratory factors include influences from the society of origin as well as individual factors. These individual factors are seen to influence the health trajectory both pre-migratory and post-migratory. Post-migratory factors include the society of settlement and individual factors, which impact upon the health trajectory after the point of migration.

The circle surrounding the health outcomes represents the focus of this thesis and addresses the following research question: ‘Australia’s post-WWII immigrants displayed superior health upon arrival and for some years following their settlement (relative to their native-born counterparts). Has this health advantage been maintained into late adulthood?’ In order to address this research question, a mixed methods approach was utilised, where four studies were undertaken; each of which are detailed in Chapters 5 through 8 below.
Figure 4.1: Study framework investigating the health status of Australia’s post-war migrants

Pre-migratory Factors – INDIVIDUAL
- Age
- Gender
- Genetics (individual make up)
- Prenatal environment
- Education
- Religion
- Health
- Language status,
  migration motivation (Push/Pull), expectations and cultural

Health Outcomes
- Self-rated health
- Tobacco use
- Alcohol consumption
- Smoking status
- Physical Activity

Biomedical
- Body weight (BMI)
- Blood pressure
- Blood cholesterol

Chronic Conditions
- Asthma
- Arthritis & Musculoskeletal
- CVD
- COPD
- Diabetes

Health stays the same
Suggesting health will mimic national averaged and immigrants will be indistinguishable to native-born population in terms of health outcomes.

Health improves:
Suggests relatively better health outcomes as indicated by lower prevalence of chronic conditions and risk factors. Individuals may engage in risky health behaviours but this is not reflected in the chronic disease outcomes.

Health deteriorates:
Suggests relatively poorer health outcomes relative to their native-born counterparts as indicated by higher prevalence of chronic conditions and risk factors.

Society of Origin - GROUP
Pre-migratory Factors
- Political
- Economic
- Demographic

Society of Settlement – GROUP
Post-migratory Factors
- Social support
- Nature of welfare
- Immigrant & settlement policies
- Settlement services
- Ethno-specific services
- General attitudes towards migration and new arrivals

Post-migratory Factors – INDIVIDUAL
- Gender
- Culture
- Individual, physical and psychological make-up
- Age

Socio-economic characteristics
- Education
- Income and wealth
- Social status and social roles
- Employment & working conditions
- Location (remoteness)
- Family and neighbourhood, housing

- Acculturation strategies & outcomes, behaviours and attitudes
- Culture, cultural identity & cultural identification
- Self-Esteem, Stress & Coping Mechanisms
- Cultural similarity to host environment

Immigrant Health

+ / -

Pre migration
Post migration

Health trajectory

Pre/Post-migratory Factors

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4.3 Research question, aims and objectives

4.3.1 Research question
It should be noted that in the development of the research question, three key observations were made from the review of the literature, which have shaped this research agenda:

1. Migrants upon arrival (regardless of their ‘homeland experiences’ with war, displacement, famine or poverty) were, at the time of their arrival to Australia in good if not better health than their Australian-born counterparts due to Australia’s strict selection criteria.

2. Despite any initial health advantages, these migrant groups were, and still are, vulnerable to the same infirmities and disabilities as their Australian-born counterparts.

3. Migrant groups are heterogeneous and as such will have varied health and ageing experiences.

These observations highlight inconsistencies in the literature because selection and health screening criteria at the time of migration were thought to produce health advantages and comparatively healthier migrant ‘stock’ compared to the Australian-born population, suggesting in some ways that immigrants were afforded some sort of protection from the development of disease, disability or death. The literature on the post-WWII migrants present some gaps in terms of understanding the health disparities that exist within and between groups compared to their native-born counterparts, what their health needs are and what demands these groups will place on the health system into the future. This therefore, sets the pretext for the research question:

- Australia’s post-WWII immigrants displayed superior health upon arrival and for some years following their settlement (relative to their native-born counterparts). Has this health advantage been maintained into late adulthood?
4.3.2 Study aims and objectives

The research question will be addressed by exploring the following aims:

- To determine if there has been a change in previously identified trends for chronic conditions and health-related risk factors in broadly defined European-born immigrants to Australia compared to their native-born counterparts.
- To determine if there are differences in the prevalence of chronic conditions and health-related risk factors for common European-born birthplace groups compared to their Australian-born counterparts.
- To investigate whether immigrant status is a risk factor for poorer health outcomes for common European-born birthplace groups compared to their Australian-born counterparts.
- To investigate whether the HME discussed in the literature is reflected in changes to the prevalence of chronic conditions and risk factors for common European-born immigrant groups compared to their Australian-born counterparts.

The aims of this research will be achieved through four major research objectives:

- **Objective 1:** Describe and compare the demographic, health and health-related outcomes of broadly defined European-born groups to their Australian-born counterparts at specific points in time.
- **Objective 2:** Describe and compare the demographic, health and health-related outcomes of Australian-born and German, Italian and Greek-born immigrants aged 65 years and over. To identify differences in health outcomes of selected birthplace groups and investigate whether migrant status is a risk factor for negative health outcomes in later life.
- **Objective 3:** To describe and compare the demographic, health and health-related characteristics of Australian, German, Italian and Greek-born individuals aged 50 to 69 in 1996/97 and aged 60 to 79 in 2007-2012. To investigate whether the selected birthplace
groups had poorer health and health-related outcomes, if these groups were more likely to develop chronic conditions over time compared to their Australian-born counterparts and to determine the magnitude of change in disease outcomes relative to the Australian-born.

- **Objective 4:** To explore and provide a deeper understanding of health experiences and health-related outcomes of ageing Greek-born South Australians through examining QoL indicators and psycho-socio characteristics.

### 4.4 Overall Approach

The aims and objectives of this research will be explored using a mixed methods approach and through undertaking four studies (see Figure 4.2 for a summary of the analytical plan). The strength of mixed method research is that it allows two paradigms to be combined to provide a platform for greater understanding of the research topic at hand (Johnson & Christensen 2014).

#### 4.4.1 Quantitative component

The quantitative component aimed to present an epidemiological assessment of immigrant health through a series of secondary analyses. Through these analyses, conclusions can be drawn regarding whether migrant status is a risk factor for poorer health outcomes in late adulthood and further understanding can be generated regarding the burden and magnitude of disease outcomes, over time, in specific birthplace groups. The quantitative component of this research was made up of three studies, which included a series of secondary analyses of national and South Australian data sources to produce an epidemiological assessment of immigrant health and health-related risk factors.

- **Study One** was a descriptive study and addressed Objective 1. This study used data collected through the NHS in 1989/90, 2001 and 2007/08 to describe and compare, at the national level, selected chronic conditions and risk factors for European and Australian-born
groups at three time points. This study explored differences in patterns of chronic conditions and health-related risk factors for these groups at three points in time.

- **Study Two** addressed Objective 2 by utilising the South Australian Monitoring and Surveillance System (SAMSS) data collected in 2004-2012 to describe and compare, at the state level, the demographic, health and health-related outcomes of Australian, German, Italian and Greek-born South Australians aged 65 years and over. This study aimed to investigate determinants of immigrant health and explore whether migrant status is a risk factor for poorer health outcomes in late adulthood for those born in Germany, Italy and Greece compared to their Australian-born counterparts.

- **Study Three** addressed Objective 3 and utilised pooled data collected from the 1996/97 Migrant Health Survey (MHS) and data collected through SAMSS in 2007-2012 to explore changes in the health status of German, Italian and Greek-born South Australians compared to their Australian-born counterparts at two points in time and at two different age groups. This study aimed to determine if there were differences in the prevalence of chronic conditions and health-related risk factors in selected birthplace groups over time, as well as investigating whether the HME as discussed in the literature is reflected in changes to the prevalence of chronic conditions and risk factors.

4.4.2 Qualitative component
The qualitative component involved a semi-structured face-to-face data collection of Greek-born South Australians aged 60 years and over. This study built on the findings from Study Two and Study Three by utilising Greek-born South Australians as a case study to provide a broader understanding of this cohort's health experiences.
• **Study Four** aimed to explore QoL indicators with psycho-socio characteristics to provide a deeper understanding of health experiences and health-related outcomes of an ageing Greek-born South Australian cohort. This data collection allowed participants the scope to express their perspectives and experiences on a number of health and health-related topic areas across various domains. Domains under investigation included demographics characteristics, overall health status, health and lifestyle, health service use and availability, activities of daily living and formal/informal support, QoL, social capital, and mental health. A number of resulting themes were generated from responses to open-ended questions and from general conversation that occurred during the interview process.
Research Question: Has an immigrant health advantage been maintained?

- Major COB Classification: European & Australian-born

**Outcome Variables**
- Demographics: Sex, Age, Marital Status, Education
- Risk Factors: Self-Rated Health, Blood Pressure, Smoking Status, BMI
- Chronic Cond.: Asthma, Arthritis, Diabetes

**Study Two: State Level Secondary Analysis (2004 – 2012, SAMSS)**
- Birthplace groups: Australian, German, Italian & Greek-born South Australians

**Outcome Variables**
- Demographics: Sex, Age, Area Residence, Education, Income, Marital Status
- Risk Factors: Self-Rated Health, Blood Pressure, Cholesterol, Physical Activity, Smoking Status, Alcohol Risk, Fruit/Veg Consumption, BMI
- Chronic Cond.: Asthma, Arthritis, Osteoporosis, CVD, COPD, Diabetes, Mental Health, Psych. Distress, Suicidal Ideation

**Study Three: State Level Analysis (1996/97 & 2007/12, MHS & SAMSS)**
- Birthplace groups: Australian, German, Italian & Greek-born South Australians

**Outcome Variables**
- Demographics: Sex, Age, Income, Marital Status
- Risk Factors: Self-Rated Health, Smoking Status, BMI
- Chronic Cond.: Asthma, Arthritis, Osteoporosis, CVD, Diabetes

**Study Four: State Level Primary Data Collection (2013/14)**
- Birthplace groups: Greek-born South Australians

**Domains**
- Demographics
- Overall Health Status
- Health Service Use & Availability
- Health & Lifestyle
- Activities of Daily Living
- World Health Organisation – Quality of Life Scale
- Religiosity
- Social Capital
- Mental Health (Kessler 6)
- Experiences
CHAPTER 5: STUDY ONE – HEALTH STATUS OF EUROPEAN-BORN AUSTRALIANS OVER-TIME

5.1 Study aims

This study aimed to determine if there had been changes in previously identified trends for chronic conditions and health-related risk factors in broadly defined European-born immigrants to Australia compared to their native-born counterparts. In order to address this aim, differences in the health status (as measured by selected chronic conditions and risk factors) of these groups were explored at three points in time (Objective 1).

5.2 Methods

The NHS is a series of health surveys that collect information on the health of Australians, their health service use and facilities, and health-related aspects of their lifestyle (ABS 2001b). The NHS aims to ‘obtain national benchmark information on a range of health-related issues and to enable the monitoring of trends in health over time’ (ABS 2009, p.5). There have been six health surveys undertaken as part of the NHS series in 1989/90, 1995, 2001, 2004/05, 2007/08 and 2011/12 (ABS 2009). An additional two other health surveys, while not part of the NHS series, were undertaken in 1977-1979 and 1983.

Data from the 2007/08, 2001 and 1989/90 NHS were used for analysis because these surveys were considered the most comparable over time and offered an 18-year period of examination. Furthermore, two of the time points (1989/90 and 2007/08) corresponded with the time points selected in Study Two and Study Three offering the opportunity for broad comparison. It is important to note that while surveys have collected similar information and used similar methodologies making a number of data items directly and/or broadly comparable, there are a number of limitations which make data comparisons over time problematic. For example, over
the years questions may have been asked differently, the definition and coding of some chronic conditions may have changed, and slight changes to the sampling strategy and survey design may have occurred (refer to Section 5.2.6 for more information on data item and survey comparability over time).

5.2.1 Sample and sampling procedure
A sample of Australian private\(^1\) dwellings from each state and territory across urban and rural areas of Australia were selected for participation in the NHS (ABS 2009). Persons identified by any responsible adult from the selected household as usual residents were eligible to participate. Those outside the scope of the NHS included persons residing in non-private\(^2\) dwellings (ABS 2009), excluding the 1989/90 NHS where hotels, motels, hostels, boarding houses and caravan parks were considered in scope (ABS 1989). Other exclusions included households with diplomatic personnel of overseas governments, households in very remote areas (except in such state or territories where a large number of households were located in very remote areas) and person(s) not considered part of the Australian resident population, despite living in Australia at the time of the survey. If the usual resident was away from the selected household for a two-month period, they were also excluded. Visitors to a dwelling were generally excluded except when they had not been at their own dwelling for any part of the previous months or would not be at their dwelling during any part of the interview month (ABS 2009).

Each NHS utilised a stratified multi-staged area sample of private dwellings (ABS 2009). This type of sampling allowed for the representation of all segments of the population within private dwellings inside the geographical scope. Broadly, the area sample was chosen by dividing each

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\(^1\)Private dwellings include houses, flats, caravans, garages, home units, tents and any other structure used as a private place of residence at the time of the survey. (Australian Bureau of Statistics (ABS) 2009).

\(^2\)Non-Private dwellings include hotels, motels, hostels, boarding houses and caravan parks, hospitals, nursing homes, convalescent homes, prisons, reformatories, boarding schools and single quarters of military establishments. (Australian Bureau of Statistics (ABS) 2009)
State and Territory into geographical areas called Strata; the division of Strata were based upon the Statistical Division or Subdivision levels of the Australian Standard Geographical Classification. Stratum were made up of Census Collection Districts (CDs), where each strata contained approximately 250 dwellings (ABS 2009). A sample of CDs was systematically chosen from each stratum and divided into blocks of similar size where one block per CD was subsequently selected (blocks are not contiguous) (ABS 2009). In low density population areas stratum were divided into units corresponding to towns or Statistical Local Areas and one or two units were selected per stratum (ABS 2009). Eligible households were randomly selected from each of the blocks or units and a random sub-sample of participants were selected from within each household for participation in the survey (additional information regarding sub-samples is provided below) (ABS 2009).

The sampling frame for the 1989/90 NHS also included some non-private dwellings for which there was a slightly different selection method. In the first instance, non-private dwellings were selected from each stratum, a list of units (rooms and beds etc) for each of the non-private dwellings was prepared and a systematic random sample of units were then selected (ABS 1989). Prior to visiting the dwellings, a random sub-sample of households were generated, on a block basis, to unbiasedly identify the households that would be asked the additional sections (discussed below in Section 5.2.4).

Households from each state and territory had a known and equal probability of selection that was equal to the State or Territory sample fraction³; due to the sampling design, each household only has one chance of being selected and interviewed (ABS 2009). For each survey, an initial sample was drawn which was considered sufficient to provide an adequate level of information

³ A sampling fraction represents the number or expected number of fully responding households. (Australian Bureau of Statistics (ABS) 2009)
based on various levels of disaggregation; however sample adjustments were required at times to accommodate for sample loss due to vacant dwellings, non-contacts and persons out of scope/coverage (ABS 1989; ABS 2001b; ABS 2009). See Table 5.1 for more information on the sample generated and the number of completed interviews achieved for each survey.

Table 5.1: Summary of sample selection and interviews completed

<table>
<thead>
<tr>
<th>Data Collection Period</th>
<th>2007/08 NHS</th>
<th>2001 NHS</th>
<th>1989/90 NHS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample after sample loss</td>
<td>19,979</td>
<td>21,891</td>
<td>26,470</td>
</tr>
<tr>
<td>Sample loss*</td>
<td>2,553 (12.8%)</td>
<td>2,483 (11.3%)</td>
<td>4,268 (16.1%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Interviews Completed</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
<td>4,032</td>
<td>5,998</td>
</tr>
<tr>
<td>Victoria</td>
<td>3,425</td>
<td>5,536</td>
</tr>
<tr>
<td>Queensland</td>
<td>3,134</td>
<td>4,733</td>
</tr>
<tr>
<td>South Australia</td>
<td>3,171</td>
<td>3,016</td>
</tr>
<tr>
<td>Western Australia</td>
<td>2,448</td>
<td>3,295</td>
</tr>
<tr>
<td>Tasmania</td>
<td>1,986</td>
<td>1,730</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>137</td>
<td>426</td>
</tr>
<tr>
<td>Australian Capital Territory</td>
<td>2,455</td>
<td>2,129</td>
</tr>
<tr>
<td>Total no. of interviews</td>
<td>20,788</td>
<td>26,863</td>
</tr>
<tr>
<td>completed</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Sample loss includes vacant dwellings, out of scope dwellings and households, - Information not available.

5.2.2 Informed consent and call backs

Initial contact with households was made via an information letter and brochure detailing the scope, aims, objectives and purpose of the survey. Participation was voluntary, and willing cooperation was sought of research participants. ‘Call-backs’ were made either personally or by telephone to re-schedule interviews that could not be obtained previously. Recruitment efforts were made to obtain interviews from selected households who were non-contactable or from those who initially refused. Such efforts included a follow-up letter and the office supervisor visiting the household. Following these efforts, no further contact was made to that selected household and there were no replacement for non-respondents or refusals (ABS 2009).
5.2.3 Pilot testing
At the time of each survey, there was a consultation process that involved a broad range of organisations with the aim of determining, assessing and clarifying data requirements. For more information, see the relevant NHS User Guides (ABS 1989; ABS 2001b; ABS 2009). In addition, a working party comprising Commonwealth and State health authorities was formed to determine the priorities and capacity of each survey. Survey questions, associated procedures and classifications were tested to ensure validity of survey instruments. A number of pilot and field tests were conducted across the states and/or territories prior to the implementation of the main survey.

5.2.4 Data collection
Personal interviews were undertaken with eligible members of a selected household by ABS trained interviewers. In 2007/08, information was captured via personal Computer Assisted Interviewing (CAI), a tool used at the point of interview for the electronic storage of questionnaires (ABS 2009). The other surveys (2001 and 1989) did not use the CAI instrument, instead manually collecting information. During the interview process there were different approaches used to collect information from participants: for example through structured questions with a pre-determined response category; responses which required subsequent classification by the interviewer following the interview; and running prompts that had pre-determined response categories that participants were required to indicate agreement to one or more of the responses or prompt cards which were used to clarify a question or assist in an appropriate response (ABS 1989; ABS 2001b; ABS 2009).

Upon contact a responsible adult was chosen to provide ABS staff with household information, also referred to as a household form, including basic demographics and household relationship information and if applicable, who would be best placed to undertake an interview on behalf of a child. Each NHS undertook face-to-face interviews with persons aged 18 years and over.
Permission was sought from parents or guardians to undertake interviews directly with those aged 15 to 17. An interview by proxy was completed with a parent or guardian for those under 15 years and in cases where the selected member could not complete the interview for reasons related to old age, issues with the dominant language, illness and/or disability (ABS 2009). If language was an issue, a member of the household could assist in the interview process, if nominated by the selected respondent, otherwise where possible an ABS interviewer proficient in the respondent's own language or an interpreter could be sourced (ABS 1989; ABS 2001b; ABS 2009).

As discussed above, a random sub-sample of persons within a selected household who were eligible to participate in each of the NHS surveys was selected. The participants who could be selected in each of the surveys was as follows. In 1989/90, all persons within the selected household were enumerated (ABS 1989). In 2001, one adult and one child (aged 7 to 17 years) were selected for participation based upon the person who had their birthday closest to the interview date and all children aged 0 to 6 years were enumerated (ABS 2001b). In 2007/08, based on the information collected through the household form, one adult (18 years and over) and where possible one child (0 to 17 years) were randomly selected to be involved in the survey (ABS 2009).

The survey material produced for each of the surveys is discussed below. In 2007/08 a household form, a personal adult questionnaire and a personal proxy questionnaire was developed. The personal interviews collected information on various domains including demographic, socio-economic, health characteristics (including physical measurements not taken in any of the other surveys), long-term medical conditions, lifestyle behaviours and health action. Those aged 15 years and under were not asked questions on lifestyle or socio-economic
characteristics, no questions relating to psychological distress were asked of participants under the age of 18 and physical measurements were only taken from persons over the age of five. It is noted that NHS did not request medical records from participants and no medical tests were performed (ABS 2009).

In 2001 a household form, a personal adult questionnaire, a personal child questionnaire and women’s health supplementary form were developed. Personal interviews sought to collect information on long-term medical conditions, recent injuries, consultation with health professionals, lifestyle behaviours and health actions taken (ABS 2001b). Demographic and socio-economic information were also obtained during the interview process. The supplementary form related to women-specific issues and those eligible to complete this form were females aged 18 years and over who had completed the personal interview. This questionnaire was self-completed and returned to the interviewer prior to the completion of the interview process (ABS 2001b). The interview process comprised administration of all interviews, including additional forms, with all eligible persons within a selected dwelling.

In 1989/90, the NHS survey included a household form, a personal interview questionnaire and a supplementary women’s health form. A separate children’s questionnaire was not produced in 1989/90 and participants were sequenced around the main personal interview questionnaire. The personal interview obtained information about recent and long-term conditions, health actions taken, lifestyle behaviours, demographic characteristics and socio-economic variables. In terms of the supplementary form, women between the age of 18 and 64 were invited to self-complete this at their discretion and return it to the interviewer upon completion of the interview process (ABS 1989).
Interview appointments were arranged for Monday through Saturday at a time most convenient to the respondent; if specifically requested, Sunday interviews could also be accommodated. Respondents could choose to have another member of the household present during the interview process if preferred.

5.2.5 Validation
All surveys underwent a validation process, which checked for data processing errors and investigated suspicious outliers. There were also vigorous training programs for interviews, pilot testing of survey material and highly descriptive procedures prior to commencement of the main interview.

5.2.6 NHS data items
NHS participants were asked a range of questions in relation to their health and wellbeing across the three data collection periods (1989, 2001 and 2007/08). As described above a number of changes have occurred between surveys including conceptual and methodological changes and the content of the survey may differ from year to year; in addition to question ordering, how questions were asked and respondent knowledge and attitudes regarding the topic at hand. These factors can affect the reliability of data items over time. Thus the data items selected for analysis in Study One were those demographic, health and health-related variables considered by the ABS as ‘acceptable’ or ‘acceptable with some limitations’ for comparison over time (ABS 2003). A data item deemed ‘acceptable’ indicated that no significant changes had occurred between the surveys. Furthermore, a data item considered ‘acceptable with limitations’ indicated changes had occurred to the questionnaire, however the impact was difficult to quantify and these data should be used with caution. A discussion of the data items and comparability is provided in the section below. Refer to Appendix A for explanatory notes on data items across the three data collection points.
Demographic and socio-demographic
Across the three time points, NHS participants were asked for information regarding their age in single years (analysis was limited to 45 to 64 years in 1989/90, 55 to 74 years in 2001 and 60 to 79 years in 2007/08), sex (male; female) and their registered marital status (responses recorded as married; separated/divorced; widowed; never married). The definition of registered marital status does not account for de facto relationships and only refers to those marriages and divorces formally registered (ABS 2008). Participants were, however, asked in 1989/90 and 2007/08 if they were involved in a de facto relationship; the ABS excluded this information from the data file available for analysis with the exception of 1989 NHS where ‘de facto’ was included as part of the ‘married’ response category. As such, this data item is broadly comparable across the three time points. Participants were asked to report their highest level of post-school education qualification (responses were subsequently coded into no post school qualification; trade/certificate/diploma; bachelor degree or higher). COB information was also recorded for all participants and dichotomised for the purposes of this investigation into Australia; Europe (excluding the United Kingdom). The COB variable reflected the classification structure of the time and as such there was no scope for further disaggregation; refer to Appendix A and Appendix B for more information.

Self-rated health, risk factors and long-term chronic conditions
Participants were asked to rate their overall health in each of the surveys. In 2001 and 2007/08, participants were asked to rate their health on a five point scale including ‘excellent’, ‘very good’, ‘good’, ‘fair’ or ‘poor’. In 1989, the ‘very good’ response category was omitted. Therefore, the 1989/90 self-rated health data item is considered broadly comparable to the self-rated health data item available in the 2001 and 2007/08 NHS. For the purpose of this analysis, self-rated health was dichotomised into ‘excellent, very good, good’ vs ‘fair, poor’. In 1989/90 and 2001, self-reported height and weight were obtained at the time of the interview; voluntary physical
measurements were taken in 2007/08. In all cases, BMI was derived using Quetelet’s body mass index, which is calculated as weight in kilograms divided by height (m²) (ABS 2009). BMI scores were grouped into categories upon the NHMRC guidelines; in 2001 and 2007/08, the BMI classification also accorded with the WHO Standards. Refer to Appendix A for additional information regarding classification of BMI. In order to make the BMI data item comparable across the three data collection periods BMI was dichotomised, based upon the WHO Standard Classification, into ‘underweight/normal (<18.5 to <25)’; ‘overweight/obese (25 to >30)’ (Tan 2004).

Information on smoking status was collected from participants across the three data collection periods. In 1989/90 and in 2007/08, participants were asked whether they were a current smoker, ex-smoker or a non-smoker. However, question wording changed in 2001: participants were asked whether they were a current daily smoker, current other smoker, ex-regular smoker or whether they had never smoked regularly. Therefore in order to make this data item comparable across the three time points, smoking status was categorised into non-smoker (including ex-smoker and never smoked/never smoked regularly) and current smoker (including daily and other current smoker). In 1989/90, participants were asked whether they had high blood pressure or hypertension, however information was not collected regarding whether this was a diagnosis from a doctor or nurse. In 2001 and 2007/08, participants were asked whether a doctor or nurse had told them if they had high blood pressure or hypertension. This variable is comparable with some limitations.

In 2001 and 2007/08, information regarding chronic conditions was obtained from participants through a self-reported clinical diagnosis, whereas in 1989/90 data were self-reported but not necessarily medically diagnosed. Participants were asked questions to determine if the reported
condition was a current and/or long-term condition. In 2001 and 2007/08, a current long-term condition was classified based upon the 10th Revision of the International Classification of Diseases. In 1989/90, long-term conditions were classified based upon the 9th Revision of the International Classification of Diseases (ABS 1989). Long-term conditions were defined by the ABS (2009) as:

... medical conditions (illnesses, injuries or disabilities) which were current at the time of the survey and which had lasted at least six months, or which the respondent expected to last for six months or more, including: long-term conditions from which only infrequent attacks may occur; long-term conditions which may be under control, for example, through the continuing use of medication; conditions which, although present, may not be generally considered 'illness'; because they are not necessarily debilitating, e.g. reduced sight; and long-term or permanent impairments or disabilities (p.22).

The chronic conditions considered comparable across the three time points and selected for analysis in Study One were arthritis, asthma and diabetes. Other chronic conditions such as CVD, osteoporosis and mental health were not included in this study because reliable time-series analysis could not be undertaken. In 1989/90, 2001 and 2007/08, participants were asked if they had asthma (and/or hay fever in 1989/90). An asthma outcome reported in 1989/90 may be self-diagnosed as participants were not asked specifically whether a doctor or nurse had provided them with this information. In 2001 and 2007/08, an asthma outcome was based on self-reported clinical diagnosis. Participants reporting 'current asthma' were included in this analysis. Asthma was considered as acceptable with limitations over the three time points.

In 1989/90, NHS participants were asked whether they had arthritis, however, information was not collected regarding whether this was a diagnosis from a doctor or nurse. In addition, due to question wording, the arthritis data item in 1989/90 could not be separated into type of arthritis. In 2001 and 2007/08, participants were asked whether they had osteoarthritis, rheumatoid
arthritis, rheumatism or gout and as such, responses may have been self- or clinically-diagnosed.

In order to make the 2001 and 2007/08 arthritis data item comparable to 1989/90, all types of arthritis were combined (i.e. rheumatism, osteoarthritis, rheumatoid arthritis excluding gout). This variable was considered as comparable with some limitations.

In terms of diabetes, in 1989/90 it was not possible to separate out the type of diabetes as participants were asked to select whether they had ‘diabetes or high blood sugar’ from a prompt card which included 41 other conditions. In 2001 and 2007/08, a question established whether the participant had been told by a doctor or a nurse if they had diabetes or high sugar levels in their blood and urine; subsequent question(s) established the type of diabetes. To make the 2001 and 2007/08 diabetes data item comparable to the 1989/90 variable, the different types of diabetes were combined (excluding gestational diabetes), making this variable comparable with limitations across the three data collection periods.

The limited number of variables utilised in this investigation are a result of issues with the comparability of data items across the three points in time. It was also not possible to make comparisons between the survey years (only within years) due to other limitations associated with restrictions imposed by the ABS for merging data files from different survey years into one file. It was initially expected that comparisons would be made between 1989/90, 1995, 2001 and 2007/08; however this was not possible because replicate weights could not be created in the 1995 data file due to the ABS not providing appropriate sampling units (replicate weights discussed below in Section 5.2.9). Further to this, the ABS advised against time series analysis due to the small numbers associated with the population groups of interest. As a result of these limitations, initial plans to examine trends over time were not possible and instead a descriptive study was undertaken.
5.2.7 NHS response and participation rates
The response and participation rates for the NHS collected in 1989/90, 2001 and 2007/08 are provided below (Table 5.2).

<table>
<thead>
<tr>
<th>Year</th>
<th>Response Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989/90</td>
<td>96.1</td>
</tr>
<tr>
<td>2001</td>
<td>92.0</td>
</tr>
<tr>
<td>2007/08</td>
<td>91.0</td>
</tr>
</tbody>
</table>

Table 5.2: Summary of 1989/90, 2001 and 2007/08 NHS response and participation rates

5.2.8 Bias
There was potential non-response bias in the NHS. This essentially occurs as a result of non-respondents, including refusals and those who are non-contactable, having different characteristics to those responding, potentially giving rise to responses not representative of the larger population. To overcome this issue, NHS data were weighted to compensate for the under- or over-representation of demographic groups in the sample (ABS 2009). In addition, an estimation procedure for incomplete interviews is described in each of the respective NHS User Guides (ABS 1989; ABS 2001b; ABS 2009).

5.2.9 Weighting
All data were weighted to take into the complex and multi-staged sampling frame used by the ABS to create a stratified sample of eligible households, while, the 1989/90, 2001 and 2007/08 NHS data files included person weights which adjusted for disproportionate sampling of some population groups and produced reflective results for the total Australian population (ABS 2009). It was necessary to create replicate weights in order to account for the design features of the survey. In 2001 and 2007/08, the ABS calculated replicate weights for the user and provided them in the data file. However, in 1989/90 replicate weights were not calculated and relevant data items (i.e. sampling unit and stratification information) were not included in the dataset. In order to create replicate weights, a technique called replication methods was used to estimate the
variance for the sampling design and weighting procedure, more information regarding replication weights can be found elsewhere (Institute for digital research and education (UCLA) 2013).

5.2.10 NHS study sample
Data collected during the 2007/08, 2001 and 1989/90 NHS were chosen for analysis in Study One. A breakdown of the sample by year, age and birthplace group is provided below in Table 5.3.

Table 5.3: Breakdown of NHS sample by year, age and birthplace group participants aged between 45 and 79 years, in 1989/90, 2001 and 2007/08

<table>
<thead>
<tr>
<th>Survey Year and Age</th>
<th>Australian-born</th>
<th>European-born</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>1989/90 (45-64 years)</td>
<td>6632</td>
<td>80.1</td>
</tr>
<tr>
<td>2001 (55-74 years)</td>
<td>2704</td>
<td>83.0</td>
</tr>
<tr>
<td>2007/08 (60-79 years)</td>
<td>2407</td>
<td>83.4</td>
</tr>
</tbody>
</table>

5.2.11 NHS data files
The ABS releases information as basic Confidentialised Unit Record Files (CURF). Basic files were made available to registered users via CD-ROM and expanded files via the Remote Access Data Laboratory (RADL) (ABS 2010). Expanded files include additional and, in some instances, more detailed data items not available in the basic version (ABS 2010). RADL is an online system, which allows users to submit requests to the ABS via programs such as Statistical Analysis System (SAS), Statistical Package for the Social Sciences (SPSS) or Stata. Due to the aggregation of the COB variable in 2001 and 2007/08, it was necessary to access the NHS data files via the RADL system; the 1989/90 data file was accessed by CD-ROM.

5.2.12 Data analysis
Analysis was limited to those aged 45 to 64 years in 1989/90; 55 to 74 years in 2001; and 60 to 79 years in 2007/08 in order to explore health status of European and Australian-born groups at three points in time. It was necessary to aggregate age into twenty-year groupings to overcome
issues with small numbers for the overseas-born groups and to ensure that sufficient numbers were available to perform statistical analyses.

Analyses for the 2001 and 2007/08 NHS data files were conducted using STATA version 10 via the ABS RADL system. Due to the limited Stata functions available in the RADL system commands from the svr module were used to produce proportions and 95% confidence intervals for demographic and health-related outcomes for Australian and European-born groups. Replicate weights were applied using the jackknife (JK-1) method. The 1989/90 data file was accessed through CD-ROM; proportions and 95% confidence intervals were produced using Stata version 13, and the same method as described above was applied. Comparisons cannot be made over time due to the inability to merge the different data files within the RADL and as such the reported findings refer to differences within each of the NHS time points.

5.3 Results

5.3.1 Introduction
This chapter reports the findings from Study One which used NHS data collected in 1989/90, 2001 and 2007/08 to describe the demographic, health and health-related characteristics of European and Australian-born groups at three points in time with three different ages (in 1989/90 participants were aged 45 to 64 years; in 2001 participants were aged 55 to 74 years; and in 2007/08 participants were aged 60 to 79 years). This study explored whether there had been a change in previously identified trends for chronic conditions and health-related risk factors in European-born immigrants compared to those born in Australia. It is possible to make comparisons within years; however, comparison between years cannot be made.

5.3.2 Demographic characteristics
Table 5.4 presents the demographic characteristics of Australian and European-born NHS participants in 1989/90, 2001 and 2007/08. In 1989/90, 2001 and 2007/08, the majority of
Australian-born participants were female (50.6%, 52.4% and 52.6%, respectively), whereas a greater proportion of those born in Europe were male (55.1% and 53.7%) aside from 2007/08. In 1989/90, the largest proportion of respondents from both COB categories were aged between 45 and 49 years (Australian-born: 29.6%; European-born: 26.4%). In 2001, the highest proportion of respondents were aged 55 to 59 (Australian-born: 31.0%; European-born: 29.0%) and 60 to 64 in 2007/08 (Australian-born: 37.7%; European-born: 32.4%). In 1989/90, 2001 and 2007/08, European-born (84.6%, 77.6% and 71.2%, respectively) participants were more likely to be married compared to those born in Australia (78.8%, 65.8% and 67.0%, respectively). Across all years, European-born participants reported a higher proportion of no-post-school qualifications (1989/90: 63.0%; 2001: 66.1%; and 2007/08: 69.3%) compared to those born in Australia (1989/90: 58.2%; 2001: 58.2%; and 2007/08: 57.8%). Furthermore, in all instances, most people born in Australia, reported having a bachelor degree or higher (1989/90: 6.6%; 2001: 8.3%; and 2007/08: 12.5%) compared to those born in Europe (1989/90: 4.0%; 2001: 5.0%; and 2007/08: 7.6%).

5.3.3 Health and health-related outcomes
Table 5.5 presents the health and health-related outcomes of Australian and European-born NHS participants in 1989/90, 2001 and 2007/08. In relation to self-rated health, those born in Europe (1989/90: 40.5%; 2001: 37.0% and 2007/08: 33.6%) had the highest proportion of respondents who reported ‘fair or poor’ health compared to those born in Australia (1989/90: 25.4%; 2001: 27.5% and 2007/08: 25.9%). Aside from 2007/08, those born in Australia (1989/90: 11.8% and 2001: 19.1%) were less likely than the European-born (1989/90: 18.0% and 2001: 30.0%) to be classified as ‘obese’. In 1989/90 and 2001, a higher proportion of those born in Europe (26.5% and 16.3%) were classified as current smokers, compared to 2007/08 when the proportion of current smokers was similar in both COB categories (Australian-born: 11.8% and European-born: 11.6%). Furthermore, at all points in time, the Australian-born (1989/90: 21.7%; 2001: 33.4%;
| Table 5.4: Demographic characteristics of Australian and European-born individuals, data limited to specific age groups in 1989/90, 2001 & 2007/08 National Health Survey |
|---------------------------------|---------------------------------|---------------------------------|-----------------|-----------------|---------------------------------|---------------------------------|-----------------|-----------------|
|                                | Australia                       | Europe                         |
| **Sex**                        |      |      |         |      |      |         |      |      |         |      |      |         |      |      |         |
| Male                           | 49.4 | 47.6 | 47.4    | 55.1 | 53.7 | 53.7    | 50.1 | 49.7 | 49.7    |      |      |         |      |      |         |
| Female                         | 50.6 | 52.4 | 52.6    | 44.9 | 46.3 | 46.3    | 49.3 | 50.3 | 50.3    |      |      |         |      |      |         |
| **Age**                        |      |      |         |      |      |         |      |      |         |      |      |         |      |      |         |
| 45 to 49                       | 29.6 |      |         | 26.4 |      |         |      |      |         |      |      |         |      |      |         |
| 50 to 54                       | 24.7 |      |         | 25.6 |      |         |      |      |         |      |      |         |      |      |         |
| 55 to 59                       | 22.1 |      |         | 26.1 |      |         |      |      |         |      |      |         |      |      |         |
| 60 to 64                       | 23.6 |      |         | 21.8 |      |         |      |      |         |      |      |         |      |      |         |
| 65 to 69                       |      |      |         |      |      |         |      |      |         |      |      |         |      |      |         |
| 70 to 74                       |      |      |         |      |      |         |      |      |         |      |      |         |      |      |         |
| 75 to 79                       |      |      |         |      |      |         |      |      |         |      |      |         |      |      |         |
| **Marital status**             |      |      |         |      |      |         |      |      |         |      |      |         |      |      |         |
| Married/living with partner    | 78.8 | 65.8 | 65.8    | 77.6 | 62.3 | 62.3    | 70.4 | 66.7 | 66.7    |      |      |         |      |      |         |
| Separated/divorced             | 10.5 | 13.6 | 14.7    | 7.4  | 5.8  | 5.8     | 7.8  | 5.3  | 5.3     |      |      |         |      |      |         |
| Widowed                        | 5.5  | 13.3 | 13.2    | 5.0  | 3.5  | 3.5     | 9.9  | 7.6  | 7.6     |      |      |         |      |      |         |
| Never married                  | 5.3  | 7.3  | 5.1     | 3.2  | 2.2  | 2.2     | 4.6  | 3.0  | 3.0     |      |      |         |      |      |         |
| **Education**                  |      |      |         |      |      |         |      |      |         |      |      |         |      |      |         |
| No post school qualification   | 58.2 | 58.2 | 57.8    | 63.0 | 66.1 | 66.1    | 69.3 | 60.3 | 60.3    |      |      |         |      |      |         |
| Trade/certificate/diploma      | 35.2 | 33.5 | 29.7    | 33.0 | 29.9 | 29.9    | 23.1 | 17.8 | 17.8    |      |      |         |      |      |         |
| Bachelor degree or higher      | 6.6  | 8.3  | 12.5    | 4.0  | 5.0  | 5.0     | 7.6  | 4.5  | 4.5     |      |      |         |      |      |         |

**Notes:** NHS Participants aged 45-64 years in 1989/90 (Australia n=6832, Europe =1642); NHS participants aged 55-74 years in 2001 (Australia n=2704, Europe n=552); NHS participants aged 60-79 years in 2007/08 (Australia n=2407, Europe n=478)
Table 5.5: Selected risk factors and health conditions for Australian and European-born individuals, data limited to specific age groups in 1989/90, 2001 & 2007/08 National Health Survey

<table>
<thead>
<tr>
<th></th>
<th>1989 % (95% CI)</th>
<th>2001 % (95% CI)</th>
<th>2007/07 % (95% CI)</th>
<th>1989 % (95% CI)</th>
<th>2001 % (95% CI)</th>
<th>2007/08 % (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-rated health</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent, very good, good</td>
<td>74.6 (72.4 - 76.8)</td>
<td>72.5 (70.5 - 74.6)</td>
<td>74.1 (71.9 - 76.2)</td>
<td>59.5 (55.8 - 63.2)</td>
<td>63.0 (58.7 - 67.2)</td>
<td>66.4 (60.4 - 72.3)</td>
</tr>
<tr>
<td>Fair, poor</td>
<td>25.4 (23.2 - 27.6)</td>
<td>27.5 (25.4 - 29.5)</td>
<td>25.9 (23.8 - 28.1)</td>
<td>40.5 (36.8 - 44.2)</td>
<td>37.0 (32.8 - 41.3)</td>
<td>33.6 (27.7 - 39.6)</td>
</tr>
<tr>
<td><strong>BMI</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight/normal</td>
<td>51.9 (50.3 - 53.5)</td>
<td>39.5 (37.3 - 41.7)</td>
<td>33.3 (30.6 - 35.9)</td>
<td>38.5 (35.4 - 41.7)</td>
<td>28.8 (24.3 - 33.2)</td>
<td>31.4 (25.6 - 37.3)</td>
</tr>
<tr>
<td>Overweight</td>
<td>36.3 (35.0 - 37.6)</td>
<td>41.4 (39.1 - 43.6)</td>
<td>40.1 (37.1 - 43.1)</td>
<td>43.5 (40.5 - 46.4)</td>
<td>41.3 (36.5 - 46.0)</td>
<td>42.3 (35.9 - 48.7)</td>
</tr>
<tr>
<td>Obese</td>
<td>11.8 (10.8 - 12.8)</td>
<td>19.1 (17.6 - 20.7)</td>
<td>26.7 (23.9 - 29.5)</td>
<td>18.0 (15.5 - 20.5)</td>
<td>30.0 (24.6 - 35.3)</td>
<td>26.3 (20.1 - 32.4)</td>
</tr>
<tr>
<td><strong>Smoker</strong>**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker/ex-smoker</td>
<td>74.9 (73.2 - 76.6)</td>
<td>85.1 (83.9 - 86.4)</td>
<td>88.2 (86.3 - 90.2)</td>
<td>73.5 (71.2 - 75.8)</td>
<td>83.7 (80.3 - 87.1)</td>
<td>88.4 (84.6 - 92.2)</td>
</tr>
<tr>
<td>Current smoker</td>
<td>25.1 (23.4 - 26.8)</td>
<td>14.9 (13.6 - 16.1)</td>
<td>11.8 (9.8 - 13.7)</td>
<td>26.5 (24.2 - 28.8)</td>
<td>16.3 (12.9 - 19.7)</td>
<td>11.6 (7.8 - 15.4)</td>
</tr>
<tr>
<td><strong>Arthritis</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>24.3 (22.9 - 25.7)</td>
<td>39.5 (37.8 - 41.3)</td>
<td>52.1 (49.1 - 55.1)</td>
<td>22.3 (19.0 - 25.5)</td>
<td>36.9 (32.9 - 41)</td>
<td>43.4 (37.2 - 49.5)</td>
</tr>
<tr>
<td>Current Asthma</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>6.1 (5.6 - 6.7)</td>
<td>10.6 (9.2 - 11.9)</td>
<td>17.9 (16.0 - 19.7)</td>
<td>4.6 (3.6 - 5.6)</td>
<td>7.3 (4.9 - 9.6)</td>
<td>9.8 (6.1 - 13.5)</td>
</tr>
<tr>
<td><strong>Diabetes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2.6 (2.2 - 3.0)</td>
<td>9.4 (8.5 - 10.3)</td>
<td>16.4 (14.0 - 18.8)</td>
<td>3.2 (2.4 - 3.9)</td>
<td>10.7 (7.9 - 13.6)</td>
<td>20.4 (15.0 - 25.9)</td>
</tr>
</tbody>
</table>

Notes: NHS Participants aged 45-64 years in 1989/90 (Australia n=6632, Europe =1642); NHS participants aged 55-74 years in 2001 (Australia n=2704, Europe n=552); NHS participants aged 60-79 years in 2007/08 (Australia n=2407, Europe n=478)

*1989 did not ask ‘very good’.
**Due to question working smoking status was classified as ‘non-smoker/ex-smoker’ and ‘smoker’.
5.4 Summary

Study One aimed to describe the health status (as measured by selected chronic conditions and risk factors) of European and Australian-born groups, at three points in time. This study explored differences in patterns of chronic conditions and health-related risk factors by producing proportions and 95% confidence intervals for demographic and health-related outcomes for Australian and European-born participants.

The results from this study indicated that the prevalence estimates of high blood pressure has increased as the cohort ages for both the Australian and European-born; however, for those born in Europe there still continues to be slightly lower prevalence rates. The prevalence of obesity in Australian-born groups has increased markedly. While the European-born initially had higher obesity rates than the Australian-born, the difference in prevalence rates have now narrowed and equals the estimates for the Australian-born groups. Despite the European-born consistently having worse self-rated health compared to their Australian-born counterparts (whose rates remained steady over the three points in time) the European-born displayed improvements in their self-rated health status. Smoking rates have declined equally.

Arthritis rates have increased for both groups as the cohort ages, however, the prevalence rates for the European-born continue to be lower than for the Australian-born. While asthma prevalence has increased for both European and Australian-born groups the European-born continue to have lower rates compared to those born in Australia. Furthermore, over time, the differences in the arthritis and asthma proportions widened and the estimates for the European-born groups did not appear to diverge towards those of the Australian-born. The rate of diabetes has increased for both COB groups; where those born in Europe had consistently higher rates than Australian-born groups across the three points in time.
Overall, both European and Australian-born groups displayed increases in the prevalence rates for chronic conditions (i.e. high blood pressure, arthritis and diabetes) and similar declines in smoking status. The consistently poorer self-rated health reported by those born in Europe despite lower prevalence estimates of high blood pressure, obesity, smoking, arthritis and asthma compared to those born in Australia. While this study does not provide a comprehensive assessment of immigrant health and significant limitations exist in the interpretation of these findings there is some evidence to suggest that for some chronic conditions (i.e. asthma and arthritis) a health advantage may exist for European-born migrants; however, this is inconclusive and would require additional research.
6.1 Study aims

This study aimed to determine if there were differences in the prevalence of chronic conditions and health-related risk factors for common European-born birthplace groups compared to their Australian-born counterparts. In order to address this aim, a series of secondary data analyses were undertaken using the SAMSS survey data collected between 1st of January 2004 and the 31st of December 2012. This study described and compared the demographic, health and health-related outcomes of Australian and German, Italian and Greek-born immigrants aged 65 years and over and examined whether migrant status was a risk factor for poorer health outcomes in late adulthood (Objective 2). A summary of the SAMSS population of interest is provided below (Table 6.1).

Table 6.1: Summary of SAMSS population of interest

<table>
<thead>
<tr>
<th>Data collection period</th>
<th>January 2004 to December 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>65 years and over</td>
</tr>
<tr>
<td>Country of Birth</td>
<td>Australia, Germany, Italy &amp; Greece</td>
</tr>
</tbody>
</table>

6.2 Methods

SAMSS is an epidemiological monitoring and surveillance telephone survey established in July 2002. SAMSS is administered by Population Research and Outcome Studies (PROS), The University of Adelaide (UoA) and is owned by Department of South Australian Health (SA Health) (PROS 2009). SAMSS collects information on demographic variables, health status, chronic conditions and risk factors, various protective and social factors, health care utilisation, child development, life-course and economic indicators. SAMSS monitors population trends in
departmental, state and national priority areas, and allows for trend and time series analyses to be undertaken (PROS 2011).

**6.2.1 Sample and sampling procedure**
Those eligible for selection in SAMSS include all South Australian households who have a listed telephone number available in the Electronic White Pages (EWP) (applies to the data collection period occurring between July 2002 to September 2012) or a listed telephone number in the Integrated Public Number Database (IPND) (data collection period occurring from October 2012 onwards). Each month, a random sample of eligible households (n=1,200) was drawn for participation in SAMSS. This sample typically yields approximately 600 completed interviews per month and approximately 7,200 per year (PROS 2009). Upon contact, eligible participants were randomly selected on the basis of who was the last to have a birthday in the household. Personal interviews were completed with those aged 16 years and over and a parent or responsible adult was interviewed on behalf of those aged 15 years or under (PROS 2009).

**6.2.2 Informed consent and withdrawal criteria**
A letter of introduction was sent to each selected household prior to contact being made. The letter of introduction provides information on the SAMSS research project and offers potential participants the opportunity to withdraw their consent to being contacted for a SAMSS interview. Upon contact, verbal consent was obtained from each participant prior to the commencement of the interview. During the interview process, SAMSS participants were given the right to withdraw or chose not to answer any question(s) and or section(s) of the interview (PROS 2009).

**6.2.3 Pilot testing**
SAMSS was pilot tested on a sample (n=100) of randomly selected households. This process assessed the survey procedure, question format, sequence and structure of the questionnaire (PROS 2004a).
6.2.4 Data collection
SAMSS utilises Computer Assisted Telephone Interviewing (CATI) technology and collects self-report data from participants. Interviews are undertaken in English only and take on average 16.4 minutes to complete (PROS 2009). Currently, Harrison Research undertake SAMSS interviews on behalf of SA Health and UoA. Households are contacted up to six times, at varying times of the day or evening, before considered non-contactable (PROS 2009). There is no replacement for non-respondents.

6.2.5 Validation
A validation process is undertaken on 10% of the SAMSS completed interviews. This process involves re-contacting survey respondents to ensure that the inclusion criteria were met and to compare that the responses to selected questions correspond to the respondents’ original responses (PROS 2009).

6.2.6 Ethical considerations
The SAMSS research project received ethical approval from the South Australian Health Human Research Ethics Committee (HREC), HREC Protocol No. 436/02/2014.

6.2.7 SAMSS data items
Information on the data items used in Study Two are detailed below. Refer to Appendix C and D for the SAMSS questionnaire and explanatory notes on how data items were derived.

Demographic and socio-demographic
SAMSS participants were asked for information on their age in years, sex (male; female), country of birth (analysis was limited to those born in Australia; Germany; Italy; Greece), educational attainment (no schooling to secondary; trade/certificate/diploma; degree or higher), marital status (married/living with a partner; separated/divorced; widowed; never married) and their gross household annual income ($20,001 or more; less than $20,000; not stated). Information on area
of residence (metropolitan Adelaide; South Australian country) was obtained through the collection of postcode information.

**Self-rated health, chronic conditions and mental health**

Self-rated health was determined by asking respondents to rate their overall health as excellent, very good, good, fair or poor; self-rated health was dichotomised into ‘excellent, very good, good’ vs ‘fair, poor’. Chronic condition variables included in this study were obtained through self-reported doctor diagnoses. SAMSS respondents were asked if a doctor had ever told them whether they had arthritis, osteoporosis, CVD (heart attack, angina, heart disease) and diabetes. Asthma was defined as a doctor diagnosis of asthma, in addition to experiencing asthma symptoms and/or treatment for asthma in the preceding 12 months (AIHW 2007). SAMSS respondents were classified as having chronic obstructive pulmonary disease (COPD) if a doctor had ever told them they had chronic bronchitis or emphysema.

Respondents considered as having ‘at least one chronic condition’ were those who had been told by a doctor they had one of the following conditions: diabetes, asthma, CVD, COPD, arthritis and/or osteoporosis. An alternative multiple chronic condition variable was derived and included mental health and/or the above listed chronic conditions. The presence of a current mental health problem was ascertained by asking SAMSS participants whether a doctor had told them in the last 12 months if they had anxiety, depression, a stress related problem or any other mental health condition and whether they were currently receiving treatment for a mental health condition.

The Kessler Psychological Distress Scale (K10) was used to determine levels of psychological distress experienced by SAMSS participants within the most recent four week period (Andrews & Slade 2001). The K10 is based upon anxiety and depressive symptoms and utilises a five point
scale where participants report the frequency of each experience from ‘all of the time’ to ‘none of the time’ (Andrews & Slade 2001). For scoring purposes, the K10 response categories were reversed and a number from one to five was assigned to each category in the direction of less frequency (Taylor et al. 2003). All items were summed with an achievable scoring range from a maximum score of 50 (high risk of anxiety or depressive disorder) to a minimum score of 10 (no distress). SAMSS participants were considered to have psychological distress if a high (22-29) or a very high (30-50) score was achieved, while those with low (10-15) or moderate (16-21) scores were not considered to have psychological distress (Taylor et al. 2003).

Suicidal ideation was measured by the severe depression scale, which comprises of four items taken directly from the 28-item General Health Questionnaire (GHQ-28). The GHQ-28 is a self-administered questionnaire developed to detect individuals with a diagnosable psychiatric disorder (Goldberg & Hillier 1979). Respondents were asked how they felt about the following questions over a four week period: ‘Have you felt that life isn’t worth living?’; ‘Have you thought of the possibility that you might do away with yourself?’; ‘Have you recently found yourself wishing you were dead and away from it all?’; and ‘Have you found the idea of taking your own life kept coming into your mind?’ (Goldberg & Hillier 1979). Responses were recorded on a four-point scale. A binary scoring method was used to score the items (Goldney et al. 2000). The negative responses (‘not at all’; ‘no more than usual’; ‘definitely not’; and ‘I don’t think so’) were each scored zero and the positive responses (‘rather more than usual’; much more than usual’; ‘has crossed my mind’; and ‘definitely have’) were each scored one (Goldney et al. 2000). Once all items were summed, a minimum score of zero and maximum score of four could be achieved. A score of one or more indicated suicidal ideation (Goldney et al. 2000).
Risk factors

SAMSS respondents were considered to have high blood pressure if they were taking antihypertensive medication and/or a doctor had told them they had high blood pressure. Current high cholesterol was classified as a participant being told by a doctor that they had high cholesterol. BMI was calculated based upon self-reported weight and height information obtained at the time of the interview. BMI was calculated as weight in kilograms divided by height (m²) where participants were categorised as either ‘underweight (≤18.5)/normal (18.5 to 24)’, ‘overweight (25 to 29)’ or ‘obese (≥ 30)’ (WHO 1999). Physical activity levels (no activity; activity not sufficient; sufficient activity) were derived from a series of questions taken from the Active Australia Survey, which asked SAMSS participants to recall the frequency and time spent on walking, moderate and vigorous activity for recreation, sport and/or fitness over the last week (AIHW 2003). According to the National Physical Activity Guidelines for Australians, sufficient physical activity in order to benefit health was defined as achieving at least 30 minutes of moderate or vigorous activity on most days in the preceding week (AIHW 2003). Fruit and vegetable consumption was also included in this study: sufficient fruit and vegetable consumption, according to the NHMRC guidelines, was two or more serves per day for fruit and five or more serves of vegetables per day (CDHFS 1998).

Information on smoking status (non-smoker; ex-smoker; current smoker) was also collected; items included whether participant currently smoked and/or whether they had ever smoked regularly. Whilst updated alcohol guidelines were released in 2009, the 2001 NHMRC guidelines were used in this study to classify the short-term alcohol risk into a dichotomous variable: ‘non-drinker/low risk drinker’ and ‘risky to high risk drinker’. The risk of short-term alcohol injury was derived from the number of alcoholic drinks consumed per day and frequency of alcoholic drinks consumed per week. ‘Low risk’ was defined as up to 6 standard drinks for males and up to 4 standard drinks for females. ‘Risky’ behaviour was classified as 7-10 standard drinks for males.
and 5-6 standard drinks for females and ‘high risk’ was categorised as 11 or more standard drinks for males and 7 or more standard drinks for females per day over a period of a week (NHMRC 2001).

6.2.8 SAMSS response and participation rates

The overall response rate for the data collection period of January 2004 to December 2012 was 63.2%. A summary of the response and participation rates are provided below (Table 6.2).

Table 6.2: Summary of SAMSS response rates during January 2004 to December 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Response Rate (%)</th>
<th>Participation Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>69.4</td>
<td>77.0</td>
</tr>
<tr>
<td>2005</td>
<td>71.1</td>
<td>77.8</td>
</tr>
<tr>
<td>2006</td>
<td>69.9</td>
<td>76.9</td>
</tr>
<tr>
<td>2007</td>
<td>67.9</td>
<td>73.6</td>
</tr>
<tr>
<td>2008</td>
<td>63.1</td>
<td>70.2</td>
</tr>
<tr>
<td>2009</td>
<td>65.4</td>
<td>72.1</td>
</tr>
<tr>
<td>2010</td>
<td>64.4</td>
<td>71.4</td>
</tr>
<tr>
<td>2011</td>
<td>62.7</td>
<td>68.7</td>
</tr>
<tr>
<td>2012</td>
<td>61.6</td>
<td>69.9</td>
</tr>
<tr>
<td>Overall 2004/12</td>
<td>63.2</td>
<td>70.6</td>
</tr>
<tr>
<td>Total number of interviews</td>
<td>68,492</td>
<td></td>
</tr>
</tbody>
</table>

As seen in Table 6.2, the SAMSS response and participation rates have decreased over time, a common issue experienced by epidemiological studies over the past 30 years and in particular, over the last decade. Declining response rates are attributed to increases in refusals and unsuccessful attempts to reach eligible survey units (Cornish 2002; Groves 1989). Issues contributing to declining response rates include developments in technology such as answering machines, voicemail and caller identification, which create additional barriers between the researcher and the respondent (Brick & Williams 2013). In recent times, there has been a proliferation of research contributing to respondent fatigue and a perception that their involvement is less worthwhile (Brick & Williams 2013; Galea & Tracy 2007). Research studies have also become more complex and demanding, creating issues with respondent burden (Galea & Tracy...
A sharp growth in telemarketing has been linked to reductions in people’s willingness to be involved in research. Furthermore, issues with participation are further compounded by an overall decline in people’s volunteerism and a general increase in society’s mistrust of major surveying organisations (Brick & Williams 2013).

### 6.2.9 Bias

Historically, response rates have been a good measure of data quality. The main issue with low response rates is that they can give rise to non-response bias, which can occur if there are meaningful differences in the characteristics measured between non-respondents and respondents (Hudson et al. 2004). Whilst a high response rate is preferable, recent studies have shown that there is little evidence to suggest that substantial bias results from non-participation (Choung et al. 2013; Curtin, Presser & Singer 2005; Galea & Tracy 2007; Holbrook, Green & Krosnick 2003; Visser et al. 1996). In SAMSS, this potential bias is addressed by weighting SAMSS data by age, sex, probability of selection and area of residence to the most recent Census data and the estimated resident population. Furthermore, weighting SAMSS data also addresses the potential bias associated with differing probabilities of selection in the sample (PROS 2004b).

Additionally, changes to telecommunications and a shift away from traditional landline telephones (i.e. increases in mobile only households or Voice over Internet Protocol (VoIP) connections) makes it increasingly difficult to obtain a complete sampling frame, which can result in non-coverage bias. SAMSS currently uses the IPND as its sampling frame, but has previously used the EWP. The IPND and EWP essentially comprise all listed connected telephone numbers in the telephone directory, where unlisted telephone numbers are not included and mobile numbers are only available if owners opt to have their number listed at a cost. As the proportion of people without a landline telephone is not uniformly distributed in the population (Dal Grande & Taylor 2007).
2010), there may be a potential bias associated with non-coverage in the sample; i.e. whether non-covered respondents differ from covered respondents (Cornish 2002).

6.2.10 Weighting
Data were weighted to account for the probability of selection within a household and the age and sex profiles of Australian, German, Italian, and Greek-born South Australians. The ABS 2011, Census data were used to weight the data to ensure that representative estimates of birthplace groups could be calculated (PROS 2009). The weighting procedure was applied to ‘correct for disproportionality of the sample with respect to the populations of interest. The weights reflect unequal sample inclusion probabilities and compensate for differential non-response’. (PROS 2009, p.12.). Refer to Appendix E for more information on the weighting formula.

6.2.11 SAMSS study sample
A breakdown of the sample by year and birthplace group is provided below in Table 6.3. The sample comprised of participants born in Australia (n=12,016), Germany (n=442) Italy (n=573) and Greece (n=164) aged 65 years and over who were surveyed between January 2004 and December 2012.

<table>
<thead>
<tr>
<th></th>
<th>Australian-born</th>
<th>German-born</th>
<th>Italian-born</th>
<th>Greek-born</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>2004</td>
<td>1260</td>
<td>10.5</td>
<td>37</td>
<td>8.5</td>
</tr>
<tr>
<td>2005</td>
<td>1201</td>
<td>10.0</td>
<td>49</td>
<td>11.1</td>
</tr>
<tr>
<td>2006</td>
<td>1231</td>
<td>10.2</td>
<td>36</td>
<td>8.2</td>
</tr>
<tr>
<td>2007</td>
<td>1219</td>
<td>10.1</td>
<td>44</td>
<td>10.0</td>
</tr>
<tr>
<td>2008</td>
<td>1316</td>
<td>10.9</td>
<td>40</td>
<td>9.1</td>
</tr>
<tr>
<td>2009</td>
<td>1265</td>
<td>10.5</td>
<td>61</td>
<td>13.8</td>
</tr>
<tr>
<td>2010</td>
<td>1891</td>
<td>15.7</td>
<td>64</td>
<td>14.6</td>
</tr>
<tr>
<td>2011</td>
<td>1284</td>
<td>10.7</td>
<td>48</td>
<td>10.8</td>
</tr>
<tr>
<td>2012</td>
<td>1349</td>
<td>11.2</td>
<td>62</td>
<td>13.9</td>
</tr>
<tr>
<td>Total</td>
<td>12016</td>
<td>100.0</td>
<td>442</td>
<td>100.0</td>
</tr>
</tbody>
</table>
SAMSS is a representative data collection of the South Australian population where those born in Germany, Italy and Greece, make up a small percentage of the overall South Australian population. It was necessary to collapse this nine-year period (January 2004 and December 2012) in order to overcome issues with small numbers (as this was particularly so for those born in Greece) to ensure that there was adequate power to perform statistical analyses.

6.2.12 Data analysis
Ethics approval was sought from the SA Health (HREC reference number: HREC/13/SAH/09) to undertake secondary data analyses on SAMSS data. The relationships between migrant status, socio-demographic variables, health outcomes and health-related risk factors were explored using Chi square tests. Pairwise comparisons between COB were performed adjusting for multiple comparisons using the Bonferroni adjustment. The Bonferroni adjustment can be undertaken when multiple statistical tests are performed simultaneously as a way to control for Type I errors (Bland & Altman 1995). Type I errors arise when significant results do not occur by chance and the null hypothesis is subsequently rejected when it is in fact true (Bland & Altman 1995). Bonferroni adjustments were made in this analysis because of the large number of $\chi^2$ multiple tests undertaken.

A series of multivariable logistic regressions were undertaken to examine the relationship between migrant status and each of the chronic conditions including arthritis, osteoporosis, CVD, asthma, diabetes, COPD, current mental health (including psychological distress and suicidal ideation) and self-rated health adjusting for multiple covariates. Three multivariable regression models were undertaken:

- Model 1 adjusted for age and sex;
- Model 2 adjusted for age, sex, education, income and marital status; and
• Model 3 adjusted for age, sex, education, income and marital status and health-related risk factors (high blood pressure, high cholesterol, physical activity, BMI, smoking status, short-term alcohol risk and fruit and vegetable consumption).

Crude and adjusted odds ratios, including 95% confidence intervals, are reported. All analyses were two-sided with a significance level of 0.05 and were performed using SPSS Version 20.0.

6.3 Results

6.3.1 Introduction
This section reports the findings from Study Two which used SAMSS data collected between January 2004 and December 2012 to describe and compare differences in demographic, health and health-related outcomes of Australian, German, Italian and Greek-born participants aged 65 years and over, in addition to examining whether the overseas-born have worse health outcomes compared to their Australian-born counterparts and exploring whether migrant status is a risk factor for poorer health outcomes in late adulthood.

6.3.2 Descriptive analysis
The relationship between migrant status, socio-demographic variables, health outcomes and health-related risk factors were explored using Chi square tests (adjusting for multiple comparisons using the Bonferroni adjustment). The abbreviations AUS, GER, IT and GR (Australia, Germany, Italy and Greece, respectively) shown in Table 6.4, Table 6.5 and Table 6.6 indicate where significant differences exist between birthplace groups (p value ≤0.05).

Table 6.4 presents the socio-demographic characteristics of SAMSS respondents aged 65 years and over who were born in Australia, Germany, Italy and Greece. The majority of respondents from all COB groups were female (55.6% overall). Compared to the Australian-born (20.3%) a greater proportion of the German (28.9%), Italian (32.0%) and Greek-born (36.3%) respondents
were aged between 75 and 79 years. In addition, a large proportion of those born in Australia (31.4%) and Germany (29.0%) were aged 65-69 years. In all instances, more people were living in metropolitan Adelaide compared to rural and regional South Australia.

Of significance are the higher proportions of Greek and Italians (80.3% and 83.6% respectively) who reported having no schooling to secondary levels of schooling compared to Australian respondents (70.3%). The German-born (32.9%) were more likely to have a trade, certificate or diploma compared to all other COB groups; and the Australian-born (10.8%) were more likely to have a university degree or higher when compared to German and Italian respondents (6.1% and 2.5% respectively). Up to 50% of all respondents from each country of birth group reported an income of $20,001 or more and were either married, living with a partner or widowed.

Chronic conditions and mental health outcomes were examined by COB for those aged over 65 years of age. The results are presented in Table 6.5. The Greek and Italian respondents had the highest proportion of osteoporosis (23.4% and 18.5% respectively) compared to the Australian (14.1%) and German-born (14.2%). Compared to those born in Greece (5.2%), the Australian (13.7%), German (15.6%), and Italian-born (17.4%) respondents had higher proportions of CVD. Greek-born participants (18.5%) were more likely to report current asthma compared to Italian and German-born respondents (10.5% and 8.6% respectively). The Italian (26.9%) and Greeks (29.2%) had higher proportions of diabetes compared to Australian (16.2%) and German (17.6%) respondents.

Greek-born participants (12.6%) had the highest proportion of COPD among all country of birth groups. In terms of mental health outcomes, Italian and Greek respondents were more likely to experience psychological distress (12.7% and 11.7% respectively) compared to Australian (5.7%) and German-born (5.7%). In addition, Italian respondents reported the highest proportion of
suicidal ideation (6.5%) compared to those born in Australia and Germany (3.4% and 4.6% respectively). Overall, these results indicate that there are significant differences in the health profiles of birthplace groups. It is also evident that immigrant groups, particularly those born in Italy and Greece, experience a higher prevalence of chronic conditions than those born in Australia and Germany.

Table 6.6 details the various health-related risk factors for the Australian, German, Italian and Greek-born respondents aged 65 years and over. In relation to self-rated health, the German (36.2%), Italian (45.0%) and Greek (39.9%) respondents who were more likely to report ‘fair or poor’ health compared to those born in Australia (27.8%). Italian and Greek respondents had the highest proportion of ‘no activity’ (41.6% and 45.9%, respectively) compared to those born in Australia (31.3%) and Germany (26.1%). Compared to the Australian (20.0%) and German (14.3%) participants, those born in Italy (26.6%) and Greece (28.9%) were more likely to be classified as ‘obese’. German respondents were least likely to be classified as non-smokers (34.1%) and German and Greek respondents had the lowest proportion of ‘non-drinkers/low risk drinkers’ (71.6% and 72.7%). These results indicated that there were differences between the Australian and overseas-born groups in regards to their health-related risk factors. However, it was observed that those born in Germany shared similar health and health-related outcomes to their Australian-born counterparts; whilst the Italian and Greek-born were most closely related in terms of their health and health-related outcomes.
Table 6.4: Socio-demographic profile of Australian, German, Italian and Greek-born South Australians aged 65 years and over, using SAMSS data from 2004 to 2012

<table>
<thead>
<tr>
<th>Area of residence</th>
<th>Australia (n=3982)</th>
<th>Germany (n=2438)</th>
<th>Italy (n=1903)</th>
<th>Greece (n=1229)</th>
<th>P values</th>
<th>χ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Adelaide</td>
<td>10.2 (9.7 - 10.8)</td>
<td>7.2 (5.2 - 10.0)</td>
<td>7.1 (5.2 - 10.0)</td>
<td>5.1 (3.5 - 7.2)</td>
<td>&lt;0.001</td>
<td>134.523</td>
</tr>
<tr>
<td>SA Country</td>
<td>33.1 (32.3 - 34.0)</td>
<td>22.2 (18.6 - 26.3)</td>
<td>22.1 (18.6 - 26.3)</td>
<td>6.9 (5.1 - 9.3)</td>
<td>0.001</td>
<td>123.967</td>
</tr>
<tr>
<td>Education</td>
<td>31.4 (30.6 - 32.2)</td>
<td>19.6 (14.6 - 23.8)</td>
<td>19.1 (16.1 - 22.5)</td>
<td>5.1 (3.5 - 7.2)</td>
<td>0.001</td>
<td>123.967</td>
</tr>
<tr>
<td>No schooling to secondary</td>
<td>15.8 (15.2 - 16.5)</td>
<td>32.9 (28.3 - 35.9)</td>
<td>18.7 (15.7 - 22.1)</td>
<td>5.1 (3.5 - 7.2)</td>
<td>0.001</td>
<td>123.967</td>
</tr>
<tr>
<td>Trade/certificate/diploma</td>
<td>10.8 (13.3 - 11.4)</td>
<td>7.2 (5.2 - 10.0)</td>
<td>2.5 (1.5 - 4.2)</td>
<td>5.1 (3.5 - 7.2)</td>
<td>0.001</td>
<td>123.967</td>
</tr>
<tr>
<td>Degree or higher</td>
<td>7.7 (7.3 - 8.1)</td>
<td>8.3 (8.0 - 8.6)</td>
<td>8.3 (8.0 - 8.6)</td>
<td>6.9 (5.1 - 9.3)</td>
<td>0.001</td>
<td>123.967</td>
</tr>
<tr>
<td>Income</td>
<td>7.7 (7.3 - 8.1)</td>
<td>8.3 (8.0 - 8.6)</td>
<td>8.3 (8.0 - 8.6)</td>
<td>6.9 (5.1 - 9.3)</td>
<td>0.001</td>
<td>123.967</td>
</tr>
<tr>
<td>$20,001 or more</td>
<td>15.8 (15.2 - 16.5)</td>
<td>32.9 (28.3 - 35.9)</td>
<td>18.7 (15.7 - 22.1)</td>
<td>5.1 (3.5 - 7.2)</td>
<td>0.001</td>
<td>123.967</td>
</tr>
<tr>
<td>Less than $20,001</td>
<td>15.8 (15.2 - 16.5)</td>
<td>32.9 (28.3 - 35.9)</td>
<td>18.7 (15.7 - 22.1)</td>
<td>5.1 (3.5 - 7.2)</td>
<td>0.001</td>
<td>123.967</td>
</tr>
<tr>
<td>Not stated</td>
<td>10.8 (13.3 - 11.4)</td>
<td>7.2 (5.2 - 10.0)</td>
<td>2.5 (1.5 - 4.2)</td>
<td>5.1 (3.5 - 7.2)</td>
<td>0.001</td>
<td>123.967</td>
</tr>
</tbody>
</table>

**Notes:** The weighting of data can result in rounding discrepancies or totals not adding. Bonferroni adjustments were performed to adjust for multiple comparisons. Abbreviations IT, GER, GR and AUS indicate significant differences between birth place groups [AUS=Australia | GER=Germany | IT=Italy | GR=Greece]
- Insufficient number for statistical analysis.
Table 6.5: Chronic condition profile of Australian, German, Italian and Greek-born South Australians aged 65 years and over, using SAMSS data from 2004 to 2012

<table>
<thead>
<tr>
<th>Condition</th>
<th>n</th>
<th>(95% CI)</th>
<th>n</th>
<th>(95% CI)</th>
<th>n</th>
<th>(95% CI)</th>
<th>n</th>
<th>(95% CI)</th>
<th>p values</th>
<th>χ²</th>
</tr>
</thead>
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<tr>
<td>Arthritis</td>
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<td></td>
<td></td>
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<td></td>
<td>0.013</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>5662</td>
<td>48.8 (47.9 - 49.7)</td>
<td>191</td>
<td>43.2 (38.6 - 47.8) IT</td>
<td>302</td>
<td>52.7 (48.6 - 56.8) GER</td>
<td>88</td>
<td>53.8 (46.2 - 61.2)</td>
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<td></td>
</tr>
<tr>
<td>Osteoporosis</td>
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<td></td>
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<td>19.260</td>
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<td>63</td>
<td>14.2 (11.3 - 17.8) GR</td>
<td>106</td>
<td>18.5 (15.5 - 21.9) AUS</td>
<td>38</td>
<td>23.4 (17.6 - 30.4) AUS, GER</td>
<td></td>
<td></td>
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<tr>
<td>CVD</td>
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<td>&lt;0.001</td>
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<td>15.6 (12.5 - 19.3) GR</td>
<td>100</td>
<td>17.4 (14.6 - 20.8) GR</td>
<td>9</td>
<td>5.2 (2.7 - 9.8) AUS, GER, IT</td>
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<td></td>
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<tr>
<td>Asthma</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>13.311</td>
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<tr>
<td>Yes</td>
<td>1499</td>
<td>12.5 (11.9 - 13.1) GR</td>
<td>38</td>
<td>8.6 (6.3 - 11.6) GR</td>
<td>60</td>
<td>10.5 (8.3 - 13.3) GR</td>
<td>30</td>
<td>18.5 (13.3 - 25.1) GER, IT</td>
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<tr>
<td>Diabetes</td>
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<td>&lt;0.001</td>
<td>62.677</td>
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<td>1950</td>
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<td>17.6 (14.3 - 21.4) GR, IT</td>
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<td>26.9 (23.5 - 30.7) AUS, GER</td>
<td>48</td>
<td>29.2 (22.8 - 36.6) AUS, GER, IT</td>
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<tr>
<td>COPD</td>
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<td>6.0 (4.1 - 8.7) GR</td>
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<td>9.5 (7.3 - 12.3) GR</td>
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<td>12.6 (7.3 - 17.1) AUS</td>
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<tr>
<td>Current Mental health Condition</td>
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<td>Yes</td>
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<td>11.7 (11.2 - 12.3) GR</td>
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<td>11.0 (8.4 - 14.3) GR</td>
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<td>14.7 (12.0 - 17.8) GR</td>
<td>19</td>
<td>11.6 (7.5 - 17.4) GER</td>
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<td></td>
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<td>Psychological distress</td>
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<td>&lt; 0.001</td>
<td>52.841</td>
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<tr>
<td>Yes</td>
<td>686</td>
<td>5.7 (5.3 - 6.2) GR, IT</td>
<td>25</td>
<td>5.7 (3.9 - 8.3) IT</td>
<td>70</td>
<td>12.7 (10.1 - 15.7) AUS, GER</td>
<td>19</td>
<td>11.7 (7.6 - 17.6) AUS</td>
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<td>Suicidal ideation</td>
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<td>0.004</td>
<td>13.349</td>
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<tr>
<td>Yes</td>
<td>311</td>
<td>3.4 (3.3 - 3.8) IT</td>
<td>16</td>
<td>4.6 (2.9 - 7.3) IT</td>
<td>29</td>
<td>6.5 (4.5 - 9.2) AUS</td>
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<td>≥ Chronic conditions (5a)</td>
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<td>31.8 (27.6 - 36.2) IT</td>
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<td>23.6 (20.3 - 27.3) GER</td>
<td>38</td>
<td>23.3 (17.4 - 30.3) GER</td>
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<td>71.6 (70.3 - 72.4)</td>
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<td>≥ Chronic conditions (6a)</td>
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<td>135</td>
<td>30.7 (26.5 - 35.1) IT</td>
<td>129</td>
<td>22.5 (19.2 - 26.1) GER</td>
<td>37</td>
<td>22.6 (16.8 - 29.6) GER</td>
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<td>At least one chronic condition</td>
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<td>306</td>
<td>69.3 (69.3 - 73.5) IT</td>
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<td>77.5 (73.9 - 80.8) GER</td>
<td>127</td>
<td>77.4 (70.4 - 83.1) GER</td>
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</tr>
<tr>
<td>Total</td>
<td>12016</td>
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<td>442</td>
<td>100.0</td>
<td>573</td>
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<td>164</td>
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</table>

Notes: The weighting of data can result in rounding discrepancies or totals not adding. Bonferroni adjustments were performed to adjust for multiple comparisons. Abbreviations IT, GER, GR and AUS indicate significant differences between birth place groups [AUS=Australia | GER=Germany | IT=Italy | GR=Greece]
- Insufficient number for statistical analysis.
- 5a refers to participants having at least one chronic conditions including diabetes, asthma, CVD, arthritis and/or osteoporosis.
- 6a refers to participants having at least one chronic conditions including diabetes, asthma, CVD, arthritis, osteoporosis and/or mental health.
<table>
<thead>
<tr>
<th></th>
<th>Australia</th>
<th>Germany</th>
<th>Italy</th>
<th>Greece</th>
<th>p values</th>
<th>χ²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-rated health</td>
<td></td>
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</tr>
<tr>
<td>Excellent, very good, good</td>
<td>8747</td>
<td>72.8 (72.0 - 73.6) AUS, GER, IT, GR</td>
<td>282</td>
<td>63.8 (59.2 - 68.2) IT</td>
<td>&lt;0.001</td>
<td>109.464</td>
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<tr>
<td>Fair, poor</td>
<td>3269</td>
<td>27.2 (26.4 - 28.0) IT</td>
<td>160</td>
<td>36.2 (31.8 - 40.8) AUS</td>
<td>0.037</td>
<td>8.487</td>
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<td>Current high blood pressure</td>
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<td>52.1 (51.2 - 53.0) AUS</td>
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<td>52.3 (47.6 - 56.9) AUS</td>
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<td>14.583</td>
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<td>Current cholesterol</td>
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<td></td>
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</tr>
<tr>
<td>Yes</td>
<td>4337</td>
<td>36.1 (35.2 - 37.0) AUS</td>
<td>179</td>
<td>40.5 (36.0 - 45.1)</td>
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<tr>
<td>Activity</td>
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</tr>
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<td>No activity</td>
<td>3674</td>
<td>31.3 (30.4 - 32.1) GR, IT</td>
<td>26</td>
<td>26.1 (22.1 - 30.5) GR, IT</td>
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<tr>
<td>Activity not sufficient</td>
<td>4899</td>
<td>41.7 (40.8 - 42.6) GR, IT</td>
<td>43</td>
<td>42.6 (38.0 - 47.4) GR, IT</td>
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<tr>
<td>Sufficient activity</td>
<td>3185</td>
<td>27.1 (26.3 - 27.9)</td>
<td>31</td>
<td>31.3 (27.1 - 35.9)</td>
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</tr>
<tr>
<td>BMI</td>
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<td>&lt;0.001</td>
<td>74.112</td>
</tr>
<tr>
<td>Underweight/normal</td>
<td>4592</td>
<td>41.7 (40.8 - 42.6) GR, IT</td>
<td>153</td>
<td>38.7 (34.0 - 43.6) GR, IT</td>
<td></td>
<td></td>
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<tr>
<td>Overweight</td>
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<td>186</td>
<td>47.0 (42.0 - 52.0) AUS</td>
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<td>Obese</td>
<td>2206</td>
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<td>14.3 (11.2 - 18.1) AUS</td>
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</tr>
<tr>
<td>Smoker</td>
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<td></td>
<td></td>
<td>&lt;0.001</td>
<td>36.449</td>
</tr>
<tr>
<td>Non smoker</td>
<td>5688</td>
<td>47.3 (46.4 - 48.2) GER</td>
<td>151</td>
<td>34.1 (29.3 - 38.7) AUS, GER, IT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ex-smoker</td>
<td>5654</td>
<td>47.1 (46.2 - 47.9) AUS</td>
<td>253</td>
<td>57.4 (52.7 - 61.9) AUS, IT, GR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current smoker</td>
<td>674</td>
<td>5.6 (5.2 - 6.0)</td>
<td>37</td>
<td>8.5 (6.2 - 11.4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short term alcohol risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;0.001</td>
<td>47.060</td>
</tr>
<tr>
<td>Non-drinker/low risk drinker</td>
<td>8311</td>
<td>69.5 (68.7 - 70.3) IT</td>
<td>314</td>
<td>71.6 (67.2 - 75.6) IT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risky to high risk drinker</td>
<td>3648</td>
<td>30.5 (29.7 - 31.3) IT</td>
<td>124</td>
<td>28.4 (24.4 - 32.8) IT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable consumption</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;0.001</td>
<td>87.255</td>
</tr>
<tr>
<td>1 or less serves/ don't eat vegetables/none</td>
<td>1962</td>
<td>15.5 (14.9 - 16.2) IT</td>
<td>43</td>
<td>18.9 (15.5 - 22.3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 to 4 serves per day</td>
<td>8484</td>
<td>70.6 (69.8 - 71.4) IT</td>
<td>312</td>
<td>70.6 (66.1 - 74.8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 or more serves per day</td>
<td>1565</td>
<td>13.0 (12.4 - 13.6)</td>
<td>43</td>
<td>9.8 (7.4 - 12.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fruit consumption</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;0.001</td>
<td>92.614</td>
</tr>
<tr>
<td>1 or less serves per day/none/don't eat fruit</td>
<td>5995</td>
<td>49.9 (49.0 - 50.8) GER, IT</td>
<td>171</td>
<td>38.7 (34.3 - 43.4) AUS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 or more serves per day</td>
<td>6000</td>
<td>49.9 (49.0 - 50.8) GER, IT</td>
<td>208</td>
<td>60.9 (56.2 - 65.2) AUS</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note: All percentages are given with 95% confidence intervals (CI).
Table 6.6: continued

<table>
<thead>
<tr>
<th>Multiple risk factors</th>
<th>2162</th>
<th>20.4 (19.6 - 21.2) IT</th>
<th>73</th>
<th>19.6 (15.9 - 23.9)</th>
<th>67</th>
<th>13.4 (10.7 - 16.7) AUS</th>
<th>18</th>
<th>12.5 (8.0 - 19.0)</th>
<th>&lt;0.001</th>
<th>19.401</th>
</tr>
</thead>
<tbody>
<tr>
<td>No health risk factors</td>
<td>8439</td>
<td>79.6 (78.8 - 80.4)</td>
<td>301</td>
<td>80.4 (76.1 - 84.1)</td>
<td>430</td>
<td>86.6 (83.3 - 89.3) AUS</td>
<td>124</td>
<td>87.5 (81.0 - 92.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At least one health risk factor</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>12016</td>
<td>100.0</td>
<td>442</td>
<td>100.0</td>
<td>573</td>
<td>100.0</td>
<td>164</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: The weighting of data can result in rounding discrepancies or totals not adding. Bonferroni adjustments were performed to adjust for multiple comparisons. Abbreviations IT, GER, GR and AUS indicate significant between birth place groups [AUS=Australia | GER=Germany | IT=Italy | GR=Greece] - Insufficient number for statistical analysis.
6.3.3 Multivariable analysis

Table 6.7 presents the results from the multivariable logistic regression models, which examined the associations between migrant status and health outcomes (presence of chronic conditions, current mental health, psychological distress, suicidal ideation and self-rated health) adjusting for age, sex, other socio-demographic variables and health-related risk factors.

Table 6.7 shows that being German (OR 1.51, CI 95% 1.23-1.88), Italian (OR 2.03, CI 95% 1.70-2.44) or Greek (OR 1.52, CI 95% 1.09-2.44) was associated with a self-rated health outcome of ‘fair or poor’ after adjusting for age, sex, other socio-demographic variables and health-related risk factors (model 3). A protective association was seen amongst German respondents in relation to arthritis and asthma (OR 0.77, CI 95% 0.63-0.95; OR 0.63, CI 95% 0.45-0.89 respectively) (model 3); whilst, Greek-born respondents had a higher risk of having asthma (OR 1.53, CI 95% 1.02-2.29).

Italian and Greek-born individuals had greater odds of having osteoporosis (OR 1.51, CI 95% 1.19-1.91; OR 2.18, CI 95% 1.47-3.23); COPD (OR 1.39, CI 95% 1.01-1.90; OR 1.90, CI 95% 1.15-3.15); diabetes (OR 1.63, CI 95% 1.33-2.01; OR 1.63, CI 95% 1.14-2.33); and psychological distress (OR 2.41, CI 95% 1.83-3.18; OR 1.90, CI 95% 1.14-3.14) adjusting for all covariates. Greek-born individuals had a protective association with CVD (OR 0.28, CI 95% 0.14-0.57) which persisted after adjusting for all covariates. In addition, results from model 3 indicate that those born in Italy had greater odds of experiencing suicidal ideation (OR 2.14, CI 95% 1.14-3.24).

The results from the multivariable analyses indicated that migrant status was shown to be associated with the presence of chronic conditions even after adjusting for various socio-demographic and health-related risk factors. It was also evident that those born in Greece and Italy had higher odds of having a chronic condition than those born in Germany.
Table 6.7: Multivariate analysis of socio-demographic variables and risk factors in relation to self-rated health and selected chronic conditions, using SAMSS data from 2004 to 2012

<table>
<thead>
<tr>
<th></th>
<th>Self-Rated Health (fair/poor)</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Unadjusted</td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 3</td>
<td></td>
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<tr>
<td></td>
<td>OR (OR 95% CI)</td>
<td>p value</td>
<td>OR (OR 95% CI)</td>
<td>p value</td>
<td>OR (OR 95% CI)</td>
<td>p value</td>
</tr>
<tr>
<td><strong>Arthritis</strong></td>
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<tr>
<td>Italy</td>
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<tr>
<td>Greece</td>
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<tr>
<td>Germany</td>
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<tr>
<td>Italy</td>
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<td>Greece</td>
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<tr>
<td>Australia</td>
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<tr>
<td><strong>COPD</strong></td>
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<td>Italy</td>
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<td>Greece</td>
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<tr>
<td>Germany</td>
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<td>Greece</td>
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<td>Australia</td>
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<tr>
<td><strong>Diabetes</strong></td>
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<td>Italy</td>
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<td>Greece</td>
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<td>Germany</td>
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<td>Italy</td>
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<td>Greece</td>
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<tr>
<td>Australia</td>
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<tr>
<td><strong>Psyc. Distress</strong></td>
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<tr>
<td>Italy</td>
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<tr>
<td>Greece</td>
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<tr>
<td>Germany</td>
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<td></td>
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<tr>
<td>Italy</td>
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<tr>
<td>Greece</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Suicidal Ideation</strong></td>
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</tr>
<tr>
<td>Italy</td>
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<tr>
<td>Greece</td>
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<tr>
<td>Germany</td>
<td></td>
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</tr>
</tbody>
</table>

Model 1: Adjusting for age & sex; Model 2: Adjusting for age, sex, & other socio-demographics [education, income, & marital status]; Model 3: Adjusting for age, sex, other socio-demographics & health-related risk factors [high blood pressure, high cholesterol, physical activity, BMI, smoking status, alcohol use, vegetable and fruit consumption]

Note: Data were weighted to the 2011 Census reflect the age and sex distribution of each birthplace grouping.
6.4 Summary

Study Two aimed to 1) determine if there were differences in the prevalence of chronic conditions and health-related risk factors for common European-born birthplace groups compared to their Australian-born counterparts and 2) investigate determinants of immigrant health for common European-born birthplace groups compared to their Australian-born counterparts.

In order to explore differences in socio-demographic variables, health outcomes and health-related risk factors Chi square tests were performed (adjusting for multiple comparisons using the Bonferroni adjustment). The results for this component of Study Two indicated that there were significant differences in the health profiles of birthplace groups, where some groups (i.e. Italian and Greeks) experienced a higher prevalence of some chronic conditions and risk factors compared to those born in Australia or Germany. In terms of chronic conditions and mental health outcomes, those born in Greece and Italy had comparatively higher rates of osteoporosis, diabetes and psychological distress. The Greek-born also had the highest asthma and COPD prevalence estimates and the Italian-born displayed the highest rates of suicidal ideation. CVD was the only chronic condition where the Australian and overseas-born (excluding Greeks) shared similar outcomes.

Furthermore, in terms of health-related behaviours and risk factors the German, Italian and Greek respondents were more likely to report ‘fair or poor’ self-rated health. The Greeks and Italians had the highest proportion of ‘no physical activity’ and were more likely to be ‘obese’. German respondents were more likely to be smokers and those born in Germany and Greece were more likely to report being non-drinkers or low risk drinkers.
The associations between migrant status and health outcomes (presence of chronic conditions, current mental health, psychological distress, suicidal ideation and self-rated health) were explored with multivariable logistic regression models adjusting for age, sex, other socio-demographic variables and health-related risk factors. This investigation demonstrated that migrant status partly explained the health differentials identified, although the actual contribution of migrant status towards health outcomes is unknown and requires further investigation.

Overall, these results highlight that substantial differences exist within and between birthplace groups that can be masked when COB is broadly aggregated (i.e. combining Northern, Western, Eastern and Southern Europe). This is evidenced through the findings from Study One where those born in Europe had worse outcomes for diabetes and lower prevalence rates for arthritis and asthma. There were also other similarities in terms of the prevalence of high blood pressure, the decreases in smoking status and rates of overweight and obesity. It is acknowledged that Study One used a different data source and there were differences in the coding of variables and the aggregation of COB.

Study Two has demonstrated that there are important country differentials and birthplace groups are not homogeneous. For example, when examining differences between the Greek, Italian and German groups those born in Germany tended to have similar health and demographic outcomes to their Australian-born counterparts and in many instances had better outcomes than those born in Greece and Italy; suggesting that some migrant groups may be faring better than others. Therefore, care needs to be taken when interpreting the results from migrant studies where COB is aggregated as some birthplace groups share little more in common than geographical proximity and often these studies do not take into account discrete social, political and cultural differences.
This study adds depth to existing knowledge around migrant health outcomes, in terms of musculoskeletal conditions, asthma and mental health status, which seems to be lacking in the literature. While some of the findings around diabetes, CVD and health-related risk facts have been reported elsewhere (Anikeeva et al. 2010), this study provides additional information and insight into the diversity of outcomes within and between birthplace groups. Furthermore, although the data used in this study is insufficient to mount a comprehensive assessment of the HME, it adequately argues for an alternative view that there is considerable divergence in the long-term health outcomes experienced by selected COB groups.
7.1 Study aims

This study aimed to determine differences in the prevalence of chronic conditions and health-related risk factors for common European-born birthplace groups compared to their Australian-born counterparts. In order to address this aim, secondary data analyses were undertaken on data collected from the 1996/97 Migrant Health Survey (Migrant HS), the 1996/97 Mental Health Survey (Mental HS), and data collected through the SAMSS. This study explores changes in health and health-related outcomes of German, Italian and Greek-born immigrants compared to their Australian-born counterparts, and examines whether those born overseas were more likely to develop chronic conditions in late adulthood.

7.2 Methods

In order to undertake a meaningful analysis of the birthplace groups of interest and to compare these groups at two different time points it was necessary to use multiple secondary data sources. It was possible to use both the Migrant HS and the Mental HS data collected during 1996 and 1997 in this component of the research as both surveys used similar methodological procedures, data were collected over similar periods, and both surveys asked identical data items (including demographic characteristics, specific disease outcomes and health behaviours). The SAMSS survey data, collected between June 2007 and December 2012 was used as a point of comparison to describe changes in health states since 1996/97. SAMSS data were considered directly comparable to the Migrant HS and Mental HS due to the similar nature and methods used (refer to Appendix F for explanatory notes on all data items, Appendix G and H for copies of the Migrant HS and Mental HS questionnaires).
The survey time points, age groups and birthplace groups used in this analysis are described in Table 7.1.

<table>
<thead>
<tr>
<th>Table 7.1: Summary of population of interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migrant HS and the Mental HS</td>
</tr>
<tr>
<td>Data collection period</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>Birthplace groups</td>
</tr>
</tbody>
</table>

*Due to issues with small numbers five years of SAMSS survey data was collapsed, a discussion of the limitations and interpretation issues are discussed below.

7.2.1 SERCIS Migrant HS and Mental HS background

The Migrant HS undertaken during October 1996 and February 1997 and the Mental HS undertaken in June and July of 1997, were two large-scale data collections utilising the Social Environment Risk Context Information System (SERCIS) methodology (as described in Taylor, Dal Grande & Parsons 1997a; Taylor et al. 1997).

SERCIS, which is no longer operational, was a telephone monitoring system used to undertake large-scale data collections. SERCIS data collections produced reliable and representative data on the South Australian population and typically were used for planning purposes. The information collected generally related to health and health-related issues, health services utilisation and consumer perspectives. Surveys were undertaken on a regular with or ad hoc surveys being undertaken from time to time. The Behavioural Epidemiology Unit, South Australian Health Commission (SAHC) (now known as Population Research and Outcome Studies (PROS), UoA) administered SERCIS and a steering committee oversaw the development of questionnaires.

The Migrant HS was commissioned by the Migrant Health Service, a division of the SAHC to collect data to support health-planning efforts being undertaken at the time. The Migrant HS aimed to describe the health status, health behaviours, patterns of health service use, prevalence
of specific diseases and experiences with the Australian health system of those aged 18 years and over who were born in a NES country. The questionnaire was developed by SERCIS personnel, in conjunction with staff from the Migrant Health Service.

The Mental HS aimed to describe the mental health status of South Australian adults aged 18 years and over and compared various risk factors, chronic conditions, patterns of health service use and medication use between those with and without a mental illness. The questionnaire was developed by SERCIS personnel, staff employed at the Department of Psychiatry at the University of Adelaide, major teaching hospitals, and other mental health professionals. A working group was established to assess the suitability of questions, topic areas and priorities.

This next section provides details on SERCIS methodology and provides specific information on the Migrant HS and the Mental HS. SAMSS shares similar methodological aspects to SERCIS and details regarding SAMSS methodology have previously been detailed in Chapter 6. This section only includes details relevant to Study Three where analysis of SAMSS data was limited to data collected between 2007 to 2012 rather than 2004 to 2012 as detailed in Section 6.2.

7.2.2 Sample and sampling procedure (SERCIS Migrant HS and Mental HS)

Migrant Health Survey
The population of interest in the Migrant HS were those aged 18 years and over, who were born in a NES country where English was not the primary language spoken. The sampling procedure for this survey was approached in three stages and n=3354 interviews were achieved.
Stage One:
In 1996 five separate surveys were undertaken in the following regions: Southern Adelaide, Western Adelaide, Northern Adelaide, country South Australia and across the whole of the state utilising SERCIS methodology (see Table 7.2). In all of the surveys, participants were asked for COB information and whether they would be willing to be recontacted by the SAHC to be involved in future research. Those from a NES country who gave permission to be re-contacted formed the sampling frame for Stage One. Overall 10,749 respondents were interviewed in 1996, of which 9.4% were from a NES country. In total, 932 NES participants gave permission to be re-contacted and 92.5% of participants went on to be re-interviewed for the Migrant HS. In addition, other consenting members of re-contacted households who were born in a NES country and aged 18 years and over were also eligible to be interviewed for the Migrant HS; a total of 970 interviews were completed with households from Stage One (Taylor et al. 1997).

The five surveys undertaken in 1996 employed slightly different sampling procedure due to their scope and focus at the time. The sampling procedure for surveys undertaken in Southern, Western and Northern Adelaide used the EWP to select a random sample of eligible telephone numbers. Eligible telephone listings included were those corresponding to postcodes from each of the Health Planning Areas not overlapping with Local Government Areas (LGAs) outside the region (Taylor et al. 1997).
The Country SA survey saw the selection of telephone listing from the regional EWP listings, including listing from seven country health regions. Regions with small populations were oversampled to ensure that there was adequate power for statistical analyses of data. The whole of state sampling procedure also used the EWP as its sampling frame. All households in South Australia with a connected telephone number were eligible for selection. A random sample of telephone numbers from across the state were selected from the EWP telephone listings. Those eligible to participate in the SERCIS surveys undertaken in 1996 were individuals aged 18 years and over who were the last to have a birthday in the household. One interview per household was conducted and non-contactable individuals were not replaceable.

Stage Two & Stage Three
To ensure the representativeness of the Migrant Health Survey, Stage Two of the sampling procedure involved a targeted data collection of the eastern suburbs of Adelaide (see Table 7.3). A sample was drawn from the EWP and included households from the eastern suburbs of Adelaide with a connected telephone number. Initially, those answering the telephone who were 18 years over and born in NES country were interviewed. Other consenting members of the household also born in a NES country aged 18 years and over were recruited. Contact was made with 1504 households of which 249 included people from a NES country; 335 interviews were conducted in Stage Two.

<table>
<thead>
<tr>
<th>Table 7.3: Summary of Stage Two and Stage Three sampling procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Households Contacted</strong></td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td><strong>n</strong></td>
</tr>
<tr>
<td><strong>Migrant Health Survey</strong></td>
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<tr>
<td>Stage Two</td>
</tr>
<tr>
<td>Stage Three</td>
</tr>
</tbody>
</table>

Stage Three of the sampling procedure was undertaken to increase the overall sample size. A random sample was drawn from the EWP where all households in South Australia with a
connected telephone number were eligible for selection. Initially participants answering the phone were interviewed providing they were born in a NES country and over 18 years of age. As was previously the case, other members of the household could be recruited for participation if they were born in a NES country and aged 18 years and over. Overall, of the 12,132 households contacted, 1555 were eligible to participate. A total number of 2049 interviews were conducted from Stage Three (refer to Table 7.3) (Taylor et al. 1997).

Mental HS – Sample Procedure
Whilst the Migrant HS used a multi-staged sampling strategy to produce a large and representative sample of South Australia’s NES migrant population, its sampling frame did not include those born in Australia. Therefore participants (and their corresponding responses) reporting to be born in Australia were included in this component of the research. The sample for Mental HS was randomly selected from the EWP South Australian connected telephone listings; participants eligible to participate were those aged 18 years and over who were the last to have a birthday in the household. Overall, 2503 interviews were conducted of which 1929 (77.1%) were born in Australia, see Table 7.4 (Taylor, Dal Grande & Parsons 1997a).

<table>
<thead>
<tr>
<th>Table 7.4: Summary of the Mental Health Survey sampling procedure</th>
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<tbody>
<tr>
<td><strong>Mental Health Survey</strong></td>
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<td>--------------------------</td>
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<tr>
<td></td>
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</tbody>
</table>

7.2.3 Informed consent
The Migrant HS and Mental HS both sent out a letter of introduction to each household within their specific sampling frame, detailing the purpose of the survey and when potential respondents should expect to be contacted. Verbal consent was sought from participants prior to the commencement of the interview.
7.2.4 Pilot Testing
Pilot testing of both the Migrant HS (n=50) and Mental HS (n=50) questionnaire was undertaken prior to the commencement of the main surveys. Slight amendments were made to the original questionnaire, in both cases due to the information obtained during pilot testing.

7.2.5 Data collection
Data were collected for the Migrant HS and the Mental HS through a third party data collection agency, namely Harrison Health Research. The Migrant HS pilot testing and Stages One and Two of data collection occurred in September of 1996. Stage Three of the data collection occurred during November 1996 to February 1997. The Mental HS was undertaken in June and July of 1997. Interviews were conducted via CATI technology and each household was contacted up to five times before they were considered non-contactable. There was non-replacement for non-contactable households.

Participants involved in the Migrant HS were able to arrange an appointment time to complete the interview in one of the following languages: English, Italian, Greek, Vietnamese, Spanish, Polish, Chinese, Croatian, Hungarian, Cambodian, Bosnian, Serbian, Cantonese, Mandarin or Persian. Participants involved in the Mental HS were able to complete the interview in English, Italian, Greek and Vietnamese, although only participants born in Australia were included in this analysis. All interviews took approximately 15 minutes to complete.

7.2.6 Validation
Both surveys implemented a validation procedure. This process involved 10% of all interviewers’ work being checked, at random, by the supervisor.

7.2.7 Data items
The questions asked of participants involved in each of the surveys were considered in the majority of cases directly comparable. If there were differences, data items were excluded or
where possible re-coded to allow comparisons to be made between surveys. For the purposes of this study, relevant Migrant HS data and Mental HS data were combined and in the following sections will be referred to as the Migrant Health Survey (MHS).

**Demographic and socio-demographic characteristics**

Participants in both the MHS and SAMSS were asked their age in years, country of birth (analysis was limited to those born in Australia, Germany, Italy and Greece/Cyprus), sex (male; female), gross household income (household income was coded into $20,001 or more; less than $20,000; and not stated). Participants were asked to report their marital status (married/living with a partner; separated/divorced; widowed; never married). MHS participants were asked if they were ‘single’ whilst SAMSS participants were not; in this case MHS respondents reporting being ‘single’ were categorised as ‘never married’.

**Chronic conditions and health status**

All participants were asked if a doctor had ever told them they had arthritis, osteoporosis and diabetes. In terms of CVD, SAMSS participants were asked whether a doctor had ever told them if they had a heart attack, angina, heart disease and stroke, and MHS participants were asked if they had ever had a heart attack, angina or a stroke. The CVD variable in this analysis excluded heart disease in order to make the data items comparable.

In SAMSS, asthma was defined as a doctor diagnosis of asthma and experiencing asthma symptoms and/or treatment for asthma in the preceding 12 months (AIHW 2007). MHS survey participants were considered to have asthma if a doctor had ever told them that they had the condition. SAMSS and MHS respondents were asked to rate their overall health as excellent, very good, good, fair or poor; self-rated health was dichotomised into ‘excellent, very good, good’ vs ‘fair, poor’.
Risk factors
BMI was calculated based upon self-reported weight and height information obtained at the time of the interview. BMI was calculated as weight in kilograms divided by height (m²) where participants were categorised as either ‘underweight (≤18.5), ‘normal (18.5 to 24)’, ‘overweight (25 to 29)’ or ‘obese (≥ 30)’ (Tan 2004). Information on smoking status (non-smoker; ex-smoker; current smoker) was also collected; items included whether the participant currently smoked and/or whether they had ever smoked regularly.

7.2.8 Migrant HS, Mental HS and SAMSS Response Rates
The response rates for the Migrant HS and the Mental HS are provided in Table 7.5. The Stages One, Two and Three response rates were 84.3%, 73.9% and 76.0% (respectively) and the response rate for the Mental HS was 74.0%.

Table 7.5: Migrant Health Survey and Mental Health Survey response rates

<table>
<thead>
<tr>
<th></th>
<th>Stage One</th>
<th>Stage Two</th>
<th>Stage Three</th>
<th>Mental HS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Sample</td>
<td>932</td>
<td>2300</td>
<td>18,000</td>
<td>3750</td>
</tr>
<tr>
<td>Sample loss*</td>
<td>78</td>
<td>430</td>
<td>2027</td>
<td>366</td>
</tr>
<tr>
<td>Refusals/non-contactable**</td>
<td>134</td>
<td>532</td>
<td>3841</td>
<td>881</td>
</tr>
<tr>
<td>Households contacted</td>
<td>720</td>
<td>1504</td>
<td>12132</td>
<td>2503</td>
</tr>
<tr>
<td>Response rate (%)</td>
<td>84.3</td>
<td>73.9</td>
<td>76.0</td>
<td>74.0</td>
</tr>
</tbody>
</table>

*Sample loss was a result of non-connected numbers, non-residential numbers and fax/modem connections
**Refusals comprised of respondents refusing to participate (incl. those who were incapacitated), households non-contactable after five attempts to be reached, and those not completing the full interview.

The overall response rate for the SAMSS data, collected during January 2007 to December 2012 was 69.4%. A summary of the response and participation rates are below (Table 7.6).

Table 7.6: Summary of SAMSS response rates during January 2007 to December 2012

<table>
<thead>
<tr>
<th>Year</th>
<th>Response Rate (%)</th>
<th>Participation Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>67.9</td>
<td>73.6</td>
</tr>
<tr>
<td>2008</td>
<td>63.1</td>
<td>70.2</td>
</tr>
<tr>
<td>2009</td>
<td>65.4</td>
<td>72.1</td>
</tr>
<tr>
<td>2010</td>
<td>64.4</td>
<td>71.4</td>
</tr>
<tr>
<td>2011</td>
<td>62.7</td>
<td>68.7</td>
</tr>
<tr>
<td>2012</td>
<td>61.6</td>
<td>69.9</td>
</tr>
<tr>
<td>Overall 2007/12</td>
<td>69.4</td>
<td>77.0</td>
</tr>
<tr>
<td>Total number of interviews</td>
<td>46,842</td>
<td></td>
</tr>
</tbody>
</table>
7.2.9 Weighting
The MHS data were weighted according to the 1991 Census age and sex data for each of the overseas and Australian-born population groups to ensure representative estimates were produced (Taylor, Dal Grande & Parsons 1997a; Taylor et al. 1997). SAMSS data were weighted according to the weighting procedure described in Section 6.2.10.

7.2.10 Study sample
The final MHS sample comprised of participants born in Australia (n=403), Germany (n=120), Italy (n=346) and Greece (n=166) who were 50 to 69 years of age at the time of the interview (Table 7.7).

Table 7.7: Breakdown of the MHS sample by birthplace group participants aged 50-69 years, October 1996 - July 1997

<table>
<thead>
<tr>
<th>MHS*</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian-born</td>
<td>403</td>
<td>39.0</td>
</tr>
<tr>
<td>German-born</td>
<td>120</td>
<td>11.6</td>
</tr>
<tr>
<td>Italian-born</td>
<td>346</td>
<td>33.4</td>
</tr>
<tr>
<td>Greek-born*</td>
<td>166</td>
<td>16.0</td>
</tr>
<tr>
<td>Total sample</td>
<td>1035</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*The Greek-born category also includes participants born in Cyprus.

SAMSS data collected between January 2007 and December 2012 were chosen for analysis in Study Three. A breakdown of the sample by year and birthplace group is provided below in Table 7.8.

Table 7.8: Breakdown of SAMSS sample by year and birthplace group participants aged 60-79 years, SAMSS from January 2007 and December 2012

<table>
<thead>
<tr>
<th></th>
<th>Australian-born</th>
<th>German-born</th>
<th>Italian-born</th>
<th>Greek-born**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>2007</td>
<td>1395</td>
<td>14.3</td>
<td>48</td>
<td>12.1</td>
</tr>
<tr>
<td>2008</td>
<td>1455</td>
<td>14.9</td>
<td>61</td>
<td>15.5</td>
</tr>
<tr>
<td>2009</td>
<td>1443</td>
<td>14.8</td>
<td>72</td>
<td>18.3</td>
</tr>
<tr>
<td>2010</td>
<td>2204</td>
<td>22.6</td>
<td>88</td>
<td>22.5</td>
</tr>
<tr>
<td>2011</td>
<td>1395</td>
<td>14.3</td>
<td>48</td>
<td>12.1</td>
</tr>
<tr>
<td>2012</td>
<td>1455</td>
<td>14.9</td>
<td>61</td>
<td>15.5</td>
</tr>
<tr>
<td>Total</td>
<td>9742</td>
<td>100.0</td>
<td>392</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**The Greek-born category also includes participants born in Cyprus.
7.2.11 Data analysis

Study Three used data collected in 1996/97 through the Migrant HS and the Mental HS as the first time point of interest where analysis was limited to those aged between 50 to 69 years. This age range was selected as Migrant HS and Mental HS participants were, at the time, more likely to be aged between 40 and 69 years compared to any other age group. SAMSS survey data collected between January 2007 and December 2012 was the second time point of interest and analysis was limited to those aged between 60 to 79 years complementing the ten-year age grouping used in the first time point. In addition, it was also necessary to aggregate the SAMSS survey data to overcome issues with small numbers for the overseas-born groups (as seen in Table 7.8 above) and to ensure that sufficient numbers were available to perform statistical analyses.

The socio-demographic variables, health outcomes and health-related risk factors for each of the four birthplace groups were explored using descriptive statistics. To make comparisons across birthplace groups directly comparable, two analytical techniques were employed. Firstly, age-sex standardised prevalence estimates were produced for chronic conditions [arthritis, osteoporosis, asthma, diabetes and CVD] and health-related risk factors [self-rated health, BMI and smoking status]. The Australian 2011 Census data was used as the standard population. Secondly, the MHS and SAMSS data were pooled and age-sex adjusted marginal probabilities were computed in order to explore the probability of each birthplace group developing a chronic condition in 1996/97 and in 2007 to 2012. This analysis also explored whether the risk of a chronic disease outcome had increased over time, and whether the risk of a chronic disease outcome was higher for migrants compared to their Australian-born counterparts. All analyses were performed in SPSS, version 20.0 and Stata, version 13.
7.3 Results

7.3.1 Introduction
This section presents the results from Study Three which used data collected from the 1996/97 Migrant HS, the 1996/97 Mental HS and data collected through the SAMSS. This study explored changes in health and health-related outcomes of Australian (n=403, n=9742, respectively), German (n=120, n=392, respectively), Italian (n=346, n=379, respectively) and Greek-born (n=166, n=143, respectively) individuals aged 50 to 69 in 1996/97 and 60 to 79 years in 2007 to 2012. This study aimed to explore changes in health and health-related outcomes of birthplace groups at two points in time, and to investigate whether the HME is reflected in changes to the prevalence of chronic conditions and risk factors for selected birthplace groups compared to their Australian-born counterparts.

7.3.2 Descriptive analysis
In order to examine changes in prevalence over time, representative estimates were produced for each birthplace group using weighted data in 1996/97 and in 2007 to 2012. These data were weighted according to age-sex distribution for each birthplace group and these results are presented in Table 7.9, Table 7.10 and Table 7.11 below. However, the weighted age-sex distribution for each of the birthplace groups were different, for example Greek and Italian-born groups were older than their Australian-born counterparts, which means that comparisons between birthplace groups cannot be made. In order for comparisons to be made between birthplace groups, age-sex standardised prevalence estimates needed to be produced (see Sections 7.3.3 to 7.3.5 for further information).

The socio-demographic characteristics of respondents aged 50 to 69 and participants aged 60 to 79 are detailed in Table 7.9. There was little difference in the sex profile of participants in either corresponding period. Whilst a majority of participants in 1996/97 were aged between 50 to 59...
years, a higher proportion of those born in Greece and Italy were aged between 60 to 69 years. The majority of SAMSS participants born in Australia (64.9%) and Germany (63.2%) were aged between 60 to 69, compared to those born in Greece (58.9%) and Italy (58.6%) who were more likely to be 70 to 79 years.

In 1996/97, the majority of German (50.0%) and Greek (65.5%) participants reported an income of less than $20,000 compared to those born in Australia (37.5%) and Italy (42.0%). Up to 6% of all participants did not state their annual income. In 2007 to 2012, the proportion of respondents reporting earning less than $20,000 was less for all groups (Australia: 20.1%, Germany: 21.5%, Italy: 24.4% and Greece: 28.6%). There was also a general increase in respondents not stating their annual income with those born in Italy (27.1%) having the highest proportion. The vast majority of participants were either married or living with a partner in both 1996/97 and 2007 to 2012, although the proportion of widowed increased for all groups.

Chronic condition outcomes were examined by COB in 1996/96 and in 2007 to 2012 and the results are presented in Table 7.10. In 1996/97 Australian-born participants had the highest proportion of arthritis (36.8%) followed by those born in Italy (32.9%), Greece (32.6%) and Germany (31.3%). The prevalence of arthritis increased in all birthplace groups in 2007 to 2012 with the highest prevalence reported in the Greek (51.9%) and Italian (49.8%) birthplace groups followed by those born in Australia (44.0%) and Germany (36.8%). The Australian (3.9%), Italian (3.9%) and German (8.5%) born had the highest prevalence of osteoporosis in 1996/97. In 2007 to 2012, there was an increase in osteoporosis for all groups with those born in Italy and Greece having the highest proportion of osteoporosis (17.4% and 24.4% respectively).
In 1996/97, Australian-born participants (11.4%) had the highest proportion of asthma, followed by those born in Italy (8.9%), Greece (6.4%) and Germany (6.0%). In 2007 to 2012, the prevalence of asthma increased across all birthplace groups particularly for those born in Greece (19.1%) and Italy (14.2%) followed by those born in Australia (12.6%) and Germany (9.6%). The prevalence of diabetes in 1996/97 was highest for the Greek (9.0%) and Italian (8.7%). In 2007 to 2012, there were increases in diabetes for those born in Greece (32.4%) and Italy (26.1%), with those born in Australia (14.8%) having the lowest proportion.

The prevalence of CVD in 1996/97 was 6.6% and 6.9% for those born in Greece and Italy, 7.3% for those born in Germany and 9.2% for those born in Australia. There was a general increase in CVD in 2007 to 2012 for all birthplace groups particularly those born in Italy (16.0%), Germany (14.2%) and Australia (12.1%), whilst those from Greece (9.8%) had the lowest proportion.

Table 7.11 details the various health-related risk factors for the Australian, German, Italian and Greek-born and respondents. Australian (78.7%) and German (78.4%) respondents were more likely to report their self-rated health as ‘excellent, very good or good’ compared to those born in Italy (60.8%) and Greece (58.1%). In 2007 to 2012, over half of all the respondents reported ‘excellent, very good or good’ health with those born in Italy (42.1%) and Greece (41.1%) having the highest proportion of self-report ‘fair or poor’ health.

In 1996/97, 42.9% and 41.0% of Australian and German-born (respectively) participants were classified as underweight/normal. The majority of those born in Italy and Greece were classified as overweight (42.4% and 49.3%, respectively) while the Italian-born (24.8%) had the highest proportion of obesity compared to all other groups (Australia: 19.9%, Germany: 17.3%, and Greece: 19.4%). In 2007 to 2012, the majority of all participants were classified as overweight.
(Australia: 41.2%, Germany: 49.5%, Italy: 46.8% and Greece: 48.4%) and those born in Italy and Greece had the highest proportion of obesity (32.6%, 31.3%, respectively). In 1996/97, the highest proportion of smokers were Greeks (20.7%), followed by those in Italy (18.7%), Germany (16.7%) and Australia (13.0%); while from 2007 to 2012, those born in Australia (8.1%) and Germany (9.5%) had the highest smoking prevalence. There was also a general increase in the ex-smoker category across all birthplace groups from 1996/97 to 2007-2012.
Table 7.9: Unadjusted weighted socio-demographic profile of Australian, German, Italian and Greek-born South Australians aged 50-69 years, using 1996/97 SERCIS data and 2007-2012 SAMSS data

<table>
<thead>
<tr>
<th></th>
<th>Australian-born</th>
<th>German-born</th>
<th>Italian-born</th>
<th>Greek-born*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>% (95% CI)</td>
<td>n</td>
<td>% (95% CI)</td>
</tr>
<tr>
<td><strong>Sex – 1996/97 (50-69 years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>202</td>
<td>50.1 (45.2 - 54.9)</td>
<td>59</td>
<td>49.2 (40.4 - 58.0)</td>
</tr>
<tr>
<td>Female</td>
<td>201</td>
<td>49.9 (45.1 - 54.8)</td>
<td>61</td>
<td>50.8 (42.0 - 59.6)</td>
</tr>
<tr>
<td><strong>Sex – 2007-2012 (60-79 years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>4610</td>
<td>47.3 (46.3 - 48.3)</td>
<td>194</td>
<td>49.5 (44.6 - 54.5)</td>
</tr>
<tr>
<td>Female</td>
<td>5133</td>
<td>52.7 (51.7 - 53.7)</td>
<td>198</td>
<td>50.5 (45.5 - 55.4)</td>
</tr>
<tr>
<td><strong>Age – 1996/97 (50-69 years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50 to 59 years</td>
<td>230</td>
<td>56.9 (52.1 - 61.7)</td>
<td>61</td>
<td>50.8 (42.0 - 59.5)</td>
</tr>
<tr>
<td>60 to 69 years</td>
<td>174</td>
<td>43.1 (38.3 - 47.9)</td>
<td>59</td>
<td>49.2 (40.5 - 58.0)</td>
</tr>
<tr>
<td><strong>Age – 2007-2012 (60-79 years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 to 69 years</td>
<td>6323</td>
<td>64.9 (63.9 - 65.8)</td>
<td>247</td>
<td>63.2 (58.3 - 67.8)</td>
</tr>
<tr>
<td>70 to 79 years</td>
<td>3420</td>
<td>35.1 (34.2 - 36.1)</td>
<td>144</td>
<td>36.8 (32.2 - 41.7)</td>
</tr>
<tr>
<td><strong>Income – 1996/97 (50-69 years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$20,001 or more</td>
<td>222</td>
<td>60.3 (55.2 - 65.2)</td>
<td>54</td>
<td>47.0 (38.1 - 56.1)</td>
</tr>
<tr>
<td>Less than $20,001</td>
<td>138</td>
<td>37.5 (32.7 - 42.5)</td>
<td>57</td>
<td>50.0 (40.9 - 59.0)</td>
</tr>
<tr>
<td>Not stated</td>
<td>8</td>
<td>2.2 (1.1 - 4.3)</td>
<td>3</td>
<td>3.0 (1.1 - 8.0)</td>
</tr>
<tr>
<td><strong>Income – 2007-2012 (60-79 years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$20,001 or more</td>
<td>6070</td>
<td>62.3 (61.3 - 63.3)</td>
<td>224</td>
<td>57.3 (52.3 - 62.1)</td>
</tr>
<tr>
<td>Less than $20,001</td>
<td>1963</td>
<td>20.1 (19.4 - 21.0)</td>
<td>84</td>
<td>21.5 (17.7 - 25.8)</td>
</tr>
<tr>
<td>Not stated</td>
<td>1709</td>
<td>17.5 (16.8 - 18.3)</td>
<td>83</td>
<td>21.3 (17.5 - 25.6)</td>
</tr>
<tr>
<td><strong>Marital status – 1996/97 (50-69 years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/living with partner</td>
<td>327</td>
<td>81.0 (76.9 - 84.5)</td>
<td>98</td>
<td>81.4 (73.5 - 87.3)</td>
</tr>
<tr>
<td>Separated/divorced</td>
<td>37</td>
<td>9.1 (8.6 - 12.3)</td>
<td>9</td>
<td>7.8 (4.2 - 14.0)</td>
</tr>
<tr>
<td>Widowed</td>
<td>25</td>
<td>6.2 (4.2 - 9.0)</td>
<td>10</td>
<td>8.2 (4.5 - 14.4)</td>
</tr>
<tr>
<td>Never married</td>
<td>15</td>
<td>3.7 (2.3 - 6.1)</td>
<td>3</td>
<td>2.7 -</td>
</tr>
<tr>
<td><strong>Marital status – 2007-2012 (60-79 years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/living with partner</td>
<td>7366</td>
<td>75.6 (74.8 - 76.5)</td>
<td>279</td>
<td>71.1 (66.5 - 75.4)</td>
</tr>
<tr>
<td>Separated/divorced</td>
<td>866</td>
<td>8.9 (8.3 - 9.5)</td>
<td>52</td>
<td>13.2 (10.2 - 16.9)</td>
</tr>
<tr>
<td>Widowed</td>
<td>1154</td>
<td>11.8 (11.2 - 12.5)</td>
<td>58</td>
<td>14.8 (11.7 - 18.7)</td>
</tr>
<tr>
<td>Never married</td>
<td>340</td>
<td>3.5 (3.1 - 3.9)</td>
<td>3</td>
<td>0.8 -</td>
</tr>
</tbody>
</table>

Notes: The weighting of data can result in rounding discrepancies or totals not adding. SERCIS Participants aged 50-69 in 1996/97 (Australia n=403, Germany n=120, Italy n=346, Greece n=166). SAMSS Participants aged 60-79 in 2007-2012 (Australia n=9742, Germany n=392, Italy n=379, Greece n=143).

- Insufficient number for statistical analysis | *The Greece variable also includes those born in Cyprus
Table 7.10: Unadjusted weighted chronic condition profile of Australian, German, Italian and Greek-born South Australians aged 50-79 years, using 1996/97 SERCIS data and 2007-2012 SAMSS data

<table>
<thead>
<tr>
<th>Condition</th>
<th>Australian-born</th>
<th>German-born</th>
<th>Italian-born</th>
<th>Greek-born*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>% (95% CI)</td>
<td>n</td>
<td>% (95% CI)</td>
</tr>
<tr>
<td><strong>Arthritis (Yes)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996/97 (50-69 years)</td>
<td>148</td>
<td>36.8 (32.3 - 41.6)</td>
<td>38</td>
<td>31.3 (23.7 - 40.0)</td>
</tr>
<tr>
<td>2007 – 2012 (60-79 years)</td>
<td>4284</td>
<td>44.0 (43.0 - 45.0)</td>
<td>144</td>
<td>36.8 (32.2 - 41.7)</td>
</tr>
<tr>
<td><strong>Osteoporosis (Yes)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996/97 (50-69 years)</td>
<td>16</td>
<td>3.9 (2.4 - 6.3)</td>
<td>10</td>
<td>8.5 (4.7 - 14.9)</td>
</tr>
<tr>
<td>2007 – 2012 (60-79 years)</td>
<td>986</td>
<td>10.1 (9.5 - 10.7)</td>
<td>42</td>
<td>10.7 (8.0 - 14.2)</td>
</tr>
<tr>
<td><strong>Asthma (Yes)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996/97 (50-69 years)</td>
<td>46</td>
<td>11.4 (8.7 - 14.9)</td>
<td>7</td>
<td>6.0 (3.0 - 11.7)</td>
</tr>
<tr>
<td>2007 – 2012 (60-79 years)</td>
<td>1231</td>
<td>12.6 (12.0 - 13.3)</td>
<td>38</td>
<td>9.6 (7.0 - 12.9)</td>
</tr>
<tr>
<td><strong>Diabetes (Yes)</strong></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1996/97 (50-69 years)</td>
<td>20</td>
<td>5.0 (3.3 - 7.6)</td>
<td>4</td>
<td>3.3 -</td>
</tr>
<tr>
<td>2007 – 2012 (60-79 years)</td>
<td>1442</td>
<td>14.8 (14.1 - 15.5)</td>
<td>70</td>
<td>17.8 (14.3 - 21.9)</td>
</tr>
<tr>
<td><strong>Cardiovascular (Yes)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996/97 (50-69 years)</td>
<td>37</td>
<td>9.2 (6.8 - 12.5)</td>
<td>9</td>
<td>7.3 (3.8 - 13.4)</td>
</tr>
<tr>
<td>2007 – 2012 (60-79 years)</td>
<td>1182</td>
<td>12.1 (11.5 - 12.8)</td>
<td>56</td>
<td>14.2 (11.1 - 18.0)</td>
</tr>
</tbody>
</table>

Notes: The weighting of data can result in rounding discrepancies or totals not adding.
SERCIS Participants aged 50-69 in 1996/97 (Australia n=403, Germany n=120, Italy n=346, Greece n=166).
SAMSS Participants aged 60-79 in 2007-2012 (Australia n=9742, Germany n=392, Italy n=379, Greece n=143).
- Insufficient number for statistical analysis
*The Greece variable also includes those born in Cyprus.
Table 7.11: Unadjusted weighted risk factor profile of Australian, German, Italian and Greek-born South Australians aged 50-79 years, using 1996/97 SERCIS data and 2007-2012 SAMSS data

<table>
<thead>
<tr>
<th>Self-rated health – 1996/97 (50-69 years)</th>
<th>Australian-born</th>
<th>German-born</th>
<th>Italian-born</th>
<th>Greek-born*</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>% (95% CI)</td>
<td>n</td>
<td>% (95% CI)</td>
<td>n</td>
</tr>
<tr>
<td>Excellent, very good, good</td>
<td>317</td>
<td>78.7 (74.5 - 82.4)</td>
<td>94</td>
<td>78.4 (70.3 - 84.9)</td>
</tr>
<tr>
<td>Fair, poor</td>
<td>86</td>
<td>21.3 (17.6 - 25.5)</td>
<td>26</td>
<td>21.6 (15.1 - 29.7)</td>
</tr>
<tr>
<td>Self-rated health – 2007-2012 (60-79 years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent, very good, good</td>
<td>7526</td>
<td>77.2 (76.4 - 78.1)</td>
<td>285</td>
<td>72.7 (68.1 - 76.9)</td>
</tr>
<tr>
<td>Fair, poor</td>
<td>2216</td>
<td>22.8 (21.9 - 23.6)</td>
<td>107</td>
<td>27.3 (23.1 - 31.9)</td>
</tr>
<tr>
<td>BMI – 1996/97 (50-69 years)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight/normal</td>
<td>171</td>
<td>42.9 (38.2 - 47.9)</td>
<td>49</td>
<td>41.0 (32.5 - 50.0)</td>
</tr>
<tr>
<td>Overweight</td>
<td>148</td>
<td>37.1 (32.5 - 42.0)</td>
<td>49</td>
<td>41.7 (33.2 - 50.7)</td>
</tr>
<tr>
<td>Obese</td>
<td>79</td>
<td>19.9 (16.3 - 24.1)</td>
<td>21</td>
<td>17.3 (11.6 - 25.1)</td>
</tr>
<tr>
<td>BMI – 2007-2012 (60-79 years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Underweight/normal</td>
<td>3025</td>
<td>33.0 (32.0 - 33.9)</td>
<td>121</td>
<td>33.2 (28.5 - 38.2)</td>
</tr>
<tr>
<td>Overweight</td>
<td>3784</td>
<td>41.2 (40.2 - 42.2)</td>
<td>180</td>
<td>49.5 (44.4 - 54.6)</td>
</tr>
<tr>
<td>Obese</td>
<td>2370</td>
<td>25.8 (24.9 - 26.7)</td>
<td>63</td>
<td>17.3 (13.8 - 21.6)</td>
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<tr>
<td>Smoker – 1996/97 (50-69 years)</td>
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<td></td>
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<tr>
<td>Non smoker</td>
<td>229</td>
<td>56.8 (52.0 - 61.6)</td>
<td>50</td>
<td>41.3 (32.9 - 50.2)</td>
</tr>
<tr>
<td>Ex-smoker</td>
<td>122</td>
<td>30.2 (25.9 - 34.9)</td>
<td>51</td>
<td>42.0 (33.6 - 50.9)</td>
</tr>
<tr>
<td>Current smoker</td>
<td>52</td>
<td>13.0 (10.0 - 16.6)</td>
<td>20</td>
<td>16.7 (11.1 - 24.4)</td>
</tr>
<tr>
<td>Smoker – 2007-2012 (60-79 years)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non smoker</td>
<td>4435</td>
<td>45.5 (44.5 - 46.5)</td>
<td>145</td>
<td>37.2 (32.5 - 42.1)</td>
</tr>
<tr>
<td>Ex-smoker</td>
<td>4515</td>
<td>46.4 (45.4 - 47.3)</td>
<td>208</td>
<td>53.3 (48.4 - 58.2)</td>
</tr>
<tr>
<td>Current smoker</td>
<td>791</td>
<td>8.1 (7.6 - 8.7)</td>
<td>37</td>
<td>9.5 (7.0 - 12.8)</td>
</tr>
</tbody>
</table>

Notes: The weighting of data can result in rounding discrepancies or totals not adding.
SERCIS Participants aged 50-69 in 1996/97 (Australia n=403, Germany n=120, Italy n=346, Greece n=166).
SAMSS Participants aged 60-79 in 2007-2012 (Australia n=9742, Germany n=392, Italy n=379, Greece n=143).
*The Greece variable also includes those born in Cyprus.
7.3.3 Comparison across birthplace groups – Age-sex standardisations

In order to facilitate the direct comparison of summary measures across birthplace groups, age-sex standardised estimates were produced for chronic conditions (arthritis, osteoporosis, asthma, diabetes and CVD) and risk factors [self-rated health, BMI and smoking status]. These results are presented in Table 7.12 and Table 7.13. The percentage differences in chronic condition estimates between the two time points were calculated for each of the birthplace groups to explore the rate of change in estimates over time. These results are presented in Section 7.3.4.

The percentage differences and weighted and age-sex standardised chronic disease estimates are detailed in Table 7.12. The weighted proportions, previously provided in Table 7.10, are recapped below to show the effect that the age-sex standardisations had on the summary measures. Over the period from 1996/97 to 2007-2012, there were increases in all chronic condition estimates across all birthplace groups. Whilst the magnitude of increase differed between the weighted and age-sex standardised proportions the patterns observed across birthplace groups were still present. This pattern generally saw a) those born in Italy and Greece with the highest proportion on chronic conditions in 2007 to 2012 (excluding CVD); b) the Australian and German-born sharing similar health outcomes and c) those born overseas with the highest percentage difference in estimates between the two points in time.

The results from Table 7.12 indicate that from 2007 to 2012 those born in Italy and Greece had the highest age-sex standardised proportion of arthritis (49.5% and 49.4% respectively), osteoporosis (16.7% and 19.6%, respectively) and diabetes (24.9% and 24.1% respectively) compared to those born in Australia (arthritis 44.6%, osteoporosis 9.9% and diabetes 14.8%) and Germany (arthritis 39.0%, osteoporosis 10.8% and diabetes 15.1%).
The results least consistent with those previously seen were the changes observed in the prevalence of asthma. The age-sex standardisation reduced the asthma prevalence for those born in Italy (12.2%) and Greece (11.8%) and brought it more in line with the Australian-born (12.7%) asthma prevalence. In spite of this, those born overseas still had the highest changes in asthma prevalence over time. The age-sex standardised CVD prevalence in 2007 to 2012 was highest for those born in Italy (8.8%), followed by the German (6.3%) and Australian (4.6%) born, while those born in Greece maintained their comparatively low prevalence of CVD (2.2%) from 2007 to 2012.

Table 7.12: Weighted and age-sex standardised chronic conditions using SERCIS data from 1996/97 and SAMSS data from 2007 to 2012

<table>
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<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
<td></td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
<td></td>
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<tr>
<td>Arthritis</td>
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<tr>
<td>Australia</td>
<td>36.8 (32.3 - 41.6)</td>
<td>44.0 (43.0 - 45.0)</td>
<td>7.2</td>
<td>36.3 (31.8-40.8)</td>
<td>44.6 (43.7-45.4)</td>
<td>8.3</td>
</tr>
<tr>
<td>Germany</td>
<td>31.3 (23.7 - 40.0)</td>
<td>36.8 (32.2 - 41.7)</td>
<td>5.5</td>
<td>30.4 (24.3-36.5)</td>
<td>39.0 (34.3-43.7)</td>
<td>8.6</td>
</tr>
<tr>
<td>Italy</td>
<td>32.9 (28.1 - 38.0)</td>
<td>49.8 (44.8 - 54.8)</td>
<td>16.9</td>
<td>33.0 (28.3-37.8)</td>
<td>49.5 (45.2-53.8)</td>
<td>16.4</td>
</tr>
<tr>
<td>Greece</td>
<td>32.6 (25.9 - 40.0)</td>
<td>51.9 (43.8 - 59.9)</td>
<td>19.3</td>
<td>31.6 (24.4-38.9)</td>
<td>49.4 (41.7-57)</td>
<td>17.7</td>
</tr>
<tr>
<td>Osteoporosis</td>
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<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Australia</td>
<td>3.9 (2.4 - 6.3)</td>
<td>10.1 (9.5 - 10.7)</td>
<td>6.2</td>
<td>3.8 (2.1-5.6)</td>
<td>9.9 (9.4-10.4)</td>
<td>6.1</td>
</tr>
<tr>
<td>Germany</td>
<td>8.5 (4.7 - 14.9)</td>
<td>10.7 (8.0 - 14.2)</td>
<td>2.2</td>
<td>9.1 (5.3-12.9)</td>
<td>10.8 (8.13-6)</td>
<td>1.7</td>
</tr>
<tr>
<td>Italy</td>
<td>3.9 (2.4 - 6.6)</td>
<td>17.4 (13.9 - 21.5)</td>
<td>13.4</td>
<td>4.4 (2.4-6.4)</td>
<td>16.7 (13.6-19.6)</td>
<td>12.3</td>
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<tr>
<td>Greece</td>
<td>2.7 (1.1 - 6.4)</td>
<td>24.4 (18.1 - 32.1)</td>
<td>21.7</td>
<td>2.8 (0.4-5.2)</td>
<td>19.6 (14.1-25.1)</td>
<td>16.8</td>
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<tr>
<td>Asthma</td>
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<tr>
<td>Australia</td>
<td>11.4 (8.7 - 14.9)</td>
<td>12.6 (12.0 - 13.3)</td>
<td>1.2</td>
<td>11.6 (8.7-14.5)</td>
<td>12.7 (12.2-13.3)</td>
<td>1.1</td>
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<tr>
<td>Germany</td>
<td>6.0 (3.0 - 11.7)</td>
<td>9.6 (7.0 - 12.9)</td>
<td>3.6</td>
<td>5.1 (2.0-8.3)</td>
<td>8.4 (5.8-10.9)</td>
<td>3.2</td>
</tr>
<tr>
<td>Italy</td>
<td>8.9 (6.3 - 12.4)</td>
<td>14.2 (11.1 - 18.1)</td>
<td>5.3</td>
<td>9.5 (6.5-12.6)</td>
<td>12.2 (9.1-15.4)</td>
<td>2.7</td>
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<tr>
<td>Greece</td>
<td>6.4 (3.6 - 11.2)</td>
<td>19.1 (13.5 - 26.4)</td>
<td>12.7</td>
<td>7.1 (2.9-11.4)</td>
<td>11.8 (8.9-16.7)</td>
<td>4.7</td>
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<tr>
<td>Diabetes</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Australia</td>
<td>5.0 (3.3 - 7.6)</td>
<td>14.8 (14.1 - 15.5)</td>
<td>9.8</td>
<td>4.8 (3.0-6.7)</td>
<td>14.8 (14.2-15.4)</td>
<td>10.0</td>
</tr>
<tr>
<td>Germany</td>
<td>3.3 (1.3 - 8.2)</td>
<td>17.8 (14.3 - 21.9)</td>
<td>14.5</td>
<td>3.6 (0.8-6.3)</td>
<td>15.1 (11.7-18.6)</td>
<td>11.6</td>
</tr>
<tr>
<td>Italy</td>
<td>8.7 (6.2 - 12.1)</td>
<td>26.1 (22.0 - 30.8)</td>
<td>17.4</td>
<td>6.4 (5.1-11.2)</td>
<td>24.9 (20.8-29)</td>
<td>16.4</td>
</tr>
<tr>
<td>Greece</td>
<td>9.0 (5.5 - 14.4)</td>
<td>32.4 (25.3 - 40.5)</td>
<td>23.4</td>
<td>10.0 (5.5-14.4)</td>
<td>24.1 (17.2-31.0)</td>
<td>14.1</td>
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</tr>
<tr>
<td>Australia</td>
<td>9.2 (6.8 - 12.5)</td>
<td>12.1 (11.5 - 12.8)</td>
<td>2.9</td>
<td>8.7 (6.1-11.3)</td>
<td>13.3 (12.7-13.9)</td>
<td>4.6</td>
</tr>
<tr>
<td>Germany</td>
<td>7.3 (3.8 - 13.4)</td>
<td>14.2 (11.1 - 18.0)</td>
<td>6.9</td>
<td>6.7 (2.7-10.7)</td>
<td>13.0 (9.9-16.0)</td>
<td>6.3</td>
</tr>
<tr>
<td>Italy</td>
<td>6.9 (4.7 - 10.1)</td>
<td>16.0 (12.6 - 20.0)</td>
<td>9.0</td>
<td>6.1 (3.8-8.4)</td>
<td>14.9 (11.8-17.9)</td>
<td>8.8</td>
</tr>
<tr>
<td>Greece</td>
<td>6.6 (3.7 - 11.4)</td>
<td>9.8 (5.9 - 15.7)</td>
<td>3.2</td>
<td>7.6 (3.6-11.6)</td>
<td>9.7 (4.8-14.7)</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Notes: Percentage difference were calculated by subtracting 2007 to 2012 estimates from 1996/97 estimates. SERCIS Participants aged 50-69 in 1996/97 Australia n=403, Germany n=120, Italy n=346, Greece n=166. SAMSS Participants aged 60-79 in 2007-2012: Australia n=9742, Germany n=392, Italy n=375, Greece n=143.
The weighted and age-sex standardised health-related risk factor estimates for each birthplace group are detailed in Table 7.13. The weighted proportions, previously provided in Table 7.11, are recapped below to show the effect that the age-sex standardisations had on the summary measures. Overall, the age-sex standardisations did not have a marked impact on the health-related risk factor estimates and the results observed were generally consistent with the weighted proportions. The Italian-born age-sex standardised proportions shifted the most in comparison to the 2007 to 2012 weighted proportions and the other birthplace groups.

The Greek and Italian-born were observed to have the highest proportion of fair/poor self-rated health in 2007 to 2012; however, the German and Italian-born had the biggest change in self-rated health from 1996/97 to 2007-2012. Whilst all of the overseas-born groups were most likely to be classified as overweight in both weighted and age-sex standardised proportions across both time points, those born in Australia and Germany had the largest changes in proportions from 1996/97 to 2007-2012.

The Greek and Italian-born were most likely to be classified as obese in 2007 to 2012 and had the highest rate of change from 1996/97 to 2007-2012. In addition, from 1996/97 to 2007-2012 there were reductions in current smoking status across all birthplace groups, particularly those born in Italy and Greece.
Table 7.13: Weighted and age-sex standardised health-related risk factors using SERCIS data from 1996/97 and SAMSS data from 2007 to 2012

<table>
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<tbody>
<tr>
<td></td>
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<td>% (95% CI)</td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
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<tr>
<td><strong>Self-rated health</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Australia</td>
<td>21.3 (17.6 - 25.5)</td>
<td>22.8 (21.9 - 23.6)</td>
<td>20.9 (17.2-24.7)</td>
<td>20.8 (19.9-21.7)</td>
</tr>
<tr>
<td>Germany</td>
<td>21.6 (15.1 - 29.7)</td>
<td>27.3 (23.1 - 31.9)</td>
<td>21.5 (15.5-27.5)</td>
<td>27.5 (21.5-33.4)</td>
</tr>
<tr>
<td>Italy</td>
<td>39.2 (34.2 - 44.5)</td>
<td>42.1 (37.2 - 47.1)</td>
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<tr>
<td>Greece</td>
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<td>41.1 (33.4 - 49.3)</td>
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<tr>
<td><strong>BMI – Overweight</strong></td>
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</tr>
<tr>
<td>Australia</td>
<td>37.1 (32.5 - 42.0)</td>
<td>41.2 (40.2 - 42.2)</td>
<td>37.3 (32.8-41.8)</td>
<td>41.9 (40.8-43.1)</td>
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<tr>
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<td>41.7 (33.2 - 50.7)</td>
<td>49.5 (44.4 - 54.6)</td>
<td>40.1 (32.7-47.4)</td>
<td>48.7 (41.9-55.4)</td>
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<td>42.4 (37.2 - 47.8)</td>
<td>46.8 (41.6 - 52.0)</td>
<td>41.8 (36.7-47.0)</td>
<td>43.0 (36.7-49.3)</td>
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<tr>
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<td>48.4 (40.0 - 56.8)</td>
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<td>47.8 (36.8-58.8)</td>
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<tr>
<td><strong>BMI – Obese</strong></td>
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<tr>
<td>Australia</td>
<td>19.9 (16.3 - 24.1)</td>
<td>25.8 (24.9 - 26.7)</td>
<td>19.7 (15.9-23.5)</td>
<td>26.9 (25.9-27.9)</td>
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<td>17.3 (13.8 - 21.6)</td>
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<tr>
<td>Greece</td>
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<td>30.8 (20.8-40.8)</td>
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<tr>
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<td>8.1 (7.6 - 8.7)</td>
<td>13.2 (10.1-16.3)</td>
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<td>16.7 (11.1 - 24.4)</td>
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<td>13.9 (9.0-18.8)</td>
</tr>
<tr>
<td>Italy</td>
<td>18.7 (14.9 - 23.1)</td>
<td>7.4 (5.1 - 10.5)</td>
<td>18.4 (14.5-22.3)</td>
<td>9.1 (5.7-12.4)</td>
</tr>
<tr>
<td>Greece</td>
<td>20.7 (15.2 - 27.6)</td>
<td>7.7 (4.4 - 13.3)</td>
<td>21.3 (12.0-27.6)</td>
<td>12.2 (6.1-18.4)</td>
</tr>
</tbody>
</table>

**Notes:** SERCIS Participants aged 50-69 in 1996/97 Australia n=403, Germany n=120, Italy n=346, Greece n=166
SAMSS Participants aged 60-79 in 2007-2012: Australia n=9742, Germany n=392, Italy n=379, Greece n=143
7.3.4 Comparison across birthplace groups – Percentage difference

Figure 7.1 presents the age-sex standardised percentage difference in arthritis prevalence from 1996/97 to 2007-2012 in Australian, German, Italian and Greek-born South Australians aged between 50 to 79 years. Between the 1996/97 and 2007 to 2012 time points the percentage of Greek and Italian-born individuals with arthritis has increased by 17.7 and 16.4 percentage points compared to 8.3 and 8.6 percentage points for Australian and German-born South Australians.

Figure 7.1: Age-Sex Standardised Percentage Difference in Arthritis prevalence from 1996/97 to 2007 - 2012 in Australian, German, Italian and Greek-born South Australians aged 50-79 years

The age-sex standardised percentage difference in osteoporosis prevalence from 1996/97 to 2007-2012 in Australian, German, Italian and Greek-born South Australians aged between 50 to 79 years are detailed in Figure 7.2 (below). From 1996/97 to 2007-2012 the Greeks (2.8% and 19.6%, respectively) and Italians (4.4% and 16.7% respectively) had the most significant increases in osteoporosis prevalence compared to the other birthplace groups (Australia 3.8% and 9.9%, Germany 9.1% and 10.8% respectively). The percentage increase in the prevalence of osteoporosis was 16.8% for Greeks and 12.3% for Italians.
The age-sex standardised percentage difference in asthma prevalence from 1996/97 to 2007-2012 in Australian, German, Italian and Greek-born South Australians aged between 50 to 79 years are presented in Figure 7.3. The Greek-born had the largest change in asthma (4.7%) compared to all other birthplace groups (Italy 2.7%, Germany 3.2% and Australia 1.1%).
Figure 7.4 details the age-sex standardised percentage difference in diabetes prevalence from 1996/97 to 2007-2012 in Australian, German, Italian and Greek-born South Australians aged between 50 to 79 years. There was an observed increase in diabetes prevalence in all birthplace groups. However, the largest increase was 16.4 percentage points in Italian-born respondents followed by increases of 14.1, 11.6 and 10.0 percentage points in the Greek, German and Australian-born South Australians.

Figure 7.4: Age-Sex Standardised Percentage Difference in Diabetes prevalence from 1996/97 to 2007 - 2012 in Australian, German, Italian and Greek-born South Australians aged 50-79 years

Figure 7.5 (below) details the age-sex standardised percentage difference in CVD prevalence from 1996/97 to 2007-2012 in Australian, German, Italian and Greek-born South Australians aged between 50 to 79 years. Those born in Greece and Australia had the smallest percentage increase in the prevalence of CVD (2.2% and 4.6% respectively) compared to those born in Italy and Germany who had an observed percentage increase of 8.8% and 6.3% (respectively).
7.3.5 Comparison across birthplace groups – Marginal probabilities

The Migrant HS, Mental HS and SAMSS data were pooled in order to compute age-sex adjusted marginal probabilities. This analysis explored the probability of each birthplace group developing a chronic condition (arthritis, osteoporosis, asthma, diabetes or CVD) in 1996/97 and 2007-2012 and identified whether those born overseas were more likely to have a poorer health outcome in late adulthood (2007 to 2012). The results of these analyses are presented in Table 7.14.

In 1996/97, the Greek-born had the lowest probability of developing arthritis (31.4%) and osteoporosis (2.3%) compared to all other birthplace groups (Australia 40.3%, 6.2%, Germany 36.7%, 8.7% and Italy 38.6%, 5.8% respectively). In 2007 to 2012, the Greeks along with the Italians had the highest probability of arthritis (43.7% and 45.4% respectively) and osteoporosis (16.0% and 13.8% respectively). The arthritis and osteoporosis estimates for the Australian and German-born remained relatively stable from 1996/97 to 2007-2012. The Australian-born had the highest probability of developing asthma in both 1996/97 and in 2007-2012 (11.8% and 12.9% respectively). The rate of increase for an asthma outcome for German (6.1% to 9.7%) and Greek (6.1% to 10.6%) birthplace groups in 1996/97 to 2007-2012 was relatively consistent, while the probability of developing asthma in the Italian-born group reduced from 11.0% in 1996/97 to
10.4% in 2007-2012. The probability of developing diabetes in 1996/97 was highest for those born in Greece (13.0%) followed by the Italian (9.0%), Australian (6.5%) and German (6.0%) birthplace groups. In 2007-2012, the Italian and Greek-born had the highest probability of a diabetes outcome (18.9% and 18.4% respectively). The rate of change from 1996/97 to 2007-2012 was highest for those born in Italy; furthermore, Greek-born groups experienced changes in diabetes consistent with their Australian and German-born counterparts.

In 1996/97, all birthplace groups shared a similar probability of developing CVD (Australia: 11.8%, Germany: 10.1%, Italy: 9.7% and Greece: 10.4%). This probability remained relatively consistent in 2007 to 2012 for all groups (Australia 10.0%, Germany 10.3% and Italy 10.2%) aside from those born in Greece whose probability of developing CVD reduced to 6.5%.

Table 7.14: Marginal probabilities of developing a chronic condition in 1996/97 using SERCIS Data in 2007-2012 using SAMSS data of those aged 50-69 and 60-79

<table>
<thead>
<tr>
<th>Condition</th>
<th>1996/97 (50-69 years)</th>
<th>2007-2012 (60-79 years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% (95% CI)</td>
<td>% (95% CI)</td>
</tr>
<tr>
<td><strong>Arthritis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>40.3 (36.6-43.9)</td>
<td>40.4 (39.8-41.0)</td>
</tr>
<tr>
<td>Germany</td>
<td>36.7 (30.7-42.6)</td>
<td>37.6 (33.9-41.3)</td>
</tr>
<tr>
<td>Italy</td>
<td>38.6 (34.1-43.1)</td>
<td>45.4 (41.9-48.9)</td>
</tr>
<tr>
<td>Greece</td>
<td>31.4 (25.1-37.7)</td>
<td>43.7 (37.9-49.6)</td>
</tr>
<tr>
<td><strong>Osteoporosis</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>6.2 (4.4-7.9)</td>
<td>8.8 (6.4-9.1)</td>
</tr>
<tr>
<td>Germany</td>
<td>8.7 (5.4-12.1)</td>
<td>9.3 (7.2-11.5)</td>
</tr>
<tr>
<td>Italy</td>
<td>5.8 (3.4-8.2)</td>
<td>13.8 (11.5-16.2)</td>
</tr>
<tr>
<td>Greece</td>
<td>2.3 (0.1-4.6)</td>
<td>16.0 (11.8-20.3)</td>
</tr>
<tr>
<td><strong>Asthma</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>11.8 (9.3-14.2)</td>
<td>12.9 (12.5-13.4)</td>
</tr>
<tr>
<td>Germany</td>
<td>6.1 (3.1-9.1)</td>
<td>9.7 (7.3-12.0)</td>
</tr>
<tr>
<td>Italy</td>
<td>11.0 (8.0-14)</td>
<td>10.4 (8.2-12.6)</td>
</tr>
<tr>
<td>Greece</td>
<td>6.1 (2.7-9.4)</td>
<td>10.6 (6.8-14.4)</td>
</tr>
<tr>
<td><strong>Diabetes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>6.5 (4.6-8.3)</td>
<td>12.4 (12.0-12.9)</td>
</tr>
<tr>
<td>Germany</td>
<td>6.0 (3.0-9.0)</td>
<td>12.0 (9.6-14.4)</td>
</tr>
<tr>
<td>Italy</td>
<td>9.0 (6.3-11.8)</td>
<td>18.9 (16.2-21.6)</td>
</tr>
<tr>
<td>Greece</td>
<td>13.0 (8.4-17.6)</td>
<td>18.4 (13.9-22.9)</td>
</tr>
<tr>
<td><strong>Cardiovascular Disease</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>11.8 (9.4-14.2)</td>
<td>10.0 (9.6-10.4)</td>
</tr>
<tr>
<td>Germany</td>
<td>10.1 (6.3-13.9)</td>
<td>10.3 (8.1-12.5)</td>
</tr>
<tr>
<td>Italy</td>
<td>9.7 (6.9-12.5)</td>
<td>10.2 (8.3-12.3)</td>
</tr>
<tr>
<td>Greece</td>
<td>10.4 (6.3-14.5)</td>
<td>6.5 (3.7-9.2)</td>
</tr>
</tbody>
</table>
7.4 Summary

The aim of Study Three was to describe and compare the demographic, health and health-related characteristics of Australian, German, Italian and Greek-born individuals aged 50 to 69 in 1996/97 and aged 60 to 79 in 2007-2012, in order to identify if those born overseas had worse health outcomes over time compared to their Australian-born counterparts and whether those born overseas were more likely to develop chronic conditions in late adulthood.

To explore changes in health and health-related outcomes for each birthplace group over time age-sex standardised chronic conditions and risk factors prevalence estimates were produced at each point in time. In addition, percentage differences for chronic condition estimates were also calculated to identify whether the overseas-born experienced worse outcomes over time. In the first instance, the general pattern observed from the results of the age-sex standardised estimates was that in 1996/97 overseas-born groups had lower prevalence for most chronic conditions when compared to their Australia-born counterparts. However, in 2007-2012 the prevalence of chronic conditions increased for all overseas-born groups and in most cases exceeded the Australian-born estimates. Furthermore, when examining the percentage differences, it was observed that the prevalence of chronic conditions for all birthplace groups increased from 1996/67 to 2007-2012 with those born in Greece and Italy experiencing the largest percentage change.

Overall, the results from this investigation indicated that Greek and Italian groups had poorer health outcomes over time when compared to their Australian-born counterparts and highlighted that health differentials exist between birthplace groups, which was consistent with the results from Study Two. This study also showed that there have been consistent changes in the prevalence estimates of selected birthplace groups over time, confirming the results of Study
One; however when analysed by COB, the results highlighted birthplace specific differences. Furthermore, the general pattern of immigrants displaying superior health as described by the HME was not observed in this study and calls into question the legitimacy of the HME. Despite the mixed results, this study emphasises that birthplace specific analysis is critical in understanding of the relevance of the HME and whether this phenomenon actually exists when data are disaggregated by birthplace.
CHAPTER 8: STUDY FOUR – HEALTH AND WELLBEING EXPERIENCES OF OLDER GREEK-BORN SOUTH AUSTRALIANS, A QUALITATIVE STUDY

8.1 Study aims

Face-to-face, semi-structured interviews were undertaken with Greek-born South Australians aged 60 years and over who came to Australia following post-WWII (the period spanning from 1945 to 1975). This component of research provides a multidimensional perspective of health for this older population cohort, and builds on the work undertaken in the previous sections of this thesis where Greek-born individuals have featured in the secondary data analyses.

There was clear evidence from the findings of Study Two and Study Three that Greek-born South Australians have approached their later years with an increased risk of illness. Further to this, there are a range of issues described in the literature that are known to affect the health of immigrants. For example, acculturation of health behaviours towards those of the adopted society with increased length of residency, which can contribute to an increased risk for some chronic conditions such as obesity, heart disease and diabetes. Mental health can be compromised due to the disruptive nature of the migratory process. Furthermore, the cumulative exposure to socio-economic factors can undermine health in later life and result in issues associated with the use of and access to health services.

Against this background, this study aimed to gain a deeper understanding of the health experiences and health-related outcomes of Greek-born South Australian by examining socio-demographics, QoL indicators and psycho-socio characteristics (including health and lifestyle factors, multidimensional QoL indicators, social capital and mental health).
8.2 Methods

8.2.1 Survey design
Sample selection
In this study, purposeful sampling and snowballing techniques were used to select the research sample. See Table 8.1 for a summary of the recruitment procedure. The 2011 ABS Census was also used to construct a demographic profile (see Appendix I, Tables I.1 to I.2) of the South Australian Greek-born population to ensure the sample selected broadly reflected the characteristics of this cohort.

The 2011 Census of Australian Population and Housing data by LGA regions of South Australia were used to determine the distribution of Greek-born individuals and areas targeted in the recruitment strategy were those LGAs with more than 100 Greek-born residents (see Appendix I, Table I.3).

Table 8.1: Summary of Study Four sample

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greek Agencies</td>
<td>48</td>
<td>42.9</td>
</tr>
<tr>
<td>Personal contacts</td>
<td>34</td>
<td>30.4</td>
</tr>
<tr>
<td>other networking</td>
<td>23</td>
<td>20.5</td>
</tr>
<tr>
<td>referrals</td>
<td>7</td>
<td>6.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>112</td>
<td>100.0</td>
</tr>
</tbody>
</table>

At the time of this data collection, there were two prominent community based groups, namely the Greek Orthodox Community of South Australia (GOCSA) and the Greek Welfare Centre (GWC) who were considered key stakeholders within the Greek community. These organisations were approached for assistance with gaining access into the community. A large portion of participants were recruited from these networks and various centre-based activity groups run through these two Greek agencies (n=48).
Greek Orthodox Community of South Australia

GOCSA is a community-based organisation funded by the State and Commonwealth government that provide a number of community care services to the Greek community. GOCSA provide a volunteer program, in-home support, emergency relief assistance in the way of part-payments for utility bills in time of need for eligible low-income clients. They provide support to carers, offer a brokering service and provide a social program for Greek speaking people within the metropolitan area called ‘Trapezia tis Agapes’ (translated as ‘table of love’). GOCSA also operate the ‘Ridleyton Greek Home for the Aged’, which includes a nursing home and independent living units (GOCSA 2012).

GOCSA agreed to support this research and offered assistance in the meaningful translation of the questionnaire and survey material from English to Greek (this included the questionnaire, participant information sheet, consent form and complaints procedure form). GOCSA also assisted in the recruitment of participants from across their networks (including their independent living units, carers and volunteers). Those willing to be interviewed arranged an appointment time with GOCSA staff or directly with the researcher. GOCSA host ten ‘Trapezia tis Agapes’, which are social gathering for people of primarily Greek speaking background. Permission was sought from the Presidents of three of the larger groups for the researcher to attend as a point of recruitment. The co-ordinator of each of the groups introduced the researcher’s project and explained what was involved. An appointment time was made with those willing to be involved at a time and place most convenient to the participant. In addition, a Greek speaking interviewer from GOCSA assisted in the completion of seven interviews on behalf of the researcher.
Greek Welfare Centre
The Greek Welfare Centre (GWC) is the welfare agency for the Greek Orthodox Archdiocese of Australia in South Australia and is a not for profit, community based human service organisation (GWC 2012). The GWC provides Commonwealth Home and Community Care programs to older Greek-born individuals with functional limitations, provide respite care, transport services, a Greek Meal Service, client and carer counselling, client assessment and other social support services (including art and craft groups, exercise classes, walking groups and computer/IT classes).

The GWC offered to support this research by providing a Greek speaking interviewer (employed at the GWC) to undertake a quota of ten interviews on behalf of the researcher; participants were recruited through the GWCs social support programs. In addition, the researcher personally attended (with the permission of the GWC and group coordinators) three exercise classes for seniors in order to recruit additional participants for this study.

Other sources of recruitment
Snowballing techniques were also employed to recruit additional participants for this study (n=64). A number of personal contacts were accessed whereby participants were asked by their family members or friends if they would be willing to participate. Those wishing to be involved either approached the researcher directly or made an appointment time through their family member or friend. Through various networking opportunities relationships were formed with individuals who were personally and/or professionally involved in the Greek community and had access to Greek-born individuals and these contacts approached potential participants to seek interest. Those wishing to be involved agreed for their telephone number to be passed on to the researcher who made direct contact to schedule an appointment time. There were also other
circumstances whereupon completing an interview with a participant another family member, neighbour or friend agreed to be interviewed on the spot, or at a time more convenient.

8.2.2 Interviewers and interviewer training
The researcher did not complete all the interviews. As mentioned previously assistance was offered from various Greek agencies and from two other personal contacts, namely those personally and/or professionally involved in the Greek community (Table 8.2). The researcher personally trained each individual who undertook an interview and ensured they were fully aware of the interview procedure.

Table 8.2: Study Four Interviewer Summary

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researcher</td>
<td>75</td>
<td>67.0</td>
</tr>
<tr>
<td>Personal contacts</td>
<td>25</td>
<td>22.3</td>
</tr>
<tr>
<td>Greek agencies</td>
<td>12</td>
<td>10.7</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>100.0</td>
</tr>
</tbody>
</table>

8.2.3 Informed consent and withdrawal criteria
Written consent was sought from all participants prior to the commencement of the interview. A consent form was prepared based on the University of Adelaide standard format available to researchers. The consent form was meaningfully translated into Greek and a copy of the completed consent form was offered to all participants upon signing.

To ensure participants were able to refuse any question(s) or section(s) of the interview 'don't know/refused' response categories were applied to each question. In addition, participants could choose to withdraw their participation at any time during the interview process and no information would be recoded from that interaction.

8.2.4 Pilot testing
Prior to the main survey being implemented, pilot testing was undertaken with participants (n=5) to test question formats, question sequence, to assess survey procedures and length of time
taken to complete the survey. Minor amendments were made to question wording to aid in ease of understanding. In addition three questions were removed from the questionnaire to reduce the time burden on participants and interviewers.

8.2.5 Survey material and questions
A questionnaire and survey material (information sheet, consent form and a complaints procedure form) were produced for this study (see Appendix J for a copy of the survey material). Participants were given the survey material prior to the commencement of the interview and had an opportunity to read all material and ask any questions before commencing. The questionnaire developed for this study was designed to be administered as a face-to-face interview and the survey took approximately 60 minutes to complete (see Appendix K for a copy of the questionnaire). As a large portion of South Australian Greek-born individuals could not speak English ‘well’ or ‘at all’ (41%) (ABS 2011), it was necessary for the questionnaire and survey material to be meaningfully translated into Greek.

This component of the thesis is primarily concerned with health outcomes of ageing post-WWII migrants and takes Greek-born South Australians as a case study to drill down and understand the association between health and psycho-socio characteristics. The specific domains included in this questionnaire are listed in Table 8.3. These domains selected for inclusion in this questionnaire were considered important factors that have been shown to influence the health experiences of older Greek-born South Australians.
Table 8.3: Summary of Study Four domains included in the questionnaire

<table>
<thead>
<tr>
<th>Domains</th>
<th>Question Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Demographics</td>
<td>1-13</td>
</tr>
<tr>
<td>2. Health</td>
<td>13-28</td>
</tr>
<tr>
<td>• Overall Health Status (Questions 13)</td>
<td></td>
</tr>
<tr>
<td>• Health Service use and Availability (Questions 14-17)</td>
<td></td>
</tr>
<tr>
<td>• Health and Lifestyle (Questions 18-28)</td>
<td></td>
</tr>
<tr>
<td>4. World Health Organisation Quality of Life Scale</td>
<td>33-54</td>
</tr>
<tr>
<td>5. Religiosity</td>
<td>55-62</td>
</tr>
<tr>
<td>7. Mental Health – The Kessler Psychological Distress Scale (K6)</td>
<td>90-95</td>
</tr>
<tr>
<td>8. Experiences</td>
<td>69-70, 96-105</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
</tr>
</tbody>
</table>

8.2.6 Ethical considerations
Ethical clearance was sought from the UoA HREC. The HREC approved this research on the 31st of October 2013 and the HREC number is H-2013-086.

8.2.7 Data collection
Data were collected between the 21st of January and the 4th of September 2014. During this time 112 interviews were completed. Interviews took between 20 minutes and 2 hours to complete with a mean interview time of 0.59 minutes. Participants’ age ranged from 59 years to 99 years with a mean age of 75.09. See Table 8.4 for a summary of the sample characteristics. The majority of the surveys were completed in metropolitan Adelaide (n=98), however a proportion were undertaken in rural areas of South Australia such as Virginia and Renmark (n=14).

Table 8.4: Summary Study Four sample characteristics

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Data collection period</td>
<td>21 January to 4 September 2014</td>
</tr>
<tr>
<td>Total Interviews Completed</td>
<td>n=112</td>
</tr>
<tr>
<td>Mean Interview time</td>
<td>0.59 minutes</td>
</tr>
<tr>
<td>Age of Participants</td>
<td>60 years and over</td>
</tr>
<tr>
<td>Age range</td>
<td>59 years to 99 years</td>
</tr>
<tr>
<td>Mean Age</td>
<td>75 years</td>
</tr>
</tbody>
</table>
For transparency it is also noted that whilst undertaking interviews with some participants (n=3) it was discovered that they fell outside the pre-determined selection criteria. For example, some participants were not born in Greece but instead born in Cyprus (n=1), Egypt (n=1) or Turkey (n=1). However for all intent and purposes these participants considered themselves to be Greek and considered Greece to be their homeland. Upon discussion with the supervisory panel, a ‘judgement call’ was made to allow these interviews to be used towards this thesis as they represented the turbulence of the post-war era and the complexity associated with transnational identities. Furthermore, another participant was 59 years of age, which is under the ‘60 years and over’ selection criteria. However, this participant had an upcoming birthday and it was deemed acceptable to include them in this research project. Finally, one participant had arrived in Australia in 1976, which was a year outside the pre-defined post-war period (1945 to 1975); however, this was considered to be within reasonable limitations.

As part of the interview process, participants were asked a range of structured and open-ended questions that were related to various aspects of their lives. During the interviews, participants commented on or discussed various life and health experiences and/or at other times provided additional information or explanatory dialogue after being asked a specific question. All information provided during the interview process was considered relevant and subject to analysis. The open-ended questions and other dialogue form the qualitative component of this thesis and will be used to investigate the health and wellbeing experiences of Greek-born South Australians (see Section 8.3 for the results).

Refusals
Two participants decided prior to the interview commencing that they did not want to continue with the interview due to issues and mistrust around signing the standard UoA consent form; no personal information was recorded in these circumstances. In addition, another participant prior
to commencing the interview decided to seek reassurance from a family member before signing
the consent form. In this case, the participant contacted the researcher to arrange an alternative
time to complete the interview.

8.2.8 Data items
While a number of domains were explored in this data collection (as described in Table 8.3), not
all domains were reported on in Study Four. The section below describes only those data items
from the following domains: demographic; socio-demographic; health status; health and lifestyle;
health service use and availability; activities of daily living & formal/Informal support; social capital
and mental health. These data items were identified to address the objective of this study, which
was to gain a deeper understanding of the health and wellbeing experiences of an ageing Greek-
born cohort.

Demographics & socio-demographics
Participants were asked to report their age (data collection limited to those aged 59 years and
over), sex (‘male’; ‘female’), marital status (‘married’; ‘separated/divorced’; ‘widowed’), their living
arrangements and highest educational attainment. Information was also sought relating to year
of arrival (data collection limited to 1945 to 1976), whether Greek was the main language spoken
at home, and the degree of difficulty experienced in understanding English, in addition to, whether
participants required an interpreter, the frequency of use and main source of interpreter.

Health status & Health and Lifestyle
Respondents were asked to rate their health status on a five point Likert scale ranging from
‘excellent’, ‘very good’, ‘good’, ‘fair’ or ‘poor’ (dichotomised into ‘excellent, very good, good’ and
‘fair, poor’). Participants were asked whether a doctor had ever told them if they had any of the
following conditions: diabetes; asthma; bronchitis; emphysema; heart attack; stroke; angina;
cancer and/or a musculoskeletal condition. Participants were asked if a doctor or nurse had told
them if they had high blood pressure or high cholesterol and whether they were taking any prescribed medication for any of these conditions.

Information regarding smoking status was ascertained by asking participants whether they currently smoked and/or had ever regularly smoked (‘current smoker’, ‘ex-smoker’, ‘non-smoker’). BMI was calculated based upon self-reported weight and height information obtained at the time of the interview. BMI was calculated as weight in kilograms divided by height (m$^2$) where participants were categorised as either ‘underweight ($\leq 18.5$)/normal (18.5 to 24)’, ‘overweight (25 to 29)’ or ‘obese ($\geq 30$)’ (WHO 1999).

Health Service use and Availability
Respondents were asked to report which allied and/or emergency services they used in the last 12 months. Information was also obtained regarding where they received their health advice from, who most influenced their health decisions and their perceptions on whether there were sufficient Greek speaking medical services available. Questions were also asked in regard to their expectations for the future in terms of how they would like to be cared for if they became ill and dependent on others. Participants were asked if they believed that in the future they would be cared for the way that they liked and if they thought they would have been cared for better if they stayed in Greece.

Activities of Daily living & Formal/Informal Support
Participants were asked to report whether their vision, hearing, mobility, memory, manual dexterity or poor health interfered with their ability to perform their daily activities. Participants were also asked if they required assistance, and who that provided assistance, with their daily living or self-care activities (i.e. showering, dressing, housework).
Social Capital
A number of questions were asked in order to establish the family network available to participants and level of contact they had with people within this network, what the type of support they received from their children or children-in-law and whether they believed that older people should be able to depend on their adult children for the help they need.

Participants were asked about the social support that they received from their family and friends and were prompted to indicate their agreement or disagreement to a set of statements; including: ‘my family really try to help me'; ‘I get the emotional help and support I need from my family'; ‘I can talk about my problems with my family'; ‘my family is willing to help me'; ‘my friends try to help me'; ‘I can count on my friends when things go wrong'; and ‘I have friends with whom I can share my joys and problems’ (Zimet et al. 1988). These questions were taken from the Multidimensional Scale of Perceived Social Support, which is a 12-item subjective measure of perceived social support adequacy from friends, family, and significant other (Zimet et al. 1988). The full set of questions were not asked of participants and only two of the three sub-scales, relating to family and friends, were included in this data collection; as such this cannot be scored.

Respondents were asked report ‘if they ever felt lonely’, with answers scored on a five-point Likert scale ranging from ‘all of the time’ to ‘none of the time’. This question was modified from a three-item loneliness scale (Hughes et al. 2004), which was originally derived from the University of California, Los Angeles (UCLA) Loneliness Scale. The UCLA is a 20-item subjective scale measuring loneliness and social isolation (Hays & DiMatteo 1987; Russell, Peplau & Ferguson 1978).

Mental Health
The presence of a current mental health problem was determined by asking participants whether a doctor had told them in the last 12 months that they had anxiety, depression, a stress-related
problem or any other mental health condition. The Kessler Psychological Distress Scale (K10) was utilised to determine levels of psychological distress experienced within the most recent four week period (Andrews & Slade 2001). Participants scoring a high (22-29) or a very high (30-50) score were considered to have ‘probable serious mental health’, while those with low (10 to 15) or moderate (16-21) scores were considered to have ‘no probable serious mental health’ (Taylor et al. 2003). Note, the scoring of this variable has previously been described elsewhere in this thesis, refer to Chapter 6, Section 6.2.7 for more information.

8.3 Results

This chapter presents the results from Study Four, which involved a semi-structured face-to-face data collection of Greek-born South Australians aged 60 years and over. In total 112 interviews were completed during January to September 2014.

8.3.1 Demographic characteristics

This study utilised a purposive sampling procedure and as such the findings are not representative of the broader Greek-born South Australian population. However, the age, sex and marital status characteristics of the study participants were compared to the 2011 Census (see Table 8.5). It was found that the majority of respondents were females (63.4%), aged between 70 to 79 years (62.4%) and were either married (62.5%) or widowed (30.4%). While the study sample included a higher proportion of females and under-represented those aged 60 to 69 years it did broadly reflect the demographic characteristics of the 2011 Census and as such broad inferences can be made in relation to these findings.

In terms of education, just under half of the participants completed primary school (47.3%), 19.6% and 17.0% finished some primary or some high school (respectively) and only a small majority of participants completed high school (7.1%) a TAFE or trade certificate or diploma (4.5%) or higher
education (1.8%). It was difficult to compare the educational levels between this study and the Census due to question wording. However, according to the 2011 Census, 83.9% of Greek-born South Australians aged 60 years and over undertook and or completed some level of primary or secondary schooling, compared to 93.6% of individuals in this study, see Table 8.5.

Table 8.5: Demographic characteristics of South Australian Greek-born participants aged 60 years and over

<table>
<thead>
<tr>
<th></th>
<th>Study Four - Data Collection</th>
<th>2011 Census**</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>41</td>
<td>3311</td>
</tr>
<tr>
<td>Female</td>
<td>71</td>
<td>3596</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 to 69 years*</td>
<td>19</td>
<td>2474</td>
</tr>
<tr>
<td>70 to 79 years</td>
<td>68</td>
<td>3151</td>
</tr>
<tr>
<td>80+ years</td>
<td>22</td>
<td>1282</td>
</tr>
<tr>
<td><strong>Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>70</td>
<td>4923</td>
</tr>
<tr>
<td>Separated/divorced</td>
<td>8</td>
<td>519</td>
</tr>
<tr>
<td>Widowed</td>
<td>34</td>
<td>1357</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No schooling</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>Some primary</td>
<td>22</td>
<td>19.6</td>
</tr>
<tr>
<td>Completed primary</td>
<td>53</td>
<td>47.3</td>
</tr>
<tr>
<td>Some high school</td>
<td>19</td>
<td>17.0</td>
</tr>
<tr>
<td>Completed high school</td>
<td>8</td>
<td>7.1</td>
</tr>
<tr>
<td>Trade/certificate/diploma</td>
<td>5</td>
<td>4.5</td>
</tr>
<tr>
<td>Degree or higher</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>112</td>
<td>6907</td>
</tr>
</tbody>
</table>

Note: *One participant aged 59 years. All other participants were 60 years and over. Section 8.2.7 for more information.
Source: **2011 Census of Population and Housing

8.3.2 Health outcomes of Greek-born South Australians

A profile of health conditions and mental health issues for Greek-born South Australians aged 60 years and over is provided in Table 8.6 and Table 8.7. In order to benchmark the findings from Study Four to the general South Australian Greek-born population the health and mental health outcomes were also compared to SAMSS data collected between 2007 to 2012 on those aged 60 years and over (see Tables 8.2 and 8.3 for more information). In terms of health conditions, 69.6% of the study participants were told by a doctor they had arthritis, 23.2% were told they had osteoporosis and 27.7% were told they had diabetes. Of all the participants, 21.4% did not report having any health conditions. It was observed that there were some discrepancies between the
SAMSS results and the findings from Study Four, although the diabetes and osteoporosis estimates derived from this study could be broadly benchmarked to those derived from SAMSS.

Table 8.6: Profile of health conditions for Greek-born South Australians aged 60 years and over

<table>
<thead>
<tr>
<th>Health Conditions</th>
<th>Study Four - Data Collection</th>
<th>SAMSS 2004 – 2012** (65+ years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>31</td>
<td>27.7</td>
</tr>
<tr>
<td>Asthma</td>
<td>6</td>
<td>5.4</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>6</td>
<td>5.4</td>
</tr>
<tr>
<td>Emphysema</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Heart attack</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Stroke</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>Angina</td>
<td>10</td>
<td>8.9</td>
</tr>
<tr>
<td>Cancer</td>
<td>11</td>
<td>9.8</td>
</tr>
<tr>
<td>Arthritis</td>
<td>39</td>
<td>69.6</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>13</td>
<td>23.2</td>
</tr>
<tr>
<td>Other</td>
<td>27</td>
<td>24.1</td>
</tr>
<tr>
<td>None</td>
<td>24</td>
<td>21.4</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: **SAMSS Data, collected 2004-2012 65 years and over.

The information collected in Study Four on mental health issues, is provided in Table 8.7.

Table 8.7: Profile of mental health issues for Greek-born South Australians aged 60 years and over

<table>
<thead>
<tr>
<th>Mental Health Issues</th>
<th>Study Four - Data Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Anxiety</td>
<td>13</td>
</tr>
<tr>
<td>Depression</td>
<td>18</td>
</tr>
<tr>
<td>A stress-related problem</td>
<td>7</td>
</tr>
<tr>
<td>Any other mental health problem</td>
<td>2</td>
</tr>
<tr>
<td>None</td>
<td>85</td>
</tr>
<tr>
<td>Psychological Distress</td>
<td></td>
</tr>
<tr>
<td>No probable serious mental health</td>
<td>96</td>
</tr>
<tr>
<td>Probable serious mental health</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
</tr>
</tbody>
</table>

Note: Unknown and Not Stated responses are not reported.

It was observed that the majority of participants, 75.9%, did not report a mental health issue, whilst 16.1% reported having depression and 11.6% reported having anxiety. Psychological distress was measured through the Kessler-6, which asks participants over the last four week period how often they felt ‘hopeless’, ‘restless or fidgety’, ‘so depressed that nothing could cheer them up’, ‘that everything was an effort’, and ‘worthless’. Overall, 93.2% of participants did not experience a serious probable, mental health issue. The levels of psychological distress
identified in the participants from Study Four was lower than that identified in SAMSS, however it is noted that SAMSS uses the K10 which includes a larger set of questions compared to Study Four which utilised the K6, a condensed version of the K10.

Furthermore, Table 8.8 presents a risk factor profile for Greek-born South Australians aged 60 years and over. Over half of the respondents reported ‘fair or poor’ health when asked to self-rate their own health (58.9%). The majority of respondents also reported having high blood pressure (58.9%) and high cholesterol (50.9%) and were a current smoker (66.1%) or an ex-smoker (32.1%). Of all respondents 43.3% were considered overweight and 33.7% were considered obese. The SAMSS estimates for 2007-2012 for those aged 60 years and over are also provided in Table 8.8. It seems that high blood pressure and high cholesterol is broadly comparable to SAMSS data as is BMI.

### Table 8.8: Health-related risk factor profile for Greek-born South Australians aged 60 years and over

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Study Four - Data Collection</th>
<th>SAMSS 2004 – 2012** (65+ years)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-Rated Health</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excellent, Very good, good</td>
<td>46</td>
<td>82</td>
</tr>
<tr>
<td>Fair, poor</td>
<td>66</td>
<td>55</td>
</tr>
<tr>
<td><strong>High Blood Pressure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>66</td>
<td>80</td>
</tr>
<tr>
<td><strong>High Cholesterol</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>57</td>
<td>70</td>
</tr>
<tr>
<td><strong>Smoking Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non smoker</td>
<td>74</td>
<td>67</td>
</tr>
<tr>
<td>Ex-smoker</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>Current smoker</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td><strong>Body Mass Index (BMI)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td>Overweight</td>
<td>45</td>
<td>71</td>
</tr>
<tr>
<td>Obese</td>
<td>35</td>
<td>42</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>112</td>
<td>137</td>
</tr>
</tbody>
</table>

**Note:** BMI was calculated from self-report weight (kg) divided by height (in m2). (BMI cut of points are based on the WHO definition (normal =18.5 to <25; overweight =25 to <30; and obese =>=30))

**Note:** Unknown and Not Stated responses are not reported.

**Source:** **SAMSS Data, collected 2004-2012 65 years and over.**
The next section unpacks some issues, well documented in the literature, which can create barriers in migrant health. For example, this data collection explored the use of and access to health service and health information. Participants were asked to report which health service they had used in the last 12 months, in South Australia (Table 8.9). Nearly all participants had been to see the GP (94.6%) in the last 12 months and a large majority of participants had been to see an eye specialist or Ophthalmologist (54.5%), 36.6% had been to see a podiatrist, 26.8% had been to hospital – accident and emergency and 21.4% had been to see a physiotherapist.

It is commonly observed that immigrants do not access health services at the same rate as their native-born counterparts (Orb 2002; Social Policy Research Centre & Benevolent Society 2010). While it is not possible to ascertain from these findings whether Greek-born participants utilised health service in a comparable fashion to those born in Australia, it is noted that Greek-born South Australians did utilise a variety of services over a 12-month period.

Table 8.9: Proportion of Greek-born South Australians aged 60 years and over using a range of South Australian health services

<table>
<thead>
<tr>
<th>Health Services</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Practitioner</td>
<td>106</td>
<td>94.6</td>
</tr>
<tr>
<td>Physiotherapist</td>
<td>24</td>
<td>21.4</td>
</tr>
<tr>
<td>Chiropractor</td>
<td>11</td>
<td>9.5</td>
</tr>
<tr>
<td>Podiatrist</td>
<td>41</td>
<td>36.6</td>
</tr>
<tr>
<td>Psychologist</td>
<td>4</td>
<td>3.6</td>
</tr>
<tr>
<td>Eye specialist/ Ophthalmologist</td>
<td>61</td>
<td>54.5</td>
</tr>
<tr>
<td>Hospital – Accident &amp; Emergency</td>
<td>30</td>
<td>26.8</td>
</tr>
<tr>
<td>Hospital – Clinic*</td>
<td>25</td>
<td>22.3</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
<td>13.4</td>
</tr>
</tbody>
</table>

Note: Totals do not add due to this multiple response
*Includes outpatient, specialised health or allied health services.

Participants were also asked whether they thought there were sufficient Greek-speaking medical services available in South Australia (Table 8.10). The majority believed there that there were sufficient Greek speaking medical services (65.2%), whilst 21.4% did not and a further 12.5% reported they did not know.
Table 8.10: Proportion of Greek-born South Australians aged 60 years and over reporting on whether there are sufficient Greek speaking medical services available in South Australia

<table>
<thead>
<tr>
<th>Sufficient Greek Medical Services</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>73</td>
<td>65.2</td>
</tr>
<tr>
<td>No</td>
<td>24</td>
<td>21.4</td>
</tr>
<tr>
<td>Don’t know</td>
<td>14</td>
<td>12.5</td>
</tr>
<tr>
<td>Refused</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>100.0</td>
</tr>
</tbody>
</table>

A number of participants offered comments when asked whether there were sufficient Greek speaking medical services available in South Australia. For example, they believed that there were sufficient services and if there were not then Greek people were well accommodated for, for example:

“There are enough and if there aren’t, they bring in services for you.”

“The government has services here … there is a lot of help if you need it.”

“Greeks work here … from the government and they look after the elderly.”

Other comments which arose reflected that there were stigmas or issue(s) associated with using Greek services, for example:

“No, I do not use these types of service. I have an English doctor. There are some services here … but it is difficult with going to Greek people. You do not want to tell them your problems.”

“I use English doctors because I can speak English. I do not even want to go to a Greek nursing home to avoid gossip and what the people would say -’look, she has 3 sons and they put her in a nursing home, look where they put her’.”

“On one side, I am satisfied, but on the other, I am not. We do not have everything we need here. If we need further test etc. we have to come to Adelaide. Also, we don’t have both male and female Greek doctors. What if I don’t want to talk to in front of family, a friend or an interpreter? This is a problem for me.”

Participants were asked to report where they received their health advice from and what most influenced their health decisions (Table 8.11). Generally, participants received their health advice
from their GP (93.8%) or their family (28.6%). The factors that most influenced their health decisions was advice from the GP (88.4%) and the opinions of their family (36.6%).

Table 8.11: Where Greek-born South Australians, aged 60 years and over, get their health advice from and what impacts most on their health decisions

<table>
<thead>
<tr>
<th>Health Advice*</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor</td>
<td>105</td>
<td>93.8</td>
</tr>
<tr>
<td>Family</td>
<td>32</td>
<td>28.6</td>
</tr>
<tr>
<td>Friends</td>
<td>7</td>
<td>6.3</td>
</tr>
<tr>
<td>TV or Radio</td>
<td>5</td>
<td>4.5</td>
</tr>
<tr>
<td>Greek TV</td>
<td>9</td>
<td>8.0</td>
</tr>
<tr>
<td>Chemist</td>
<td>7</td>
<td>6.3</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>4.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Influence Health Decisions*</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Advice from GP</td>
<td>99</td>
<td>88.4</td>
</tr>
<tr>
<td>Family opinions</td>
<td>41</td>
<td>36.6</td>
</tr>
<tr>
<td>Friends opinions</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>Advice from TV or radio</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Advice from Greek TV</td>
<td>4</td>
<td>3.6</td>
</tr>
<tr>
<td>Chemist</td>
<td>6</td>
<td>5.4</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>6.3</td>
</tr>
<tr>
<td>Don’t know</td>
<td>1</td>
<td>0.9</td>
</tr>
</tbody>
</table>

*Multiple response

It seemed that participants placed a great deal of trust and confidence in their doctors, for example:

“I have to listen to what the doctors say.”

“I get my advice from a professional, the doctor.”

“I trust my doctor. I do not listen to other people because they all have different opinions.”

“You cannot rely on other sources (like friends) for help or advice on your health. I listen to the doctor.”

“I trust the doctor the most.”

“I do whatever the doctor tells me.”

“I do not listen to anyone else but my doctor and myself.”
“I never ask friends for advice about my health. I don’t have many friends, but they are simple and do not understand very much about health.”

Furthermore, when asked what their caring preference would be if they were to get sick and become dependent on others reported wanting to ‘stay at home with outside help’ (61.3%) or ‘move to a nursing home’ (19.8%) (Table 8.12).

Table 8.12: Caring preferences if Greek-born South Australians aged 60 years and over were to have a health problem which made them dependent on others

<table>
<thead>
<tr>
<th>Caring preference if become ill and dependent on others</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stay at home with outside help</td>
<td>68</td>
<td>61.3</td>
</tr>
<tr>
<td>Move in with children</td>
<td>9</td>
<td>8.1</td>
</tr>
<tr>
<td>Move to a home for the aged</td>
<td>7</td>
<td>6.3</td>
</tr>
<tr>
<td>Move to a nursing home</td>
<td>22</td>
<td>19.8</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Don’t know</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>Total</td>
<td>111</td>
<td>100.0</td>
</tr>
</tbody>
</table>

This question raised some interesting results, because it was difficult for participants to identify what their care needs would be because their health had not yet deteriorated to a point where this was an immediate reality, for example…:

“I don’t now, but maybe when I get older.”

“No, because I am still able.”

When asked whether participants believed they would be cared for in the way they liked in the future – 57.1% of participants believed that they would, whilst 25.9% did not know and 10.7% believed they would not be cared for the way the like (Table 8.13).

Table 8.13: Proportion of Greek-born respondents, aged 60 years and over, who believed they would be cared for in the way they liked in the future

<table>
<thead>
<tr>
<th>Believe will be cared for the way you like in the future</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>64</td>
<td>57.1</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>10.7</td>
</tr>
<tr>
<td>Don’t have any expectations</td>
<td>7</td>
<td>6.3</td>
</tr>
<tr>
<td>Don’t know</td>
<td>29</td>
<td>25.9</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>100.0</td>
</tr>
</tbody>
</table>
In addition, participants were asked whether they believed they would have been cared for better if they had stayed in Greece. Overall, 78.6% said they would not be cared for better in Greece, whilst 11.6% did not know and 7.1% believed that it made no difference (Table 8.14).

Table 8.14: Proportion of Greek-born respondents, aged 60 years and over, who believed they would have been cared for better if you had stayed in Greece

<table>
<thead>
<tr>
<th>Believe will be cared for better in Greece</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>No</td>
<td>88</td>
<td>78.6</td>
</tr>
<tr>
<td>Makes no difference</td>
<td>8</td>
<td>7.1</td>
</tr>
<tr>
<td>Don’t know</td>
<td>13</td>
<td>11.6</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>100.0</td>
</tr>
</tbody>
</table>

These questions raised some discrepancies between perceptions of care and care expectations. For example, 26.1% of participants reported wanting to go to a nursing home or a home for the aged in order to avoid being a burden to their children or children-in-law. However, when asked whether they believed that older people should be able to depend on their adult children for the help they need (Table 8.15) the overwhelming majority either agreed or strongly agreed (82.7%) with this statement.

Table 8.15: Proportion of Greek-born South Australians aged 60 years and over who agreed or disagreed that older people should be able to depend on their adult children for the help they need

<table>
<thead>
<tr>
<th>Children Should Help their Parents</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree/Agree</td>
<td>91</td>
<td>82.7</td>
</tr>
<tr>
<td>Neither agree or disagree</td>
<td>8</td>
<td>7.3</td>
</tr>
<tr>
<td>Strongly disagree /Disagree</td>
<td>11</td>
<td>10.0</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100.0</td>
</tr>
</tbody>
</table>

It was also evident that there was a significant demand for support if the participant became dependent in older age. For example:

“Yep, because why did you have children? They are your family. Just like they lean on me when they need.”

“Of course our children are our life, we have raised them, now they have a responsibility to their elders.”

“They try to help as much as they can as they have been brought up to believe as children they must help us their parents.”
“They should help because we have done our best to help our children so out of respect they hold for us we would say they would help us without question.”

“Yes, the young have the strength to help the older person finds things difficult but also don’t know the English which makes things more difficult. Our children know more. Our life was home and work. We did not learn things here and that is why we take advice.”

“If you can’t depend on your children to help then who is. The love and respect they have for me I would be surprised if they didn’t help.”

“As my children I believe they have the responsibility to us as parents to look after us.”

“My children were bought up to value family life and to know if we do get sick that I trust them to do the right thing.”

However, some participants also acknowledged that their children did have their own problems and/or responsibilities and the participant did not want to be a burden on them:

“Family have own issues and family to take care of their own.”

“I don’t think so, I wouldn’t ask. I have two sons, but I wouldn’t ask their wives. I wouldn’t want to put my daughter in that problem either. One thing to help with the things and another to look after you when you are sick. That is why nursing homes are around. Thank god for them.”

“No they are working and have their own family, how they can help me?”

“Not necessarily depend but it is nice to know that your children are there for you if you need them. Remember they have their own families and responsibilities, life is difficult for them too.”

The idea that children or family should provide help in times of need was further highlighted, when participants were asked whether they believed they could seek help and support from their family or friends if they were sick (Table 8.16). The majority of participants either agreed (60.7%) or strongly agreed (31.2%) with this statement.
Table 8.16: Proportion of Greek-born South Australians aged 60 years and over who agreed or disagreed with being able to seek support from family or friends when sick

<table>
<thead>
<tr>
<th>Support From Friends &amp; Family When Sick</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>35</td>
<td>31.2</td>
</tr>
<tr>
<td>Agree</td>
<td>68</td>
<td>60.7</td>
</tr>
<tr>
<td>Neither agree or disagree</td>
<td>6</td>
<td>5.4</td>
</tr>
<tr>
<td>Disagree</td>
<td>1</td>
<td>0.9</td>
</tr>
<tr>
<td>Don't know</td>
<td>2</td>
<td>1.8</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>100.0</td>
</tr>
</tbody>
</table>

However, when this was unpacked there were discrepancies where help was sought. A number of participants commented that they would not ask for help from friends, but rather from family (more specifically their children).

“From your children yes, but not your friends.”

“Well from my family more than my friends.”

“Family ONLY.”

“What help should I ask for from friends?”

“No, I would not seek help from my friends. Only my family.”

“Family for these things.”

It was also very evident that participants relied on family/children for a wide range of other support mechanisms, for example, when participants were asked whether they received help from their children or children-in-law across a range of domains (see Table 8.17). The most common form of support received was in the way of being driven to places such as the doctor, shop or church (50.0%), being given gifts (49.1%), having the shopping or errands run for them (49.1%) and assistance with the house (48.2%).
Table 8.17: Proportion of Greek-born South Australians receiving support from children and children-in-law

<table>
<thead>
<tr>
<th>Support from Children*</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Give gifts</td>
<td>55</td>
<td>49.1</td>
</tr>
<tr>
<td>Shop or run errands for you</td>
<td>55</td>
<td>49.1</td>
</tr>
<tr>
<td>Help out with money</td>
<td>25</td>
<td>22.3</td>
</tr>
<tr>
<td>Help keep the house or fix things around the house for you</td>
<td>54</td>
<td>48.2</td>
</tr>
<tr>
<td>Prepare meals for you</td>
<td>16</td>
<td>14.3</td>
</tr>
<tr>
<td>Drive you places such as the doctor, shopping or church</td>
<td>56</td>
<td>50.0</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>6.2</td>
</tr>
</tbody>
</table>

Note: *Multiple response

Additionally, when participants were asked how available information they needed for their day-to-day life was, 40.9% reported it was moderately available while 34.5% reported mostly available (Table 8.18).

Table 8.18: Proportion of Greek-born South Australians, aged 60 years and over who receive adequate information required for their day-to-day life

<table>
<thead>
<tr>
<th>Information available to participant</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>3</td>
<td>2.7</td>
</tr>
<tr>
<td>A little</td>
<td>15</td>
<td>13.6</td>
</tr>
<tr>
<td>Moderately</td>
<td>45</td>
<td>40.9</td>
</tr>
<tr>
<td>Mostly</td>
<td>38</td>
<td>34.5</td>
</tr>
<tr>
<td>Completely</td>
<td>9</td>
<td>8.2</td>
</tr>
<tr>
<td>Total</td>
<td>110</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: Unknown and Not Stated responses are not reported.

However, this did not necessarily reflect the participant’s ability to source the information on their own accord and it seemed that the participant’s perception of whether information was available to them was tied to their children providing them with the help they needed. Some common comments included:

“On my own - not good. But with my daughter ok. She does everything for me.”

“I have the kids if I need anything.”

“I can get the information I need because my daughter is with me all the time.”

“Yes, with the help of my family and children, otherwise no.”

“I need my children to help me find information. I am lucky I have my kids.”
“I ask my children - if I understand I still ask children to make sure all is ok.”

“Things to do with health and other things my children organise for me. They do everything for me.”

This leads to another salient point, presented in Table 8.19, regarding the proportion of Greek-born South Australians mainly speaking Greek at home and the degree to which it was difficult for them to understand English. The overwhelming majority of participants, 93.8%, mainly spoke Greek at home and just under half of all participants (42.0%) found English moderately difficult to understand and 28.5% found it a little difficult.

Table 8.19: Main language spoken at home and the English proficiency of Greek-born South Australians aged 60 years and over

<table>
<thead>
<tr>
<th>Mainly speak Greek at home</th>
<th>Study Four - Data Collection</th>
<th>2011 Census**</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Yes</td>
<td>105</td>
<td>93.8</td>
</tr>
<tr>
<td>No</td>
<td>7</td>
<td>6.3</td>
</tr>
<tr>
<td>English Proficiency*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at all</td>
<td>17</td>
<td>15.2</td>
</tr>
<tr>
<td>A little</td>
<td>32</td>
<td>28.6</td>
</tr>
<tr>
<td>A moderate amount</td>
<td>47</td>
<td>42.0</td>
</tr>
<tr>
<td>Very much/An extreme amount</td>
<td>16</td>
<td>14.3</td>
</tr>
<tr>
<td>Total</td>
<td>112</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: *Census question on English Proficiency asks participants to categories their proficiency in English using the following response categories ‘Not at all’, ‘Not well’, ‘Well’ or ‘Very well’.

Source: **2011 Census of Population and Housing

There was a striking comment made regarding an individual’s ability to not only understand English but to understand Greek and raises the question that even if material is meaningfully translated into Greek this will not capture those groups who are illiterate. For example:

“I cannot read or write English. But, I can understand English. I learnt this from work and picked up the language on my own. Now in my older age I wish I was in my country, but I have my roots here - how can I leave?”

Furthermore, the lack of language proficiency was attributed to the lack of educational opportunity due to the turbulent time in which they were attending school.

“I went to school, but this was during WWII - I was only 9 years old and it was a very difficult time.”
“I went to 2nd class at primary school. It was during the war and there was no school.”

“I don’t know how to write because I never learnt due to school.”

Over half of all participants (51.8%) required an interpreter ‘about half the time’ (53.5%) or ‘now and then, but less than half of the time’ (34.5%) (See Table 8.20) and the main type of interpreter reported was familial (where 53.5% asked their ‘son or daughter’ or their ‘husband or wife’ (15.5%) for assistance).

Table 8.20: Proportion and frequency of which Greek-born South Australians, aged 60 years and over, requiring an interpreter

<table>
<thead>
<tr>
<th>Requires Interpreter</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>58</td>
<td>51.8</td>
</tr>
<tr>
<td>No</td>
<td>54</td>
<td>48.2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Frequency Requires Interpreter</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everyday</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>Almost everyday</td>
<td>6</td>
<td>10.3</td>
</tr>
<tr>
<td>About half the time</td>
<td>31</td>
<td>53.5</td>
</tr>
<tr>
<td>Now &amp; then, but less than half the time</td>
<td>20</td>
<td>34.5</td>
</tr>
<tr>
<td>Rarely</td>
<td>1</td>
<td>1.7</td>
</tr>
<tr>
<td>None of the time</td>
<td>6</td>
<td>10.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main Interpreter</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Son or daughter</td>
<td>31</td>
<td>53.5</td>
</tr>
<tr>
<td>Husband or wife</td>
<td>9</td>
<td>15.5</td>
</tr>
<tr>
<td>Other relative</td>
<td>3</td>
<td>5.2</td>
</tr>
<tr>
<td>Other informal</td>
<td>2</td>
<td>3.5</td>
</tr>
<tr>
<td>Formal, free service</td>
<td>11</td>
<td>19.0</td>
</tr>
<tr>
<td>Formal, paid service</td>
<td>2</td>
<td>3.5</td>
</tr>
</tbody>
</table>

| Total             | 58 | 100.0|

8.4 Summary

The aim of Study Four was to gain a deeper understanding of the health experiences and health-related outcomes of ageing Greek-born South Australians by examining various health and QoL indicators known to be important to people as they age. This data collection used a purposive sampling frame and care should be taken when interpreting the results. It is noted that there were some similarities in the demographic, health and health-related characteristics of this study sample when compared to the 2011 Census and the results from Study Two; thus suggesting that the findings from Study Four broadly reflect the characteristics of ageing Greek-born South Australians and as such broad inferences can be made.
The emerging themes arising from Study Four included ‘health service use’, ‘family as a vehicle for health information and support’ and ‘life-course histories affecting health in later life’. These themes will be discussed below.

8.4.1 Health service use
The majority of participants reported having at least one chronic condition where diabetes, arthritis and osteoporosis made up the largest proportion of conditions reported. Furthermore, over half the respondents reported ‘fair or poor’ health, had high blood pressure, high cholesterol and were either overweight or obese. While Greeks had various chronic conditions and health-related risk factors it was interesting to note that an overwhelmingly large majority of participants had been to a GP in the last 12 months and had also used other allied health services in the same 12 month period. The majority of participants received their health advice from their GP and GPs the nominated avenue to influence participant’s health decisions. Respondents also reported feeling a high level of trust and confidence towards their doctors and suggested that they did whatever their doctor told them to do.

There is often a push for language specific services, however, the majority of participants in this sample believed that there were sufficient Greek medical services in South Australia. When this was unpacked, there appeared to be some issues associated with Greeks not wanting to use language-specific services. For example, participants did not want to tell other Greeks their problems or did not necessarily want to talk about their problems in front of their family, interpreter or a person of the opposite sex. Further to this, there was also a stigma associated with using Greek-specific services, such as nursing homes. For example, some participants feared judgement from family, friends or the wider community that their children had not provided care for them and had instead put them in a home. As such some participants suggested it would be their preference to not use ethno-specific services to avoid this type of judgement.
Often the literature reports that immigrants under-utilise health services and do not use health services in the same way as their native-born counterparts (Orb 2002; Social Policy Research Centre & Benevolent Society 2010). This study did not investigate the patterns or frequency of health service usage and cannot present an argument as to whether Greek-born South Australians used health services in a comparable fashion to their Australian-born counterparts. It does suggest that Greek-born individuals, in this sample, used a variety of health services. It was also identified that Greeks were self-aware of their health, they worried about their health and they wanted to do the ‘right thing’ for their health, perhaps suggesting that health service utilisation is not necessarily a useful indicator for explaining health differentials for this particular population group.

It is important to note that health service utilisation is a complex area and it is certainly not the intention to discount that some migrant groups do underutilise health services. However, this may not apply to all overseas-born groups and usage patterns may reflect different meanings which need to be unpacked further to reveal misconceptions that may exist.

8.4.2 Family as a vehicle for health information and support
This then lead to another pertinent finding which was ‘family as a vehicle for health advice and support’. It seemed that participants could seek the help they needed from the right sources through their families. This was highlighted when participants were asked how able they were to access the information they needed in their day-to-day life. While, the majority of respondents reported ‘mostly’ and ‘completely’, when unpacked it became obvious that without the help and support of (mostly) their children, participants would experience some degree of difficulty in accessing the information and resources they would need in their day-to-day life. It is noted that this would be different for each participant and also depend upon their language skills.
The reliance on family was further highlighted when participants were asked if they agreed or disagreed with whether or not they should be able to seek support from family or friends if they were to get sick. Participants made it very clear that they did not wish to seek help or support from friends and would rely on their children for the support they needed. When asked what kind of support participants received it was with all aspects of their lives from shopping to running errands, helping out with money, fixing things around the house and being driven places. However, this did raise some discussion from participants about the fact that they were independent and in control of their own lives and still provided a great deal of support to their children in terms of cooking, helping children around the house, childcare and in some instances money. As a side note, it appeared that friends were a source to ‘pass the time’. However, it was highlighted that there had been significant changes to friendship circles as a result of death or sickness. This meant that many participants did not feel they had close friends anymore, but did report a sense of nostalgia for the old days when friends were a hub of social activity.

This raised an interesting dynamic. On the one hand there was an expectation that children would help them but a lack of acknowledgement for 1) what this help meant and 2) the actual the dependency that participants had on their children. This was distilled when participants were asked whether older people should be able to depend on their adult children for the help they may need. The overwhelming response from participants was that a mutually reciprocal relationship existed between children and parents. For example, children were obliged to help their parents as parents have always helped their children. Underlying this was the knowledge that children would help because they were raised to be family orientated and as such would do the ‘right thing’ by their family. Although, the duality to this was that while participants did not want to be a burden on their children or their families, there was still some level of expectation.
There was an undeniable reliance on family, where this relationship seemed to afford participants with a sense of confidence. There was also evidence that Greeks considered their children to be their most important social resource and were tied with how meaningful participants perceived their lives to be. It was a relationship which inspired hope even in the face of adversity (i.e. loss of spouse). Furthermore, family appeared to provide participants with what seemed to be a surrogate relationship, or in other words, a vehicle to navigate the system and get the help they needed for their lives whether this be in regards to health, recreation or just everyday activities.

Thus, this reliance on family raised various points in terms of what do people without family support do? How does this affect childless Greeks and their ability to navigate the system and receive the help they need? And what does this mean in terms of caring expectations and caring responsibilities into the future? While, the majority of participants reported wanting to stay at home with outside help there may be complexities in who coordinates this arrangement, who overseas this process to ensure that the appropriate help is in fact being administered and who supplements anything extra that the ‘outside help’ could not sufficiently provide. This is particularly relevant in light of the recent shifts towards consumer directed care and changes to traditional family structures.

8.4.3 Life-course histories affecting health in later life
Participants appeared to be quite resourceful, resilient and capable of working their way around things. This was highlighted through their personal stories which saw them coming to a foreign land, often with nothing (no money, no family, no language, no education, no housing etc.) but showing a great capacity to build their lives, raise a family, own their own homes, find work and overcome adversity. Another point of interest was the acknowledgement made by some participants of how earlier life experiences in terms of working blue collar jobs and a lack of language caused stress, which has contributed to some of their poorer health outcomes now. It
was interesting to hear some participants recall how hard they worked for Australia, showing their arthritic hands as evidence of this labour, but praising God that they still had some good health left.

Language was, and continues to be, an important issue. Participants reported having language and communication problems not only in their ability to understand written and spoken English but also in understanding Greek due to not having attended school in Greece and not having learnt English when arriving in Australia. Although, some participants who considered themselves as having reasonable language skills did acknowledge that there was a loss of language as they aged, which made it harder for them to communicate.

Overall, Study Four shed some light onto the health experiences of ageing Greek-born South Australians and revealed some misconceptions around health service utilisation, highlighted the importance of family as a resource despite the capacity to be a resource and magnified the importance of understanding life-course histories when exploring later life experiences.
CHAPTER 9: DISCUSSION

This research has explored the health status of older post-WWII European-born immigrants to Australia relative to their Australian-born counterparts, by examining differences in demographic, health and health-related outcomes based on broadly defined European-born groups and specific birthplace groups (German, Italian and Greek-born) at different points in time. The research explored whether migrant status was a risk factor for negative health outcomes in later life for the selected birthplace groups, and whether these immigrants were more likely to develop chronic conditions over time compared to their Australian-born counterparts. The magnitude of change for selected chronic conditions and risk factors prevalence estimates were also examined and changes in the health status of Australian, German, Italian and Greek-born groups were investigated in order to understand whether the HME as discussed in the literature was reflected in changes to health outcomes. In-depth qualitative interviews with selected older Greek-born migrants were undertaken to further understand findings from the quantitative studies.

The key findings identified in this research were that:

1) Differences do exist in the health and health-related outcomes of older European-born immigrants compared to their Australian-born counterparts.

2) The health of the older European-born immigrant deteriorates at a higher rate over time compared to those of the same age born in Australia, with:
   a. all birthplace groups experiencing deteriorations in health over time;
   b. Greek and Italian birthplace groups experiencing disproportionately worse health outcomes compared to their German and Australian-born counterparts; and
   c. those born in Germany displaying similar demographic, health and health-related outcomes to their Australian-born counterparts.
3) Aggregation of COB classification may mask health inequalities among birthplace groups.

4) HME is an inadequate construct to fully explain migrant health in that:
   a. the HME is challenged by other existing constructs, which in part better explain migrant health outcomes;
   b. misconceptions may exist around the patterns of health service use of some migrant groups;
   c. family is an important resource in achieving health expectations;
   d. it is important to take a life-course approach when exploring later life experiences and health outcomes.

9.1 Differences in health outcomes

This research has demonstrated that important differentials exist between European-born migrants by birthplace groups. While it cannot categorically be stated that the overall health status of this post-WWII migrant group is worse or better than their Australian-born counterparts, some notable differences were seen. Furthermore, this research adds depth associated with the inclusion of a broad range of chronic conditions and health-related risk factors, and provides the ability to differentiate between European birthplace groups (discussed later in this chapter).

The results of this study demonstrated that Italian and Greek-born groups experienced a higher prevalence of most chronic conditions and health-related risk factors compared to their Australian and German-born counterparts at the same age. The better health profiles of the German-born immigrants were not entirely unsurprising because this group tend to have similar demographic and socio-demographic characteristics, as well as comparable outcomes in terms of their social and economic well-being to their Australian-born counterparts (Khoo 2011; Khoo 2012). Variables such as proficiency in the dominant language, higher levels of education and higher
lifetime earnings have been previously shown to be correlated with reduced social isolation, improved social and community participation, and can assist in the formation of broader social networks, increased human capital and personal resources (Khoo 2011). These factors can contribute to improved QoL, health and wellbeing through the positive and additive cumulative effects of past life-course trajectories (Bajekal et al. 2004; Khoo 2011). This study identified many of the similarities in the demographic, health and health-related characteristics of the German-born to their Australian-born counterparts.

There are also a number of other cultural differences between German, Italian and Greek-born migrants, which can shape value orientation, social norms and construction of social relationships, networks and support systems (Stanaway et al. 2011). Individualism and collectivism are useful terms that describe relationships between people and membership to groups (Bochner 1994). Identification with individualism sees ‘persons as separate entities, clearly distinguishable from their social milieus’ (Bochner 1994, p.274). Identification with collectivism sees the ‘distinction between the individual and the group as blurred, and people regard themselves and are treated as an extension of the various social systems to which they belong’ (Bochner 1994, p.274). The distinction is important because it can underlie social expectations and result in feelings of loneliness and isolation, which are often reported by Southern Europeans. This is despite being more likely than Western and Eastern Europeans to not live alone and to reside with family members other than their spouse (Khoo 2011; Stanaway et al. 2011). However, it is somewhat surprising to note that there is little documented evidence for the better health outcomes of the German-born in the peer-reviewed literature.

Overall, the broad results showed similarities in the findings from previous research undertaken on various chronic conditions (i.e. CVD and diabetes) and health-related risk factors (such as
high blood pressure, high cholesterol, physical activity, alcohol and tobacco use). The higher rate of type 2 diabetes among those born in Southern and Eastern Europe have previously been documented in the literature, however these studies have relied on mortality and hospitalisation statistics and older cross-sectional data (Mathers 1996; Singh & De Looper 2002; Young 1987). Further to this, while higher rates of mortality from diabetes have been identified, this was not necessarily reflected in hospitalisation separations (Singh & De Looper 2002), suggesting that the management of diabetes may be a problem for these groups, or that differences exist in health beliefs or thresholds for the use of health services by migrant groups.

The high proportion of diabetes has been attributed to the higher rates of health-related risk factors identified, with Greeks and Italians being more likely to be classified as overweight or obese, and to have lower physical activity levels, and dietary alterations (increased salt consumption, alterations to caloric intake and adaptation to western diet) (Harding 2004; Kouris-Blazos 2002; McKay, McCarty & Taylor 2000; Welborn et al. 1995). These changes are thought to occur as groups assimilate and take on the health behaviours of their adopted country (Antecol & Bedard 2006; Kuh et al. 2003). This study investigated a range of these factors (where diet was crudely measured as daily fruit and vegetable intake) and while associations were apparent these did not fully explain the higher diabetes prevalence rates and left questions, regarding to what extent migrant status contributes to this outcome.

In addition, in Australia, research into diabetes has focused predominately on Greeks and Italians and as a result, there is little peer-reviewed literature on other specific birthplace groups - aside from those studies which highly aggregate COB into broad clusters (Anikeeva et al. 2010). There is also limited information on diabetes outcomes over time. Where studies have undertaken a longitudinal assessment (Hodge et al. 2004), short follow-up periods make it difficult to quantify
and understand the change. Despite these limitations, these studies have made an important contribution and there is strength in the fact that the results of this thesis are in line with those previously undertaken.

This study also showed some interesting findings in relation to CVD. For example, CVD was the only chronic condition where the Australian and overseas-born (excluding Greeks) shared similar outcomes. Greeks were observed to have a similar CVD prevalence rates to their Italian and German-born counterparts at earlier points in time (i.e. 1996/97). However, significant divergence occurred for the Italian-born where over time, the prevalence estimates exceeded those of the Australian and German-born, whereas the Greek-born maintained their comparatively lower rates of CVD and a protective association for CVD was reported (Kouris-Blazos 2002; Kouris-Blazos & Wahlqvist 1999). The higher rates of CVD in European-born groups have been documented previously in the literature (Dassanayake et al. 2009) as has the dissociation between Greek-born groups having lower rates of CVD morbidity and mortality despite, reporting a number of CVD-related risk factors such as obesity, diabetes, hyperlipidaemia, inactivity and smoking (Kouris-Blazos 2002; Kouris-Blazos & Wahlqvist 1999). This dissociation has been described as a ‘benign’ form of obesity where protective mechanisms are operating that counteract the risk. Thus, the findings of this study confirm these earlier results.

Other variables including self-rated health, asthma, musculoskeletal conditions (arthritis and osteoporosis) and mental health have been far less researched and there is limited peer-review evidence available on how European-born groups are faring. Further to this, little is known about trends in these areas over time. Therefore, these inclusions are important outcomes of this study.
as previously there has been a lack of clarity around the current burden of disease of this important priority older population.

This lack of clarify in part stems from there being limited in-depth research on migration and health in relation to older European-born as research priorities shift towards more recent arrivals and other priority groups. Australia has experienced some distinct migration waves over the decades; thus, over time the research has also focused on those coming from the Middle East, East Asia, South Asia, Vietnam, Philippines, Sudan and Iran, and those coming as refugees or asylum seekers. Studies on the older European-born migrants have been undertaken, however these studies have primarily utilised high level indicators, have focused on a limited number of health outcomes and/or been limited to specific birthplace groups (for example those born in Greece, Italy, Yugoslavia, Netherlands, Poland, Former USSR and Australia). Additionally, the major studies focusing on the post-WWII migrants are in many cases dated (for example most undertaken in the 1980’s and 1990’s) and often use ABS data or other fragmented cross-sectional data sources or registries at a singular point in time (Anikeeva et al. 2010; Jatrana, Pasupuleti & Richardson 2014).

9.2 Deterioration of health over time

This research also allowed for a number of chronic conditions and health-related risk factors to be examined over time and for the magnitude of change to be quantified. The results demonstrated that while there were increases in the chronic disease prevalence rates for all birthplace groups, Greeks and Italians had the largest percentage increase over time. Earlier studies have shown that for some types of cancers, diabetes and infectious diseases poorer health outcomes were observed. Additionally it has also been reported in the earlier work that differentials in health reduced or narrowed as duration of residence in Australia increased. However, a health advantage was also present and well-documented in many of the earlier pieces of work for
overseas-born groups often classified as Europe, Other Europe, NES countries and NES European countries, or for those born in Greece and Italy. Health advantages were reflected in lower mortality rates for most major causes of death, lower hospitalisation rates and through better overall health (Mathers 1996; Young 1987). These health advantages have frequently been explained by the HME and the selection bias at the time of arrival of the post-WWII migrant’s.

Furthermore, declines in health are expected because the incidence of chronic disease generally increases with age, shown in a recent study exploring health assimilation patterns of Australian immigrants (Biddle, Kennedy & McDonald 2007). However, the concern raised in this research is not only regarding the fact that these changes in health occurred, but as documented in Study Three, that they occurred in spite of an observed superiority in health for Greek and Italian-born groups at an earlier point in time (i.e. 1996/97 to 2007 to 2012). Thus, without the ability to analyse multiple health and health-related variables over time and across specific birthplace groups, as has been undertaken in this thesis, the divergence in health that occurs cannot be fully understood.

There is limited research on birthplace-specific health differences over time, as the element of time is frequently excluded from migrant studies. For instance, migrant studies generally utilise secondary data, which may have occurred at a single point in time or at various points in time such as national ABS data (and more specifically the NHS), which has a very limited scope to perform trend analyses for minority groups due to issues with small numbers and the predetermined aggregation of COB. Studies that use longitudinal data often have short follow-up periods, which do not take into account the latency period in the development of disease. Additionally, the measurement of health status differs between data collections and the definitions
of various health indicators changes often over time. These factors not only make it difficult to undertake migrant studies over time, but also create additional challenges when trying to interpret the findings between studies. Thus, one way this thesis was able to overcome this limitation was to introduce a crude measure of time, which allowed for changes in health to be measured over time. While not a perfect measure, it has contributed important knowledge to the research field, clarified health differences and quantified the inequalities that some groups may be experiencing.

9.3 Aggregation of country of birth

The findings from this study add to the existing knowledge by providing insight into the diversity of outcomes within and between birthplace groups on a broader range of chronic conditions and health-related risk factors than previously undertaken in Australia. This raises an interesting point in relation to the broad classification of COB. Previous studies have focused on broad-based European-born groups (i.e. Southern, Western, Eastern and Northern Europe, Other Europe, European-born from NES, NESB and overseas-born) and the more common post-WWII European migrants arriving after the Second World War such as those born in the United Kingdom/Ireland, Germany, Italy and Greece among others (Anikeeva et al. 2010; Bennett 1993; Dassanayake et al. 2009; Gibberd et al. 1984; Gray, Harding & Reid 2007; Harriss et al. 2007; Hodge et al. 2004; Kouris-Blazos 2002; Strong, Trickett & Bhatia 1998; Taylor et al. 1999; Wahlqvist et al. 1991; Welborn et al. 1995). With the ability in this thesis to separate COB into specific countries, additional important results were apparent.

As mentioned previously, consistent changes in health were observed over time in relation to increases in chronic disease and health-related risk factor estimates for both the broad and birthplace specific analyses. However, the European-born were found to have lower rates of high blood pressure, arthritis and asthma over time. In fact, where asthma and arthritis were concerned, a health advantage was maintained and there was no narrowing of estimates towards
the Australian-born averages. This finding was not consistent with the birthplace group specific analyses, which showed significant divergence in arthritis and asthma estimates. This suggests that when COB is aggregated to such a broad extent, the direction of the association may only reflect the health of some members within that population under investigation. It is also misleading in terms of understanding what vulnerabilities, and inequalities exist and highlights that care needs to be taken when interpreting the results from migrant studies where COB is highly aggregated.

9.4 HME as a concept to explain migrant health

It was not within the scope of this thesis to identify whether the HME was operating or to confirm its existence. Rather, from a supplementary perspective, this research aimed to explore whether the HME as discussed in the literature was reflected in changes to the health status of overseas-born groups. To this end, a health advantage was observed in the descriptive assessment (Study One) of European-born migrants for some chronic conditions and health-related risk factors but this was not necessarily reflected in the results of the birthplace group specific assessment of health (Study Three).

Although the data used in this study were insufficient to mount a comprehensive assessment of the HME, the findings adequately argue for an alternative view that there is considerable divergence in the long-term health outcomes experienced by selected COB groups. It also emphasizes that health profiles will be varied and different groups will experience health and ageing differently. Moreover, if health advantages do in fact exist a greater level of understanding needs to be achieved around 1) identifying to which, if any, migrant groups this phenomenon is applicable to; and 2) determining whether this phenomenon actually exists when data are disaggregated by birthplace.
While the HME is one means to describe migrant health outcomes, there is little evidence supporting this phenomenon in the broader literature. For example, in Australia the nature and the application of this phenomenon is not well understood. While the HME has been investigated in more detail in the international literature, inconsistent results have been found in terms of the strength of the relationship and the associations between immigrant health outcomes and associated characteristics (Dunn & Dyck 2000; Kliewer 1992). The observed ‘health advantage’ is further challenged by constructs such as the ‘unhealthy remigration hypothesis’, the ‘salmon bias effect’, or the notion that there is a latency period in the expression of disease and/or a selection bias in the people who choose to migrate. Furthermore, other constructs described in the literature such as cumulative inequality, double jeopardy theory and health assimilation are seen to conceptualise and in part better explain migrant health outcomes (Angel, Buckley & Sakamoto 2001; Antecol & Bedard 2006; Ben-Shlomo & Kuh 2002; Biddle, Kennedy & McDonald 2007; Carreon & Noymer 2011; Dowd & Bengtson 1978). This is a critical point because relying on the HME creates a possible foundation for misinterpretation for the research community and a false sense of understanding around how ageing migrants are actually faring.

The results from the qualitative data collection were also able to shed some light around the health outcomes experienced by ageing Greek-born South Australians and perhaps revealed some misconceptions around health service utilisation, the importance of family as a resource in achieving health expectations and magnified the importance of understanding life-course histories when exploring later life experiences. In the first instance, the findings from this thesis identified that Greek-born individuals used a variety of health services (including GPs and allied health services), that they were self-aware of their health and, worried about their health, and that they wanted to do the ‘right thing’ for their health. However, the literature often reports that immigrants under-utilise health services and that some groups do not use health services in the same way as
their native-born counterparts (Orb 2002; Social Policy Research Centre & Benevolent Society 2010). This can often occur because of language and communication difficulties, lack of understanding around host health care systems, cultural factors, health beliefs and experiences with racism and discrimination among other factors (Newbold, KB 2005). Restricted access to health services is commonly described as a barrier experienced by CALD groups that can, in part, contribute to the health differentials observed in some groups.

In contrast, there is a competing school of thought suggesting that with increased duration of residence, health service patterns begin to parallel those of the native-born (Newbold, KB 2005). There is also evidence to suggest that some groups access a number of health services (Nazroo et al. 2009) including their GPs, a range of allied health services and hospitals. It was not in the scope of this study to describe and compare the patterns or frequency of health service usage between Greek-born and Australian-born. However, the findings did put forward the notion that misconceptions may exist around how some migrant groups perceive and use health services. Some groups do under-utilise health services, perhaps for some population groups health service utilisation is not a useful indicator for explaining health differentials. Furthermore, usage patterns may reflect different meanings across different population groups that need to be unpacked further to reveal any misconceptions that exist. For example, as suggested by Nazroo et al. (2009), higher rates of health service use by some ethnic groups may reflect differences in the threshold for consultation, differences in referral patterns of GPs and other health care providers, and difficulties in accessing and finding services.

Adding to the points raised above, Greek-born individuals were observed to have an undeniable reliance on family, which seemed to afford participants with a sense of confidence in terms of providing access to information and services needed for day-to-day life. This relationship
appeared to provide an almost a surrogate relationship, or in other words, a vehicle to navigate the system. It was apparent that without this help, participants would not have been able to achieve their desired outcomes due to various under-acknowledged barriers associated with their language, communication and confidence.

It was also apparent that in many cases, Greeks considered their children to be their most important social resource and children were tied with how meaningful participants perceived their lives to be. While there was a clear expectation that children would support their parents, there was a lack of acknowledgement for the support they actually received and the dependency that participants had on their children. This was coupled with not wanting to be a burden but, still having some level of expectation. This raises concern regarding the complexities around caring expectations and responsibilities into the future, particularly in light of the recent shifts towards consumer directed care and changes to traditional family structures. The qualitative interviews undertaken in this thesis provided a lens for understanding some of the health experiences of Greek-born South Australians and suggests that a great deal of complexity exists around understanding health which needs to be further unpacked.

Finally, it was clearly identified in this research that taking a life-course approach is an important factor that needs to be considered when examining health in later life. For example, it was observed that Greek-born individuals more often than not came to Australian with little or no money, family, English language skills, education and housing etc., but showed a great capacity to build their lives, raise a family, own their own homes and find work. They were able to achieve these goals through their resourcefulness and resilience and through their ability to work their way around things to overcome obstacles and adversity. However, participants also acknowledged that earlier life experiences caused stress, which many attributed to their poorer
health outcomes. Thus, extending migrant studies beyond the quantitative humanises experiences and provides a level of understanding that can shed light on lived experiences that would otherwise be overlooked. Furthermore, these findings also show that there is great merit in understanding health from a life-course perspective because life-course histories are intimately connected with outcomes.

9.5 Future research

As has been shown from the findings of this research, the classification of birthplace groups into large clusters often overlooks the significant heterogeneity that exists within and between birthplace groups. This can be highlighted when unpacking the differences between Greek, Italian and German-born groups. It was apparent that those born in Germany had similar health and demographic outcomes to their Australian-born counterparts and in many instances had better outcomes than those born in Greece and Italy. This raises a pertinent point in terms of why some migrant groups, compared to others, have disproportionately worse health outcomes, and what factors contribute to these inequalities. Future research in this area is required.

This research went some way to explain the health differentials observed by including a wide range of factors in the investigation of whether migrant status was a risk factor for poorer health outcomes. However, the actual contribution that migrant status has on poor health outcomes is unclear. Furthermore, this study measured health status in terms of chronic disease and health-related risk factor outcomes. It is also acknowledged that as people age, the presence or absence of disease is not always the best indicator of health and non-medical indicators become more important (Bowling & Iliffe 2011). So it is important to consider that migrant health as a complex and multidimensional construct where a range of factors operating over the life-course can affect health and ageing (Irving & Mosca 2010). Thus, birthplace-specific future research examining various relevant factors (such as multi-dimensional QoL, wellbeing, individual,
structural and environmental determinants, social determinants, homeland experiences, acculturation strategies, impact and nature of political discourse) from a life-course perspective is warranted.

There is also merit in further exploring the association between socio-economic factors over the life-course in relation to migration and health. Socio-economic variables have previously been overlooked as valuable explanatory factors contributing to high mortality and/or morbidity among some ethnic minority groups (McMunn, Nazroo & Breeze 2009). There is the notion that selective mortality, or in other words the premature death of disadvantaged groups, may weaken the predictive value that socioeconomic indicators have on later life health outcomes. Irrespective of this fact, migrant health is closely linked with socio-economic determinants and the cumulative exposure to less privileged social class and poorer socio-economic conditions experienced over the life-course can account for poorer health outcomes in later life (Malmusi, Borrell & Benach 2010; Marmot & Wilkinson 2005; WHO 2012).

In addition, notwithstanding the limitations associated with the double jeopardy theory, there would be value in further understanding the contribution that membership to two or more stigmatized states has on migrant health over the life-course. This may help to further unpack the social, economic and psychological disadvantages experienced by some groups (Angel, Buckley & Sakamoto 2001; WHO 2012).

The broad aggregation of COB is a largely accepted limitation of migrant studies, particularly when secondary data are utilised. For example, there is a lack of cross-sectional and longitudinal data, and often those born in NES countries are excluded from investigations due to language and communication difficulties. Where birthplace groups of interest are represented in secondary
data collections, issues with the sampling strategy and/or small numbers can make it difficult to
disaggregate data and to produce reliable and representative estimates on health indicators. It is
also acknowledged that undertaking large-scale data collections including a range of birthplace
groups would be costly. There are issues associated with determining appropriate sampling
strategies that could capture a representative sample with adequate power to perform statistical
analyses.

Furthermore, it is often difficult to compare and contrast the results from migrant health studies
undertaken in Australia with those from other large migrant receiving countries, due to the
significant differences in the cultural, political and environmental landscape. These factors
present a fundamental challenge associated with migrant studies, which limits in many ways the
depth of understanding that can be achieved when investigating migration and health from a
broad national and highly aggregated perspective. However, this does not reduce the need for
current representative, cross-sectional and longitudinal data on the health profiles of specific
birthplace groups including the post-WWII cohort.

Overall, this research also raised a fundamental question in relation to migrant health. For
example why do some migrant groups, compared to others, have disproportionately worse health
outcomes? There is also concern regarding not only the disproportionately worse health
outcomes experienced by some migrant groups compared to others, but most strikingly the
magnitude of change that occurred in chronic disease prevalence estimates across all birthplace
groups over time. There is also a need for further clarity around what the current burden of
disease and magnitude of change in health outcomes is for specific birthplace groups, in order to
not only understand how migrants are approaching later life but also to better articulate what
health disparities exist within migrant populations. This is important and will have implications
into the future where the demand and uptake of health care and services is concerned, particularly in light of the complexity arising from the structural ageing coupled with the ethno-diversity of Australia’s population.

9.6 Limitations

This research was not without its weaknesses. It is noted that Study One had some significant limitations and as a result the findings should be interpreted with care. Study One was a descriptive study and as such, presents information pertaining to the frequency of occurrence which is limited in terms of the inferences which can be drawn regarding associations. Comparisons between survey time points could not be made due to issues associated with pooling the survey data files into one database. As a result, time-series analyses of changes in migrant health over time could not be presented.

There were additional challenges associated with the comparability of data items over the three selected time points, which limited the ability to present a more in-depth assessment of immigrant health. It is also noted that while the data items included in this study were considered comparable there may have been some conceptual and methodological changes which may have occurred between surveys. For example, the content of the survey may have differed from year to year; changes to question ordering and how questions were asked may have occurred, and changes in societal attitudes, increased respondent knowledge and awareness towards topic areas may have impacted how participants responded to questions over time. These factors could potentially affect the reliability of data items and may have resulted in some of the prevalence estimates being under- or over-estimated.

Another factor that may have affected the prevalence estimates presented in Study One, related to the classification of COB into large clusters of origin such as Australian-born and European-
born. However, it was not possible to further disaggregate the COB variable due to the concordance of COB classification structures over the three survey time points selected for investigation. The broad aggregation of COB has been previously described as a limitation due to the dangers associated with masking health disparities experienced by migrant groups who may be represented in smaller numbers (Sevoyan & Hugo 2013). Furthermore, large COB groupings assumes some level of homogeneity within and between birthplace groups and does not take into account differences that may exist in SES, diet, culture, social networks, religion, working conditions, educational and employment opportunities and language proficiency, which are known to be factors that can affect health and well-being (Marmot & Wilkinson 2005).

Despite the limitations presented above, it is emphasised that Study One did present a broad snapshot of the health status of European-born migrants using national data over three points in time. Furthermore, unlike other studies which use broad indicators of health (such as hospitalisation separations and mortality data), this study measured health status in terms of chronic disease outcomes and health-related risk factors, adding additional information and insight into the health status of Australia’s European-born migrants.

This thesis aimed to explore health status as measured by chronic conditions and health-related risk factors, however other variables known to be important to immigrant health and health in general could not be explored because of the limitations associated with the availability of data items. Thus, it is acknowledged that investigating QoL variables, social determinants, indicators of acculturation, length of residency and life-course factors in relation to migrant health, would have added to the strength of this thesis and presents an opportunity for future investigation. Additionally, the data used for these studies were cross-sectional and as such, only provide a snapshot of immigrant health at a single point in time and do not present information on cause-
and-effect. These studies utilised self-report data, which can result in under-reporting of the severity or frequency of conditions due to issues with recall, mistrust or to avoid embarrassment.

It is also noted that, while Study Two and Study Three used representative data of the South Australian population, migrant groups were generally not represented in large numbers which resulted in collapsing multiple survey years together. In addition, as a result of the relatively small numbers of respondents, additional European birthplace groups were not included in the investigations. Collapsing multiple survey years to overcome issues with small numbers can inadvertently create additional challenges. For example, there may be unknown and discrete differences over the survey years, improved knowledge towards topic areas may result in increased awareness and/or response bias, and collapsing survey years also assumes that participants are homogenous when they are in fact not and can result in estimation errors.

The SAMSS data used in Study Two and Study Three, like many other epidemiological studies, has experienced declining response and participation rates over time. The main issue with low response and participation rates is that it can give rise to non-response bias. In order to overcome these issues SAMSS data are weighted by age, sex, probability of selection and area of residence to the most recent Census data and the estimated resident population. Furthermore, weighting SAMSS data also addresses the potential bias associated with differing probabilities of selection in the sample (PROS 2004b).

Additionally, Study Three utilised cross-sectional data to construct two quasi-cohorts to be compared at two points in time. These data were not longitudinal and did not follow the same participants over time, thus causal relationships cannot be fully established. However there is confidence in the links and associations between variables as SAMSS is a well validated survey
tool. Similar findings have been described in previous studies, thus providing some level of confidence that the approach taken was robust despite these limitations.

9.7 Strengths

The time element is often ignored in migrant studies, which contributes to the lack of knowledge concerning the health status of Australia’s migrant population. Thus, examining health over time in this research piece was a strength, and allowed for a greater depth of understanding to be achieved around how health has changed and what health inequalities were experienced by some groups. Another area of strength associated with this study was the broad range of health and health-related variables used to explore migrant health, extending beyond other measures of health status such as hospitalisation separations and mortality data. This added additional information and insight into the health status of Australia’s European-born migrants.

To build on the findings from Study Two and Study Three and to gain a deeper understanding of the health and health-related experiences of ageing Greek-born South Australians, a face-to-face data collection was undertaken. Despite the limitations associated with using a purposive sampling frame, similarities were found in the demographic, health and health-related characteristics of the study sample in relation to the 2011 Census and the results from Study Two and Study Three. This suggests that the findings from Study Four broadly reflected the characteristics of ageing Greek-born South Australians and broad inferences could be made.

This thesis also incorporated a variety of data sources to examine migrant health. For example, the national ABS data is a large-scale data collection which is representative of the broader Australian population. In addition, SAMSS is a large cross-sectional data collection which has been in operation for a number of years and is representative of the broader South Australian population. The data incorporated in this thesis were weighted to the ABS Census data to reflect
the age and sex distribution of the sub-populations of interest. Furthermore, by utilising a mixed methods approach, a deeper understanding of the topic area was achieved and as a result, weaknesses associated with using a single research design were avoided.

A range of basic and complex statistical analyses were undertaken as part of this thesis in order to gain a greater understanding of the current health status of migrants, to identify how health had changed and to explore whether migrant status was a risk factor for poorer health outcomes in later life. This showed that the issue at hand was interrogated thoroughly and showed breadth of knowledge.

**9.8 Summary**

It is commonly observed that immigrants display superior health upon arrival, and for some years following settlement, in their adopted country compared to their native-born counterparts. However with increased years since migration, there is a propensity for this health advantage to dissipate and for health trajectories of some migrant groups to reach, and in some cases fall below, the host national averages. The health status of older European-born immigrants, in terms of the burden and magnitude of disease outcomes in later life, is unclear. This is due partly to a large body of dated literature relying on mortality and hospitalisation data to describe the health status of migrant populations and a historical trend to aggregate COB into large groupings, ignoring inherent differences within and between birthplace groups. This research allowed for the comparisons of demographic, health and health-related outcomes to be analysed over time and across birthplace groups, providing additional information and insight into the diversity of outcomes within and between birthplace groups, and adding depth to existing knowledge around migrant health outcomes.
There are a range of constructs, notions and ideologies offered to explain the health outcomes of migrant populations, such as acculturative stress, discrimination, HME, SES inequalities, cumulative disadvantage, double jeopardy, language and communication barriers, culture, health beliefs and health behaviours, barriers with accessing health services among a number of other hypotheses and variables. Despite these wide ranging complementary and paralleling explanations, there is still only a simplistic understanding of migrant health and what contributes to the declines that occur. These declines involve a multidimensional set of factors accumulating along with a number of mechanisms that are operating in combination over the life-course. The complexity of migrant health is compounded by the fact that migrants can be exposed to a varying range of factors and will be affected by them to a varying degree. When examining migrant health, study designs need to take into account the heterogeneity and uniqueness of experiences that can occur within sub-populations. There is also a need to understand migrant health from a life-course perspective to pay homage to how early life experiences do impact later life outcomes.

Undertaking this research has progressed many of these aspects and it is hoped that the findings will go some way into adding value to the remaining years of this valuable group of older Australians who were so instrumental in shaping Australia’s future.

### A.1: Demographic questions asked of participants and coding of variables for 1989, 2001 and 2007/08 National Health Survey Variables of Interest

<table>
<thead>
<tr>
<th></th>
<th>1989/90</th>
<th>2001</th>
<th>2007/08</th>
<th>Comparability</th>
<th>Derived Variable</th>
</tr>
</thead>
<tbody>
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<td>Male</td>
<td>Acceptable</td>
<td>Sex</td>
</tr>
<tr>
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<td>Female</td>
<td>Female</td>
<td>Female</td>
<td></td>
<td>Male</td>
</tr>
<tr>
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<td>Age in years</td>
<td>Age in years</td>
<td>Acceptable</td>
<td>Age</td>
</tr>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>55-74 (2001 NHS)*</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>60-79 (2007/08 NHS)*</td>
</tr>
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<td>Australia</td>
<td>Australia</td>
<td>Acceptable</td>
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<td>United Kingdom &amp; Ireland</td>
<td>United Kingdom &amp; Ireland</td>
<td></td>
<td>Australia</td>
</tr>
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<td>Never Married</td>
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<td></td>
<td>Other – De facto</td>
<td>Other Single/not married</td>
<td></td>
<td>Never married</td>
</tr>
</tbody>
</table>

**Notes:**
- **Acceptable:** No significant changes between surveys;
- **Acceptable with limitations:** Difficult to quantify the impact of questionnaire changes. Use with caution;
- **Not acceptable:** significant inter-survey differences or unexplainable major change in prevalence preclude the reliable use of data for time-series applications.

*Study One restricted analysis to those aged 45 to 64 years in 1989; 55 to 74 years in 2001; and 60 to 79 years in 2007/08.

**It was not possible to disaggregate country of birth (COB) any further due to the changes in the classification structures over time and due to how the Australian Bureau of Statistics coded the COB variable in the respective data files. Please see Appendix B, Table B.1 for further information regarding concordance between the two classifications namely the Standard Australian Classification of Countries (SACC) and the Australian Standard Classification of Countries for Social Statistics (ASCCSS).

***This information relates to the registered marital status question asked of NHS participants in 1989, 2001 and 2007/08. The concept of registered marital status refers to “formally registered marriages and divorces. Registered marital status is a person's relationship status in terms of whether he or she has, or has had, a registered marriage with another person. Accordingly, people are classified as either 'never married', 'married', 'widowed' or 'divorced" (ABS 2008). This definition was adopted and applied retrospectively. As such, 'de facto' was excluded from analysis with the exception of 1989 where 'de facto' has already been coded as part of the 'married' response category. Furthermore, the 'other' categories in the 2007/08 NHS were excluded from the registered marital status variable.

**Source:** Adapted from the 1989/90, 2001 and 2007/08 NHS, Australian Bureau of Statistics
### A.2: Risk factor questions asked of participants and coding of variables for 1989, 2001 and 2007/08 National Health Survey

<table>
<thead>
<tr>
<th>Variables of Interest</th>
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<th>2001</th>
<th>2007/08</th>
<th>Comparability</th>
<th>Derived Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Self-Rated Health</strong>*</td>
<td>In general, would you say that your health is Excellent, Good, Fair or Poor?</td>
<td>In general, would you say that your health is Excellent, Very Good, Good, Fair or Poor?</td>
<td>In general, would you say that your health is Excellent, Very Good, Good, Fair or Poor?</td>
<td>Acceptable with limitations</td>
<td>Self-Rated Health Excellent/Very good/Good Fair/Poor</td>
</tr>
<tr>
<td>BMI**</td>
<td>Underweight (&lt;20) Acceptable weight (20 to 25) Overweight (26 to 30) Obese (&gt;30)</td>
<td>Underweight (&lt;18.5) Normal range (18.5 to &lt;20.0) Normal range (20.0 to &lt;25.0) Overweight (25.0 to &lt;30.0) Obese (&gt;30.0)</td>
<td>Underweight (grade 3 thinness &lt;16) Underweight (grade 2 thinness 16 to &lt;17) Underweight (grade 1 thinness 17 to &lt;18.5) Normal weight (18.5 to &lt;20) Normal weight (20 to &lt;25) Overweight (grade 1 overweight 25 to &lt;30) Obese (grade 2 overweight 30 to &lt;40) Obese (grade 3 overweight &gt;40)</td>
<td>Acceptable with limitations</td>
<td>Self-Rated Health Underweight/Normal (BMI &lt;18.5 to &lt;25) Overweight/Obese (BMI 25 to &gt;30)</td>
</tr>
<tr>
<td><strong>Smoking Status</strong>*</td>
<td>Q401 asked “I would now like to ask you some questions about smoking. Do you currently smoke?” Subsequent questions Q402-Q423 established additional information regarding smoking habits and frequency.</td>
<td>Q220 asked “I would now like to ask you some questions about smoking. Do you currently smoke?” Subsequent questions Q221-Q225 established additional information regarding smoking habits and frequency.</td>
<td>SMOKE_Q01 asked “I would now like to ask you some questions about smoking. [Do you/does (proxy name)] currently smoke?” Subsequent questions SMOKQ02-SMOKQ14 established additional information regarding smoking habits and frequency.</td>
<td>Acceptable</td>
<td>Smoking Status Smoker Non-Smoker</td>
</tr>
<tr>
<td><strong>High Blood Pressure</strong></td>
<td>Included in Q230 asked “Do you have any conditions like these?” Prompt card 5 was shown which includes “High blood pressure, hypertension” among a list of 41 conditions.</td>
<td>Q450 asks “Have you ever been told by a doctor or nurse you have any heart or circulatory conditions?” as they are shown prompt card 15, which lists 13 conditions including “High blood pressure or hypertension”. Subsequent questions Q453-Q454 and Q457-458 establish whether the conditions are current and long-term.</td>
<td>CARSTAT_Q02 asked “Including any conditions which can be controlled with medication, [have you/has (proxy name)] ever been told by a doctor or nurse that [you have/(proxy name) has] any heart or circulatory conditions? As they are shown prompt card 23, which lists conditions including “High blood pressure”.”</td>
<td>Acceptable with limitations</td>
<td>High Blood Pressure Yes No</td>
</tr>
</tbody>
</table>

**Notes:**
- **Acceptable:** No significant changes between surveys.
- **Acceptable with limitations:** Difficult to quantify the impact of questionnaire changes. Use with caution.
- **Not acceptable:** Significant inter-survey differences or unexplainable major change in prevalence preclude the reliable use of data for time-series applications.

*The self-rated health variable remains broadly comparable across the four surveys due to the response category ‘very good’ being omitted in 1989/90.*

**BMI was derived from self-report height and weight in 1989/90, 2001 and by voluntary physical height and weight measures in 2007/08. BMI was calculated as weight in kilograms divided by height (m²) and grouped based on National Health and Medical Research Council guidelines. In 2001 and 2007/08, BMI was accorded with WHO Standards. The classification of BMI variable used in Study One was based upon WHO Standard (Tan 2004).**

**Source:** Adapted from the 1989/90, 2001 and 2007/08 NHS, Australian Bureau of Statistics
### A.3: Long-Term Conditions asked of participants and coding of variables for 1989/90, 2001 and 2007/08 National Health Survey

<table>
<thead>
<tr>
<th>Variables of Interest</th>
<th>1989/90</th>
<th>2001</th>
<th>2007/08</th>
<th>Comparability</th>
<th>Derived Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Arthritis</strong>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Included in Q230, &quot;...(Do you have) Any conditions which you have had or a long time and may have adjusted to such as arthritis or back problems?&quot;</td>
<td>Q545 asks &quot;Do you currently have: osteoarthritis? Rheumatoid arthritis? Gout? Rheumatism? Other type of arthritis?&quot;</td>
<td>ARTHF_Q01 through Q06 ask &quot;Do you currently have: Gout? Rheumatism? Arthritis? Osteoarthritis? Rheumatoid arthritis? Other type of arthritis?&quot;</td>
<td>Acceptable with limitations</td>
<td>Long Term Arthritis</td>
<td>Yes No</td>
</tr>
<tr>
<td>**Asthma</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Included in Q230, &quot;...(Do you have any) conditions that recur from time to time such as asthma or hayfever?&quot;</td>
<td>Q359 asked 'The next questions are about long term health conditions. Please include only those conditions that have lasted or are expected to last for six months or more. The next questions are about asthma. Have you ever been told by a doctor or a nurse that you have asthma?'</td>
<td>ASTH_Q01 asked 'I would like to ask about asthma.[Have you/has (proxy name)] ever been told by a doctor or nurse that [you/he/she] [has] The next questions establish more information about asthma.'</td>
<td>Acceptable with limitations</td>
<td>Current Asthma</td>
<td>Yes No</td>
</tr>
<tr>
<td><strong>Diabetes</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Included in Q230, &quot;Do you have any conditions like these?&quot; Prompt card 5 was shown which included &quot;Diabetes OR high blood sugar (Specify)&quot; among a list of 41 conditions.</td>
<td>Q500 asked &quot;Have you ever been told by a doctor or nurse that you have – Diabetes High sugar levels in your blood or urine?&quot; Subsequent questions 501-508 establish age of diagnosis, type of diabetes/high sugar levels, whether the diabetes/high sugar levels are still current and long-term.</td>
<td>DIABST_Q01 asked &quot;These next few questions are about Diabetes and High Sugar Levels. [Have you/has (proxy name)] ever been told by a doctor or nurse that [you/he/she] [have/has] Diabetes?&quot; Subsequent questions establish age of diagnosis, type of diabetes/high sugar levels, whether the diabetes/high sugar levels are still current and long-term.</td>
<td>Acceptable with limitations</td>
<td>Long-Term Diabetes</td>
<td>Yes No</td>
</tr>
</tbody>
</table>

**Notes:**
- *Acceptable: No significant changes between surveys. Acceptable with limitations: Difficult to quantify the impact of questionnaire changes. Use with caution; Not acceptable: significant inter-survey differences or unexplainable major change in prevalence preclude the reliable use of data for time-series applications.*
- *Arthritis was coded to include rheumatism, arthritis, osteoarthritis, and other types of arthritis. Gout was not included in this definition of arthritis.*
- **Due to the way participants were asked to report their diabetes status in 1989/90, diabetes has been coded to include: Type I Diabetes, Type II Diabetes and high blood sugar. Gestational diabetes was excluded from this variable.*

**Source:** Adapted from the 1989/90, 2001 and 2007/08 NHS, Australian Bureau of Statistics
## APPENDIX B: CONCORDANCE BETWEEN COUNTRY OF BIRTH CLASSIFICATION STRUCTURES

### B.1: Concordance between country of birth classification structures

<table>
<thead>
<tr>
<th>SACC*</th>
<th>ASCCSS**</th>
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<tbody>
<tr>
<td>2</td>
<td>NORTH-WEST EUROPE</td>
</tr>
<tr>
<td>21</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>2101</td>
<td>Channel Islands</td>
</tr>
<tr>
<td>2102</td>
<td>England</td>
</tr>
<tr>
<td>2103</td>
<td>Isle of Man</td>
</tr>
<tr>
<td>2104</td>
<td>Northern Ireland</td>
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<tr>
<td>2105</td>
<td>Scotland</td>
</tr>
<tr>
<td>2106</td>
<td>Wales</td>
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<td>22</td>
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</tr>
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<td>2201</td>
<td>Ireland</td>
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<tr>
<td>23</td>
<td>Western Europe</td>
</tr>
<tr>
<td>2301</td>
<td>Austria</td>
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<tr>
<td>2302</td>
<td>Belgium</td>
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<td>2303</td>
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<td>2305</td>
<td>Liechtenstein</td>
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<td>2307</td>
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<td>2308</td>
<td>Netherlands</td>
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<tr>
<td>2311</td>
<td>Switzerland</td>
</tr>
<tr>
<td>24</td>
<td>Northern Europe</td>
</tr>
<tr>
<td>2401</td>
<td>Denmark</td>
</tr>
<tr>
<td>2402</td>
<td>Faeroe Islands</td>
</tr>
<tr>
<td>2403</td>
<td>Finland</td>
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<td>2405</td>
<td>Iceland</td>
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<td>2406</td>
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<tr>
<td>2407</td>
<td>Sweden</td>
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<tr>
<td>3</td>
<td>SOUTHERN and EASTERN EUROPE</td>
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<tr>
<td>31</td>
<td>Southern Europe</td>
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<td>Code</td>
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</tr>
<tr>
<td>3202</td>
<td>Bosnia and Herzegovina</td>
</tr>
<tr>
<td>3203</td>
<td>Bulgaria</td>
</tr>
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<td>3204</td>
<td>Croatia</td>
</tr>
<tr>
<td>3205</td>
<td>Cyprus</td>
</tr>
<tr>
<td>3206</td>
<td>Former Yugoslav Republic of Macedonia (FYROM)</td>
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<tr>
<td>3207</td>
<td>Greece</td>
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<td>3307</td>
<td>Poland</td>
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<td>3308</td>
<td>Russian Federation</td>
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<tr>
<td>3311</td>
<td>Slovakia</td>
</tr>
<tr>
<td>3312</td>
<td>Ukraine</td>
</tr>
</tbody>
</table>

Notes:
*In 2001 and 2007/08 the country of birth variable was classified in accordance with the Standard Australian Classification of Countries (SACC).

**In 1989/90 the country of birth variable was classified in accordance with the Australian Standard Classification of Countries for Social Statistics (ASCCSS). Due to political changes in Europe, a number of amendments were made to the structure of the classification making disaggregation of the country of birth variable not possible.

APPENDIX C: SOUTH AUSTRALIAN MONITORING AND SURVEILLANCE SYSTEM QUESTIONNAIRE
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<td>Y. SOCIAL CAPITAL (SOCIAL FACTOR)</td>
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<td>AA. ECONOMICS</td>
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<td>EE. SOCIAL CHARACTERISTICS</td>
<td>239</td>
</tr>
</tbody>
</table>

Last updated: 25 June 2012
TIME OF SURVEY

DEM1 Enter Year
(Single Response)
1. Enter Year __ __

DEM2 Enter month
(Single Response)
1. January
2. February
3. March
4. April
5. May
6. June
7. July
8. August
9. September
10. October
11. November
12. December

INTRODUCTION

Intro 1 : Call for the first time
Good ....... My name is ....... and I am calling on behalf of SA Dept of Health in collaboration with University of Adelaide. We are conducting a survey about the health needs of South Australians.

Intro 2 : Receiving the letter
We recently sent you a letter telling you about the survey. Did you receive the letter?

(Single Response)
1. Yes
2. No
3. Don't know

Interviewer note: If respondent queried how the phone number was selected:
EWP : Your phone number was randomly selected from the Electronic White Pages.

A. SELECTION OF RESPONDENT (DEMOGRAPHICS)

IntroA5 Records prior to survey are randomly allocated into three aged groups:
1. 0 to 15 years Go to A5IntA
2. 16 to 24 years Go to A5IntB
3. 25 to 34 years Go to A5IntC

A5IntA This survey includes children aged less than 16 years living in the household where a parent or guardian answers these health questions on their behalf. To ensure that we get a good representation of the community, could you please tell me if there are any children in the household aged less than 16 years, including newborn babies.

(Single Response)
1. Yes Go to A7Int
2. No / Not stated Go to A6Int

A5IntB To ensure that we get a good representation of the community can you please tell me if there is anyone in your household who is aged between aged 16 to 24 years.

(Single Response)
1. Yes Go to A8Int
2. No / Not stated Go to A6Int
A5IntC  To ensure that we get a good representation of the community can you please tell me if there is anyone in your household who is aged between aged 25 to 34 years.

(Single Response)
1. Yes Go to A9Int
2. No / Not stated Go to A6Int

A6Int  Since there is no one in this age group, can you please tell me the age of the person in the household who was the last to have a birthday. (This includes children and newborn babies living in the household).

(Interviewer note: some of the questions are only asked of people in certain age groups.)
Sequence guide: go to DEM4 (Q0)

A7Int  Can you please tell me the age of the child in the household who was the last to have a birthday. (This includes children and newborn babies living the household).

(Interviewer note: some of the questions are only asked of people in certain age groups.)
Sequence guide: go to DEM4 (Q0)

A8Int  Can you please tell me the age of the person aged between 16 and 24 years in the household who was last to have a birthday.

(Interviewer note: some of the questions are only asked of people in certain age groups.)
Sequence guide: go to DEM4 (Q0)

A9Int  Can you please tell me the age of the person aged between 25 and 34 years in the household who was last to have a birthday.

(Interviewer note: some of the questions are only asked of people in certain age groups.)
Sequence guide: go to DEM4 (Q0)

DEM3  Age of respondent

(Single Response. Enter 999 if not stated)
1. Enter year ___
2. Enter months ___
3. Enter weeks ___
4. Not stated [999]

Sequence guide: If AGE < 16 years Go to IntroA2 (Q3)

0  DEM4  Which age group [are you / is the person who was last to have a birthday] in? Would it be

(Read Options. Single Response)
1. 0 to 5 months
2. 6 to 11 months
3. 1 year
4. 2 years
5. 3 years
6. 4 years
7. 5 to 9
8. 10 to 11
9. 12 years
10. 13 to 15
11. 16 to 19
12. 20 to 24
13. 25 to 34
14. 35 to 44
15. 45 to 50
16. 51 to 54
17. 55 to 64
18. 65 to 74
19. 75 to 84
20. 85 years or older

Sequence guide: if AGE < 16 years Go to IntroA2 (Q3)

1  IntroA1  Are you that person in the household who was last to have a birthday?

Interviewer select the appropriate type:
1. Yes - speaking
2. No - somebody else
3. Foreign language interviewer required Enter language
4. Refusal Enter reasons
Intro 3: Confidentiality and assurance

I can assure you that information given will remain confidential. The answers from all people interviewed will be gathered together and presented in a report. No individual answers will be passed on. Whilst your input to the survey is very important to us, participation is voluntary and you can choose not to answer any particular question or any section and you are free to withdraw from the survey at any time. And before we start, I just need to let you know that this call may be monitored by my supervisor for training and coaching purposes.

2  IntroA5  Are you happy for us to continue?  (Single Response)
   1. Yes
   2. No

Sequence guide: If IntroA5 = no. Interviewer note: Thank the person for their time and terminate.

Sequence guide: If IntroA1 = 1, Go to NS
If IntroA1 = 2, repeat Intro 1, 2 & 3, clarify age, then Go to NS

3  IntroA2  Would you be the most appropriate person to answer questions on their behalf?
   (Single response)
   1. Yes
   2. No

Intro 3: Confidentiality and assurance

I can assure you that information given will remain confidential. The answers from all people interviewed will be gathered together and presented in a report. No individual answers will be passed on. Whilst your input to the survey is very important to us, participation is voluntary and you can choose not to answer any particular question or any section and you are free to withdraw from the survey at any time. And before we start, I just need to let you know that this call may be monitored by my supervisor for training and coaching purposes.

4  IntroA5  Are you happy for us to continue?  (Single Response)
   1. Yes
   2. No

Sequence guide: if IntroA5 = no. Interviewer note:
   Thank the person for their time and terminate.

Sequence guide:
If IntroA2 = 1, Go to IntroA3 (Q5)
If IntroA2 = 2  Either
   a) Get the person & repeat Intro 1, 2 & 3, clarify age, Go to IntroA3 (Q5)
   b) Make an appointment to call back later (within 24 hours)

5  IntroA3  Because we are going to ask questions about this child, would you mind telling me this child’s first name so that we can use this during the interview?
   (Single response)
   1. Yes, enter name
   2. Refused

6  IntroA4  Could you please tell me your relationship to [child’s name]?
   (Single response)
   1. Mother
   2. Father
   3. Step-mother
   4. Step-father
   5. Other relative
   6. Other (specify)
B. INITIAL DEMOGRAPHICS

7 DEM5 Gender of respondent or child
   1. Male
   2. Female

8 DEM6 Including yourself how many people aged 16 years and over live in this household?
   (Single Response. Interviewer note: enter number of people 16 years and over)
   1. Enter number _____
   2. Not stated [999]

9 DEM7 How many children (including babies) under 16 years live in your household?
   (Single Response. Interviewer note: enter number of people 16 years and over)
   1. None [0]
   2. Enter number _____
   3. Not stated [999]

C. OVERALL HEALTH STATUS

<table>
<thead>
<tr>
<th>SF1</th>
<th>0-4</th>
<th>5-15</th>
<th>16+</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

Sequence guide: If AGE < 5 go to NS

This first question asks for your views about [your / child’s name] health.

10 SF1 In general, would you say [your / child’s name] health is:
   (Read Options. Single Response)
   1. Excellent
   2. Very good
   3. Good
   4. Fair
   5. Poor
D. HEALTH CARE UTILISATION

<table>
<thead>
<tr>
<th></th>
<th>0-4</th>
<th>5-15</th>
<th>16+</th>
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<tr>
<td>SER6</td>
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<td>✓</td>
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<tr>
<td>SER1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

11 SER6 In the last 12 months, how many times have you/has child’s name used a general practitioner in South Australia?

(Single response. Interviewer note: enter 0 = none, 998 = don’t know, 999 = refused)

1. Enter No. of times ___
2. None [ 0 ]
3. Don’t know [ 998 ]
4. Refused [ 999 ]

Sequence guide: If Q11 SER6 = 0, (has not visited a GP in last 12 months go to Q12 (SER1.2) pg Error! Bookmark not defined. (seq ch 201006))

12 SER1 In the last four weeks, how many times have you/has child’s name used these health services in South Australia?

(Read Options. Multiple Response. Interviewer note: Enter 99 if none, 990 don’t know & 999 if refused)

1. General Practitioner pg Error! Bookmark not defined. (seq ch 201006)
2. Hospital - Accident & Emergency department ___
3. Hospital admission ___
4. Hospital - Clinic (outpatient, specialist or other clinic) ___
5. Specialist doctor (not in hospital) pg Error! Bookmark not defined. ___
6. None
7. Refused

Sequence guide: If SER1 ≠ 2 and age < 16 GO TO SER7.
If SER1=2 and age<16 GO TO SER8.
Else GO TO SER3.

13 SER18 In the last 12 months, how many times has [child’s name] visited an accident and emergency department in South Australia?

(Single Response)

1. Enter No. of times ___
2. None [ 0 ]
3. Don’t know [ 998 ]
4. Refused [ 999 ]

The following questions are about [child’s name]'s most recent visit to an accident and emergency department.

14 SER19 Did you seek medical advice before taking [child’s name] to the accident and emergency department?

(Single Response)

1. Yes
2. No
3. Don’t know
4. Refused
15 SER20 What would you say were the reasons you took [child’s name] to an accident and emergency department rather than a GP or other health service?  
(Multiple Response)  
1. No confidence in GP  
2. Don’t have a usual GP  
3. Was referred by GP/other health service  
4. The cost for other health service/A&E doesn’t incur a cost  
5. Child’s problem more appropriate for A&E  
6. The seriousness of the child’s problem  
7. GP would have referred child to A&E anyway  
8. Advised to take child straight to A&E by somebody else  
9. Child will be seen more quickly in A&E  
10. No other services available at that time  
11. Easier to get to A&E than GP surgery  
12. Easier to get to A&E than GP emergency centre  
13. A&E more convenient because of my working hours  
14. A&E more convenient because of child care arrangements  
15. Doctors at A&E more experienced  
16. Get better treatment at A&E  
17. Other (specify)  
18. Don’t know  
19. Refused

Sequence guide: If age < 16 Go to NS

16 SER3 [In the last four weeks, how many times [have you / has child’s name] used these health services in South Australia?]  
(Read Options. Multiple Response. Interviewer note: Enter 99 if none, 990 don’t know & 999 if refused)  
1. Psychologist  
2. Psychiatrist  
3. Other community mental health services  
4. None
### E. CO-MORBIDITY, INJURY, DISABILITY (Health Status)

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**17 DIA1** [Have you / has child’s name] ever been told by a doctor that [you have / he has / she has] diabetes? 
(Single Response) pg Error! Bookmark not defined. seq ch 2-15yrs 200307
1. Yes
2. No
3. Don’t know/Refused

Sequence guide: 
If Q17 (DIA1) = 2,3 Go to Q23 (AST5)

**18 DIA10** How old [were you / was your child] when first diagnosed with diabetes? 
(Single Response) pg Error! Bookmark not defined. new qn 200701
1. Enter age _____
2. Don’t know/ refused

Sequence guide: If AGE ≥ 16 & SEX = 1 Go to Q21 (DIA4) 
If AGE 2 -15 Go to Q22 (DIA5) 
If DIA10 ≥ 45 and < 100 Go to Q21 (DIA4)

**19 DIA2** Were you pregnant when you were first told you had diabetes? 
(Single Response)
1. Yes
2. No

Sequence guide: If Q18 (DIA2) = 2 Go to Q21 (DIA4)

**20 DIA3** Have you ever been told by a doctor that you have diabetes other than when you were pregnant? 
(Single Response)
1. Yes
2. No

Sequence guide: If Q20 (DIA3) = 2 Go to Q23 (AST5)

**21 DIA4** Have you got diabetes now? 
(Single Response)
1. Yes
2. No
22 DIA5 [Other than the diabetes when you were pregnant] What type of diabetes [were you / was child’s name] told [you / he / she] had?

(Single Response) pg Error! Bookmark not defined. seq ch 2-15yrs 200307
1. Type 1 – Insulin dependent – Juvenile onset
2. Type 2 – Non-insulin dependent – Mature onset
3. Don’t know
4. Other (specify)

23 AST5 [Have you / has child’s name] ever been told by a doctor that [you have / he has / she has] asthma?

(Single Response)
1. Yes
2. No
3. Don’t know

Sequence guide: if Q23 (AST5) ≥ 2 go to Q25 (AST7)

24 AST10 How old [were you / was your child] when first diagnosed with asthma?

(Single Response.) pg Error! Bookmark not defined. new qn 200701
1. Enter age ______
2. Don’t know / refused

25 AST7 Symptoms of asthma include cough, wheezing, shortness of breath and chest tightness.

During the past 12 months, did [you / child’s name] have any symptoms of asthma?

(Single Response) pg Error! Bookmark not defined. new qn 200501 del AST1
1. Yes
2. No
3. Don’t know

Dropped AST2 pg Error! Bookmark not defined. 200401

26 AST3 During the past 12 months, did [you / child’s name] take asthma medication that was prescribed or given to you by a doctor? This includes using an inhaler, puffer or nebuliser.

(Single Response)
1. Yes
2. No
3. Don’t know

Dropped AST4 pg Error! Bookmark not defined. 200401

27 AST8 Have [you / child’s name] had wheezing or whistling in [your/his/her] chest at any time in the last 12 months?

(Single Response) pg Error! Bookmark not defined. new qn 200501
1. Yes
2. No
3. Don’t know

Sequence guide:
If AGE < 16 Go to Q40 (COM1)
If Q23 (AST5) ≥ 2 Go to Q29 (COP3)

28 AST6 [Do you / does person’s name] still have asthma?

(Single Response)
1. Yes
2. No
3. Don’t know

29 COP3 Have you ever been told by a doctor that you have chronic bronchitis or emphysema?

(Single Response) pg Error! Bookmark not defined. new qn 200501 del COP1 & COP2 pg Error! Bookmark not defined.
1. Yes
2. No
3. Don’t know

Sequence guide: If Q29 (COP3) ≥ 2 go to Q31 (CVD1)
30  COP10  How old were you when you were first diagnosed with chronic bronchitis or emphysema?
(Single Response) Pg 206
1. Enter age ______
2. Don’t know / refused

31  CVD1  Have you ever been told by a doctor that you have had any of the following conditions?
(Read Options. Multiple Response)
1. Heart attack
2. Angina
3. Heart disease
4. Stroke
5. None of the above

Sequence guide: If Q31 CVD1 = 5 go to Q33 ART1

32  CVD10 How old were you when you were first diagnosed with [heart attack / angina / heart disease / stroke]?
(Single Response) Pg 206
1. Enter age ______
2. Don’t know / refused

33  ART1 Have you ever been told by a doctor that you have arthritis?
(Read Options. Multiple Response. Interviewer note: if yes, prompt what type?) Pg 206
1. Yes, Osteoarthritis
2. Yes, Rheumatoid Arthritis
3. Yes, Juvenile Rheumatoid Arthritis (JRA)
4. Yes, other (specify)
5. No, don’t have arthritis
6. Yes, don’t know type

Sequence guide: If Q33 ART1=5 go to Q35 OST1

34  ART10 How old were you when you were first diagnosed with arthritis?
(Single Response) Pg 206
1. Enter age ______
2. Don’t know / refused

35  OST1 Have you ever been told by a doctor that you have osteoporosis?
(Single Response)
1. Yes
2. No
3. Don’t know

Sequence guide: If Q35 (OST1) ≥ 2 AGE ≤16 go to Q40 (COM1)
If Q35 (OST1) ≥ 2 and AGE ≥ 16 Go to Q45 (DIS1)

36  OST10 How old were you when you were first diagnosed with osteoporosis?
(Single Response.) Pg 206
1. Enter age ______
2. Don’t know / refused

Sequence guide: If AGE <16 go to Q40 (COM1) Pg 206

37  CAC1 [Have you / has child’s name] ever been told by a doctor that [you have / he has / she has] cancer?
(Single Response) Pg 206
1. Yes
2. No
3. Don’t know/Refused

Sequence guide: Pg 206
If Q37 (CAC1) >1 and AGE ≥ 16 Go to Q17 (DIS1)
If Q37 (CAC1) >1 and AGE < 16 Go to Q40 (COM1)

38  CAC2 What type of cancer was it?
(Multiple Response) Pg 206
1. Gastrointestinal (colon (bowel)/ liver/ pancreatic/ stomach)
2. Leukemia/Lymphoma (lymph nodes and bone marrow)
3. Male cancers (prostate or testicular)
4. Skin melanoma
5. Skin non-melanoma (Squamous cell carcinoma / basal cell carcinoma)
6. Thoracic (heart/ lung)
7. Urinary (bladder/kidney)
8. Breast
9. Other Female (cervical/ uterus/ ovarian)
10. Head/Neck (head/ neck/ throat/ thyroid)
11. Brain
12. Other specify_______
13. Don’t know / Not sure
14. Refused

39 CAC3 How old [were you / was your child] when first diagnosed with cancer? (Single Response)
1. Enter age ______
2. Don’t know / refused

Sequence guide: If AGE ≥ 16 Go to Q45 (DIS1)

40 COM1 Does [child’s name] have a long term illness or ongoing pain that puts pressure on you or the family as a whole? (Single Response)
1. Yes
2. No
3. Don’t know
4. Refused

Sequence guide: If AGE < 2 Go to NS

41 COM5 I am going to read you a list of problems or difficulties that some children have. Please tell me if a health care professional or other professional (e.g. teacher) has ever told you that [child’s name] has:
(Read options. Multiple Response)
1. Significant behavioural problems
2. Migraines and headaches
3. A problem with coordination and clumsiness
4. Developmental delay
5. Learning disorder or difficulty
6. Any other physical or intellectual disability
7. Attention Deficit Hyperactivity Disorder
8. None of the above

Sequence guide: If COM1>1 and COM5>7 Go to NS
42 COM7 Due to the condition(s) you have just told me about, does [child’s name] have difficulty in any of the following areas compared to children of a similar age?

(Read options. Multiple Response)
1. Communication (understanding or being understood by others)
2. Mobility (getting out of bed, moving around home or at places away from home)
3. Self care (eating, drinking, dressing, bathing)
4. Interact or play with others
5. Managing his/her emotions
6. Difficulty learning
7. Other activities
8. None of the above
9. Don’t know
10. Refused

Sequence guide: If DEM7 >1 and <999 (more than 1 child in house) GO TO COM9. Else GO TO NS.

44 COM9 Has having someone in your home with a long term condition had an effect on any of the following for any other children within the household?

(Read options. Multiple Response)
1. Their schoolwork
2. Their ability to participate in their interests (sports or the arts etc)
3. Their ability to spend time with friends
4. Their relationships with other family members
5. None of the above
6. Other (specify)
7. Don’t know
8. Refused

Sequence guide: If AGE < 16 go to NS

45 DIS1 These next questions are about disabilities, that is, physical, mental, or emotional problems or limitations you may have in your daily life.

Are you limited in any way in any activities because of any impairment or health problem?

(Single Response)
1. Yes
2. No
3. Don’t know/not sure
4. Refused

Dropped DIS2, DIS3, DIS4, DIS5, DIS6, DIS7, DIS8, DIS9

Sequence guide: If AGE < 65 Go to NS

46 INJ1 Now I would like to ask you about falls that you may have had in the past year including those falls that did not result in injury as well as those that did.

How many falls (including slips, trips and falls to the ground) did you have in the past year?

(Single Response)
1. Enter number of falls ___
2. None
3. Don’t know

Sequence guide: If Q46 (INJ1) > 1 Go to NS
47 INJ2 Did you receive medical treatment for injuries from any of these falls or did you limit your usual activity for more than two days due to injuries from any of these falls?

(Single Response)
1. Medical treatment
2. Limit activity
3. Both
4. Neither

Dropped INJ14, INJ15, INJ16

Dropped INJ6

Dropped IMM1 & IMM2

F. CARERS

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Sequence guide: If age < 16 Go to NS

1 CAR1 Do you provide long-term care at home for a parent, partner, child, other relative or friend who has a disability, is frail, aged or who has a chronic mental or physical illness? (Interviewer note: Long-term care is a minimum of 6 months and may extend into years.)

(Single Response)
1. Yes
2. No
3. Don’t know
4. Refused
G. BLOOD PRESSURE (Risk Factors)

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Sequence guide: If AGE < 16 Go to NS. Seq ch 16+ instead of 20-64 yrs only.

48 HBP1 Have you ever been told by a doctor or a nurse that you have high blood pressure?
(Single Response. Interviewer note: do not include other health professional)
1. Yes
2. No
3. Don’t know
4. Never measured

Sequence guide: If Q48 (HBP1) = 4 Go to NS. Dropped HBP2.

49 HBP3 When did you last have your blood pressure measured (by a doctor or nurse)?
(Single Response)
1. Less than 1 year ago
2. One to less than two years ago
3. Two to three years ago
4. More than 3 years ago
5. Never measured
6. Don’t know

Sequence guide: If Q49 (HBP3) = 5,6 Go to NS. If Q48 (HBP1) ≥ 2 Go to NS.

50 HBP4 Do you still have high blood pressure?
(Single Response. Interviewer Note: Enter yes if controlled by tablets or medication)
1. Yes
2. No
3. Don’t know
51 HBP5 Are you on tablets or other prescribed medication for blood pressure?
(Single Response)
1. Yes
2. No

55 CHO4 Are you on tablets or other prescribed medication for high cholesterol?
(Single Response)
1. Yes
2. No

H. CHOLESTEROL (Risk Factors)

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Sequence guide: If AGE < 16 Go to NS

52 CHO1 Have you ever been told by a doctor or a nurse that you have high cholesterol?
(Single Response)
1. Yes
2. No
3. Don’t know
4. Never measured

Sequence guide: If Q52 (CHO1) = 4 Go to NS.

53 CHO2 When did you last have your cholesterol measured (by a doctor or nurse)?
(Single Response)
1. Less than 1 year ago
2. One to less than two years ago
3. Two to three years ago
4. More than 3 years ago
5. Never measured
6. Don’t know

Sequence guide: If Q53 (CHO2) = 5,6 Go to NS.
If Q52 (CHO1) ≥ 2 Go to NS.

54 CHO3 Do you still have high cholesterol?
(Single Response. Interviewer Note: Enter yes if controlled by tablets or medication)
1. Yes
2. No
3. Don’t know
I. PHYSICAL ACTIVITY (Protective Factors)

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Sequence guide: If AGE ≤ 15 Go to Q63 (PA12)
If AGE ≥ 18 Go to Q57 (PA1)
If AGE ≥ 2 & < 5 Go to Q66 (PA15)

The next few questions are about any physical activities that you may have done in the last week. They are similar to the previous question but it would help our research if you could also answer these questions.

57 PA1 In the last week, how many times have you walked continuously, for at least 10 minutes, for recreation, exercise or to get to or from places?
   (Single Response. Enter number of times.
   Enter 0 if none)
   1. None Go to Q59 (PA7)
   2. Enter number of times _____
   3. Not stated/Don’t know [999]

58 PA2 What do you estimate was the total time that you spent walking in this way in the last week?
   (Single Response. Enter number of hours AND/OR minutes.)
   1. Hours _____
   2. Minutes _____
   3. Not stated/Don’t know [999]

59 PA7 This question excludes household chores or gardening. In the last week, how many times did [you/child] do any vigorous physical activity which made [you/child] breathe harder or puff and pant? (e.g. tennis, jogging, cycling, keep fit exercises).
   (Single Response. Enter number of times.
   Enter 0 if none)
   1. None Go to Q61 (PA9)
   2. Enter number of times _____
   3. Not stated/Don’t know [999]

60 PA8 What do you estimate was the total time that you spent doing this vigorous physical activity in the last week?
   (Single Response. Enter number of hours AND/OR minutes.)
   1. Hours _____
   2. Minutes _____
   3. Not stated/Don’t know [999]
61 PA9 This question excludes household chores or gardening.
In the last week, how many times did [you/child] do other more moderate physical activities that you have not already mentioned? (e.g. lawn bowls, golf, gentle swimming, etc)
(Single Response. Enter number of times. Enter 0 if none)
1. None Go to Q63 (PA12)
2. Enter number of times
   3. Not stated/Don't know [999]

62 PA10 What do you estimate was the total time that [you/child] spent doing these activities in the last week?
(Single Response. Enter number of hours AND/OR minutes.)
1. Hours
2. Minutes
3. Not stated/Don't know [999]

Sequence guide: Go to QError! Reference source not found. (PA16) seq ch 201207
Dropped PA11 pg Error! Bookmark not defined. 200401

63 PA12 On average, how many hours per day or per week does [child's name] spend doing organised sport?
(Single Response. Interviewer note: Does not = PE at school, organised means regular commitment to activity. Enter number of hours/ day or hours/ week)
1. None [0]
2. Enter hours per day
3. Enter hours per week
4. Don't know [999]
5. Refused [998]

64 PA13 On average how many hours per day or per week does [child's name] spend reading for pleasure?
(Single Response. Interviewer note enter number of hours/ day or hours/ week)
1. None [0]
2. Enter hours per day
3. Enter hours per week
4. Don't know [999]

5. Refused [998]

Dropped PA14 pg Error! Bookmark not defined. new qn 201003

65 PA21 On an average school day, about how many hours a day does [child's name] spend doing HOMEWORK [when they are not at school]?
(Single Response. Interviewer note: Enter number of hours/ day or hours/ week)
1. None [0]
2. Enter hours per day
3. Enter hours per week
4. Don't know [999]
5. Refused [998]

66 PA15 On average how many hours per day or per week does [child's name] spend watching TV, videos or playing video or computer games?
(Single Response. Interviewer note enter number of hours/ day or hours/ week)
1. None [0]
2. Enter hours per day
3. Enter hours per week
4. Don't know [999]
5. Refused [998]

Sequence guide: If AGE ≥ 2 & < 5 Go to 69 (PA16) pg Error! Bookmark not defined. seq ch aged 5-15 yrs only 200401

The following two questions are similar to the previous question. It would help our research if you could also answer these questions.

67 PA22 On an average school day, about how many hours a day does [child's name] spend WATCHING TV/VIDEOS/DVDS [when they are not at school]?
(Single Response. Interviewer note: Enter number of hours/ day or hours/ week)
1. None [0]
2. Enter hours per day
3. Enter hours per week
4. Don't know [99]
5. Refused [999]
PA23  On an average school day, about how many hours a day does [child’s name] spend USING THE INTERNET OR PLAY COMPUTER GAMES [when they are not at school]?  

(Single Response.  Interviewer note: Enter number of hours/ day or hours/ week  
Does not include computer use for homework.)

1. None [0]  
2. Enter hours per day _____  
3. Enter hours per week _____  
4. Don’t know [999]  
5.Refused [998]  

PA16  On average how many hours per day or per week [do you/ does child’s name] spend sleeping?  

(Single Response.  Interviewer note: Enter number of hours/ day or hours/ week  
include 16+)  

1. None [0]  
2. Enter hours per day _____  
3. Enter hours per week _____  
4. Don’t know [999]  
5. Refused [998]  

J. HEIGHT AND WEIGHT - BODY MASS INDEX (BMI) (Risk Factors) 

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BMI1  What is [your / child’s name] height without shoes?  

(Single Response)  

1. Centimetres _____  
2. Feet : Inches _____  
3. Don’t know  
4. Refused  

BMI3  Interviewer note: DO NOT READ. Has respondent measured height?  

(Single Response)  

1. Yes  
2. No  

BMI2  What is [your / child’s name] weight? (Undressed in the morning)  

(Single Response)  

1. Kilograms (Kg) _____  
2. Stones : Pounds _____  
3. Don’t know  
4. Refused  

BMI4  Interviewer note: DO NOT READ. Has respondent measured weight?  

(Single Response)  

1. Yes  
2. No  

Sequence guide: If AGE ≥ 16 Go to NS
74. **BMI5**  How much did you weigh a year ago?  
   [If female & age < 46; If you were pregnant a year ago, how much did you weigh before your pregnancy?]
   
   (Single Response)
   1. **Kilograms (Kg)** ___
   OR
   2. **Stones : Pounds** ___ ___
   3. Don’t know / Not sure
   4. Refused

   **Interviewer note:** Subtract weight one year ago from current weight. If weight is same, Go to NS.

75. **BMI6**  Was the change between your current weight and your weight a year ago intentional?

   (Single Response)
   1. Yes
   2. No
   3. Don’t know / Not sure
   4. Refused
   5. No change

---

**K. SMOKING (Risk Factors)**

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**Sequence guide:** If AGE < 16 Go to Q76 (SMO6)

---

**The following questions are about tobacco smoking. This includes cigarettes, cigars and pipes.**

76. **SMO6**  Which of the following best describes your home situation?  
   (Read options. Single Response)
   1. My home is smoke free (includes smoking is allowed outside)
   2. People occasionally smoke in the house
   3. People frequently smoke in the house
   4. Don’t know
   5. Refused

   **Sequence guide:** If AGE < 16 Go to NS

77. **SMO1**  Which of the following best describes your smoking status?  
   (Read options. Single Response)
   1. I smoke daily
   2. I smoke occasionally
   3. I don’t smoke now but I used to
   4. I’ve tried it a few times but never smoked regularly
   5. I’ve never smoked
   6. Refused

   **Sequence guide:** If Q77 (SMO1) = 3 (Ex-smoker) go to Qu72 (SMO7)
   If Q77 (SMO1) = 4, 5, 6 (non-smoker) go to NS

---

Dropped SUN1  
Dropped SUN1  
Dropped SMO2
On average how many cigarettes do you smoke per day or each week?

(Single Response. Enter number)
1. Daily
2. Weekly
3. Monthly
4. Don’t know

Sequence guide: Go to NS

Over your lifetime would you have smoked at least 100 cigarettes or similar amount of tobacco? (Single Response)
1. Yes
2. No
3. Don’t know
4. Refused

L. ALCOHOL CONSUMPTION (Risk Factors)

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Sequence guide: If AGE < 16 Go to NS

The following questions are about drinking alcohol.

How often do you usually drink alcohol?
(Single Response)
1. I don’t drink alcohol Go to NS
2. Less than once a week
3. Specify number of days per week
4. Refused Go to NS

A Standard Drink is equivalent to a schooner or midi of full strength beer, a glass of wine or a nip of spirits. On a day when you drink alcohol, how many drinks do you usually have?
(Single Response)
1. Specify number drinks
2. Refused

Dropped ALC6
M. BREASTFEEDING (Additional Module)

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The following questions are about breastfeeding. [New qn 200710]

Sequence guide: [Seq ch 201001]

If age < 4 go to NUT40
Else go to NS

82 NUT40 For our calculations could you please tell us the age of your child in weeks, months AND year [Pg 200710]

(Single response)
1. Enter years _____
And
2. Enter months _____
And
3. Enter weeks _____
4. Not sure / Don’t know [ ]
5. Refused [ ]

Sequence guide: [Seq ch 201001]

83 NUT19 Has [child’s name] ever been breastfed?

(Single Response. Interview note: Ever given breastmilk, even just once. This includes putting the infant to the breast to feed or giving expressed breastmilk)
1. Yes
2. No
3. Not sure / Don’t know

Sequence guide: [Seq ch 200401]

If Q83 (NUT19) = 2,3 and AGE < 12 months, Go to Q85 (NUT21)
If Q83 (NUT19) = 2,3 and AGE >= 12 months, Go to NS

Dropped NUT42 and Moved NUT20, NUT21 and NUT22 [Pg 201001]
84 NUT20 Since this time yesterday, has [child's name] been breastfed?
(Single Response. Interview note: includes expressed breastmilk)
1. Yes
2. No
3. Not sure / Don't know

Sequence guide: pg 200401
If AGE >= 12 months and Q84 (NUT20) = 2,3 Go to Q81 (NUT22)
If AGE >= 12 months and Q84 (NUT20) = 1, Go to NS

85 NUT21 Since this time yesterday, did [child's name] received any of the following?
(Read options. Multiple Response)
1. Vitamins, mineral supplements, medicine
2. Plain water
3. Sweetened or flavoured water eg cordial, soft drinks, ‘fruit box’, ribena
4. Fruit juice
5. Tea or infusion
6. Infant formula
7. Tinned, powered or fresh milk
8. Solid or semi-solid food eg ‘farex’, baby cereal, home-prepared or bought baby food
9. Oral Rehydration salts
10. Other
11. Not sure / Don't know
12. None, only breastfeeding

Sequence guide: pg 200308
If Q83 (NUT19) = 2,3 Go to NS
If Q84 (NUT20) = 1, Go to NS

86 NUT22 Including times of weaning, what is the total time that [child's name] was breastfed?
(Single Response. Interview note: includes expressed breastmilk. Weaning is period during which infants are introduced to breastmilk substitutes, and/or solid foods with the intention of replacing some or all of the breastmilk in the diet)
1. Enter weeks ______
2. Enter months ______
3. Not sure / Don't know
N. BREASTFEEDING (Protective factors)

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Sequence guide: female, aged < 50 years

Now some questions about breastfeeding

87 NUT41 Can you please tell me the number of babies you have given birth to, who are currently aged three years or under

(Single response) 1. None
2. Enter number _____
3. Not sure / Don't know
4. Refused

Sequence guide: if Q87 (NUT41) = 1,3 or 4 go to NS.

For each child, starting with the youngest,

88 NUT51 Could you please tell me the age of your child in years, weeks AND months

(Single response) 1. Enter years _____
And
2. Enter months _____
And
3. Enter weeks _____
4. Not sure / Don't know
5. Refused

Sequence guide: ask NUT52 to NUT55 for each child aged four or less in the household.

89 NUT52 Has [your child] ever been breastfed?

(Single Response. Interview note: Ever given breastmilk, even just once. This includes putting the infant to the breast to feed or giving expressed breastmilk)
1. Yes
2. No
3. Not sure / Don't know

Sequence guide: If Q89 (NUT52) = 2, 3 and NUT51 < 12 months, Go to Q91 (NUT54)
If Q89 (NUT52) = 2, 3 and NUT51 >= 12 months Go to NS

90 NUT53 Since this time yesterday, has [your child] been breastfed?

(Single Response. Interview note: includes expressed breastmilk)
1. Yes
2. No
3. Not sure / Don't know

Sequence guide: If Q88 NUT51 >= 12 months and Q90 (NUT53) = 2, 3 Go to Q92 (NUT55)
If Q88 NUT51 >= 12 months and Q90 (NUT53) = 1, Go to NS

91 NUT54 Since this time yesterday, did [your child] receive any of the following?

(Read options. Multiple Response)
1. Vitamins, mineral supplements, medicine
2. Plain water
3. Sweetened or flavoured water eg cordial, soft drinks, 'fruit box', ribena
4. Fruit juice
5. Tea or infusion
6. Infant formula
7. Tinned, powdered or fresh milk
8. Solid or semi-solid food eg ‘farex’, baby cereal, home-prepared or bought baby food
9. Oral Rehydration salts
10. Other
11. Not sure / Don't know
12. None, only breastfeeding

Sequence guide:
If Q89 (NUT52) = 2, 3 Go to NS
If Q90 (NUT53) = 1, Go to NS
Including times of weaning, what is the total time that [your child] was breastfed? (Single Response. Interview note: includes expressed breastmilk. Weaning is period during which infants are introduced to breastmilk substitutes, and/or solid foods with the intention of replacing some or all of the breastmilk in the diet)

1. Enter weeks ______
2. Enter months ______
3. Not sure / Don’t know ______

O. NUTRITION - Food Consumption
(Protective Factors)

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Sequence guide: If AGE < 1 Go to NS

Now to some questions about food. The following question is about eating vegetables which includes fresh, dried, frozen and tinned vegetables.

93 NUT1 How many serves of vegetables [do you / does child’s name] usually eat each day? A ‘serve’ is ½ cup cooked vegetables or 1 cup of salad.

(Single Response)
1. Less than one serve
2. Enter number of serves ____
3. Don’t eat vegetables
4. None
5. Don’t know

The next question is about eating fruit, which includes fresh, dried, frozen and tinned fruit.

94 NUT2 How many serves of fruit [do you / does child’s name] usually eat each day? A ‘serve’ is 1 medium piece or 2 small pieces of fruit, 1 cup of diced pieces, or 1 tablespoon of dried fruit.

(Single Response)
1. Less than one serve
2. Enter number of serves ____
3. Don’t eat fruit
4. None
5. Don’t know
**NUT3**  What type of milk do you [do you/does child’s name] usually have?  
(Single Response. Interview note: If brand of milk given, prompt for type, ie whole milk or reduced fat)

1. Whole milk
2. Low or reduced fat
3. Skim
4. Soya
5. Evaporated/ sweetened condensed
6. Other (specify)
7. None of the above
8. Don’t know
9. High calcium, low fat
10. Breast milk
11. Formula
12. Rice milk
13. Doesn’t drink milk

**NUT4**  How often [do you/does child’s name] you eat chips, french fries, wedges, fried potatoes or crisps?  
(Single Response. Interview note: enter number of times per day, week or month)

1. Enter number of times per day __
2. Enter number of times per week __
3. Enter number of times per month __
4. Rarely (< once / month)
5. Never
6. Don’t know/can’t say

**NUT8**  How often [do you/does child’s name] eat meat products such as sausages, frankfurters, devon (fritz), salami, meat pies, bacon or ham?  
(Single Response. Interview note: enter number of times per day, week or month)

1. Enter number of times per day __
2. Enter number of times per week __
3. Enter number of times per month __
4. Rarely (< once / month)
5. Never
6. Don't know/can't say

98 NUT17 How many times a week on average does [do you / does child's name] have meals or snacks such as burgers, pizza, chicken or chips from places like McDonalds, Hungry Jacks, Pizza Hut or Red Rooster?

(Single Response. Interview note: enter number of times per day, week or month)  pg Error! Bookmark not defined. seq ch all ages 200607

1. Enter number of times per day ______
2. Enter number of times per week ______
3. Enter number of times per month ______
4. Rarely
5. Never
6. Don't know/can't say

99 NUT18 During the last four weeks, on average, how many glasses of water [do you / does child's name] usually have in a day?

(Single Response. Interviewer note: water is tap, bottled, rain. This does not include fruit juice, cordial, fizzy or energy drinks, milk, tea or coffee. A glass = 200 mls)  pg Error! Bookmark not defined. seq ch 200401; seq ch all ages 200601

1. Enter number of glasses ______
2. Enter ml's ______
3. Enter litres ______
4. None
5. Don't know

100 NUT46 How many cups of fruit or vegetable juice [do you / does child's name] usually drink each day? This does not include fruit juice drinks and fruit drinks (eg Fruitbox).

(Single Response. Interviewer note: 1 cup = 250 mls)  pg Error! Bookmark not defined. new qn 200802

1. Enter cups
2. Enter litres
3. Don't know
4. Refused

101 NUT47 On average, how many litres of soft drink (eg coke, lemonade, flavoured mineral water) [do you / does child's name] usually have in a day?

(Single Response. Interviewer note: 1 cup=250mls. Include diet soft drinks)  pg Error! Bookmark not defined. new qn 200802; pg Error! Bookmark not defined. qn ch 201001

1. Enter ______
2. Don't know
3. Refused

102 NUT50 On average, how many cups or litres of sports drink (eg Powerade, Gatorade) [do you / does child's name] usually have in a day?

(Single Response. Interviewer note: 1 cup=250mls. Include diet sports drinks)  pg Error! Bookmark not defined. Error! Reference source not found. new qn 201001

1. Enter MLS ______
2. Enter litres ______
3. Don't know
4. Refused

103 NUT57 On average, how many cups or litres of energy drink (eg Red Bull, V, Mother) [do you / does child's name] usually have in a day?

(Single Response. Interviewer note: 1 cup=250mls. Energy drinks contain large amounts of caffeine. Do not include tea, coffee or soft drinks like cola)  pg Error! Bookmark not defined. Error! Reference source not found. 201207

1. Enter MLS ______
2. Enter litres ______
3. Don't know
4. Refused

Dropped NUT48 NUT49  pg Error! Bookmark not defined. & Error! Bookmark not defined. 200802 to 200812
P. NUTRITION – Folate
(Protective Factors)

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Sequence guide: If AGE < 16 go to NS

1. Yes, specify year
2. No

Dropped NUT23

104 NUT24 Do you know when folic acid needs to be taken by a woman to reduce her chance of having a baby with spina bifida?

(Read options. Single Response)
1. During the menstrual period
2. Before pregnancy
3. Before pregnancy and in first three months of pregnancy
4. In first three months of pregnancy only
5. In the first six months of pregnancy
6. Throughout pregnancy
7. Before pregnancy and throughout pregnancy
8. Other (specify)
9. Not sure Don’t know

Sequence guide: If (SEX=1) OR ((AGE < 16 or ≥ 50) & SEX = 2) Go to Q. 109 (NUT43)
If (NUT41) = 1, 3 or 4 go to Q106 (NUT27).
If (NUT41) =Go to 105 (NUT26).
Else Go to Q. 109 (NUT43)

The following question is similar to one we asked you earlier about babies you have given birth to.

105 NUT26 Can you please tell me if you have given birth in the last three years?

Reference source not found. seq ch 200401; 200808; 201101-201106

Intervener note: If more than one birth, most recent only.)
1. Yes, specify year
2. No
106 NUT27 Can you tell me if you are currently pregnant?  

(Single Response. Interviewer note: Enter number of months or weeks)
1. Yes, specify weeks
2. Yes, specify months
3. No

107 NUT28 In the month before you became pregnant the last time, did you do any of the following?

1. Took folic acid tablets every day
2. Ate cereals or other prepared foods/juices specially enriched with folic acid every day
3. Increased your intake of foods rich in folate or folic acid, such as green leafy vegetables, cereals and fruits
4. None
5. Not sure

108 NUT29 In the first three months of your current or most recent pregnancy, did you do any of the following?

1. Took folic acid tablets every day
2. Ate cereals or other prepared foods/juices specially enriched with folic acid every day
3. Increased your intake of foods rich in folate or folic acid, such as green leafy vegetables, cereals and fruits
4. None
5. Not sure

Q. FOOD SECURITY (Social Factor)

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Changing the subject for a moment to some more questions about food.

109 NUT43 In the last twelve months, were there any times that you ran out of food and you couldn’t afford to buy more?

(Single Response)
1. Yes
2. No
3. Don’t know
4. Refused

110 NUT32 How often did this happen?

(Read options. Multiple Response)
1. Enter number of times per week
2. Enter number of times per fortnight
3. Enter number of times per month
4. Enter number of times per year
5. Rarely
6. Never
7. Don’t know/ can’t say

Dropped NUT33, NUT34
R. CHILDCARE

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Sequence guide: If AGE > 5 Go to NS

Now some questions about the use of childcare

111 CHC4 In total, how many hours per week is [child’s name] usually cared for in formal childcare?

   (Single Response)
   1. Hours per week __________
   2. None
   3. Don’t know
   4. Refused

Dropped CHC1, CHC2, CHC3, [Error! Bookmark not defined.] 200801
Dropped CHC5 [Error! Bookmark not defined.] 201001

S. EARLY YEARS [Section dropped 201307]

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Sequence guide: If AGE = 16 Go to NS

Now we would like to ask some questions about [child’s name] development.

112 CHD1 A premature birth or a ‘pre-term’ birth is one that occurs at less than 37 weeks gestation. Was [child’s name] born prematurely?

   (Single Response)
   1. Yes
   2. No
   3. Don’t know
   4. Refused

Dropped CHD4, CHD5, CHD6 [Error! Bookmark not defined.] 200401
Dropped CHD3, CHD7 [Error! Bookmark not defined.] 200801

T. SCHOOL PERFORMANCE

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Sequence guide: If AGE < 5 AND ≥ 16 Go to NS

113 SCH1 Thinking about the previous month, can you tell me about how many days (other than holidays) [child’s name] has been away from school for any reason?

   (Single Response)
   1. None [0]
   2. Enter number of days __________
   3. Doesn’t go to school
   4. Don’t know [999]
   5. Refused [9999]

Sequence guide: If Q113 (SCH1) = 3 Go to NS

Dropped SCH2, SCH3 [Error! Bookmark not defined.] 200401

114 SCH4 Is [child’s name] ever unhappy at school?

   (Read options. Single Response.)
   1. Never
   2. Rarely
   3. Sometimes
   4. Often
   5. Always
   6. Not applicable
   7. Don’t know
   8. Refused

115 SCH5 Does [child’s name] have a special friend or a really close mate?

   (Single Response.)
   1. Yes
   2. No
   3. Don’t know
   4. Refused
116 SCH6 Does [child's name] have a group of friends to play with or hang around with?
   (Single Response)
   1. Yes
   2. No
   3. Don’t know
   4. Refused

Sequence guide: If AGE > 12 Go to Q118 (SCH9)

117 SCH7 Do you use after school or vocational care?
   (Single Response.)
   1. Yes
   2. No
   3. Never needed care
   4. Don’t know
   5. Refused

Dropped SCH8 pg Error! Reference source not found. Error! Bookmark not defined. 200401

118 SCH9 The next questions are about bullying at school. Bullying is when someone is picked on, hit, kicked, threatened, actively excluded or ignored by other children.

   In the last month, has [child’s name] been bullied?
   (Single Response.)
   1. Yes
   2. No
   3. Don’t know
   4. Refused

Sequence guide: If Q118 (SCH9) > 1 Go to NS

119 SCH10 Was the bullying emotional or physical?
   (Single Response.)
   1. Emotional
   2. Physical
   3. Both
   4. Don’t know
   5. Refused

120 SCH9B Bullying can also include cyber bullying, using text messages or racial/cultural insults. In the last month, has [child’s name] been bullied in this way? pg Error! Bookmark not defined. new qn 201001
   (Single Response.)
   1. Yes
   2. No
   3. Don’t know
   4. Refused

U. MENTAL HEALTH
Now some questions about concentration and behaviour

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Sequence guide: If AGE < 2 AND ≥ 16 Go to NS

121 MTL16 Overall, does [child’s name] have trouble with emotions, concentration, behaviour or getting on with people? Would you say
   (Read options. Single Response)
   1. No
   2. Only a little
   3. Quite a lot
   4. Very much
   5. Don’t know / refused

Sequence guide: If Q121 (MTL16) = 1 Go to Q123 (MTL18)

122 MTL17 Do you think [child’s name] needs special help for this?
   (Single Response.)
   1. Yes
   2. No
   3. Don’t know
   4. Refused
123. MTL18  Has [child's name] ever been treated for an emotional, mental health or behavioural problem?
(Single Response.)
1. Yes
2. No
3. Don't know
4. Refused

Sequence guide: If Q123 (MTL18) > 1 Go to NS

124. MTL19  Who has treated [child's name]?
(Multiple Response)
1. School counsellor
2. Psychologist
3. Youth worker
4. Social worker
5. Psychiatrist
6. Other (specify)
7. Don't know
8. Paediatrician
9. GP
10. Neurologist
11. CAM practitioner
12. C&YH

Sequence guide: If AGE < 16 Go to NS

V. KESSLER PSYCHOLOGICAL DISTRESS SCALE+ (K10+) (Health Status)

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Sequence guide: If Q126 (MTL2) = 5 Go to Q128 (MTL4)
127 MTL3 In the past four weeks, about how often did you feel so nervous that nothing could calm you down?  
(Read Options. Single Response)  
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  

5. None of the time  
6. Don't know  
7. Refused  

128 MTL4 In the past four weeks, about how often did you feel hopeless?  
(Read Options. Single Response)  
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  

129 MTL5 In the past four weeks, about how often did you feel restless or fidgety?  
(Read Options. Single Response)  
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  

Sequence guide: If Q129 (MTL5) = 5 Go to Q131 (MTL7)  

130 MTL6 In the past four weeks, about how often did you feel so restless you could not sit still?  
(Read Options. Single Response)  
1. All of the time  
2. Most of the time  
3. Some of the time  
4. A little of the time
131 MTL7  In the past four weeks, about how often did you feel depressed?
(Read Options. Single Response)
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

7. Refused

Dropped MTL23 MTL24 MTL25 MTL26 MTL27

132 MTL8  In the past four weeks, about how often did you feel everything was an effort?
(Read Options. Single Response)
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

7. Refused

133 MTL9  In the past four weeks, about how often did you feel so sad that nothing could cheer you up?
(Read Options. Single Response)
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

7. Refused

134 MTL10 In the past four weeks, about how often did you feel worthless?
(Read Options. Single Response)
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

7. Refused
W. SUICIDAL IDEATION (Health Status)

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Sequence guide: If AGE < 16 Go to NS

Now I'm going to ask you some questions about when life may not be worth living. Remember that if you feel uncomfortable you don't have to answer these questions.

135 MTL11 Over the past few weeks, have you felt that life isn't worth living?
(Read Options. Single Response)
1. Not at all
2. No more than usual
3. Rather more than usual
4. Much more than usual
5. Don't know
6. Refused

136 MTL12 [Over the past few weeks] Have you thought of the possibility that you might do away with yourself?
(Read Options. Single Response)
1. Definitely not
2. I don't think so
3. Has crossed my mind
4. Definitely have
5. Don't know
6. Refused

137 MTL13 [Over the past few weeks] Have you found yourself wishing you were dead and away from it all?
(Read Options. Single Response)
1. Not at all
2. No more than usual
138 MTL14 [Over the past few weeks ] Have you found that the idea of taking your own life kept coming into your mind? *(Read Options. Single Response)*
1. Definitely not  
2. I don’t think so  
3. Has crossed my mind  
4. Definitely have  
5. Don’t know  
6. Refused

139 PHO6 As some of the questions we have asked may have been distressing or caused some concern for some people, I would like to offer you the Adult Mental Health Service telephone number if you feel that you need to discuss some of these concerns with a qualified professional. This is a 24 hour crisis and emergency assistance service available for South Australians [131-465]. Did the respondent accept the number? *(Single Response)*
1. Yes  
2. No

X. MENTAL HEALTH (Health Status)

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Sequence guide: If AGE < 16 Go to NS

140 MTL20 In the last 12 months have you been told by a doctor that you have any of the following conditions? *(Read Options. Multiple Response)*
1. Anxiety  
2. Depression  
3. A stress related problem  
4. Any other mental health problem  
5. None Go to Q142 (MTL22)  
6. Refused Go to Q142 (MTL22)

141 MTL21 Do you still have [this / any of these] condition(s)? *(Single Response)*
1. Yes  
2. No  
3. Refused

142 MTL22 Are you currently receiving treatment for anxiety, depression, stress related problems or any other mental health problem? *(Single Response. Interviewer note: includes phone treatment)*
1. Yes  
2. No  
3. Refused

143 MTL27 In the last 12 months were you FIRST told by a doctor that you either have anxiety, depression, a stress related problem or any other mental health problem? *(Single Response)*
1. Yes  
2. No  
3. Don’t know  
4. Refused

Dropped SOC1

Dropped TEL1 TEL4 TEL5

Dropped TEL2 TEL3
Y. SOCIAL CAPITAL (Social Factor)

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Sequence guide: Dropped SOC6, SOC7

Now some general questions about your neighbourhood.

144 SOC2 Overall, do you feel that your neighbourhood is a safe place?
(Single response)
1. Yes
2. No
3. Don’t know / not sure

145 SOC3 Do you think that in this neighbourhood people generally trust one another?
(Single response)
1. Yes
2. No
3. Don’t know / not sure

146 SOC4 Do you feel safe in your home?
(Read Options. Single response)
1. All of the time
2. Most of the time
3. Some of the time
4. None of the time
5. Don’t know

Sequence guide: If AGE < 16 Go to Q148 (SOC8)

147 SOC5 Do you agree or disagree with the following statement?
I have control over the decisions that affect my life.
(Read Options. Single response)
1. Strongly agree
2. Agree
3. Neutral/don’t know
4. Disagree
5. Strongly disagree

Dropped SOC6, SOC7

148 SOC8 How often do you have problems with transport when you want to go, for example, to hospital, medical appointments, recreational facilities, visiting people, shopping, school or childcare?
(Read options. Single Response)
1. Never
2. Sometimes
3. All the time
4. Don’t know
Z. WELL BEING

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Questions added: pg Error! Bookmark not defined. added

The next few questions are about how you rate your general well-being. On a scale of 0 to 10 where 0 means “not at all” and 10 means “completely”. pg Error! Bookmark not defined.

149 MTL30 Overall, how satisfied are you with your life nowadays?
   (Single response)
   1. Enter no_____  
   2. Don't know  
   3. Refused

150 MTL31 Overall, to what extent do you feel the things you do in your life are worthwhile?
   (Single response)
   1. Enter no_____  
   2. Don't know  
   3. Refused

151 MTL32 Overall, how happy did you feel yesterday?
   (Single response)
   1. Enter no_____  
   2. Don't know  
   3. Refused

152 MTL33 Overall, how anxious did you feel yesterday?
   (Single response)
   1. Enter no_____  
   2. Don't know  
   3. Refused

Can you please tell me if you agree or disagree with the following statement.

153 MTL34 “There are people in my life who really care about me”
   (Read options. Single Response)
   1. Strongly agree  
   2. Agree  
   3. Disagree  
   4. Strongly disagree  
   5. Don’t know  
   6. Refused
AA. ECONOMICS

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Sequence guide: If AGE < 16 Go to NS

154 ECO1 Beginning yesterday, and going back 4 weeks, how many days out of the past 4 weeks were you totally unable to work or carry out your normal duties because of your health?

(Single Response. Enter number of days off. Enter 999 if unknown)
1. None [0]
2. Enter days [ ]
3. Don’t know [999]

155 ECO2 [Apart from (that day/these days)] how many days in the past 4 weeks were you able to work and carry out your activities, but had to cut down what you did, or did not get as much done as usual because of your health?

(Single Response. Enter number of days off. Enter 999 if unknown)
1. None [0]
2. Enter days [ ]
3. Don’t know [999]

Dropped ENV1 ENV2 pg Error! Bookmark not defined. 200807 to 200812

BB. Customer Satisfaction

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Sequence guide: If AGE < 16 Go to NS

156 Sequence guide: If SER1.2, SER1.3 or SER1.4 ≠ 1 go to NS

157 SAP1 You mentioned earlier that you had used a [insert response to SER1.2 or SER1.3 or SER1.4] in the last four weeks. Were any of those services provided through the public health system? pg Error! Bookmark not defined.

(Multiple response)
1. Yes Hospital Accident and Emergency
2. Yes Hospital admission
3. Yes Hospital clinic (outpatient, specialist or other clinic)
4. No (private)
5. Don’t know
6. Refused

Sequence guide if SAP1 >3 go to NS

158 SAP2 What public health service did you use most recently? pg Error! Bookmark not defined. new qu 200901

(Single response)
1. Hospital Accident and Emergency
2. Hospital admission
3. Hospital clinic (outpatient, specialist or other clinic)
4. Don’t know
5. Refused

Sequence guide if SAP2 >3 go to NS
The next three questions are about how you rate your most recent experience with [enter SAP2] on a scale of 1 to 5 where 1 means very dissatisfied and 5 means very satisfied.

159 SAP 3 How satisfied were you with the overall quality of service delivery? (Single response)
1. (Very dissatisfied)
2. 2
3. 3
4. 4
5. (Very satisfied)
6. Don’t know
7. Refused

160 SAP4 Overall, how satisfied were you with the accessibility of [enter SAP2]? (Single response)
1. (Very dissatisfied)
2. 2
3. 3
4. 4
5. (Very satisfied)
6. Don’t know
7. Refused

I am now going to ask you to rate the next four statements in relation to your experience with [enter SAP2] where 1 means you strongly disagree and 5 means you strongly agree.

162 SAP6 “I was treated fairly” (Single response. Interviewer note: if accessing services ONLINE then select “not applicable”)
1. (Strongly disagree)
2. 2
3. 3
4. 4
5. (Strongly agree)
6. Don’t know
7. Refused
8. Not applicable (online service)

163 SAP7 “I was informed of everything I had to do to get the service/product” (Single response. Interviewer note: if accessing services ONLINE then select “not applicable”)
1. (Strongly disagree)
2. 2
3. 3
4. 4
5. (Strongly agree)
6. Don’t know
7. Refused
8. Not applicable (online service)

164 SAP8 “Staff were knowledgeable and competent” (Single response. Interviewer note: if accessing services ONLINE then select “not applicable”)
1. (Strongly disagree)
2. 2
3. 3
4. 4
5. (Strongly agree)
6. Don’t know
7. Refused
8. Not applicable (online service)
165 SAP9 “Staff went the extra effort to make sure I got what I needed”
(Single response. Interviewer note: if accessing services ONLINE then select “not applicable”)
1. (strongly disagree)
2. 2
3. 3
4. 4
5. (strongly agree)
6. Don’t know
7. Refused
8. Not applicable (online service)

I am now going to ask you to rate the next four statements in relation to how important your experience with [enter SAP2] to you, where 1 means not at all important and 5 means very important.

166 SAP10 “How important was it that you were treated fairly?”
(Single response. Interviewer note: if accessing services ONLINE then select “not applicable”)
1. (Not at all important)
2. 2
3. 3
4. 4
5. (Very important)
6. Don’t know
7. Refused
8. Not applicable (online service)

167 SAP11 “How important was it for you to be informed of everything you had to do to get the service or product?”
(Single response. Interviewer note: if accessing services ONLINE then select “not applicable”)
1. (Not at all important)
2. 2
3. 3
4. 4
5. (Very important)
6. Don’t know
7. Refused
8. Not applicable (online service)

168 SAP12 “How important was it for the staff to be knowledgeable and competent”
(Single response. Interviewer note: if accessing services ONLINE then select “not applicable”)
1. (Not at all important)
2. 2
3. 3
4. 4
5. (Very important)
6. Don’t know
7. Refused
8. Not applicable (online service)

169 SAP13 “How important was it for the staff to go the extra effort to make sure you've got what you needed”
(Single response. Interviewer note: if accessing services ONLINE then select “not applicable”)
1. (Not at all important)
2. 2
3. 3
4. 4
5. (Very important)
6. Don’t know
7. Refused
8. Not applicable (online service)

170 SAP14 In the end, did you get what you needed?
(Read Options. Single response)
1. Yes
2. I got part of what I needed
3. No
4. Don’t know
5. Refused
CC. Rural Access to Health Services

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<tr>
<td>SER13</td>
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</table>

Sequence guide: If postcode = 5118, 5153, 5131, 5132, 5133, 5139 or >=5200 (not metro Adelaide) Go to SER7. Else Go to NS

The next few questions are about your experiences using health services in South Australia. (Interviewer note: they only refer to respondent’s OWN health)

170 SER14 In the last 6 months did you travel over 100kms to use a health service? (Single Response)
   1. Yes
   2. No
   3. Don’t know
   4. Refused

Sequence guide: If SER14=1 Go to SER15

171 SER8 In the last 6 months was there a time you needed to travel to a health service over 100 kms away but couldn’t? (Single response)
   1. Yes
   2. No
   3. Don’t know
   4. Refused

Sequence guide: If SER14>1 Go to NS

172 SER15 What was the reason you travelled over 100kms to use this health service? (Multiple response. Interviewer note: if more than one occasion or visit, the following questions refer to the most recent visit)
   1. Earlier appointment or service available
   2. Service not available in home community
   3. Referral pattern of GP
   4. Family support available
   5. Own choice (eg to use particular health professional or service)
   6. Other (specify)
   7. Don’t know
   8. Refused

Sequence guide: Go to SER13

173 SER11 How did you travel to this service?
   (Multiple response)
   1. Private car
   2. Taxi
   3. Public bus
   4. Train
   5. Plane
   6. Royal Flying Doctor Service
   7. Health/ Medical bus
   8. Volunteer service
   9. Ambulance
   10. Other (specify)
   11. Don’t know
   12. Refused

Sequence guide: Go to SER13

174 SER16 The next question is about how you rate access to the health service that you travelled to. On a scale of 1 to 5 where 1 means very difficult and 5 means very easy. How easy was it for you to get to this health service? (Single response)
   1. (Very difficult)
   2. 2
   3. 3
   4. 4
   5. (Very easy)
   6. Don’t know
   7. Refused

Sequence guide: If SER16 >2 Go to NS
175 SER17 What was the main difficulty in getting to this health service? (Multiple Response)
1. Health service too far from home
2. Transport issues (eg no access to a car, no one to take them etc)
3. Financial considerations
4. Waiting time too long
5. Accommodation issues for themselves or family/friends
6. Lack of support for family members while in hospital
7. Other (specify)
8. Don’t know
9. Refused

DD. Life Course

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</tr>
<tr>
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Sequence guide: If AGE < 16 Go to NS

The following questions are about you and your family's situation when you were 10 years old.

176 DEM40 How would you best describe your family structure when you were 10 years old? (Read options. Single response)
1. Family with child/children living with both biological or adoptive parents
2. A step or blended family
3. A sole parent family (lived only with mother)
4. A sole parent family (lived only with father)
5. Shared care parenting
6. Lived with relatives/grandparents
7. Boarded/ orphanage/ children’s home/ foster care/ other
8. Other (specify)
9. Don’t know
10. Refused

177 DEM41 When you were 10 years old, was the dwelling you were living in...
(Read options. Single response. Interviewer note: prompt if rent free, prompt if dwelling rented or owned)
1. Owned or being purchased
2. Rented from the housing trust or government
3. Rented privately
4. Provided with employment
5. Other (specify)
6. Don’t know
7. Refused
178 DEM42 Which best described your family's money situation when you were 10 years old? (Read options. Single response)
1. We spent more money than we got
2. We had just enough money to get through to the next pay
3. Some money left over each week but we just spent it
4. We could save a bit every now and then
5. We could save a lot
6. Other (specify)
7. Don't know
8. Refused

EE. SOCIAL CHARACTERISTICS

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<td>DEM24</td>
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</tr>
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</table>

Now to finish off with some general questions.

179 DEM8 What is the Postcode of the house?
(Single Response)
1. Enter postcode __________
2. Not stated [9999]

Sequence Guide: Pg seq Error! Bookmark not defined. ch 201207

180 DEM9 What town, suburb or community do you live in?
(Single Response.)
1. Enter town/suburb __________
2. Not stated
181 DEM10  How would you best describe your family structure?  
Please listen to the descriptions and then tell me which one is the closest to your family situation.

(Read options. Single Response. 
Interviewer note: only read out appropriate categories)
1. A family with a child or children living with both biological or adoptive parents
2. A step or blended family
3. A sole parent family
4. Shared care parenting
5. Adult living alone
6. Adult living with partner and no children
7. Related adults living together
8. Unrelated adults living together
9. Other (specify)
10. Refused

Sequence guide:
If (AGE ≥ 16) Go to Q182 (DEM12)
If Q181 (DEM10) = 1 or >4 Go to Q182 (DEM12)

Dropped DEM11

182 DEM12  Which of these best describes your current employment status? Are you

(Read Options. Single Response)
1. Self employed
2. Employed for wages, salary or payment in kind
3. Unemployed
4. Engaged in home duties
5. Student
6. Retired
7. Unable to work
8. Other (Specify)
9. Don’t know/refused

Sequence guide: If AGE ≥ 16 & Q182 (DEM12) > 2 Go to Q186 (DEM16)
If Q182 (DEM12) > 2 AND Q181 (DEM10) > 2 Go to Q186 (DEM16)
If Q182 (DEM12) > 2 AND Q181 (DEM10) ≤ 2 Go to Q184 (DEM14)

183 DEM13  How many hours do you work per week?

(Single Response)
1. Enter number of hours per week _____
2. Don’t know

Sequence guide: If (AGE ≥ 16) Go to Q186 (DEM16)
If Q181 (DEM10) > 2 Go to Q186 (DEM16)

184 DEM14  Now some questions about the other partner in the household.

Which of these best describes the other partner’s current employment status? Are they…?

(Read Options. Single Response)
1. Self employed
2. Employed for wages, salary or payment in kind
3. Unemployed
4. Engaged in home duties
5. Student
6. Retired
7. Unable to work
8. Other (Specify)
9. Not stated/ Don’t know

Sequence guide: If Q184 (DEM14) > 2 Go to Q186 (DEM16)

185 DEM15  How many hours do they work per week?

(Single Response)
1. Enter number of hours per week _____
2. Don’t know
186 DEM16 In which country [were you / was child’s name] born?
(Single Response)
1. Australia
2. Austria
3. Bosnia-Herzegovina
4. Canada
5. China
6. Croatia
7. France
8. Germany
9. Greece
10. Holland / Netherlands
11. Hong Kong
12. Iran
13. Italy
14. Japan
15. Malaysia
16. New Zealand
17. Philippines
18. Poland
19. Slovenia
20. Spain
21. U.K. and Ireland
22. USA
23. Vietnam
24. Former Yugoslav Republic of Macedonia
25. Former Yugoslav Republics of Serbia & Montenegro
26. Other country (specify)
27. Refused
28. Fiji [1602]
29. India [6104]
30. South Africa [9220]

Sequence guide: If Q186 (DEM16) > 1 Go to Q188 (DEM18)

187 DEM17 [Are you / is child’s name] of Aboriginal or Torres Strait Islander origin?
(Single Response)
1. No
2. Aboriginal
3. Torres Strait Islander
4. Both
5. Not stated

Sequence guide: if AGE < 16 Go to Q190 (DEM20)

188 DEM18 [Do you / does child’s name] speak a language, other than English, at home?
(Single Response)
1. Yes
2. No
3. Not stated

189 DEM19 What is your current marital status?
(Read Options. Single Response)
1. Married
2. Living with a partner (De Facto)
3. Divorced
4. Separated
5. Widowed
6. Never Married
7. Not stated

190 DEM20 What is the highest level of education you have completed?
(Single Response. Interviewer note: Prompt if necessary)
1. Never attended school
2. Some primary school
3. Completed primary school
4. Some high school
5. Completed high school (i.e. Year 12, Form 6, HSC)
6. TAFE or trade certificate or diploma
7. University, CAE or some other tertiary institute degree
8. Other (specify)
9. Not stated/refused

Sequence guide: If (AGE ≥ 16) Go to Q192 (DEM22)
If Q181 (DEM10) > 2  Go to Q192 (DEM22)

191 DEM21 What is the highest level of education the other partner in the house has completed?
(Single Response. Interviewer note: Prompt if necessary)
1. Never attended school
2. Some Primary school
3. Completed Primary School
4. Some High School
5. Completed High School (i.e. Year 12, Form 6, HSC)
6. TAFE or Trade Certificate or Diploma
7. University, CAE or some other Tertiary Institute degree
8. Other (specify)
9. Not stated
192  DEM22  The next question is about housing. Is this dwelling …

(Read Options. Single Response)  

1. Owned or being purchased
2. Rented from Housing SA
3. Rented privately
4. Other (specify)
5. Community Housing
6. Retirement Village
7. Don’t know
8. Refused

9. More than $200,000
10. Not stated/refused
11. Don’t know

193  DEM23  Which best describe your family’s money situation?

(Read Options. Single Response)

1. [I am / we are] spending more money than [I / we] get
2. [I / we] have just enough money to get [me / us] through to the next pay day
3. There’s some money left over each week but [I / we] just spend it
4. [I / we] can save a bit every now and then
5. [I / we] can save a lot
6. Don’t know
7. Refused

194  DEM24  Can you tell me the approximate annual gross income of your household? That is, for all people in the household before tax is taken out. I’ll read out some categories and could you please tell me into which one your household’s income falls?

(Read Options. Single Response)

1. Up to $12,000
2. $12,001 - $20,000
3. $20,001 - $40,000
4. $40,001 - $60,000
5. $60,001 - $80,000
6. $80,001 - $100,000
7. $100,001 - $150,000
8. $150,001 - $200,000
9. More than $200,000
10. Not stated/refused
11. Don’t know
195 DEM27 Which of the following is the main source of income in your household? (Read Options. Single Response)
1. Wages and salary
2. Superannuation or investment
3. Any Government pension or allowance/income support
4. Child support or maintenance (from ex-partner)
5. Other (specify)
6. Don’t know
7. Refused

Information. Would you like to help us with this?
(Single Response. Interviewer note: suggest respondent uses a tape measure for height. If the respondent does not have a tape measure for height and/or scales for weighting, suggest borrowing this/these from family, neighbours, friends, Child & Youth Services local offices, chemist, local doctor’s surgery)
(Single Response)
1. Yes
2. No

Sequence guide: If DEM30 (Ques 180) =2 (No), go to NS.
[dem30 asked as of July 2006]

[MODIFICATION TO DEM30 October 2007]

[DEM32 deleted October 2007]

Dropped 182b, DEM34

196 PHO1 How many residential telephone numbers, including mobile phones, can be used to speak to someone in this household?
(Single Response. Interviewer note: do not include Internet or fax numbers)
1. Enter number ___
2. Don’t know [99]

Sequence guide: If DEM7 (Ques 9) =2, that is there are children aged under 16 years living in the household.

197 PHO2 How many times [do these / does this] number(s) appear in the White Pages?
(Single Response. Interviewer note: do not include Internet or fax numbers. Total number of entries includes numbers that are listed more than once.)
1. Enter number ___
2. Don’t know [99]

199 PHO3 As some of the questions we have asked may have been distressing or caused some concern for some people, I would like to offer you the Adult Mental Health Service a telephone number if you feel that you need to discuss some of these concerns with a qualified professional. This is a 24 hour crisis and emergency assistance service available for South Australians [131-465]

Did the respondent accept the number?
(Single Response)
1. Yes
2. No

173B If you have any queries regarding this survey or would like to speak to someone at SA Health please telephone 1800 635 352

200 DEM26 Please record what language this interview was conducted in
(Single Response)
1. English
2. Italian
3. Greek
4. Vietnamese
5. Other (specify)
Interviewer note: Please record type of phone number respondent was contacted on to complete the survey. Note this may not necessarily be the phone number on screen.

(Single Response)
1. Landline
2. Mobile

Do you have a (landline) telephone connected to this house (not including mobile phones)?

(Single Response. Interviewer note: do not include internet or fax number)
1. Yes
2. No
3. Don’t know
4. Refused

[Interviewer note: if you have already established the answer to this question, please code appropriately]. Are there any mobile phones currently being used by members of this household (including work phones)?

(Single Response. Interviewer note: do not include internet or fax number)
1. Yes
2. No
3. Don’t know
4. Refused

Date of interview
Day of week interview undertaken
Time of day interview undertaken

That concludes the survey. On behalf of the SA Dept of Health, thank you very much for taking part in this survey. Note: if calling back for child measurements please say ‘we will call you in a week’s time’.

(END)

Child’s BMI Measurement Callback

Good morning / afternoon. I am ____ calling on behalf of the SA Department of Health. We have previously rung your household and somebody indicated that they would be willing to answer further questions in relation to [enter name of child] height and weight measurements.

Would you be the most appropriate person to answer questions about [child’s name] measurements?

(Single response)
1. Yes
2. No

Are you happy to do this now?

(Single response)
1. Yes
2. No

If person not available, make an appointment to call back later (within 24 hours)

Have you been able to measure [child’s name] height and weight?

(Single response)
1. Yes
2. No

If no, make an appointment to call back later (within 24 hours)

What is [child’s name] height without shoes?

(Single Response)
1. Centimetres ___
   OR
2. Feet : Inches ___ ___
3. Don’t know [ ]
4. Refused [ ]

What is [child’s name] weight? (Undressed in the morning)

(Single Response)
1. Kilograms (Kg) ___
OR
2. Stones : Pounds _____ _____
3. Don't know [ ]
4. Refused [ ]
APPENDIX D: EXPLANATORY NOTES ON THE SOUTH AUSTRALIAN MONITORING AND SURVEILLANCE SYSTEM DATA ITEMS

This SAMSS secondary analysis used a variety of questions across various domains. The questions, coding notes and scoring methodology utilised in this thesis is provided below. See Appendix C for a full version of the SAMSS questionnaire.

D.1: Demographic questions asked of SAMSS participants including how variables were derived

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<th>Variable of Interest</th>
<th>SAMSS Question</th>
<th>Derived Variable</th>
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<td><strong>Age</strong></td>
<td><strong>Q1.</strong> asked ‘Age of respondent’</td>
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<td></td>
<td>4. Not stated</td>
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<tr>
<td><strong>Area</strong></td>
<td><strong>Q168.</strong> asked ‘What is the Postcode of the house?’</td>
<td>Areas*</td>
</tr>
<tr>
<td></td>
<td>1. Enter postcode</td>
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</tr>
<tr>
<td></td>
<td>2. Not stated</td>
<td>SA Country</td>
</tr>
<tr>
<td><strong>Household Income</strong></td>
<td><strong>Q183.</strong> asked ‘Can you tell me the approximate annual gross income of your household? That is, for all people in the household before tax is taken out. I’ll read out some categories and could you please tell me into which one your household’s income falls?’</td>
<td>Income</td>
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<td></td>
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<td></td>
<td>9. Don’t know</td>
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### Educational Attainment

**Q179** ... asked 'What is the highest level of education you have completed?'

1. Never attended school
2. Some primary school
3. Completed primary school
4. Some high school
5. Completed high school (i.e. Year 12, Form 6, HSC)
6. TAFE or trade certificate or diploma
7. University, CAE or some other tertiary institute degree
8. Other (specify)'

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<th>Trade/certificate/diploma</th>
<th>Degree or higher</th>
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### Marital Status

**Q178** ... asked 'What is your current marital status?'

1. Married
2. Living with a partner (De Facto)
3. Divorced
4. Separated
5. Widowed
6. Never Married
7. Not stated'

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<tr>
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<th>Married/living with partner</th>
<th>Separated/divorced</th>
<th>Widowed</th>
<th>Never married</th>
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</table>

### Country of Birth

**Q75**... asked 'In which country were you born?'

1. Australia
2. Austria
3. Bosnia-Herzegovina
4. Canada
5. China
6. Croatia
7. France
8. Germany
9. Greece
10. Holland / Netherlands
11. Hong Kong
12. Iran
13. Italy
14. Japan
15. Malaysia
16. New Zealand
17. Philippines
18. Poland
19. Slovenia
20. Spain
21. U.K. and Ireland
22. USA
23. Vietnam
24. Former Yugoslav Republic of

<p>| Country of Birth | Australia | Germany | Italy | Greece |</p>
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</table>

**Notes:**
*The area variable was derived from postcode information collected from participants at the time of the interview and coded based on Statistical Local Areas.*

**Source:** Adapted from the South Australian Monitoring and Surveillance System Questionnaire
### D.2: Health and mental health questions asked of SAMSS participants including coding of variables

<table>
<thead>
<tr>
<th>Variable of Interest</th>
<th>Question</th>
<th>Derived Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td>Q15… asked ‘Have you ever been told by a doctor that you have diabetes?’</td>
<td>Diabetes</td>
</tr>
<tr>
<td></td>
<td>1. Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>2. No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>3. Don’t know/Refused</td>
<td></td>
</tr>
<tr>
<td>Asthma</td>
<td>Q21… asked ‘Have you ever been told by a doctor that you have asthma?’</td>
<td>Asthma</td>
</tr>
<tr>
<td></td>
<td>1. Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>2. No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>3. Don’t know</td>
<td></td>
</tr>
<tr>
<td>Chronic Obstructive Pulmonary Disease (COPD)</td>
<td>Q.27… asked ‘Have you ever been told by a doctor that you have chronic bronchitis or emphysema?’</td>
<td>COPD</td>
</tr>
<tr>
<td></td>
<td>1. Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>2. No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>3. Don’t know</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular Disease (CVD)</td>
<td>Q29… asked ‘Have you ever been told by a doctor that you have had any of the following conditions?’</td>
<td>CVD</td>
</tr>
<tr>
<td></td>
<td>1. Heart attack</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>2. Angina</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>3. Heart disease</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Stroke</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. None of the above</td>
<td></td>
</tr>
<tr>
<td>Arthritis</td>
<td>Q31… asked ‘Have you ever been told by a doctor that you have arthritis?’</td>
<td>Arthritis</td>
</tr>
<tr>
<td></td>
<td>1. Yes, Osteoarthritis</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>2. Yes, Rheumatoid Arthritis</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>3. Yes, Juvenile Rheumatoid Arthritis (JRA)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Yes, other (specify)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. No, don’t have arthritis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Yes, don’t know type</td>
<td></td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>Q33… asked ‘Have you ever been told by a doctor that you have osteoporosis?’</td>
<td>Osteoporosis</td>
</tr>
<tr>
<td></td>
<td>1. Yes</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>2. No</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>3. Don’t know</td>
<td></td>
</tr>
</tbody>
</table>
Mental Health

**Q134.** "In the last 12 months have you been told by a doctor that you have any of the following conditions? (Read Options. Multiple Response)
1. Anxiety
2. Depression
3. A stress-related problem
4. Any other mental health problem"

**Q136.** asked 'Are you currently receiving treatment for anxiety, depression, stress-related problems or any other mental health problem? (Single Response. Interviewer note: includes phone treatment)
1. Yes
2. No
3. Refused'

**Kessler Psychological Distress Scale+(K10)***

**Q119.** asked 'In the past four weeks, about how often did you feel tired out for no good reason?
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'

**Q120.** asked 'In the past four weeks, about how often did you feel nervous?
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'

**Q121.** 'In the past four weeks, about how often did you feel so nervous that nothing could calm you down?
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'

**Q122.** asked 'In the past four 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'

**Q123.** 'In the past four 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'

**Q124.** ‘In the past four weeks, about how often did you feel so restless you could not sit still?
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'

Current Mental Health
No - current diagnosed mental health condition
Yes - Current diagnosed mental health condition

Psychological distress**
No psychological distress
(10 to 21)
Psychological distress
(22 to 50)
### Suicidal Ideation

<table>
<thead>
<tr>
<th>Question</th>
<th>Possible Responses</th>
</tr>
</thead>
</table>
| **Q125**... asked ‘In the past four weeks, about how often did you feel depressed?’ | 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’ |
| **Q126**... asked ‘In the past four weeks, about how often did you feel everything was an effort?’ | 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’ |
| **Q127**... asked ‘In the past four 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’ |
| **Q128**... asked ‘In the past four 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’ |
| **Q129**... asked ‘Over the past few weeks, have you felt that life isn’t worth living?’ | 1. Not at all  
2. No more than usual  
3. Rather more than usual  
4. Much more than usual  
5. Don’t know  
6. Refused’ |
| **Q130**... asked ‘Over the past few weeks, have you thought of the possibility that you might do away with yourself?’ | 1. Definitely not  
2. I don’t think so  
3. Has crossed my mind  
4. Definitely have  
5. Don’t know  
6. Refused’ |
| **Q131**... asked ‘Over the past few weeks, have you found yourself wishing you were dead and away from it all?’ | 1. Not at all  
2. No more than usual  
3. Rather more than usual  
4. Much more than usual  
5. Don’t know  
6. Refused’ |
| **Q132**... asked ‘Over the past few weeks, have you found that the idea of taking your own life kept coming into your mind?’ | 1. Definitely not  
2. I don’t think so  
3. Has crossed my mind  
4. Definitely have  
5. Don’t know  
6. Refused’ |

---

**Suicidal Ideation**

- **No**
- **Yes**
Notes:

*Psychological distress has been measured using the Kessler Psychological Distress Scale (K10). The K10 is a ten item questionnaire measuring levels of psychological distress experienced within the most recent four week period (Andrews & Slade, 2001). The K10 is based upon anxiety and depressive symptoms and utilises a five-point scale where participants report the frequency of their experience (Andrews & Slade 2001). There are various scoring methods, cut off limits and interpretations of the K10 due to the creators not publishing international standards on such methods (Centre for Epidemiology and Research 2010). The K10, within this context, has been scored according to the methods used by the New South Wales (NSW) Surveys (Department of South Australian Health 2002). In this method, response categories are reversed and assigned a number between one and five in the direction of less frequency. All items are summed where a maximum score of 50 and a minimum score of 10 can be achieved. Scores are then converted to a ‘t-score’ by subtracting the mean of the score and dividing it by the standard deviation of the score. The scores are then standardised with a mean of 50 and a standard deviation of 10. Psychological distress was determined by taking one standard deviation above the mean minus 60’. The cut-off points for scores used to define low (10 to 15), moderate (16 to 21), high (22 to 29) and very high (30 to 50) levels of psychological distress. This scoring was adopted from the NSW Survey scoring system (Centre for Epidemiology and Research 2010; Department of South Australian Health 2002).

**This analysis collapsed the K10 score into two groups, for example, ‘low’ and ‘moderate’ scores were coded into ‘no psychological distress’ and ‘high and very high’ scores were coded into ‘psychological distress’. Participants that had a score of 22 and over were considered to have high to very high levels of psychological distress.

***The General Health Questionnaire (GHQ) is a self-administered questionnaire developed to detect individuals with a diagnosable psychiatric disorder (Goldberg & Hillier 1979). The GHQ focuses on two major domains the ‘inability to carry out normal functions and the appearance of new and distressing experiences’ (1979). The GHQ in its original form is a 60-item questionnaire, however, shorter versions have been developed (these include the GHQ-30, GHQ-28, GHQ-20 and the GHQ-12) (1979). The GHQ-28 includes within it a set of four questions specifically relating to suicidal ideation on a four-point scale asking participants to report how they had felt about certain situations ‘over the past few weeks’ (Watson et al. 2001). Suicidal ideation in this context was defined as the presence of ‘serious thoughts about committing suicide’ (ABS 2007a). The SAMSS questionnaire included these questions and assessed suicidal ideation on the basis of participants’ reporting ‘rather more than usual’ or ‘much more than usual’ to any of the four questions.

Source: Adapted from the South Australian Monitoring and Surveillance System Questionnaire
## D.3: Health-related behaviours asked of SAMSS participants including coding of variables

<table>
<thead>
<tr>
<th>Variable of Interest</th>
<th>Question</th>
<th>Derived Variable</th>
</tr>
</thead>
</table>
| **Self-Rated Health (sf1)*** | Q12... asked... 'This first question asks for your views about your health... In general, would you say your health is: | sf1  
Excellent, very good or good  
Fair or poor |
|                          | 1. Excellent  
2. Very good  
3. Good  
4. Fair  
5. Poor  
6. Don't know  
7. Refused' |                                                                                  |
| **Blood Pressure**       | Q43 asked... 'Have you ever been told by a doctor or a nurse that you have high blood pressure? | High Blood Pressure  
No  
Yes |
|                          | 1. Yes  
2. No  
3. Don't know  
4. Never measured' |                                                                                  |
| **Current Cholesterol**  | Q47 asked... 'Have you ever been told by a doctor or a nurse that you have high cholesterol? | High Cholesterol  
No  
Yes |
|                          | 1. Yes  
2. No  
3. Don't know  
4. Never measured' |                                                                                  |
| **BMI****                | Q65... asked 'What is [your / child’s name] height without shoes? | BMI  
Underweight/Normal (BMI <18.5 to <25)  
Overweight/Obese (BMI 25 to >30) |
|                          | 1. Centimetres OR  
2. Feet : Inches  
3. Don’t know  
4. Refused' |                                                                                  |
|                          | Q67... asked 'What is [your / child’s name] weight? (Undressed in the morning) (Single Response) |                                                                                  |
|                          | 1. Kilograms (Kg) OR  
2. Stones : Pounds  
3. Don’t know  
4. Refused' |                                                                                  |
| **Smoking Status**       | Q72 asked... ‘Which of the following best describes your smoking status? | Smoking Status  
Non Smoker  
Ex-Smoker  
Smoker |
|                          | 1. I smoke daily  
2. I smoke occasionally  
3. I don’t smoke now but I used to  
4. I’ve tried it a few times but never smoked regularly  
5. I’ve never smoked  
6. Refused' |                                                                                  |
<table>
<thead>
<tr>
<th>Questions</th>
<th>Options</th>
<th>Notes:</th>
</tr>
</thead>
</table>
| **Short-Term Alcohol Injury Risk***                                       | Q75. asked ‘how often do you usually drink alcohol?’                     | *The question relating to self-rated health (also referred to as SF1) is part of the Medical Outcome Study Short Form 36 (SF-36). The SF-36 is a multi-purpose, short-form health survey containing 36 questions that produces scores on eight domains of health, in addition it yields a summary measures for physical health and mental health (Ware 2000). The SF1 is a measure of health status that is commonly used in health and health-related surveys and offers information on how a person perceives their own health at a particular point in time (ABS 2007b). Self-assessed health also provides context around how individuals may perceive their health in relation to other health indicators and/or risk factors (ABS 2007b). In addition, SF1 has been linked to the future use of health care services and mortality (Gill et al. 2009).**  
|                                                                          | 1. I don’t drink alcohol                                                 | **BMI was derived from self-report height and weight. BMI was calculated as weight in kilograms divided by height (m²) and grouped based on the WHO Standard (Tan 2004).**  
|                                                                          | 2. Less than once a week                                                 | **Short-term alcohol risk was calculated based on the current Australian guidelines to reduce health risks from drinking alcohol (NHMRC 2001).**  
|                                                                          | 3. Specify number of days per week                                       | **Vegetable and fruit consumption variables were derived based upon the NHMRC, Dietary Guidelines for Australians (CDHFS 1998)**  
|                                                                          | 4. Refused                                                              | **Source: Adapted from the South Australian Monitoring and Surveillance System Questionnaire**  
|                                                                          | Q76. asked ‘A Standard Drink is equivalent to a schooner or midi of full strength beer, a glass of wine or a nip of spirits. On a day when you drink alcohol, how many drinks do you usually have?’ |                                                                                                                                         |
|                                                                          | 1. Specify number drinks                                                 |                                                                                                                                         |
|                                                                          | 2. Refused                                                              |                                                                                                                                         |
| **Vegetable Consumption****                                              | Q88. asked ‘How many serves of vegetables [do you / does child’s name] usually eat each day? A ‘serve’ is ½ cup cooked vegetables or 1 cup of salad.’ |                                                                                                                                         |
|                                                                          | 1. Less than one serve                                                   |                                                                                                                                         |
|                                                                          | 2. Enter number of serves                                                |                                                                                                                                         |
|                                                                          | 3. Don’t eat vegetables                                                  |                                                                                                                                         |
|                                                                          | 4. None                                                                  |                                                                                                                                         |
|                                                                          | 5. Don’t know                                                            |                                                                                                                                         |
| **Fruit Consumption****                                                  | Q89. asked ‘How many serves of fruit [do you / does child’s name] usually eat each day? A ‘serve’ is 1 medium piece or 2 small pieces of fruit, 1 cup of diced pieces, or 1 tablespoon of dried fruit.’ |                                                                                                                                         |
|                                                                          | 1. Less than one serve                                                   |                                                                                                                                         |
|                                                                          | 2. Enter number of serves                                                |                                                                                                                                         |
|                                                                          | 3. Don’t eat fruit                                                       |                                                                                                                                         |
|                                                                          | 4. None                                                                  |                                                                                                                                         |
|                                                                          | 5. Don’t know                                                            |                                                                                                                                         |
| Notes:                                                                   |                                                                        |                                                                                                                                         |
| *                                                                      |                                                                        |                                                                                                                                         |
| **BMI was derived from self-report height and weight. BMI was calculated as weight in kilograms divided by height (m²) and grouped based on the WHO Standard (Tan 2004).**  
| **Short-term alcohol risk was calculated based on the current Australian guidelines to reduce health risks from drinking alcohol (NHMRC 2001).**  
| **Vegetable and fruit consumption variables were derived based upon the NHMRC, Dietary Guidelines for Australians (CDHFS 1998)**  
| **Source: Adapted from the South Australian Monitoring and Surveillance System Questionnaire** |                                                                                                                                         |
APPENDIX E: SOUTH AUSTRALIAN MONITORING AND SURVEILLANCE SYSTEM WEIGHTING FORMULA

…‘This weights reflect unequal sample inclusion probabilities and compensate for differential non-response’ (ABS 2009). ‘This weighting formula is based on a random selection of households and one person within the household’. Areas, regions or boundaries are usually determined by postcode. Age is recoded into either five or 10-year age groups (2009).

Thus, let:

\[ N_h \]  \text{The population size of stratum } h \\
\[ n_h \]  \text{The sample size in stratum } h \\

From this information the following can be derived:

\[ N \]  \text{The total population size} \\
\[ n \]  \text{The total sample size} \\

The weighting formula for a particular region, where there are different probabilities of selection within each household \( i \) for each strata \( h \) (strata is area, gender and age). The weighting applied is:

\[
w_{h,i} = \frac{d_{h,i}}{\sum_{i=1}^{n_h} d_{h,i} N_h} \times \frac{n}{N}
\]

Where:

\[ w_{h,i} \] is the weighting value for respondent \( i \) in stratum \( h \). \\
\[ d_{h,i} \] is the household size of people for respondent \( i \) in stratum \( h \).

Source: (PROS 2004a)
APPENDIX F: EXPLANATORY NOTES AND COMPARABILITY OF DATA ITEMS FROM THE MIGRANT HEALTH SURVEY (SER CIS), MENTAL HEALTH SURVEY (SER CIS) AND SOUTH AUSTRALIAN MONITORING AND SURVEILLANCE SYSTEM (SAMSS)

Study Three used a variety of questions across various domains. The questions, coding notes and scoring methodology utilised in this thesis is provided below.

F.1: Demographic questions asked of survey participants including how variables were derived

<table>
<thead>
<tr>
<th>Variables of Interest</th>
<th>SERCIS – Migrant Health Survey</th>
<th>SERCIS – Mental Health Survey</th>
<th>SAMSS – Years 2007 to 2012</th>
<th>Comparability</th>
<th>Derived Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Q51… asked ‘Voice (ask if unsure)’</td>
<td>Q.C.2… asked ‘Voice (ask if unsure)’</td>
<td>Q9… asked ‘Gender of respondent or child’</td>
<td>Directly comparable</td>
<td>Sex</td>
</tr>
<tr>
<td></td>
<td>1. Male</td>
<td>1. Male</td>
<td>1. Male</td>
<td></td>
<td>Male</td>
</tr>
<tr>
<td></td>
<td>2. Female</td>
<td>2. Female</td>
<td>2. Female</td>
<td></td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td>Sex</td>
<td>Sex</td>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q52… asked ‘What is your year of birth?’</td>
<td>Q.C1… asked ‘How old you are? (in single years)’</td>
<td>Q1… asked ‘Age of respondent:’</td>
<td>Directly comparable</td>
<td>Age</td>
</tr>
<tr>
<td></td>
<td>1. Year 19 ___ ___</td>
<td>1. Enter year</td>
<td>1. Enter year</td>
<td></td>
<td>50 to 69</td>
</tr>
<tr>
<td></td>
<td>2. Don’t know</td>
<td>2. Enter months</td>
<td>2. Enter months</td>
<td></td>
<td>60 to 79</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>Age</td>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q54… asked ‘What is your marital status?’</td>
<td>Q.P.11… asked ‘What is your marital status?’</td>
<td>Q178… asked ‘What is your current marital status?’</td>
<td>Comparable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Married / De Facto</td>
<td>2. Married / De Facto</td>
<td>2. Living with a partner (De Facto)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Marital Status</td>
<td>Marital Status</td>
<td>Marital Status</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: SAMSS participants were not asked if they were ‘Single’. It is, therefore, assumed those participants who were Single were coded as ‘Never married’.
### Education

Q55. asked 'Which of these groups best describes the highest educational qualification you have obtained?

1. Still at school
2. Left school at 15 years or less
3. Left school after age 15
4. Left school after age 15 but still studying
5. Trade qualifications/apprenticeship
6. Certificate/Diploma - one year full time or less
7. Certificate/Diploma - more than one year full time
8. Bachelor degree or higher

Q.P.16. asked 'Which best describes the highest educational qualification you have obtained?

1. Still at school
2. Left school at 15 years or less
3. Left school after age 15
4. Trade/Apprenticeship
5. Certificate/Diploma - one year full time or less
6. Certificate/Diploma - more than one year full time
7. Bachelor degree or higher

Q179. asked 'What is the highest level of education you have completed?

1. Never attended school
2. Some primary school
3. Completed primary school
4. Some high school
5. Completed high school (i.e. Year 12, Form 6, HSC)
6. TAFE or trade certificate or diploma
7. University, CAE or some other tertiary institute degree
8. Other (specify)

Not comparable

Note: Excluded from analysis

N/A

### Household Income

Q72. asked 'Can you tell me the approximate annual gross income of your household? That is, for all people in the household before tax is taken out. I'll read out some categories and could you please tell me into which one your household's income falls?

1. Up to $12,000
2. $12,001 - $20,000
3. $20,001 - $30,000
4. $30,001 - $40,000
5. $40,001 - $50,000
6. $50,001 - $60,000
7. $60,001 - $80,000
8. More than $80,000
9. Not stated/refused
10. Don't know

Q.P.17. asked 'Can you tell me the approximate annual gross income of your household? That is, for all people in the household before tax is taken out. I'll read out some categories and could you please tell me into which one your household's income falls?

1. Up to $12,000
2. $12,001 - $20,000
3. $20,001 - $30,000
4. $30,001 - $40,000
5. $40,001 - $50,000
6. $50,001 - $60,000
7. $60,001 - $80,000
8. More than $80,000
9. Not stated/refused
10. Don't know

Q183. asked 'Can you tell me the approximate annual gross income of your household? That is, for all people in the household before tax is taken out. I'll read out some categories and could you please tell me into which one your household's income falls?

1. Up to $12,000
2. $12,001 - $20,000
3. $20,001 - $30,000
4. $30,001 - $40,000
5. $40,001 - $50,000
6. $50,001 - $60,000
7. $60,001 - $80,000
8. $80,001 - $100,000
9. More than $100,000
10. Not stated/refused
11. Don't know

Not comparable

In: $20,000 or more
2. less than $20,000
3. Not stated

Source: Adapted from the South Australian Monitoring and Surveillance System Questionnaire, The 1996/97 Migrant Health Survey and the 1996/97 Mental Health Survey.
### F.2: Health conditions asked of survey participants including how variables were derived

<table>
<thead>
<tr>
<th>Variables of Interest</th>
<th>SERCIS – Migrant Health Survey</th>
<th>SERCIS – Mental Health Survey</th>
<th>SAMSS – Years 2007 to 2012</th>
<th>Comparability</th>
<th>Derived Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disease Specific</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Q41... asked ‘Have you ever been told by a doctor that you have any of the following conditions? (Read Options. Multiple Response)’ | 1. Diabetes  
2. A hearing loss  
3. Osteoporosis (not osteoarthritis)  
4. Arthritis  
5. Asthma  
6. Heart attack/angina  
7. Stroke  
8. Cervical cancer (women only)  
9. Breast cancer (women only)  
10. Prostate cancer (men only)  
11. None’ | Q.B.1... asked ‘Have you ever been told by a doctor that you have any of the following conditions?’ | 1. Diabetes  
2. A hearing loss  
3. Osteoporosis (not osteoarthritis)  
4. Arthritis  
5. Asthma  
6. Heart attack/angina  
7. Stroke  
8. Cervical cancer (women only)  
9. Breast cancer (women only)  
10. Prostate cancer (men only)  
11. None’ | Directly comparable | Disease Outcome  
No, disease outcome  
Yes, disease outcome |
| **Diabetes**          |                                 |                                |                            |               |                    |
| Q15... asked ‘Have you / has child’s name ever been told by a doctor that [you have / he has / she has] diabetes?’ | 1. Yes  
2. No  
3. Don’t know/Refused’ |                               | Directly comparable | Diabetes  
No  
Yes |                    |
| **Osteoporosis**      |                                 |                                |                            |               |                    |
| Q31... asked ‘Have you ever been told by a doctor that you have osteoporosis?’ | 1. Yes  
2. No  
3. Don’t know’ |                               | Directly comparable | Osteoporosis  
No  
Yes |                    |
| **Arthritis**         |                                 |                                |                            |               |                    |
| Q31... asked ‘Have you ever been told by a doctor that you have arthritis?’ | 1. Yes, Osteoarthritis  
2. Yes, Rheumatoid Arthritis  
3. Yes, Juvenile Rheumatoid Arthritis (JRA)  
4. Yes, other (specify)  
5. No, don’t have arthritis  
6. Yes, don’t know type’ |                               | Directly comparable | Arthritis  
No  
Yes |                    |
<table>
<thead>
<tr>
<th></th>
<th>Asthma</th>
<th>Directly comparable</th>
<th>Asthma</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q21... asked ‘Have you / has child’s name] ever been told by a doctor that [you have / he has / she has] asthma?</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Don’t know</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Directly comparable</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Heart Attack/Angina</td>
<td>Q29... asked ‘Have you ever been told by a doctor that you have had any of the following conditions?’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stroke</td>
<td>4. Heart attack</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Angina</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. Heart disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Stroke</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. None of the above</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comparable</td>
<td>Note: Migrant Health Survey did not include heart disease in the response category, therefore, excluded from the definition of cardiovascular disease (which includes only heart attack, angina and stroke).</td>
<td>Heart Attack/Angina Stroke</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>No</td>
<td></td>
<td>No</td>
</tr>
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</table>

Source: Adapted from the South Australian Monitoring and Surveillance System Questionnaire, the 1996/97 Migrant Health Survey and the 1996/97 Mental Health Survey.
### Variables of Interest

<table>
<thead>
<tr>
<th>Variables of Interest</th>
<th>SERCIS – Migrant Health Survey</th>
<th>SERCIS – Mental Health Survey</th>
<th>SAMSS – Years 2007 to 2012</th>
<th>Comparability</th>
<th>Derived Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Rated Health (SF1)</td>
<td>Q2... asked 'In general, would you say your health is: 1. Excellent 2. Very good 3. Good 4. Fair 5. Poor'</td>
<td>Q.A.1... asked 'In general, would you say your health is: 1. Excellent 2. Very good 3. Good 4. Fair 5. Poor'</td>
<td>Q12... asked 'In general, would you say [your / child’s name] health is: 1. Excellent 2. Very good 3. Good 4. Fair 5. Poor'</td>
<td>Directly comparable</td>
<td>SF1 Excellent, Very Good or Good Fair or Poor</td>
</tr>
<tr>
<td>Alcohol Consumption</td>
<td>Q26... asked ‘How often do you usually drink alcohol? 1. I don't drink alcohol 2. Less than once a week 3. On 1 or 2 days a week 4. On 3 or 4 days a week 5. On 5 or 6 days a week 6. Every Day’</td>
<td>Q.G.1... asked ‘How often do you usually drink alcohol? 1. I don't drink alcohol 2. Less than once a week 3. On 1 or 2 days a week 4. On 3 or 4 days a week 5. On 5 or 6 days a week 6. Every Day’</td>
<td>Q75... asked ‘How often do you usually drink alcohol? 1. I don't drink alcohol 2. Less than once a week 3. Specify number of days per week 4. Refused’</td>
<td>Not comparable</td>
<td>N/A Note: Excluded from analysis</td>
</tr>
<tr>
<td></td>
<td>Q27... asked ‘A Standard Drink is equivalent to a schooner of full strength beer, a glass of wine or a nip of spirits. On a day when you drink alcohol, how many standard drinks do you usually have? 1. 1 or 2 drinks 2. 3 or 4 drinks 3. 5 or 8 drinks 4. 9 or 12 drinks 5. 13 or 20 drinks 6. More than 20 drinks’</td>
<td>Q.G.2A... asked ‘Standard Drink is equivalent to a schooner of full strength beer, a glass of wine or a nip of spirits. On a day when you drink alcohol, how many drinks do you usually have? 1. 1 or 2 drinks 2. 3 or 4 drinks 3. 5 or 8 drinks 4. 9 or 12 drinks 5. 13 or 20 drinks 6. More than 20 drinks’</td>
<td>Q76... asked ‘A Standard Drink is equivalent to a schooner or midi of full strength beer, a glass of wine or a nip of spirits. On a day when you drink alcohol, how many drinks do you usually have? 1. Specify number drinks 2. Refused’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Excluded from analysis
<table>
<thead>
<tr>
<th>BMI</th>
<th>Question</th>
<th>Options</th>
<th>Source: Adapted from the South Australian Monitoring and Surveillance System Questionnaire, The 1996/97 Migrant Health Survey and the 1996/97 Mental Health Survey.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q28... asked ‘What is your height without shoes?</td>
<td>1. Centimetres OR</td>
<td>Directly comparable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Feet:inches</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Don’t know</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q29... asked ‘What is your weight? (Undressed in the morning)</td>
<td>1. Kilograms (kg) OR</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>2. Stones:pounds</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Don’t know</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q.I.1... asked ‘What is your height without shoes?</td>
<td>1. Centimetres OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Feet:inches</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Don’t know</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q.I.2... asked ‘What is your weight? (Undressed in the morning)</td>
<td>1. Kilograms (kg) OR</td>
<td></td>
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<td></td>
<td></td>
<td>2. Stones:pounds</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Don’t know</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q65... asked ‘What is [your / child’s name] height without shoes?</td>
<td>1. Centimetres OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Feet:inches</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Don’t know</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Refused</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q67... asked ‘What is [your / child’s name] weight?</td>
<td>1. Kilograms (kg) OR</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Stones:pounds</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>3. Don’t know</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Refused</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q33... asked ‘Do you smoke at all?</td>
<td>1. Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Occasionally</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q.J.1... asked ‘Do you smoke at all?</td>
<td>1. Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. No</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Occasionally</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Q.J.2... asked ‘Have you ever smoked regularly? (Single Response)</td>
<td>1. Yes</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. No</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from the South Australian Monitoring and Surveillance System Questionnaire, The 1996/97 Migrant Health Survey and the 1996/97 Mental Health Survey.
SECTION 1: DEMOGRAPHICS - PERSONAL

1. What is your country of birth?
   (Single Response)
   1. Australia [ ] Abort
   2. Argentina [ ]
   3. Austria [ ]
   4. Bosnia - Herzegovina [ ]
   5. Bulgaria [ ]
   6. Cambodia [ ] Abort
   7. Canada [ ]
   8. Chech Republic [ ]
   9. China [ ]
   10. Croatia [ ]
   11. Cyprus [ ]
   12. Denmark [ ]
   13. Egypt [ ]
   14. El Salvador [ ]
   15. Estonia [ ]
   16. Finland [ ]
   17. Former Yugoslav Republic of Macedonia [ ]
   18. France [ ]
   19. Germany [ ]
   20. Greece [ ]
   21. Holland/Netherlands [ ]
   22. Hong Kong [ ]
   23. Hungary [ ]
   24. India [ ]
   25. Indonesia [ ]
   26. Iran [ ]
   27. Israel [ ]
   28. Italy [ ]
   29. Japan [ ]
   30. Korea [ ]
   31. Latvia [ ]
   32. Lebanon [ ]
   33. Lithuania [ ]
   34. Malaysia [ ]
   35. Malta [ ]
   36. Middle East [ ]
   37. New Zealand [ ] Abort
   38. Papua New Guinea [ ]
   39. Philippines [ ]
   40. Poland [ ]
   41. Portugal [ ]
   42. Romania [ ]
   43. Russia [ ]
   44. Serbia & Montenegro [ ]
   45. Singapore [ ]
   46. Slovakia [ ]
   47. Slovenia [ ]
   48. South Africa [ ]
   49. Spain [ ]
   50. Sri Lanka [ ]
   51. UK and Ireland [ ] Abort
   52. Ukraine [ ]
   53. USA [ ] Abort
   54. Vietnam [ ]
   55. Other country (specify) [ ]

SECTION 2: QUALITY OF LIFE

These questions ask for your views about your health.

2. In general, would you say your health is:
   (Read Options. Single Response)
   1. Excellent [ ]
   2. Very good [ ]
   3. Good [ ]
   4. Fair [ ]
   5. Poor [ ]

SECTION 3: GENERAL HEALTH QUESTIONNAIRE

The next series of questions all relate to how your health has been in general over the past few weeks.

3. Over the past few weeks have you been able to concentrate on whatever you are doing?
   (Read Options. Single Response)
   1. Better than usual [ ]
   2. Same as usual [ ]
   3. Less than usual [ ]
   4. Much less than usual [ ]

4. Over the past few weeks have you lost much sleep over worry?
   (Read Options. Single Response)
   1. Not at all [ ]
   2. No more than usual [ ]
   3. Rather more than usual [ ]
   4. Much more than usual [ ]

5. Over the past few weeks have you felt that you are playing a useful part in life?
   (Read Options. Single Response)
   1. More so than usual [ ]
   2. Same as usual [ ]
   3. Less than usual [ ]
   4. Much less than usual [ ]
6. [Over the past few weeks] have you felt capable of making decisions about things?  
(Read Options. Single Response)  
1. More so than usual [ ]  
2. Same as usual [ ]  
3. Less than usual [ ]  
4. Much less than usual [ ]

7. [Over the past few weeks] have you felt constantly under strain?  
(Read Options. Single Response)  
1. Not at all [ ]  
2. No more than usual [ ]  
3. Rather more than usual [ ]  
4. Much more than usual [ ]

8. [Over the past few weeks] have you felt that you could not overcome your difficulties?  
(Read Options. Single Response)  
1. Not at all [ ]  
2. No more than usual [ ]  
3. Rather more than usual [ ]  
4. Much more than usual [ ]

9. [Over the past few weeks] have you been able to enjoy your normal day to day activities?  
(Read Options. Single Response)  
1. More so than usual [ ]  
2. Same as usual [ ]  
3. Less so than usual [ ]  
4. Much less than usual [ ]

10. [Over the past few weeks] have you been able to face up to your problems?  
(Read Options. Single Response)  
1. More so than usual [ ]  
2. Same as usual [ ]  
3. Less able than usual [ ]  
4. Much less able [ ]

11. [Over the past few weeks] have you been feeling unhappy and depressed?  
(Read Options. Single Response)  
1. Not at all [ ]  
2. No more than usual [ ]  
3. Rather more than usual [ ]  
4. Much more than usual [ ]

12. [Over the past few weeks] have you been losing confidence in yourself?  
(Read Options. Single Response)  
1. Not at all [ ]  
2. No more than usual [ ]  
3. Rather more than usual [ ]  
4. Much more than usual [ ]

13. [Over the past few weeks] have you been thinking of yourself as a worthless person?  
(Read Options. Single Response)  
1. Not at all [ ]  
2. No more than usual [ ]  
3. Rather more than usual [ ]  
4. Much more than usual [ ]

14. [Over the past few weeks] have you been feeling reasonably happy, all things considered?  
(Read Options. Single Response)  
1. More so than usual [ ]  
2. About the same as usual [ ]  
3. Less so than usual [ ]  
4. Much less than usual [ ]
SECTION 4: THE SOCIAL HEALTH BATTERY

15. About how many families in your neighbourhood do you know well enough, that you visit each other in your homes?  
(Single Response. Enter 0 if none)  
1. Enter number of families known __ __

16. About how many close friends do you have - people you feel at ease with and can talk with about what is on your mind?  (You may include relatives)  
(Single Response. Enter 0 if none)  
1. Enter number of close friends __ __

17. In the last 12 months, about how often do you get together with friends or relatives like going out together or visiting in each other’s homes?  
(Single Response.)  
1. Every day [ ]  
2. Several days a week [ ]  
3. About once a week [ ]  
4. 2 or 3 times a month [ ]  
5. About once a month [ ]  
6. 5 to 10 times a year [ ]  
7. Less than 5 times a year [ ]

18. During the past month, about how often have you had friends over to your home? (Do not count relatives)  
(Single Response.)  
1. Every day [ ]  
2. Several days a week [ ]  
3. About once a week [ ]  
4. 2 or 3 times a month [ ]  
5. About once a month [ ]  
6. 5 to 10 times a year [ ]  
7. Less than 5 times a year [ ]

19. About how often have you visited with friends at their homes during the past month? (Do not count relatives)  
(Single Response.)  
1. Every day [ ]  
2. Several days a week [ ]  
3. About once a week [ ]  
4. 2 or 3 times in past month [ ]  
5. Once in past month [ ]  
6. Not at all in past month [ ]

20. About how often were you on the telephone with close friends or relatives during the past month?  
(Single Response.)  
1. Every day [ ]  
2. Several times a week [ ]  
3. About once a week [ ]  
4. 2 or 3 times [ ]  
5. Once [ ]  
6. Not at all [ ]

21. About how often did you write a letter to a friend or relative during the past month?  
(Single Response.)  
1. Every day [ ]  
2. Several times a week [ ]  
3. About once a week [ ]  
4. 2 or 3 times in past month [ ]  
5. Once in past month [ ]  
6. Not at all in past month [ ]

22. In general, how well are you getting along with other people these days - would you say.......  
(Read Options. Single Response.)  
1. Better than usual [ ]  
2. About the same [ ]  
3. Not as well as usual [ ]

23. How often have you attended a religious service during the past month?  
(Single Response.)  
1. Every day [ ]  
2. Several times a week [ ]  
3. About once a week [ ]  
4. 2 or 3 times in past month [ ]  
5. Once in past month [ ]  
6. Not at all in past month [ ]

24. About how many voluntary groups or organisations do you belong to - like church groups, clubs or lodges, parent groups, etc. (Voluntary means because you want to)  
(Single Response. Enter 0 if none)  
1. Enter number of groups or organisations __ __

Sequence Guide: if value is 0 then Go To Q26
Migrant Questionnaire

25. How active are you in the affairs of these groups or clubs you belong to? (If belong to a great many, just count those feel closest to). (Read Options. Single Response.)
1. Very active (attend most meetings) [   ]
2. Fairly active (attend fairly often) [   ]
3. Not active (belong but hardly every go) [   ]
4. Do not belong to any groups [   ]

SECTION 5 : RISK FACTORS - Alcohol

26. How often do you usually drink alcohol? (Single Response)
1. I don't drink alcohol [   ] Go to Q28
2. Less than once a week [   ]
3. On 1 or 2 days a week [   ]
4. On 3 or 4 days a week [   ]
5. On 5 or 6 days a week [   ]
6. Every Day [   ]

A Standard Drink is equivalent to a schooner of full strength beer, a glass of wine or a nip of spirits.

27. On a day when you drink alcohol, how many standard drinks do you usually have? (Single Response)
1. 1 or 2 drinks [   ]
2. 3 or 4 drinks [   ]
3. 5 or 8 drinks [   ]
4. 9 or 12 drinks [   ]
5. 13 or 20 drinks [   ]
6. More than 20 drinks [   ]

SECTION 6 : RISK FACTORS - BMI

28. What is your height without shoes? (Single Response)
1. centimetres ______
2. OR feet:inches ___ __
3. don't know [   ]

29. What is your weight? (Undressed in the morning) (Single Response)
1. kilograms (kg) ______
2. OR stones:pounds ___ __
3. don't know [   ]

SECTION 7 : RISK FACTORS - Exercise

The next few questions are about the past 2 weeks only.

30. In the last 2 weeks, have you walked for sport, recreation or fitness? (Single Response)
1. Yes [   ]
2. No [   ]

31. In the last 2 weeks, (apart from walking) did you do any exercise which cause a moderate increase in your heart rate or breathing? (Single Response)
1. Yes [   ]
2. No [   ]

32. In the last 2 weeks, did you do any other exercise which caused a large increase in your heart rate or breathing, that is, vigorous exercise? (Single Response)
1. Yes [   ]
2. No [   ]
SECTION 8 : RISK FACTORS - Smoking

33. Do you smoke at all?
   (Single Response)
   1. Yes [ ] Go to Section 9
   2. No [ ]
   3. Occasionally [ ] Go to Section 9

34. Have you ever smoked regularly?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

SECTION 9 : RISK FACTORS - Workplace Injury

I want to now ask you about injuries such as sprains, broken bones, burns, cuts, heavy knocks etc.

35. How many times in the last 2 years have you had any injury that was bad enough to interfere with your daily activities?
   (Single Response)
   1. times [ ]
   2. None [ ] Go to Section 10

If more than one injury, prompt: In regard to the most recent injury

36. Did this injury happened at work?
   (Single Response)
   1. Yes [ ]
   2. No [ ] Go to Section 10

37. Could you tell me what medical or other professional care you sought?
   (Multiple Response)
   1. Did not seek professional help [ ] Go to Q39
   2. Casualty/accident & emergency staff [ ]
   3. GP (General Practitioner) [ ]
   4. Nurse [ ]
   5. Physiotherapist [ ]
   6. Pharmacist/chemist [ ]
   7. Surgeon [ ]
   8. Other Specialist [ ]
   9. Chiropractor [ ]
   10. Other (specify) [ ]

38. Were you admitted to hospital as a result of this injury?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

39. Did you have any days lost from work, school or home duties as a result of this injury?
   (Single Response)
   1. Yes [ ]
   2. No [ ] Go to Section 10

40. How many DAYS did you have off?
   (Enter days, weeks or months)
   1. days [ ]
   2. weeks [ ]
   3. months [ ]
   4. Don’t know [ ]
SECTION 10 : DISEASE SPECIFIC

41. Have you ever been told by a doctor that you have any of the following conditions?
(Read Options. Multiple Response)
1. Diabetes [ ]
2. A hearing loss [ ]
3. Osteoporosis (not osteoarthritis) [ ]
4. Arthritis [ ]
5. Asthma [ ] Go to Q42
6. Heart attack/angina [ ]
7. Stroke [ ]
8. Cervical cancer (women only) [ ]
9. Breast cancer (women only) [ ]
10. Prostate cancer (men only) [ ]
11. None [ ]

Sequence Guide: (If Q41.5 = 0) Go to Section 12

42. Do you currently suffer from asthma?
(Single Response)
1. Yes [ ]
2. No [ ]

SECTION 11 : HEALTH SERVICE USE

Now some questions about the use of health services.

43. In the last 12 months, which of these health services have YOU used in South Australia?
(Read Options. Multiple Response)
1. General Practitioner [ ]
2. Dentist [ ]
3. Optometrist (Optician) [ ]
4. Ambulance [ ]
5. A Chemist for Advice (Pharmacist) [ ]
6. Community Health Centre [ ]
7. District nurses or other community nurses [ ]
8. Chiropractor [ ]
9. Physiotherapist [ ]
10. Podiatrist [ ]
11. Community Mental Health Services [ ]
12. Day surgery [ ]
13. Hospital - Accident & Emergency Department [ ]
14. Hospital - Clinic (outpatient/specialist/allied health) [ ]
15. Hospital - Stayed at least one night (inpatient) [ ]
16. Specialist doctor (not in a hospital) [ ]
17. An alternative therapist eg naturopath, osteopath [ ]
18. Respite care [ ]
19. 24 hour clinic [ ]
20. Acupuncturist [ ]
21. Herbalist [ ]
22. None [ ]

44. Overall, how would you describe your experiences with the Australian Health system?
(Read Options. Single Response)
1. Very good [ ] Go to Q46
2. Good [ ] Go to Q46
3. Moderate [ ] Go to Q47
4. Poor [ ]
5. Very poor [ ]
6. No experience [ ] Go to Q47

45. What was the main reason your experience was poor?
(Multiple Response)
1. Waited too long (to be seen/for treatment etc) [ ]
2. Health provider was not patient [ ]
3. Financial reasons [ ]
4. No interpreter [ ]
5. Lack of confidentiality [ ]
6. Insensitive to culture/religion [ ]
7. Health provider not understanding/empathy [ ]
8. Not used to Australian health services [ ]
9. Other (specify) [ ]

Sequence Guide: Go to Q47

46. What was the main reason your experience was good?
(Multiple Response)
1. Didn't have any problems [ ]
2. Didn't have to wait [ ]
3. Friendly staff [ ]
4. Very good treatment [ ]
5. Fixed my problem [ ]
6. Service good [ ]
7. Other (specify) [ ]
47. What services have you ever used at the Migrant Health Services in Market Street, Adelaide?
(Multiple Response)
1. Never used the Migrant Health Services
2. Did not know it existed
3. GP services
4. Clinical psychology services
5. Other clinical services eg health screening, immunisation
6. Counselling services provided by social workers
7. Interpreter
8. Translated information on health and health care system
9. Health education
10. Lawyer
11. Optometrist
12. Other (specify)

48. Overall, how would you describe your experiences of settling in Australia?
(Read Options. Single Response)
1. Very good
2. Good
3. Moderate
4. Poor
5. Very poor
6. No experience/too young

49. What was the main reason your experience was poor?
(Multiple Response)
1. Did not know anyone
2. Unfriendly people
3. Financial reasons
4. Language barrier
5. Homesick
6. Not used to Australian culture
7. Other (specify)

50. What was the main reason your experience was good?
(Multiple Response)
1. No reason
2. Friendly people
3. Had relatives in Australia
4. Climate better
5. Better working opportunities
6. Only a baby/too young
7. Other (specify)

SECTION 12 : DEMOGRAPHICS - PERSONAL

Now, to finish with some general questions.

51. Voice (ask if unsure)
1. Male
2. Female

52. What is your year of birth?
(Single Response. Enter 99 if year is unknown)
1. Year
2. Don't know 1999

53. In what year did you arrive in Australia?
(Single Response. Enter 99 if year is unknown)
1. Year
2. Don't know 1999

54. What is your marital status?
(Read Options. Single Response)
1. Single / Never married
2. Married / De Facto
3. Separated / Divorced
4. Widowed
55. Which of these groups best describes the highest educational qualification you have obtained?
(Read Options. Single Response)
1. Still at school [  ]
2. Left school at 15 years or less [  ]
3. Left school after age 15 [  ]
4. Left school after age 15 but still studying [  ]
5. Trade qualifications/apprenticeship [  ]
6. Certificate/Diploma - one year full time or less [  ]
7. Certificate/Diploma - more than one year full time [  ]
8. Bachelor degree or higher [  ]

56. What is your work status?
(Read Options If Necessary. Single Response)
1. Full time employed [  ] Go to Q58
2. Part time employed [  ] Go to Q58
3. Home duties [  ]
4. Unemployed [  ]
5. Retired [  ]
6. Student [  ]
7. Other (Specify) [  ]

57. Do you receive a pension or benefit from the department of social security?
(Not self-funded eg superannuation & Not family allowance. Single Response)
1. Yes [  ]
2. No [  ]
3. Don't know [  ]

Sequence Guide: Go to Q59

58. Which of the following BEST DESCRIBES your usual occupation?
(Single Response. The exact job may not be listed, but tick the one that comes closest)
1. Manager or administrator (eg parliamentarian, judge, general or specialist manager, managing supervisor) [  ]
2. Professional (eg scientist, architect, engineer, medical practitioner, school teacher, social work, accountant, journalist) [  ]
3. Para-Professional (eg medical or science technical officer, engineering or building technician, pilot, registered nurse, police or ambulance officer) [  ]
4. Trades person (eg metal fitter or machinist, electrician, carpenter, mechanic, cook, hairdresser) [  ]
5. Clerk (eg public service clerk, typist, data processor, receptionist, telephonist) [  ]
6. Sales person or personal service worker (eg sales representative or assistant, teller, enrolled nurse, waiter or waitress) [  ]
7. Plant or machine operator or driver (eg truck, delivery van, bus, or taxi drive, fire fighter, crane operator, textile machinist, etc) [  ]
8. Labourer or related worker (eg trades assistant, hand packer, farm hand, cleaner, storeman/woman, kitchen hand) [  ]
9. Other (specify) [  ]

59. Which of the following BEST DESCRIBES your usual occupation before arriving in Australia?
(Single Response)
1. Too young to work [  ]
2. Unemployed [  ]
3. Home duties [  ]
4. Retired [  ]
5. Student [  ]
6. Manager or administrator (eg parliamentarian, judge, general or specialist manager, managing supervisor) [  ]
7. Professional (eg scientist, architect, engineer, medical practitioner, school teacher, social work, accountant, journalist) [  ]
8. Para-Professional (eg medical or science technical officer, engineering or building technician, pilot, registered nurse, police or ambulance officer) [  ]
9. Trades person (eg metal fitter or machinist, electrician, carpenter, mechanic, cook, hairdresser) [  ]
10. Clerk (eg public service clerk, typist, data processor, receptionist, telephonist) [  ]
11. Sales person or personal service worker (eg sales representative or assistant, teller, enrolled nurse, waiter or waitress) [  ]
12. Plant or machine operator or driver (eg truck, delivery van, bus, or taxi drive, fire fighter, crane operator, textile machinist, etc) [  ]
13. Labourer or related worker (eg trades assistant, hand packer, farm hand, cleaner, storeman/woman, kitchen hand) [  ]
14. Other (specify) [  ]
60. **What is your mother’s country of birth?**  
(Single Response)

<table>
<thead>
<tr>
<th></th>
<th>Country</th>
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<tbody>
<tr>
<td>1.</td>
<td>Australia</td>
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<td>2.</td>
<td>Argentina</td>
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<td>3.</td>
<td>Austria</td>
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<td>4.</td>
<td>Bosnia - Herzegovina</td>
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<td>5.</td>
<td>Bulgaria</td>
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<td>6.</td>
<td>Cambodia</td>
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<td>7.</td>
<td>Canada</td>
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<td>8.</td>
<td>Chech Republic</td>
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<td>9.</td>
<td>China</td>
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<td>10.</td>
<td>Croatia</td>
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<td>11.</td>
<td>Cyprus</td>
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<td>12.</td>
<td>Denmark</td>
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<td>13.</td>
<td>Egypt</td>
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<td>14.</td>
<td>El Salvador</td>
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<td>15.</td>
<td>Estonia</td>
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<td>16.</td>
<td>Finland</td>
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<td>17.</td>
<td>Former Yugoslav Republic of Macedonia</td>
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<td>18.</td>
<td>France</td>
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<td>19.</td>
<td>Germany</td>
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<td>20.</td>
<td>Greece</td>
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<td>21.</td>
<td>Holland/Netherlands</td>
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<td>22.</td>
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<td>23.</td>
<td>Hungary</td>
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<td>24.</td>
<td>India</td>
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<td>26.</td>
<td>Iran</td>
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<td>27.</td>
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<td>28.</td>
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<td>30.</td>
<td>Korea</td>
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<td>31.</td>
<td>Latvia</td>
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<td>33.</td>
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<td>34.</td>
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<td>36.</td>
<td>Middle East</td>
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<td>37.</td>
<td>New Zealand</td>
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<td>38.</td>
<td>Papua New Guinea</td>
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<td>39.</td>
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<td>41.</td>
<td>Portugal</td>
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<td>42.</td>
<td>Romania</td>
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<td>43.</td>
<td>Russia</td>
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<td>44.</td>
<td>Serbia &amp; Montenegro</td>
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<td>45.</td>
<td>Singapore</td>
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<td>46.</td>
<td>Slovakia</td>
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<td>47.</td>
<td>Slovenia</td>
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<td>48.</td>
<td>South Africa</td>
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<td>49.</td>
<td>Spain</td>
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<td>50.</td>
<td>Sri Lanka</td>
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<td>51.</td>
<td>UK and Ireland</td>
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<td>52.</td>
<td>Ukraine</td>
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<td>53.</td>
<td>USA</td>
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<td>54.</td>
<td>Vietnam</td>
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<tr>
<td>55.</td>
<td>Other country (specify)</td>
</tr>
</tbody>
</table>

61. **What is your father’s country of birth?**  
(Single Response)

<table>
<thead>
<tr>
<th></th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Australia</td>
</tr>
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</table>

62. **What is the main language you speak at home?**  
(Single Response)

<table>
<thead>
<tr>
<th></th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>English</td>
</tr>
</tbody>
</table>
2. Arabic [ ]
3. Chinese [ ]
4. Croatian [ ]
5. Dutch [ ]
6. French [ ]
7. German [ ]
8. Greek [ ]
9. Hungarian [ ]
10. Italian [ ]
11. Khmer (Cambodian) [ ]
12. Macedonian [ ]
13. Polish [ ]
14. Russian [ ]
15. Serbian [ ]
16. Spanish [ ]
17. Tagalog (Filipino) [ ]
18. Turkish [ ]
19. Vietnamese [ ]
20. Other (specify) [ ]

66. Are you a Permanent Resident of Australia?
(Single Response)
1. Yes [ ]
2. No [ ]
3. Don’t know [ ]

SECTION 13 : DEMOGRAPHICS - HOUSEHOLD

67. Including yourself how many people aged 18 and over live in this household?
(Single Response. Enter number of people 18 years and over) [ ]

68. How many children under 18 years and live in your household?
(Single Response. Enter number of people 18 years and over. Enter 0 if none) [ ]

69. What is the Postcode of the house?
(Single Response. If postcode is not known enter 5999)
5_ _ _
Sequence Guide: If Q69 < 5999 Go to Q71

70. What town or suburb do you live in?
(Single Response. Enter town/suburb) ________

64. How well do you speak English?
(Single Response.)
1. Very well [ ]
2. Well [ ]
3. Not well [ ]
4. Not at all [ ]

65. Are you an Australian citizen?
(Single Response)
1. Yes [ ] Go to Q67
2. No [ ]

71. Are you a Permanent Resident of Australia?
(Single Response)
1. Yes [ ]
2. No [ ]
3. Don’t know [ ]

SECTION 13 : DEMOGRAPHICS - HOUSEHOLD

67. Including yourself how many people aged 18 and over live in this household?
(Single Response. Enter number of people 18 years and over) [ ]

68. How many children under 18 years and live in your household?
(Single Response. Enter number of people 18 years and over. Enter 0 if none) [ ]

69. What is the Postcode of the house?
(Single Response. If postcode is not known enter 5999)
5_ _ _
Sequence Guide: If Q69 < 5999 Go to Q71

70. What town or suburb do you live in?
(Single Response. Enter town/suburb) ________

64. How well do you speak English?
(Single Response.)
1. Very well [ ]
2. Well [ ]
3. Not well [ ]
4. Not at all [ ]

65. Are you an Australian citizen?
(Single Response)
1. Yes [ ] Go to Q67
2. No [ ]

71. Are you a Permanent Resident of Australia?
(Single Response)
1. Yes [ ]
2. No [ ]
3. Don’t know [ ]

SECTION 13 : DEMOGRAPHICS - HOUSEHOLD

67. Including yourself how many people aged 18 and over live in this household?
(Single Response. Enter number of people 18 years and over) [ ]

68. How many children under 18 years and live in your household?
(Single Response. Enter number of people 18 years and over. Enter 0 if none) [ ]

69. What is the Postcode of the house?
(Single Response. If postcode is not known enter 5999)
5_ _ _
Sequence Guide: If Q69 < 5999 Go to Q71

70. What town or suburb do you live in?
(Single Response. Enter town/suburb) ________

64. How well do you speak English?
(Single Response.)
1. Very well [ ]
2. Well [ ]
3. Not well [ ]
4. Not at all [ ]

65. Are you an Australian citizen?
(Single Response)
1. Yes [ ] Go to Q67
2. No [ ]
71. How many bedrooms are there in your house or unit?  
(Single Response. Enter number)  

72. Can you tell me the approximate annual gross income of your household? That is, for all people in the household before tax is taken out. I’ll read out some categories and could you please tell me into which one your household’s income falls?  
(Read Options. Single Response)  
1. Up to $12,000  
2. $12,001 - $20,000  
3. $20,001 - $30,000  
4. $30,001 - $40,000  
5. $40,001 - $50,000  
6. $50,001 - $60,000  
7. $60,001 - $80,000  
8. More than $80,000  
9. Not stated/refused  
10. Don’t know  

73. In a survey like this, issues often arise which require further explanation. If we need to could we contact you at a later date to help clarify some issues?  
(Single Response)  
1. Yes  
2. No  

73A For that we will need your name. May I ask your name?  
(Single Response. Enter name)  

CONCLUSION  

Record phone number (including are code)  
(    ) __________  

If number of people in household 18+ years and born in NES country is more than 1 person read:  

You mentioned at the beginning of the interview that there were others in your household who were born in countries where English is not the main language. I would appreciate it very much if they could also complete the questionnaire - either now if it is convenient, or I can arrange a time to call them back when it would be more convenient.  
(Single Response)  
1. Immediate interview  
2. Call back arrange  
3. Unable to arrange interview among other household members  

That concludes the survey. On behalf of The Migrant Health Service. Thank you very much for taking part in this survey.
APPENDIX H: MENTAL HEALTH SURVEY QUESTIONNAIRE
A QUALITY OF LIFE (SF12)

These first few questions ask for your views about your health.

A.1 In general, would you say your health is:
(Read Options. Single Response)
1. Excellent [  ]
2. Very good [  ]
3. Good [  ]
4. Fair [  ]
5. Poor [  ]

The following items are about activities that you might do during a typical day.

A.2 Does your health now limit you in undertaking moderate activities, such as moving a table, pushing a vacuum cleaner, bowling or playing golf? Does your health limit you?
(Read Options. Single Response)
1. A lot [  ]
2. A little [  ]
3. Not at all [  ]

A.3 What about climbing several flights of stairs? Does your health limit you?
(Read Options. Single Response)
1. A lot [  ]
2. A little [  ]
3. Not at all [  ]

A.4 During the past four weeks, have you accomplished less than you would like with your work or other regular daily activities as a result of your physical health?
(Read Options. Single Response)
1. Yes [  ]
2. No [  ]

A.5 During the past four weeks, were you limited in the kind of work or other activities as a result of your physical health?
(Read Options. Single Response)
1. Yes [  ]
2. No [  ]

A.6 During the past four weeks, have you accomplished less than you would like with your work or other regular daily activities as a result of any emotional problems, such as feeling depressed or anxious?
(Read Options. Single Response)
1. Yes [  ]
2. No [  ]

A.7 During the past four weeks, did you not do work or other activities as carefully as usual as a result of any emotional problems, such as feeling depressed or anxious?
(Read Options. Single Response)
1. Yes [  ]
2. No [  ]

A.8 During the past four weeks, how much did pain interfere with your normal work, including both work outside the home and housework?
(Read Options. Single Response)
1. Not at all [  ]
2. A little bit [  ]
3. Moderately [  ]
4. Quite a bit [  ]
5. Extremely [  ]
The next few questions are about how you feel and how things have been with you during the past 4 weeks. Please give the one answer that comes closest to the way you have been feeling.

A.9  How much of the time during the past four weeks have you felt calm and peaceful?
(Read Options. Single Response)
1. All of the time 
2. Most of the time 
3. A good bit of the time 
4. Some of the time 
5. A little of the time 
6. None of the time 

A.10 How much of the time during the past four weeks did you have a lot of energy?
(Read Options. Single Response)
1. All of the time 
2. Most of the time 
3. A good bit of the time 
4. Some of the time 
5. A little of the time 
6. None of the time 

A.11 How much of the time during the past four weeks have you felt downhearted and blue (or down)?
(Read Options. Single Response)
1. All of the time 
2. Most of the time 
3. A good bit of the time 
4. Some of the time 
5. A little of the time 
6. None of the time 

A.12 During the past four weeks, how much of the time has your physical health or emotional problems interfered with your social activities like visiting friends or relatives?
(Read Options. Single Response)
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 

B  CO-MORBIDITY

B.1 Have you ever been told by a doctor that you have any of the following conditions?
(Read Options. Multiple Response)
1. Diabetes 
2. A hearing loss 
3. Osteoporosis (not osteoarthritis) 
4. Arthritis 
5. Heart attack/angina 
6. Stroke 
7. Cancer 
8. Asthma 
9. None 

Sequence Guide: Go to Section C

B.2 Do you still have asthma?
(Single Response)
1. Yes 
2. No 

Go to BB.2
C DEMOGRAPHICS

As some of the next questions relate to certain groups of people only could you please tell me

C.1 How old you are?
   (Single Response. Enter 999 if not stated)
   ______

C.2 Voice (ask if unsure)
   1. Male [    ]
   2. Female [    ]

C.3 Including yourself how many people aged 18 and over live in this household?
   (Single Response. Enter number of people 18 years and over)
   [    ]

C.4 How many children under 18 years live in your household?
   (Single Response. Enter number of people 18 years and over. Enter 0 if none)
   [    ]

C.5 What is the Postcode of the house?
   (Single Response. If postcode is not known enter 5999)
   5_ _ _

Sequence Guide: If CC.5 < 5999 Go to Section D

C.6 What town do you live in?
   (Single Response. Enter town/suburb)
   ______

D Not Relevant

E MEDICATION USE

Now to change the subject:

E.1 In the last 2 weeks have you regularly taken any tablets or medicines bought from a pharmacy, supermarket, health shop etc?
   (Single Response)
   1. Yes [    ]
   2. No [    ] Go to Section F

E.2 What are the medicines for?
   (Multiple Responses - no prompt)
   1. Sleeping [    ]
   2. To keep you calm [    ] Go to DE.3
   3. Water [    ]
   4. Blood Pressure [    ]
   5. Heart [    ]
   6. Infection [    ]
   7. Depression [    ] Go to DE.3
   8. Pain relief [    ]
   9. Diabetes [    ]
   10. Asthma [    ]
   11. Contraception [    ]
   12. Hormones (HRT) [    ]
   13. Stress [    ] Go to DE.3
   14. Anxiety [    ] Go to DE.3
   15. Mental Health problem [    ] Go to DE.3
   16. Something else (specify) [    ] Go to DE.3

Sequence Guide: Go to Section F

E.3 In regard to the main medicine you take is the medicine prescribed by a doctor:
   1. Yes [    ]
   2. No [    ]
F HEALTH CARE UTILISATION

Now some questions about the use of health services.

F.1 How many times in the last 12 months, have you used these health services in South Australia?
   (Read Options. Multiple Response)
   1. General Practitioner [    ]
   2. Community Health Centre [    ]
   3. District nurses or other community nurses [    ]
   4. Psychologist [    ]
   5. Psychiatrist [    ]
   6. Day surgery [    ]
   7. Hospital - Accident & Emergency Department [    ]
   8. Hospital - Clinic (outpatient/specialist/allied health) [    ]
   9. Specialist doctor (not in a hospital) [    ]
   10. A Physiotherapist [    ]
   11. A Chiropractor [    ]
   12. An alternative therapist eg naturopath, osteopath [    ]

F.2 In the last 12 months, how many nights, have you spent in
   (Read Options. Multiple response)
   1. A Private hospital [    ]
   2. A Public hospital [    ]
   3. None [    ]

G RISK FACTORS - Alcohol

G.1 How often do you usually drink alcohol?
   (Single Response)
   1. I don’t drink alcohol [    ] Go to H
   2. Less than once a week [    ]
   3. On 1 or 2 days a week [    ]
   4. On 3 or 4 days a week [    ]
   5. On 5 or 6 days a week [    ]
   6. Every Day [    ]

G.2 A Standard Drink is equivalent to a schooner of full strength beer, a glass of wine or a nip of spirits.
On a day when you drink alcohol, how many drinks do you usually have?
   (Single Response)
   1. 1 or 2 drinks [    ]
   2. 3 or 4 drinks [    ]
   3. 5 or 8 drinks [    ]
   4. 9 or 12 drinks [    ]
   5. 13 or 20 drinks [    ]
   6. More than 20 drinks [    ]
H  RISK FACTORS - Exercise

The next few questions are about the past 2 weeks only.

H.1 In the last 2 weeks, have you walked for sport, recreation or fitness?
   (Single Response)
   1. Yes [   ]
   2. No [   ]

H.2 In the last 2 weeks, (apart from walking) did you do any exercise which cause a moderate increase in your heart rate or breathing?
   (Single Response)
   1. Yes [   ]
   2. No [   ]

H.3 In the last 2 weeks, did you do any other exercise which caused a large increase in your heart rate or breathing, that is, vigorous exercise?
   (Single Response)
   1. Yes [   ]
   2. No [   ]

I  RISK FACTORS - BMI

I.1 What is your height without shoes?
   (Single Response)
   1. centimetres _________
   OR
   2. feet:inches ______ __
   3. don’t know [   ]

I.2 What is your weight? (Undressed in the morning)
   (Single Response)
   1. kilograms (kg) _________
   OR
   2. stones:pounds ______ __
   3. don’t know [   ]

I.3 Do you consider yourself to be?
   (Read Options. Single Response)
   1. An acceptable weight [   ]
   2. Underweight [   ]
   3. Overweight [   ]

J  RISK FACTORS - Smoking

J.1 Do you smoke at all?
   (Single Response)
   1. Yes [   ]Go to Section I
   2. No [   ]
   3. Occasionally [   ]Go to Section I

J.2 Have you ever smoked regularly?
   (Single Response)
   1. Yes [   ]
   2. No [   ]
K GENERAL HEALTH QUESTIONNAIRE

We would now like to know if you have had any medical complaints, and how your health has been in general, over the past few weeks.

K.1 Over the past few weeks....Have you been feeling perfectly well and in good health?
(Read Options. Single Response)
1. Better than usual [ ]
2. Same as usual [ ]
3. Worse than usual [ ]
4. Much worse than usual [ ]

K.2 Have you been feeling in need of some medicine to pick you up (a tonic)?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.3 Have you been feeling run down and out of sorts?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.4 Have you felt that you are ill?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.5 Have you been getting any pains in your head?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.6 Have you been getting a feeling of tightness or pressure in your head?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.7 Have you been having hot or cold spells?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.8 Have you lost much sleep over worry?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.9 Have you had difficulty in staying asleep once you are asleep?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.10 Have you felt constantly under strain?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

[Over the past few weeks]
<table>
<thead>
<tr>
<th>Question</th>
<th>Options</th>
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<tr>
<td><strong>K.11</strong> Have you been getting edgy and bad tempered?</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td></td>
<td>1. Not at all</td>
</tr>
<tr>
<td></td>
<td>2. No more than usual</td>
</tr>
<tr>
<td></td>
<td>3. Rather more than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much more than usual</td>
</tr>
<tr>
<td><strong>K.16</strong> Have you been taking longer over the things you do?</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td></td>
<td>1. Quicker than usual</td>
</tr>
<tr>
<td></td>
<td>2. Same as usual</td>
</tr>
<tr>
<td></td>
<td>3. Longer than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much longer than usual</td>
</tr>
<tr>
<td><strong>K.12</strong> Have you been getting scared or panicky for no good reason?</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td></td>
<td>1. Not at all</td>
</tr>
<tr>
<td></td>
<td>2. No more than usual</td>
</tr>
<tr>
<td></td>
<td>3. Rather more than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much more than usual</td>
</tr>
<tr>
<td><strong>K.17</strong> Have you felt on the whole you were doing things well?</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td></td>
<td>1. Better than usual</td>
</tr>
<tr>
<td></td>
<td>2. About the same</td>
</tr>
<tr>
<td></td>
<td>3. Less well than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much less well</td>
</tr>
<tr>
<td><strong>K.13</strong> Have you found everything getting too much for you?</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td></td>
<td>1. Not at all</td>
</tr>
<tr>
<td></td>
<td>2. No more than usual</td>
</tr>
<tr>
<td></td>
<td>3. Rather more than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much more than usual</td>
</tr>
<tr>
<td><strong>K.18</strong> Have you been satisfied with the way you've carried out your</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td>tasks?</td>
<td>1. More satisfied</td>
</tr>
<tr>
<td></td>
<td>2. About the same as usual</td>
</tr>
<tr>
<td></td>
<td>3. Less satisfied than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much less satisfied</td>
</tr>
<tr>
<td><strong>K.14</strong> Have you been feeling nervous and strung-up all the time?</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td></td>
<td>1. Not at all</td>
</tr>
<tr>
<td></td>
<td>2. No more than usual</td>
</tr>
<tr>
<td></td>
<td>3. Rather more than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much more than usual</td>
</tr>
<tr>
<td><strong>K.19</strong> Have you felt that you are playing a useful part in things?</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td></td>
<td>1. More so than usual</td>
</tr>
<tr>
<td></td>
<td>2. Same as usual</td>
</tr>
<tr>
<td></td>
<td>3. Less useful than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much less useful</td>
</tr>
<tr>
<td><strong>K.15</strong> Have you been managing to keep yourself busy and occupied?</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td></td>
<td>1. More so than usual</td>
</tr>
<tr>
<td></td>
<td>2. Same as usual</td>
</tr>
<tr>
<td></td>
<td>3. Rather less than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much less than usual</td>
</tr>
<tr>
<td><strong>K.20</strong> Have you felt capable of making decisions about things?</td>
<td>(Read Options. Single Response)</td>
</tr>
<tr>
<td></td>
<td>1. More so than usual</td>
</tr>
<tr>
<td></td>
<td>2. Same as usual</td>
</tr>
<tr>
<td></td>
<td>3. Less so than usual</td>
</tr>
<tr>
<td></td>
<td>4. Much less capable</td>
</tr>
</tbody>
</table>
K.21 Have you been able to enjoy your normal day-to-day activities?
(Read Options. Single Response)
1. More so than usual [ ]
2. Same as usual [ ]
3. Less so than usual [ ]
4. Much less than usual [ ]

K.22 Have you been thinking of yourself as a worthless person?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.23 Have you felt that life is entirely hopeless?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.24 Have you felt that life isn’t worth living?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.25 Have you thought of the possibility that you might do away with yourself?
(Read Options. Single Response)
1. Definitely not [ ]
2. I don’t think so [ ]
3. Has crossed my mind [ ]
4. Definitely have [ ]

K.26 Have you found at times you couldn’t do anything because your nerves were too bad?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.27 Have you found yourself wishing you were dead and away from it all?
(Read Options. Single Response)
1. Not at all [ ]
2. No more than usual [ ]
3. Rather more than usual [ ]
4. Much more than usual [ ]

K.28 Have you found that the idea of taking your own life kept coming into your mind?
(Read Options. Single Response)
1. Definitely not [ ]
2. I don’t think so [ ]
3. Has crossed my mind [ ]
4. Definitely has [ ]
Mental Health Questionnaire

L. TRAUMA

Now I would like to ask you about extremely stressful or upsetting events that sometimes occur to people. I would like to remind you that your responses are confidential.

L.1 Did you ever have direct combat experience in a war?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

L.2 Were you ever involved in a life-threatening accident?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

L.3 Were you ever involved in a fire, flood or other natural disaster?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

L.4 Did you ever witness somebody being badly injured or killed?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

L.5 Were you ever raped, that is someone had sexual intercourse with you when you did not want to, by threatening you, or using some degree of force?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

L.6 Were you ever sexually molested, that is someone touched or felt your genitals when you did not want them to?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

L.7 Were you ever seriously physically attacked or assaulted?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

L.8 Have you ever been threatened with a weapon, held captive, or kidnapped?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

L.9 Have you ever been tortured or the victim of terrorists?
   (Single Response)
   1. Yes [ ]
   2. No [ ]

L.10 Have you ever experienced any other extremely stressful or upsetting event?
   (Single Response)
   1. Yes (specify) [ ]
   2. No [ ]

Sequence Guide:
If answered no to L.1 to L.10 Go to Section M
If answered only one (L.1 to L.10) Go to L.12

L.11 What was the most stressful or upsetting event?
   (Read Options if Necessary. Single Response)
   1. Direct combat experience in a war [ ]
   2. Life-threatening accident [ ]
   3. Fire, flood or other natural disaster [ ]
   4. Witness somebody being badly injured or killed [ ]
   5. Raped [ ]
   6. Sexually molested [ ]
   7. Seriously physically attacked or assaulted [ ]
   8. Threatened with a weapon, held captive, or kidnapped [ ]
   9. Tortured or the victim of terrorists [ ]
   10. Other [ ]
The next few questions are about the most stressful or upsetting event.

L.12 How old were you when this event happened?
(Single Response. Enter 999 if not stated)

L.13 When it happened, did you feel terrified?
(Single Response)
1. Yes [    ]
2. No [    ]

L.14 When the event happened, did you feel helpless?
(Single Response)
1. Yes [    ]
2. No [    ]

M Psychosocial Event

M.1 In the last 12 months have you personally been affected by any of the following?
(Multiple Response - Read options)
1. Unplanned loss of job [    ]
2. New job [    ]
3. Family or domestic violence [    ]
4. Death of somebody close to you [    ]
5. Discrimination [    ]
6. Moved house [    ]
7. Robbed or home burglarised [    ]
8. Marriage/relationship breakdown [    ]
9. Serious injury [    ]
10. Serious illness [    ]
11. Any other major events (specify) [    ]
12. None [    ]

N SOCIAL PHOBIA

N.1 Some people fear or avoid doing things in front of others for fear of being the centre of attention or being embarrassed.

Have you ever had such a strong, unreasonable fear of speaking in public?
1. Yes [    ]
2. No [    ]

N.2 [Have you ever had such a strong, unreasonable fear] of having to use a toilet when away from home?
1. Yes [    ]
2. No [    ]

N.3 [Have you ever had such a strong, unreasonable fear of] eating or drinking in public?
1. Yes [    ]
2. No [    ]

N.4 [Have you ever had such a strong, unreasonable fear of] talking to people because you might have nothing to say or might sound foolish?
1. Yes [    ]
2. No [    ]

N.5 [Have you ever had such a strong, unreasonable fear of] writing while someone watches?
1. Yes [    ]
2. No [    ]

N.6 [Have you ever had such a strong, unreasonable fear of] taking part in a meeting, a class, or going to a party?
1. Yes [    ]
2. No [    ]

Sequence Guide: If answered no to NN.1 to NN.6 Go to Section O
Mental Health Questionnaire

N.7 Did any strong unreasonable fear like this continue for months or years?
1. Yes [   ]
2. No [   ]

N.8 Did these fears or having to avoid these situations interfere with your life or activities a lot?
1. Yes [   ]
2. No [   ]

N.9 Have you ever been very upset with yourself for having these fears?
1. Yes [   ]
2. No [   ]

N.10 Have these fears ever kept you from carrying out a task at work, taking on new responsibilities at work, or taking on a new job?
1. Yes [   ]
2. No [   ]

N.11 Has one of these fears ever kept you from going to a party, social event or meeting?
1. Yes [   ]
2. No [   ]

N.12 When you have had to be in one of these feared situations or thought that you would have to, did it almost always make you extremely nervous or panicky, make you sweat, your heart beat fast, or make you short of breath?
1. Yes [   ]
2. No [   ]

N.13 Was your fear so bad that you blushed or shook?
1. Yes [   ]
2. No [   ]

N.14 Was your fear so bad that you felt like vomiting?
1. Yes [   ]
2. No [   ]

N.15 Was your fear so bad that you thought you might do something embarrassing?
1. Yes [   ]
2. No [   ]

N.16 Do you still have these/these fear?
1. Yes [   ]
2. No [   ]

N.17 Have you sought professional help to overcome this/these fears?
1. Yes [   ]
2. No [   ]

O.1 In the last 12 months have you been told by a doctor that you have any of the following conditions?
(Read Options Multiple Response)
1. Anxiety [   ]
2. Depression [   ]
3. A stress related problem [   ]
4. Any other mental health problem [   ]
5. None [   ] Go to O.O.3

O.2 Do you still have the condition?
1. Yes [   ]
2. No [   ]

O.3 Are you currently receiving treatment for anxiety, depression, stress related problems or any other mental health problem?
1. Yes [   ]
2. No [   ]

Sequence Guide: If O1 = 5 & O3 = 2 Go to O7
O.4 How many nights in the last 12 months, have you spent in hospital because of depression, stress, anxiety or other mental health problem?
(Single Response. Enter number of days off. Enter 999 if unknown)
1. None
2. Days
3. Don’t know [999]

Sequence Guide: If O4 = 0 (or 999) Go to O6

O.5 What sort of hospital was it?
(if more than one hospital the one most nights spent in)
(Read Options. Single Response)
1. Private Psychiatric Hospital [ ]
2. Public Psychiatric Hospital (eg Glenside) [ ]
3. General private hospital (eg Ashford, Burnside) [ ]
4. General public hospital (eg QEH, RAH) [ ]

O.6 In the last 12 months how many times have you seen the following health professionals about your depression, stress or other mental health problem?
(Read Options Multiple Response)
1. General Practitioner [ ]
2. Community Health Centre [ ]
3. District nurses or other community nurses [ ]
4. Psychologist [ ]
5. Psychiatrist [ ]
6. Hospital - Clinic (outpatient/specialist/allied health) [ ]
7. Specialist doctor (not in a hospital) [ ]
8. A Physiotherapist [ ]
9. A Chiropractor [ ]
10. An alternative therapist eg naturopath, osteopath [ ]
11. None [ ]

O.7 Do you care for or look after a person who has been diagnosed as having a mental illness?
1. Yes [ ]
2. No [ ] Go to Section P

O.8 Does this person live with you?
1. Yes [ ]
2. No [ ]

P DEMOGRAPHICS (2)

P.1 Beginning yesterday, and going back 4 weeks, how many days out of the past 4 weeks were you totally unable to work or carry out your normal duties because of your health?
(Single Response. Enter number of days off. Enter 999 if unknown)
1. None [ ] Go to P3
2. Days [ ]
3. Don’t know [999]

P.2 Was this because of your mental health or feelings of stress, anxiety or depression?
1. Yes [ ]
2. No [ ]

Sequence Guide: If PP.1 > 28 Go to PP.4

P.3 [Apart from (that day/these days)] how many days in the past 4 weeks were you able to work and carry out your activities, but had to cut down what you did, or did not get as much done as usual because of your health?
(Single Response. Enter number of days. Enter 999 if unknown)
1. None [ ] Go to P5
2. Days [ ]
3. Don’t know [999]
P.4 Was this because of your mental health or feelings of stress, anxiety or depression?
1. Yes [ ]
2. No [ ]

P.5 What is your work status?
(Read Options If Necessary. Single Response)
1. Full time employed [ ] Go to P7
2. Part time employed [ ] Go to P7
3. Unemployed [ ]
4. Home duties [ ]
5. Retired [ ]
6. Student [ ]
7. Other (Specify) [ ]

P.6 Do you receive a pension or benefit from the department of social security?
(Not self-funded eg superannuation & Not family allowance. Single Response)
1. Yes [ ]
2. No [ ]
3. Don't know [ ]

Sequence Guide: Go to Section PP.8

P.7 In the past 4 weeks how many “sick” days have you had off work?
(Single Response. Enter number of days off. Enter 999 if unknown)
1. None [ ]
2. Days (specify) [ ]
3. Don’t know [999]

P.8 On average, how many hours per week do you work?
(Single Response. Enter number of hours. Enter 999 if unknown)
1. Days (specify) [ ]
2. Don't know [999]

P.9 Not relevant
P.10 Not relevant

Now, to finish with some general questions.

P.11 What is your marital status?
(Read Options. Single Response)
1. Never Married [ ]
2. Married / De Facto [ ]
3. Separated / Divorced [ ]
4. Widowed [ ]
P.12 What is your country of birth?
(Single Response)
1. Australia [ ] Go to P.14
2. Austria [ ]
3. Bosnia-Herzegovina [ ]
4. Canada [ ]
5. China [ ]
6. Croatia [ ]
7. France [ ]
8. Germany [ ]
9. Greece [ ]
10. Holland [ ]
11. Hong Kong [ ]
12. Iran [ ]
13. Italy [ ]
14. Japan [ ]
15. Malaysia [ ]
16. New Zealand [ ]
17. Philippines [ ]
18. Poland [ ]
19. Slovenia [ ]
20. Spain [ ]
21. UK and Ireland [ ]
22. USA [ ]
23. Vietnam [ ]
24. Former Yugoslav Republic of Macedonia [ ]
25. Former Yugoslav Republics of Serbia & Montenegro [ ]
26. Other country (specify) [ ]

P.13 What year did you arrive in Australia?
(Single Response. Enter 99 if unknown)
1. Year (specify) 19 __ __
2. Don't know [99]

Sequence Guide: Go to Error! Reference source not found.

P.14 Do you consider yourself an Aboriginal / Torres Strait Islander?
(Single Response)
1. Yes [ ]
2. No [ ]

P.15 What is the main language you speak at home?
(Single Response)
1. English [ ]
2. Cambodian [ ]
3. Chinese [ ]
4. Croatian [ ]
5. Filipino [ ]
6. Greek [ ]
7. Italian [ ]
8. Polish [ ]
9. Serbian [ ]
10. Spanish [ ]
11. Vietnamese [ ]
12. Other (specify) [ ]

P.16 Which best describes the highest educational qualification you have obtained?
(Read Options. Single Response)
1. Still at school [ ]
2. Left school at 15 years or less [ ]
3. Left school after age 15 [ ]
4. Trade/Apprenticeship [ ]
5. Certificate/Diploma - one year full time or less [ ]
6. Certificate/Diploma - more than one year full time [ ]
7. Bachelor degree or higher [ ]
P.17 Can you tell me the approximate annual gross income of your household? That is, for all people in the household before tax is taken out. I'll read out some categories and could you please tell me into which one your household's income falls?

(Read Options. Single Response)
1. Up to $12,000 [ ]
2. $12,001 - $20,000 [ ]
3. $20,001 - $30,000 [ ]
4. $30,001 - $40,000 [ ]
5. $40,001 - $50,000 [ ]
6. $50,001 - $60,000 [ ]
7. $60,001 - $80,000 [ ]
8. More than $80,000 [ ]
9. Not stated/refused [ ]
10. Don't know [ ]

As some of the questions we have asked may have been distressing or caused some concern for some people, we would like to offer you a telephone number if you feel that you need to discuss some of these concerns with a qualified health professional.

That concludes the survey. On behalf of the South Australian Health Commission, thank you very much for taking part in this survey.

P.18 Do you have private health insurance that includes hospital cover?

(Single Response)
1. Yes [ ]
2. No [ ]
3. Don't know [ ]

P.19 Date of interview

P.20 Day of week interview undertaken

P.21 Time of day interview undertaken

P.22 In a survey like this, issues often arise which require further explanation. If we need to could we phone you at a later date to help clarify some issues?

(Single Response)
1. Yes (specify - record first name only) __________ [ ]
2. No [ ]
## APPENDIX I: GREEK-BORN SOUTH AUSTRALIAN DEMOGRAPHIC PROFILE

### I.1: Demographic information of South Australian Greeks, who arrived in Australia between 1945-1975, 60 years and over, Census 2011

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3311</td>
<td>47.9</td>
</tr>
<tr>
<td>Female</td>
<td>3596</td>
<td>52.1</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 to 69 years</td>
<td>1152</td>
<td>16.7</td>
</tr>
<tr>
<td>65 to 69 years</td>
<td>1322</td>
<td>19.1</td>
</tr>
<tr>
<td>70 to 74 years</td>
<td>1594</td>
<td>23.1</td>
</tr>
<tr>
<td>75 to 79 years</td>
<td>1557</td>
<td>22.5</td>
</tr>
<tr>
<td>80 to 84 years</td>
<td>893</td>
<td>12.9</td>
</tr>
<tr>
<td>85 years and over</td>
<td>389</td>
<td>5.6</td>
</tr>
<tr>
<td><strong>Registered Marital status</strong>*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never married</td>
<td>108</td>
<td>1.6</td>
</tr>
<tr>
<td>Widowed</td>
<td>1357</td>
<td>19.6</td>
</tr>
<tr>
<td>Divorced</td>
<td>368</td>
<td>5.3</td>
</tr>
<tr>
<td>Separated</td>
<td>151</td>
<td>2.2</td>
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<tr>
<td>Married</td>
<td>4923</td>
<td>71.3</td>
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<tr>
<td><strong>Social Marital Status</strong></td>
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</tr>
<tr>
<td>Married in a registered marriage</td>
<td>4739</td>
<td>71.5</td>
</tr>
<tr>
<td>Married in a de facto marriage</td>
<td>36</td>
<td>0.5</td>
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<tr>
<td>Not married</td>
<td>1854</td>
<td>28.0</td>
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<tr>
<td><strong>Income</strong></td>
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<tr>
<td>Negative income</td>
<td>19</td>
<td>0.3</td>
</tr>
<tr>
<td>Nil income</td>
<td>178</td>
<td>2.6</td>
</tr>
<tr>
<td>$1-$199 ($1-$10,399)</td>
<td>415</td>
<td>6.0</td>
</tr>
<tr>
<td>$200-$299 ($10,400-$15,599)</td>
<td>2859</td>
<td>41.4</td>
</tr>
<tr>
<td>$300-$399 ($15,600-$20,799)</td>
<td>1728</td>
<td>25.0</td>
</tr>
<tr>
<td>$400-$599 ($20,800-$31,199)</td>
<td>740</td>
<td>10.7</td>
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<td>$600-$799 ($31,200-$41,599)</td>
<td>260</td>
<td>3.8</td>
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<td>$800-$999 ($41,600-$51,999)</td>
<td>144</td>
<td>2.1</td>
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<tr>
<td>$1,000-$1,249 ($52,000-$64,999)</td>
<td>115</td>
<td>1.7</td>
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<td>$1,250-$1,499 ($65,000-$77,999)</td>
<td>72</td>
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</tr>
<tr>
<td>$1,500-$1,999 ($78,000-$103,999)</td>
<td>57</td>
<td>0.8</td>
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<tr>
<td>$2,000 or more ($104,000 or more)</td>
<td>67</td>
<td>1.0</td>
</tr>
<tr>
<td>Not stated</td>
<td>253</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6907</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Data Source: 2011 Census of Population and Housing*
I.2: Socio-Demographic information of South Australian Greeks, who arrived in Australia between 1945-1975, 60 years and over, Census 2011

<table>
<thead>
<tr>
<th>Education Level</th>
<th>Males</th>
<th></th>
<th>Females</th>
<th></th>
</tr>
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<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Year 12 or equivalent</td>
<td>447</td>
<td>13.5</td>
<td>274</td>
<td>7.6</td>
</tr>
<tr>
<td>Year 11 or equivalent</td>
<td>126</td>
<td>3.8</td>
<td>99</td>
<td>2.8</td>
</tr>
<tr>
<td>Year 10 or equivalent</td>
<td>263</td>
<td>7.9</td>
<td>228</td>
<td>6.3</td>
</tr>
<tr>
<td>Year 9 or equivalent</td>
<td>186</td>
<td>5.6</td>
<td>149</td>
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<td>Year 8 or below</td>
<td>1755</td>
<td>53.0</td>
<td>2095</td>
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<tr>
<td>Did not go to school</td>
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<td>9.3</td>
<td>516</td>
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<tr>
<td>Not stated</td>
<td>226</td>
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<table>
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<tr>
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<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
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<tr>
<td>Graduate Diploma and Graduate Certificate Level</td>
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<td>1.6</td>
<td>6</td>
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<td>22.9</td>
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<tr>
<td>Advanced Diploma and Diploma Level</td>
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<td>29</td>
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<tr>
<td>Certificate Level</td>
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<table>
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<tr>
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<th>Males</th>
<th></th>
<th>Females</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Very well</td>
<td>694</td>
<td>22.3</td>
<td>517</td>
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<tr>
<td>Well</td>
<td>1380</td>
<td>44.3</td>
<td>1287</td>
<td>37.0</td>
</tr>
<tr>
<td>Not well</td>
<td>988</td>
<td>32.0</td>
<td>1577</td>
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</tr>
<tr>
<td>Not at all</td>
<td>42</td>
<td>1.3</td>
<td>101</td>
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</table>

<table>
<thead>
<tr>
<th>Religious Affiliation</th>
<th>Males</th>
<th></th>
<th>Females</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Christian</td>
<td>11</td>
<td>0.3</td>
<td>16</td>
<td>0.5</td>
</tr>
<tr>
<td>Anglican</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>0.1</td>
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<td>Baptist</td>
<td>15</td>
<td>0.5</td>
<td>14</td>
<td>0.4</td>
</tr>
<tr>
<td>Catholic</td>
<td>5</td>
<td>0.2</td>
<td>7</td>
<td>0.2</td>
</tr>
<tr>
<td>Jehovah's Witnesses</td>
<td>11</td>
<td>0.3</td>
<td>23</td>
<td>0.6</td>
</tr>
<tr>
<td>Eastern Orthodox</td>
<td>3160</td>
<td>98.1</td>
<td>3455</td>
<td>97.5</td>
</tr>
<tr>
<td>Uniting Church</td>
<td>0</td>
<td>0.0</td>
<td>3</td>
<td>0.1</td>
</tr>
<tr>
<td>Pentecostal</td>
<td>7</td>
<td>0.2</td>
<td>9</td>
<td>0.3</td>
</tr>
<tr>
<td>Other Protestant</td>
<td>8</td>
<td>0.2</td>
<td>9</td>
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<tr>
<td>Other Christian</td>
<td>3</td>
<td>0.1</td>
<td>3</td>
<td>0.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Religion</th>
<th>Males</th>
<th></th>
<th>Females</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Greek Orthodox</td>
<td>3118</td>
<td>100.0</td>
<td>3404</td>
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</tr>
<tr>
<td>Total</td>
<td>3311</td>
<td></td>
<td>3596</td>
<td></td>
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</tbody>
</table>

Data Source: 2011 Census of Population and Housing
### I.3: Proportion of South Australian Greeks in South Australian Local Government Area’s (LGAs), who arrived in Australia between 1945-1975, 60 years and over, Census 2011

<table>
<thead>
<tr>
<th>LGA</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles Sturt</td>
<td>1375</td>
<td>20.0</td>
</tr>
<tr>
<td>West Torrens</td>
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<td>17.5</td>
</tr>
<tr>
<td>Port Adelaide Enfield</td>
<td>628</td>
<td>9.1</td>
</tr>
<tr>
<td>Unley</td>
<td>496</td>
<td>7.3</td>
</tr>
<tr>
<td>Mitcham</td>
<td>414</td>
<td>6.0</td>
</tr>
<tr>
<td>Salisbury</td>
<td>354</td>
<td>5.1</td>
</tr>
<tr>
<td>Marion</td>
<td>304</td>
<td>4.4</td>
</tr>
<tr>
<td>Prospect</td>
<td>288</td>
<td>4.2</td>
</tr>
<tr>
<td>Campbelltown</td>
<td>280</td>
<td>4.1</td>
</tr>
<tr>
<td>Norwood Payneham St.Peters</td>
<td>241</td>
<td>3.5</td>
</tr>
<tr>
<td>Burnside</td>
<td>170</td>
<td>2.5</td>
</tr>
<tr>
<td>Berri and Barmera</td>
<td>157</td>
<td>2.3</td>
</tr>
<tr>
<td>Onkaparinga</td>
<td>140</td>
<td>2.0</td>
</tr>
<tr>
<td>Playford</td>
<td>127</td>
<td>1.8</td>
</tr>
<tr>
<td>Renmark Paringa</td>
<td>114</td>
<td>1.7</td>
</tr>
<tr>
<td>Tea Tree Gully</td>
<td>114</td>
<td>1.7</td>
</tr>
<tr>
<td>Adelaide</td>
<td>65</td>
<td>0.9</td>
</tr>
<tr>
<td>Coober Pedy</td>
<td>52</td>
<td>0.8</td>
</tr>
<tr>
<td>Holdfast Bay</td>
<td>44</td>
<td>0.6</td>
</tr>
<tr>
<td>Whyalla</td>
<td>43</td>
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<tr>
<td>Loxton Waikerie</td>
<td>38</td>
<td>0.6</td>
</tr>
<tr>
<td>Walkerville</td>
<td>33</td>
<td>0.5</td>
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<tr>
<td>Port Pine City</td>
<td>32</td>
<td>0.5</td>
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<tr>
<td>Mallala</td>
<td>28</td>
<td>0.4</td>
</tr>
<tr>
<td>Mount Gambier</td>
<td>27</td>
<td>0.4</td>
</tr>
<tr>
<td>Gawler</td>
<td>23</td>
<td>0.3</td>
</tr>
<tr>
<td>Adelaide Hills</td>
<td>21</td>
<td>0.3</td>
</tr>
<tr>
<td>Copper Coast</td>
<td>16</td>
<td>0.2</td>
</tr>
<tr>
<td>Ceduna</td>
<td>10</td>
<td>0.1</td>
</tr>
<tr>
<td>Victor Harbor</td>
<td>9</td>
<td>0.1</td>
</tr>
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<td>Port Lincoln</td>
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<tr>
<td>Yorke Peninsula</td>
<td>8</td>
<td>0.1</td>
</tr>
<tr>
<td>Mount Barker</td>
<td>6</td>
<td>0.1</td>
</tr>
<tr>
<td>Alexandrina</td>
<td>5</td>
<td>0.1</td>
</tr>
<tr>
<td>Mid Murray</td>
<td>4</td>
<td>0.1</td>
</tr>
<tr>
<td>Murray Bridge</td>
<td>4</td>
<td>0.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6892</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Data Source:** 2011 Census of Population and Housing
PARTICIPANT INFORMATION SHEET

Ageing in a Foreign Land – Health & Quality of Life Experiences of Elderly Greek-Born South Australians

Purpose of this study
We invite you to participate in the “Ageing in a Foreign land – Health & Quality of Life Experiences of Elderly Greek-Born South Australians” project. This project aims to explore the health and quality of life experiences of people aged 65 years and over people who have migrated to South Australia. We hope that this study may better understand the health and wellbeing needs of this group both now and into the future.

Do I have to take part?
No. Taking part in this interview is completely voluntary and you will be able to withdraw at any time during the interview if necessary. While it is not anticipated that your participation in this research will cause you any distress some personal questions will be asked of you which you may choose not to answer. If you have any questions about the interview, you can call Constance Kourbelis on (08) 8313 1213 or via email constance.kourbelis@adelaide.edu.au.

What would I have to do?
If you decide to take part you will be asked to participate in either a face-to-face interview or telephone interview, at a time and place convenient for you. The interview will take up to 40 minutes to complete. If you are interested in taking part in an interview please contact Constance who can arrange an interview time with you. We know you are busy but we hope that you will take the time to talk to us as your feedback is really important to us.

Who is organising this study?
This study is being carried out by Constance Kourbelis, who is a PhD student in Geography, Environment and Population at the University of Adelaide. The answers you give will be published in a report, peer-reviewed journal articles or presented at conferences/workshops and will be used towards the completion of her University degree. Ethics approval for the interview has been obtained from the University of Adelaide Health Human Ethics Committee (Ethics Approval Number: H-2013-086).

Will my taking part in this study be kept confidential?
Yes. All answers are confidential and all results will be presented in a form that does not allow any individual’s answers to be identified. We would like to reassure you that your privacy will be protected at all times.

The research team will only have access to the information you provide us with. The information collected will be stored securely at the University of Adelaide and will be kept for a period of five years. Please see the attached ‘University's contacts and independent complaints procedure sheet’ should you have any complaints with the research process.

Contact for further information

Ms Constance Kourbelis
PhD Candidate
Telephone: (08) 8313 1213
Email: constance.kourbelis@adelaide.edu.au

Professor Graeme Hugo
ARC Australian Professorial Fellow
PhD Supervisor
Telephone: (08) 8313 5646
Email: graeme.hugo@adelaide.edu.au
ΕΝΗΜΕΡΩΤΙΚΟ ΕΝΤΥΠΟ ΓΙΑ ΤΟΝ ΣΥΜΜΕΤΕΧΟΝΤΑ

Περνώντας στην Τρίτη Ηλικία στην Ξενιτία – Εμπειρίες των Ηλικιωμένων Ελλήνων της Νότιας Αυστραλίας σε θέματα Υγείας και Ποιότητας Ζωής

Σκοπός της έρευνας

Σας καλούμε να πάρετε μέρος στην έρευνα με τίτλο «Περνώντας στην Τρίτη Ηλικία στην Ξενιτία - Εμπειρίες των Ηλικιωμένων Ελλήνων της Νότιας Αυστραλίας σε θέματα Υγείας και Ποιότητας Ζωής». Η έρευνα αυτή έχει ως σκοπό να διερευνήσει θέματα όπως η υγεία και η ποιότητα ζωής ατόμων ηλικίας 65 ετών και άνω που μετανάστευσαν στη Νότια Αυστραλία. Ελπίζουμε ότι η μελέτη αυτή θα μας βοηθήσει να κατανοήσουμε καλύτερα τις ανάγκες των ανθρώπων αυτών όσον αφορά την υγεία και την ευημερία τους, τόσο στο παρόν όσο και στο μέλλον.

Είμαι υποχρεωμένος/η να πάρω μέρος στην έρευνα;

Όχι. Η συμμετοχή σας στην έρευνα είναι εντελώς εθελοντική και μπορείτε να διακόψετε τη συνέντευξη οποιαδήποτε στιγμή εσείς κρίνετε αναγκαία. Επιπλέον, παρ’ όλο που η συμμετοχή σας στην έρευνα δεν αναμένεται να σας φέρει σε δύσκολη θέση, θα σας απευθύνουμε κάποιες προσωπικές ερωτήσεις, στις οποίες μπορείτε να μην απαντήσετε. Εάν έχετε οποιαδήποτε απορία σχετικά με την συνέντευξη, μπορείτε να επικοινωνήσετε με την κα Κόνστας Κουρμπέλης Πανεπιστημίου Αδελαΐδας στο (08) 8313 1213 ή μέσω email constance.kourbelis@adelaide.edu.au.

Τι θα πρέπει να κάνω;

Εάν αποφασίσετε να πάρετε μέρος, θα σας ζητήσουμε να δώσετε μία προσωπική ή τηλεφωνική συνέντευξη σε μέρος και ώρα που να σας βολεύει. Η συνέντευξη θα χρειαστεί έως και 40 λεπτά για να ολοκληρωθεί.

Εάν ενδιαφέρεστε να πάρετε μέρος στη συνέντευξη, παρακαλούμε επικοινωνήστε με την Κόνστας, η οποία θα κανονίσει μαζί σας την ώρα της συνέντευξης. Γνωρίζουμε ότι έχετε πολλές ασχολίες αλλά ελπίζουμε ότι θα αφετερώσετε λίγο από τον χρόνο σας, καθώς όσα θα συντηρήσουμε έχουν μεγάλη σημασία για την έρευνά μας.

Ποιος οργανώνει αυτή την έρευνα;

Η έρευνα αυτή διεξάγεται από την Κόνστας Κουρμπέλης, η οποία είναι διδακτορικό φοιτήτρια του Τμήματος Γεωγραφίας, Περιβάλλοντος και Πληθυσμού του Πανεπιστημίου Αδελαΐδας. Οι απαντήσεις που θα δώσετε θα δημιουργούνται σε ερευνητική εργασία, σε άρθρα επιστημονικών περιοδικών ή θα παρουσιαστούν σε συνέδρια/σεμινάρια και θα χρησιμοποιηθούν για την ολοκλήρωση της Πανεπιστημιακής της διατριβής.

Η έγκριση για τις συνεντεύξεις χορηγήθηκε από την Επιτροπή Ηθικής και Δεοντολογίας των Ανθρωπιστικών Ερευνών (Health Human Ethics Committee) του Πανεπιστημίου Αδελαΐδας (αριθμός έγκρισης: H-2013-086).

Η συμμετοχή μου έρευνα αυτή θα παραμείνει εμπιστευτική;

Ναι. Όλες οι απαντήσεις είναι εμπιστευτικές και όλα τα αποτελέσματα θα παρουσιαστούν με τέτοιο τρόπο ώστε να είναι αδύνατο ο συχνοτελισμός των ατόμων με τις απαντήσεις τους. Θα θέλαμε να σας διαβεβαιώσουμε ότι τα προσωπικά σας στοιχεία θα παραμείνουν εμπιστευτικά σε κάθε περίπτωση.

Η ερευνητική ομάδα θα έχει πρόσβαση μόνο στα στοιχεία που θα μας δώσετε. Οι πληροφορίες που θα συλλέξουμε θα αποθηκευτούν με ασφάλεια στο Πανεπιστήμιο Αδελαΐδας και θα τηρηθούν για περίοδο πέντε ετών. Παρακαλούμε συμβουλεύετε το συνημμένο έντυπο «Στοιχεία επικοινωνίας με το Πανεπιστήμιο και διαδικασία υποβολής”
παραπόνων», σε περίπτωση που έχετε κάποιο παράπονο σχετικά με τη διεξαγωγή της έρευνας.

<table>
<thead>
<tr>
<th>Ms Constance Kourbeils</th>
<th>Professor Graeme Hugo</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD Candidate</td>
<td>ARC Australian Professorial Fellow</td>
</tr>
<tr>
<td>Telephone: (08) 8313 1213</td>
<td>Telephone: (08) 8313 5646</td>
</tr>
<tr>
<td>Email: <a href="mailto:constance.kourbelis@adelaide.edu.au">constance.kourbelis@adelaide.edu.au</a></td>
<td>Email: <a href="mailto:graeme.hugo@adelaide.edu.au">graeme.hugo@adelaide.edu.au</a></td>
</tr>
</tbody>
</table>

Στοιχεία επικοινωνίας για περαιτέρω πληροφορίες
CONSENT FORM

1. I have read the attached Information Sheet and agree to take part in the following research project:

<table>
<thead>
<tr>
<th>Title:</th>
<th>Ageing in a Foreign Land – Health &amp; Quality of Life Experiences of Elderly Greek-Born South Australians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethics Approval</td>
<td>H-2013-086</td>
</tr>
</tbody>
</table>

2. I have had the project, so far as it affects me, fully explained to my satisfaction by the research worker. My consent is given freely.

3. I have been given the opportunity to have a member of my family or a friend present while the project was explained to me.

4. Although I understand the purpose of the research project it has also been explained that involvement may not be of any benefit to me.

5. I have been informed that, while information gained during the study may be published, I will not be identified and my personal results will not be divulged.

6. I understand that I am free to withdraw from the project at any time.

7. I am aware that I should keep a copy of this Consent Form, when completed, and the attached Information Sheet.

Participant to complete:

Name: ___________________ Signature: ___________________ Date: __________

Researcher/Witness to complete:

I have described the nature of the research to ________________________________

(print name of participant)

and in my opinion she/he understood the explanation.

Signature: _______________ Position: ___________________ Date: __________
ENTYPE SYNAINESEHS

1. Έχω διαβάσει τις συνημμένες πληροφορίες και συμφωνώ να πάρω μέρος στην ακόλουθη έρευνα:

<table>
<thead>
<tr>
<th>Τίτλος:</th>
<th>Περνώντας στην Τρίτη Ηλικία στην Ξενιτιά: Εμπειρίες των Ηλικιωμένων Ελλήνων της Νοτίου Αυστραλίας σε θέματα Υγείας και Ποιότητας Ζωής</th>
</tr>
</thead>
<tbody>
<tr>
<td>Αριθμός Έγκρισης:</td>
<td>H-2013-086</td>
</tr>
</tbody>
</table>

2. Όσον με αφορά, μου δόθηκαν ικανοποιητικές εξηγήσεις από την ερευνήτρια σχετικά με το περιεχόμενο της έρευνας και δίνω ελεύθερα τη συγκατάθεσή μου.

3. Μου δόθηκε η δυνατότητα να έχω ένα μέλος της οικογένειάς μου ή ένα φιλικό μου πρόσωπο παρόν κατά τη διάρκεια των εξηγήσεων.

4. Αν και κατανοώ το σκοπό της έρευνας, μου έγινε σαφές ότι μπορεί να μην ωφεληθώ από αυτήν.

5. Έχω ενημερωθεί ότι παρ’ όλο που από την έρευνα αυτή μπορεί να προκύψουν επιστημονικά δημοσιεύματα, τα προσωπικά μου στοιχεία δεν θα γνωστοποιηθούν.

6. Κατανοώ το ότι είμαι ελεύθερος/η να αποσυρθώ από την έρευνα οποιαδήποτε στιγμή το θελήσω.

7. Γνωρίζω ότι θα πρέπει να κρατήσω αντίγραφο αυτού του εγγράφου, όταν συμπληρωθεί, καθώς επίσης και του πληροφοριακού εντύπου.

Συμπληρώνεται από τον/την Συμμετέχοντα/Συμμετέχουσα:

Όνομα: ________________________ Υπογραφή: ________________________
Ημερομηνία: ________________________

Συμπληρώνεται από την Ερευνήτρια ή τον/την Μάρτυρα:

Έχω εξηγήσει τη φύση της έρευνας στον/στην ________________________________

(γράψτε το όνομα του συμμετέχοντα)

και κατά τη γνώμη μου έχει κατανοήσει το περιεχόμενο.

Υπογραφή: ________________________ Θέση: ________________________
Ημερομηνία: ________________________
The University of Adelaide

Human Research Ethics Committee (HREC)

This document is for people who are participants in a research project.

CONTACTS FOR INFORMATION ON PROJECT AND INDEPENDENT COMPLAINTS PROCEDURE

The following study has been reviewed and approved by the University of Adelaide Human Research Ethics Committee:

<table>
<thead>
<tr>
<th>Project Title:</th>
<th>Ageing in a Foreign Land – Health &amp; Quality of Life Experiences of Elderly Greek-Born South Australians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval Number:</td>
<td>H-2013-086</td>
</tr>
</tbody>
</table>

The Human Research Ethics Committee monitors all the research projects which it has approved. The committee considers it important that people participating in approved projects have an independent and confidential reporting mechanism which they can use if they have any worries or complaints about that research.

This research project will be conducted according to the NHMRC National Statement on Ethical Conduct in Human Research (see http://www.nhmrc.gov.au/publications/synopses/e72syn.htm)

1. If you have questions or problems associated with the practical aspects of your participation in the project, or wish to raise a concern or complaint about the project, then you should consult the project co-ordinator:

| Name: | Professor Graeme Hugo  
ARC Australian Professorial Fellow |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Phone:</td>
<td>(08) 8313 5646</td>
</tr>
</tbody>
</table>

| Name: | Miss Constance Kourbelis  
PhD Candidate |
<table>
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<tbody>
<tr>
<td>Phone:</td>
<td>(08) 8313 1213</td>
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</tbody>
</table>

2. If you wish to discuss with an independent person matters related to:
   - making a complaint, or
   - raising concerns on the conduct of the project, or
   - the University policy on research involving human participants, or
   - your rights as a participant,

contact the Human Research Ethics Committee’s Secretariat on phone (08) 8313 6028 or by email to hrec@adelaide.edu.au
Το παρόν έγγραφο απευθύνεται σε άτομα που συμμετέχουν σε ερευνητική εργασία.

ΣΤΟΙΧΕΙΑ ΕΠΙΚΟΙΝΩΝΙΑΣ ΓΙΑ ΠΛΗΡΟΦΟΡΙΕΣ ΣΧΕΤΙΚΑ ΜΕ ΤΗΝ ΕΡΕΥΝΑ ΚΑΙ ΔΙΑΔΙΚΑΣΙΑ ΥΠΟΒΟΛΗΣ ΠΑΡΑΠΟΝΩΝ

Η ακόλουθη έρευνα έχει θεωρηθεί και εγκριθεί από την: Επιτροπή Ηθικής και Δεοντολογίας των Ανθρωπιστικών Ερευνών του Πανεπιστημίου Αδελαίδας (University of Adelaide Human Research Ethics Committee)

<table>
<thead>
<tr>
<th>Τίτλος Έρευνας:</th>
<th>Περνώντας στην Τρίτη Ηλικία στην Ξενιτία – Εμπειρίες των Ηλικιωμένων Ελλήνων της Νοτίου Αυστραλίας σε θέματα Υγείας και Ποιότητας Ζωής</th>
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<tbody>
<tr>
<td>Αριθμός Έγκρισης:</td>
<td>H-2013-086</td>
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</table>
APPENDIX K: PRIMARY DATA COLLECTION QUESTIONNAIRE
Thank you for agreeing to be involved in the “Ageing in a Foreign Land – Health & Quality of Life Experiences of Elderly Greek-Born South Australians” project conducted by a University of Adelaide PhD student.

The interview should take approximately 40 minutes to complete.

This interview is completely voluntary and you are free to withdraw at any time. I would like to assure you that your individual responses will remain confidential and you are not required to answer any questions that you are not comfortable with. I would like to reassure you that your privacy will be protected at all times.

Notes:

Before commencing all interviews please check that the participant has read and understood the information sheet and what is required of them. Please ensure that the participant completes the consent form.

If the participant does not have time or does not wish to undertake an interview on spot, please arrange an alternative appointment time with participant at their earliest convenience or provide them with the appropriate information to contact the research team if they wish to be involved.
Before we begin I would like to ask you some general questions about yourself.

1. When were you born?
   Πότε γεννηθήκατε?
   (Interviewer: Circle one response only)
   1. Specify (DD/MM/YYYY) __________________
   2. Specify age _____________
   3. Refused

2. What is your sex? / Φύλο
   (Interviewer: Circle one response only)
   1. Male
   2. Female
   3. Refused

3. What is your current marital status?
   Ποια είναι η οικογενειακή σας κατάσταση;
   (Interviewer: Read options, circle one response only)
   1. Married (Έγγαμος (παντρεμένος/η))
   2. Living with a partner (De Facto) (Ζω με τον/τη σύντροφό μου)
   3. Divorced (Διαζευγμένος/η)
   4. Separated (Χωρισμένος/η)
   5. Widowed (Χήρος / Χήρα)
   6. Never Married (Άνυπανδρος/η)
   7. Not stated
   8. Don’t know
   9. Refused

4. Who do you currently live with?
   Με ποιον μένετε;
   (Interviewer: Read options, and circle one response only)
   1. No one, I live alone / Με κανέναν, ξω μόνο/η μου
   2. Spouse / Με τον/την σύζυγό μου
   3. Partner / Με τον/την σύντροφό μου
   4. Child[ren] only / Μόνο με τα παιδιά τα παιδιά μου
   5. Children & grandchildren / Με τα παιδιά και τα εγγόνια μου
   6. Other adults – relative / Με άλλους ενήλικους - συγγενείς
   7. Other adults – not family members / Με άλλους ενήλικους - μη συγγενικά πρόσωπα
   8. Other (specify)
   9. Not stated
   10. Don’t know
   11. Refused

5. What is the highest level of education you have completed?
   Ποιο είναι το επίπεδο εκπαίδευσής σας;
   (Interviewer: Read options, circle one response only)
   1. Never attended school
   2. Some primary school (κάποιες τάξεις του δημοτικού)
   3. Completed primary school (Τελειώσα το δημοτικό)
   4. Some high school (Ολοκλήρωσα κάποιες τάξεις του γυμνασίου)
   5. Completed high school (Τελείωσα το γυμνασίου)
   6. TAFE or trade certificate or diploma (Τεχνική Σχολή)
   7. University, CAE or some other tertiary institute degree (ΤΕΙ / Πανεπιστήμιο / Παλιντεχνείο)
   8. Other (specify)
   9. Don’t know
   10. Refused
<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>In what year did you arrive in Australia?</td>
<td>Specify YEAR / MONTH</td>
</tr>
<tr>
<td>How would you describe yourself?</td>
<td>Australian, Greek, Greek-Australian, Don't know, Refused</td>
</tr>
<tr>
<td>Do you mainly speak Greek at home?</td>
<td>Yes, No, Don't know, Refused</td>
</tr>
<tr>
<td>To what degree is it difficult is it for you to understand English?</td>
<td>Not at all, A little, A moderate amount, Very much, An extreme amount, Don't know, Refused</td>
</tr>
<tr>
<td>Who is your main interpreter?</td>
<td>Son or Daughter, Husband or Wife, Other Relative, Other household members, Friend, Neighbour, Other informal, Formal, free service, Formal, paid service, Don't know, Refused</td>
</tr>
</tbody>
</table>

Guides:
- [Guide: if Q10=2, go to Q13]
- Contd.
### HEALTH STATUS

I would like to ask you a few questions about your health and some of the health services you use...

Θα ήθελα να σας κάνω ορισμένες ερωτήσεις σχετικά με την υγεία σας και τις υπηρεσίες υγείας που χρησιμοποιείτε.

#### 13. In general, would you say your health is:

Γενικά, θα λέγατε πως η υγεία σας είναι:

*Interviewer: Read options, circle one response only*

1. Excellent (Εξαιρετική)
2. Very good (Πολύ καλή)
3. Good (Καλή)
4. Fair (Μέτρια)
5. Poor (Κακή)
6. Don’t know
7. Refused

### HEALTH SERVICE USE, AVAILABILITY & QUALITY

#### 14. In the last 12 months have you used any of the following health services in South Australia?

Κατά τους τελευταίους 12 μήνες χρησιμοποίησατε κάποια από τις παρακάτω υπηρεσίες υγείας στη Νότια Αυστραλία;

*Interviewer: Read options, circle all that apply*

1. General practitioner (GP)
2. Physiotherapist (Φυσιοθεραπευτή)
3. Chiropractor (Χειροπρακτικό)
4. Podiatrist (Ποδίατρο)
5. Psychologist (Ψυχολόγο)
6. Eye specialist/ophthalmologist (Οφθαλμίατρο)
7. Hospital – Accident & Emergency Department (Νοσοκομείο – Τμήμα Επειγόντων Περιστατικών)
8. Hospital – Clinic (outpatient/specialist/allied health) (Νοσοκομείο – Κλινική (εξωτερικά ιατρεία/ειδικευμένο γιατρό/ παραϊατρικά επαγγέλματα))
9. Other (specify)
10. Don’t know
11. Refused

#### 15. Do you think that there are there sufficient Greek-speaking medical services available for you to access?

Πιστεύετε πώς υπάρχει ικανοποιητικός αριθμός ελληνόφωνων υπηρεσιών υγείας στις οποίες έχετε πρόσβαση?

*Interviewer: Circle one response only*

1. Yes
2. No
3. Don’t know
4. Refused

#### 16. Generally, where do you get your health advice from?

Γενικά, ποιον συμβουλεύεστε σε θέματα υγείας;

*Interviewer: Circle all that apply, prompt if necessary*

1. Family
2. Friends
3. Doctor
4. TV or Radio
5. Greek TV
6. Chemist (Φαρμακοποιό)
7. Other (specify)
8. Don’t know
9. Refused

#### 17. Which of the following most influences your health decisions?

Τι από τα παρακάτω επηρεάζει περισσότερο τις αποφάσεις σας σε θέματα υγείας;

*Interviewer: Read options, circle all that apply*

1. Family opinions (Οι γνώμες της οικογένειας)
2. Friends opinions (Οι γνώμες των φίλων)
3. Advice from GP (Συμβουλή του γιατρού (GP))
4. Advice from TV or Radio (Συμβουλές της τηλεόρασης ή του ραδιοφώνου)
5. Advice from Greek TV (Συμβουλές της ελληνικής τηλεόρασης)
6. Chemist (Φαρμακοποιό)
7. Other (specify)
8. Don’t know
9. Refused
18. Have you ever been told by a doctor that you have any of the following conditions?

Σας έχει πει ποτέ γιατρός ή νοσοκόμα ότι έχετε κάποιο από τα παρακάτω προβλήματα;

(Interviewer: Read options, circle all that apply)
1. Diabetes (Διαβήτη)
2. Asthma (Λαθυμία)
3. Bronchitis (Βρογχίτιδα)
4. Emphysema (Εμφύσημα)
5. Heart attack (Καρδιακή προσβολή (έμφραγμα))
6. Stroke (Εγκεφαλικό)
7. Angina (Στηθάγχη)
8. Cancer (Specify type) (Καρκίνο)
9. Musculoskeletal condition (Specify condition) (Μυοσκελετικά προβλήματα (π.χ. αρθρίτιδα, οστεοπόρωση, κλπ.) (προσδιορίστε))
10. Other (Specify)
11. None
12. Don’t know
13. Refused

19. In the last 12 months, have you been told by a doctor that you have any of the following conditions?

Κατά τους τελευταίους 12 μήνες, σας έχει πει γιατρός ότι έχετε κάποιο από τα παρακάτω προβλήματα;

(Interviewer: Read options, circle all that apply)
1. Anxiety (Άγχος)
2. Depression (Κατάθλιψη)
3. A stress related problem (Κάποιο πρόβλημα που σχετίζεται με το άγχος)
4. Any other mental health problem (Κάποιο άλλο ψυχιατρικό πρόβλημα)
5. None
6. Don’t know
7. Refused

20. Have you ever been told by a doctor or nurse that you have high blood pressure?

Σας έχει πει ποτέ γιατρός ή νοσοκόμα ότι έχετε υψηλή πίεση;

(Interviewer: Circle one response only)
1. Yes
2. No
3. Never measured
4. Don’t know
5. Refused

21. Are you on tablets or prescribed medication for blood pressure?

Παίρνετε χάπια ή συνταγογραφημένα φάρμακα για την πίεση;

(Interviewer: Circle one response only)
1. Yes
2. No
3. Don’t know
4. Refused

22. Have you ever been told by a doctor or nurse that you have high cholesterol?

Σας έχει πει ποτέ γιατρός ή νοσοκόμα ότι έχετε υψηλή χοληστερίνη;

(Interviewer: Circle one response only)
1. Yes
2. No
3. Never measured
4. Don’t know
5. Refused

23. Are you on tablets or prescribed medication for high cholesterol?

Παίρνετε χάπια ή συνταγογραφημένα φάρμακα για υψηλή χοληστερίνη;

(Interviewer: Circle one response only)
1. Yes
2. No
3. Don’t know
4. Refused
This section of the survey is related to your lifestyle...
To τμήμα αυτό της έρευνας σχετίζεται με τον τρόπο ζωής σας

24. Which of the following best describes your smoking status? (Καπνίζετε;)
   (Interviewer: Read options, circle one response only)
   1. I smoke daily (Καπνίζω καθημερινά)
   2. I smoke occasionally (Καπνίζω περιστασιακά)
   3. I don’t smoke now but I used to (Δεν καπνίζω τώρα, αλλά κάπνιζα παλιά)
   4. I’ve tried it a few times but never smoked regularly (Το έχω δοκιμάσει μερικές φορές αλλά ποτέ δεν κάπνισα συστηματικά)
   5. I’ve never smoked
   6. Don’t now
   7. Refused

25. How often do you usually drink alcohol? (Πόσο συχνά πίνετε αλκοόλ;)
   (Interviewer: Circle one response only)
   1. I don’t drink alcohol
   2. Less than once a week
   3. Specify number of days per week __________________
   4. Don’t know
   5. Refused
   [Guide: If Q25= 1, 4, go to Q27]

26. A Standard Drink is equivalent to a schooner or midi of full strength beer, a glass of wine or a nip of spirits. On a day when you drink alcohol, how many drinks do you usually have? (Ένα Κανονικό Ποτό αντιστοιχεί σε μία κούπα δυνατής μπύρας, ένα ποτήρι κρασί ή ένα ποτηράκι οινοπνευματώδους ποτού. Σε μία μέρα, πόσα ποτά πίνετε συνήθως;)
   (Interviewer: Circle one response only)
   1. Specify number drinks ______________
   2. Don’t know
   3. Refused

27. What is your height without shoes? (Τι ύψος έχετε χωρίς τα παπούτσια;)
   (Interviewer: Circle one response only)
   1. Centimetres ______________
   2. Feet: inches ______________
   3. Don’t know
   4. Refused

28. What is your weight? (undressed in the morning) (Τι βάρος έχετε; (χωρίς ρούχα, το πρωί)
   (Interviewer: Circle one response only)
   1. Kilograms ______________
   2. Stones: pounds ______________
   3. Don’t know
   4. Refused

ACTIVITIES OF DAILY LIVING & FORMAL/INFORMAL SUPPORT

The following questions ask about how well you are able to do your regular activities and if you require any assistance...
Οι παρακάτω ερωτήσεις αφορούν το πόσο καλά είστε σε θέση να ασκείτε τις δραστηριότητες σας τακτικά και αν χρειάζεστε βοήθεια...

29. Do any of the following interfere with your daily activities? (Σας εμποδίζει κάτι από τα παρακάτω στις καθημερινές σας δραστηριότητες;)
   (Interviewer: Read options, circle all that apply)
   1. My vision (Η όρασή μου)
   2. My hearing (Η ακοή μου)
   3. My mobility (walking, moving about) (Η κινητικότητά μου (περπάτημα, μετακίνηση))
   4. My memory (Η μνήμη μου)
   5. My manual dexterity (ability to use hands easily) (Η επιδεξιότητα των χεριών μου (η ικανότητα να χρησιμοποιώ τα χέρια μου με ευκολία))
   6. Poor health
   7. Don’t know
   8. Refused
30. Do you currently receive any assistance with your regular activities for daily living [such as showering, dressing, meals, housework or moving about?]

Έχετε κάποια βοήθεια στις συνηθισμένες καθημερινές σας δραστηριότητες; [όπως για παράδειγμα στο μπάνιο, το νύσιμο, τα γεύματα, τις δουλειές του σπιτιού, τις μετακινήσεις;]

(Interviewer: Circle one response only)
1. Yes
2. No
3. Don’t know
4. Refused

[Guide: If Q30=No, go to Q33]

31. Who do you receive this assistance from?

Ποιος σας βοηθάει;

(Interviewer: Circle all that apply, prompt if necessary)
1. Family
2. Friends
3. Service provider
4. Care worker
5. Other (specify)
6. Don’t know
7. Refused

32. If you receive assistance from a paid service provider or organisation, which activities do you receive help with?

Εάν έχετε βοήθεια από κάποια υπηρεσία επί πληρωμή ή από κάποιο οργανισμό, ποιες δραστηριότητες αφορά αυτή η βοήθεια;

(Interviewer: Read options, circle all that apply)
1. House cleaning, lawn mowing, gutter cleaning, maintenance etc. (Καθαριότητα σπιτιού, κόψιμο γκαζόν, καθαρισμός υδρορροών, συντήρηση σπιτιού, κτλ)
2. Meals on Wheels (Έτοιμα γεύματα)
3. Respite services (either home or centre based) (Υπηρεσίες ανακούφισης – ανάσπαλας (respite) (είτε στο σπίτι είτε σε κάποιο κέντρο))
4. Specialised nursing assistance in your home (Βοήθεια από εξειδικευμένη νοσοκόμα στο σπίτι σας)
5. Community Age Care Package (assistance with shopping, social outings, etc) (Πακέτο Κοινωνικής Φροντίδας Ηλικιωμένων (CACP) (βοήθεια στα ψώνια, κοινωνικές εκδηλώσεις, κλπ.)
6. Personal Care (showering, dressing etc) (Ατομική Φροντίδα (μπάνιο, νύσιμο, κτλ.))
7. Transport services (Μετακινήσεις με όχημα)
8. None
9. Don’t know
10. Refused
This next section of the survey asks how you feel about your quality of life, health and other areas of your life over the last two weeks. Please choose the answer that is most appropriate...

Το επόμενο τμήμα της έρευνας σας ερωτά πώς αισθάνεστε σχετικά με την ποιότητα ζωής σας, την υγεία σας και άλλους τομείς της ζωής σας κατά τις τελευταίες δύο εβδομάδες. Παρακαλώ, επιλέξτε την καταλληλότερη απάντηση...

### 33. How would you rate your overall quality of life?

Πώς θα βαθμολογούσατε συνολικά την ποιότητα της ζωής σας?

*Interviewer: Read options, circle one response only*

1. Very poor (Πολύ κακή)
2. Poor (κακή)
3. Neither poor nor good (Ούτε κακή ούτε καλή)
4. Good (καλή)
5. Very good (Πολύ καλή)
6. Don’t know
7. Refused

### 34. How satisfied are you with your health?

Πόσο ικανοποιημένος/η είστε από την υγεία σας?

*Interviewer: Read options, circle one response only*

1. Very dissatisfied (Πολύ δυσαρεστημένος/η)
2. Dissatisfied (Δυσαρεστημένος/η)
3. Neither satisfied nor dissatisfied (Ούτε ικανοποιημένος/η ούτε δυσαρεστημένος/η)
4. Satisfied (Ικανοποιημένος/η)
5. Very satisfied (Πολύ ικανοποιημένος/η)
6. Don’t know
7. Refused

### 35. To what extent do you feel that physical pain prevents you from doing what you need to do?

Σε ποιο βαθμό νομίζετε ότι ο σωματικός πόνος σας εμποδίζει να κάνετε αυτό που πρέπει να κάνετε?

*Interviewer: Read options, circle one response only*

1. Not at all (Καθόλου)
2. A little (Λίγο)
3. A moderate amount (Μέτρια)
4. Very much (Πολύ)
5. An extreme amount (Πάρα πολύ)
6. Don’t know
7. Refused

### 36. How much do you need any medical treatment to function in your daily life?

Πόσο απαραίτητα σας είναι τα φάρμακα για να λειτουργείτε στην καθημερινή σας ζωή?

*Interviewer: Read options, circle one response only*

1. Not at all (Καθόλου)
2. A little (Λίγο)
3. A moderate amount (Μέτρια)
4. Very much (Πολύ)
5. An extreme amount (Πάρα πολύ)
6. Don’t know
7. Refused

### 37. How much do you enjoy life?

Πόσο απολαμβάνετε τη ζωή?

*Interviewer: Read options, circle one response only*

1. Not at all (Καθόλου)
2. A little (Λίγο)
3. Moderate amount (Μέτρια)
4. Very much (Πολύ)
5. An extreme amount (Πάρα πολύ)
6. Don’t know
7. Refused
38. To what extent do you feel your life to be meaningful?
Σε ποιο βαθμό πιστεύετε ότι η ζωή σας έχει νόημα;
(Interviewer: Read options, circle one response only)
1. Not at all (Καθόλου)
2. A little (Λίγο)
3. A moderate amount (Μέτρια)
4. Very much (Πολύ)
5. An extreme amount (Πάρα πολύ)
6. Don’t know
7. Refused

39. How well are you able to concentrate?
Πόσο καλά μπορείτε να συγκεντρωθείτε;
(Interviewer: Read options, circle one response only)
1. Not at all (Καθόλου)
2. A little (Λίγο)
3. A moderate amount (Μέτρια)
4. Very much (Πολύ)
5. An extreme amount (Πάρα πολύ)
6. Don’t know
7. Refused

40. How safe do you feel in your daily life?
Πόσο ασφαλής νιώθετε στην καθημερινή σας ζωή;
(Interviewer: Read options, circle one response only)
1. Not at all (Καθόλου)
2. A little (Λίγο)
3. A moderate amount (Μέτρια)
4. Very much (Πολύ)
5. An extreme amount (Πάρα πολύ)
6. Don’t know
7. Refused

The following questions ask about how completely you experience or were able to do certain things in the last two weeks...
Οι παρακάτω ερωτήσεις αφορούν το κατά πόσο καταφέρατε να ολοκληρώσετε κάποια πράγματα κατά τις τελευταίες δύο εβδομάδες...

41. Do you have enough energy for everyday life?
Έχετε αρκετή ενέργεια στην καθημερινή σας ζωή;
(Interviewer: Read options, circle one response only)
1. Not at all (Καθόλου)
2. A little (Λίγη)
3. Moderately (Μέτρια)
4. Mostly (Αρκετή)
5. Completely (Πολλή)
6. Don’t know
7. Refused

42. Have you enough money to meet your needs?
Έχετε αρκετά χρήματα ώστε να καλύπτετε τις ανάγκες σας;
(Interviewer: Read options, circle one response only)
1. Not at all (Καθόλου)
2. A little (Λίγα)
3. Moderately (Μέτρια)
4. Mostly (Αρκετά)
5. Completely (Πολλά)
6. Don’t know
7. Refused

43. How available to you is the information you need in your day-to-day life?
Πόσο εύκολα βρίσκετε τις πληροφορίες που χρειάζεστε στην καθημερινή σας ζωή;
(Interviewer: Read options, circle one response only)
1. Not at all (Καθόλου)
2. A little (Λίγα)
3. Moderately (Μέτρια)
4. Mostly (Αρκετά)
5. Completely (Πολύ)
6. Don’t know
7. Refused
44. **To what extent do you have the opportunity for leisure activities?**

Σε ποιο βαθμό έχετε τη δυνατότητα αναψυχής (ξεκούρασης και διασκέδασης);

(Interviewer: Read options, circle one response only)
1. Not at all (Καθόλου)
2. A little (Λίγο)
3. Moderately (Μέτρια)
4. Mostly (Αρκετά)
5. Completely (Πολύ)
6. Don’t know
7. Refused

45. **How well are you able to get around?**

Πόσο εύκολα κινείστε;

(Interviewer: Read options, circle one response only)
1. Very poor (Πολύ λίγο)
2. Poor (Λίγο)
3. Neither poor nor good (Έτσι κι έτσι)
4. Good (Καλά)
5. Very good (Πολύ καλά)
6. Don’t know
7. Refused

The following questions ask you to say how good or satisfied you have felt about various aspects of your life over the last two weeks...

46. **How satisfied are you with your sleep?**

Πόσο ικανοποιημένος/η είστε με τον ύπνο σας;

(Interviewer: Read options, circle one response only)
1. Very dissatisfied (Πολύ δυσαρεστημένος/ή)
2. Dissatisfied (Δυσαρεστημένος/ή)
3. Neither satisfied nor dissatisfied (Ούτε ικανοποιημένος/ή ούτε δυσαρεστημένος/ή)
4. Satisfied (Ικανοποιημένος/ή)
5. Very satisfied (Πολύ ικανοποιημένος/ή)
6. Don’t know
7. Refused

47. **How satisfied are you with your ability to perform your daily living activities?**

Πόσο ικανοποιημένος/η είστε με την ικανότητά σας να εκτελείτε τις καθημερινές σας δραστηριότητες;

(Interviewer: Read options, circle one response only)
1. Very dissatisfied (Πολύ δυσαρεστημένος/ή)
2. Dissatisfied (Δυσαρεστημένος/ή)
3. Neither satisfied nor dissatisfied (Ούτε ικανοποιημένος/ή ούτε δυσαρεστημένος/ή)
4. Satisfied (Ικανοποιημένος/ή)
5. Very satisfied (Πολύ ικανοποιημένος/ή)
6. Don’t know
7. Refused

48. **How satisfied are you with yourself?**

Πόσο ικανοποιημένος/η είστε με τον εαυτό σας;

(Interviewer: Read options, circle one response only)
1. Very dissatisfied (Πολύ δυσαρεστημένος/ή)
2. Dissatisfied (Δυσαρεστημένος/ή)
3. Neither satisfied nor dissatisfied (Ούτε ικανοποιημένος/ή ούτε δυσαρεστημένος/ή)
4. Satisfied (Ικανοποιημένος/ή)
5. Very satisfied (Πολύ ικανοποιημένος/ή)
6. Don’t know
7. Refused

49. **How satisfied are you with your personal relationships?**

Πόσο ικανοποιημένος/η είστε από τις προσωπικές σας σχέσεις;

(Interviewer: Read options, circle one response only)
1. Very dissatisfied (Πολύ δυσαρεστημένος/ή)
2. Dissatisfied (Δυσαρεστημένος/ή)
3. Neither satisfied nor dissatisfied (Ούτε ικανοποιημένος/ή ούτε δυσαρεστημένος/ή)
4. Satisfied (Ικανοποιημένος/ή)
5. Very satisfied (Πολύ ικανοποιημένος/ή)
6. Don’t know
7. Refused
50. **How satisfied are you with the support you get from your friends?**
Πόσο ικανοποιημένος/η είστε με την υποστήριξη που έχετε από τους φίλους σας?
*(Interviewer: Read options, circle one response only)*
1. Very dissatisfied (Πολύ δυσαρεστημένος/η)
2. Dissatisfied (Δυσαρεστημένος/η)
3. Neither satisfied nor dissatisfied (Ούτε ικανοποιημένος/η ούτε δυσαρεστημένος/η)
4. Satisfied (Ικανοποιημένος/η)
5. Very satisfied (Πολύ ικανοποιημένος/η)
6. Don’t know
7. Refused

51. **How satisfied are you with the conditions of your living place?**
Πόσο ικανοποιημένος/η είστε από τις συνθήκες του μέρους όπου ζείτε?
*(Interviewer: Read options, circle one response only)*
1. Very dissatisfied (Πολύ δυσαρεστημένος/η)
2. Dissatisfied (Δυσαρεστημένος/η)
3. Neither satisfied nor dissatisfied (Ούτε ικανοποιημένος/η ούτε δυσαρεστημένος/η)
4. Satisfied (Ικανοποιημένος/η)
5. Very satisfied (Πολύ ικανοποιημένος/η)
6. Don’t know
7. Refused

52. **How satisfied are you with your access to health services?**
Πόσο ικανοποιημένος/η είστε από την δυνατότητα πρόσβασης που έχετε στις υπηρεσίες υγείας?
*(Interviewer: Read options, circle one response only)*
1. Very dissatisfied (Πολύ δυσαρεστημένος/η)
2. Dissatisfied (Δυσαρεστημένος/η)
3. Neither satisfied nor dissatisfied (Ούτε ικανοποιημένος/η ούτε δυσαρεστημένος/η)
4. Satisfied (Ικανοποιημένος/η)
5. Very satisfied (Πολύ ικανοποιημένος/η)
6. Don’t know
7. Refused

53. **How satisfied are you with your transport?**
Πόσο ικανοποιημένος/η είστε από τις μετακινήσεις σας με όχημα?
*(Interviewer: Read options, circle one response only)*
1. Very dissatisfied (Πολύ δυσαρεστημένος/η)
2. Dissatisfied (Δυσαρεστημένος/η)
3. Neither satisfied nor dissatisfied (Ούτε ικανοποιημένος/η ούτε δυσαρεστημένος/η)
4. Satisfied (Ικανοποιημένος/η)
5. Very satisfied
6. Don’t know
7. Refused

The following question refers to how often you have experienced certain things in the last two weeks...
Η επόμενη ερώτηση αναφέρεται στο πόσο συχνά βιώσατε ορισμένα πράγματα κατά τις τελευταίες δύο εβδομάδες...

54. **How often do you have negative feelings, such as blue mood, despair, anxiety, depression?**
Πόσο συχνά έχετε αρνητικά συναισθήματα, όπως μελαγχολική διάθεση, απόγνωση, άγχος, κατάθλιψη;
*(Interviewer: Read options, circle one response only)*
1. Never (Ποτέ)
2. Seldom (Σπάνια)
3. Quite often (Αρκετά συχνά)
4. Very often (Πολύ συχνά)
5. Always (Πάντοτε)
6. Don’t know
7. Refused
The next section is interested in your religious beliefs…
Το επόμενο τμήμα ενδιαφέρεται για τις θρησκευτικές σας πεποιθήσεις.

55. Do you hold any religious or spiritual beliefs?
Είστε θρησκευόμενο άτομο ή έχετε πνευματικές ανησυχίες?
(I)nterviewer: Circle one response only
1. Yes
2. No
3. Don’t know
4. Refused

[Guide: If Q55=2, go to Q63]

56. What religion do you identify with?
Ποιο είναι το θρησκεύμα σας?
(I)nterviewer: Circle one response only, prompt if necessary
1. Greek Orthodox
2. Catholic
3. Anglican
4. Other (specify)
5. None
6. Don’t know
7. Refused

[Guide: If Q56=5, go to Q63]

57. How often do you attend religious services, apart from weddings, funerals or christenings?
Πόσο συχνά πηγαίνετε στην εκκλησία, εκτός από γάμους, βαφτίσια ή κηδείες?
(I)nterviewer: Read options, circle one response only
1. Almost every or almost everyday (Σχεδόν καθημερινά)
2. At least once a week (Τουλάχιστον μία φορά την εβδομάδα)
3. One-three times a month (Μία έως τρεις φορές το μήνα)
4. Less often (Πιο αραιά)
5. Never (Ποτέ)
6. Don’t know
7. Refused

58. Do you think that your religious beliefs and/or religious practices protect you from ill-health?
[Note: by ill-health I mean physical and mental illnesses]
Πιστεύετε ότι οι θρησκευτικές σας πεποιθήσεις (η πίστη σας) και οι θρησκευτικές σας πρακτικές (π.χ. προσευχή, νηστεία, εξομολόγηση, κλπ.) σας προστατεύουν από την κακή υγεία;
(I)nterviewer: Read, circle one response only
1. Not at all (Καθόλου)
2. A little (Πολύ λίγο)
3. A moderate amount (Μέτρια)
4. Very much (Πολύ)
5. An extreme amount (Πάρα πολύ)
6. Don’t know
7. Refused

59. If you were to get sick do you believe that this would be God’s way of punishing you?
Εάν αρρωσταίνατε, πιστεύετε ότι μ’ αυτόν τον τρόπο σας τιμωρεί ο Θεός?
(I)nterviewer: Read options, circle one response only
1. Yes, a great deal (Ναι, το πιστεύω ακράδαντα)
2. Yes, quite a bit (Ναι, το πιστεύω αρκετά)
3. Somewhat (Το πιστεύω κάπως)
4. Not at all (Δεν το πιστεύω καθόλου)
5. Don’t know
6. Refused

60. If you were to get sick do you think that adhering to your religious beliefs and/or religious practices would contribute to your recovery?
Εάν αρρωσταίνατε, πιστεύετε ότι χάρη στην πίστη σας και τις θρησκευτικές σας πρακτικές θα γινόσασταν καλά;
(I)nterviewer: Read options, circle one response only
1. Not at all (Καθόλου)
2. A little (Πολύ λίγο)
3. A moderate amount (Μέτρια)
4. Very much (Το πιστεύω πολύ)
5. An extreme amount (Το πιστεύω πάρα πολύ)
6. Don’t know
7. Refused
61. What aspects of your religious beliefs and religious practices do you believe protect you from ill-health?

Ποιες από τις θρησκευτικές σας πεποιθήσεις και θρησκευτικές πρακτικές πιστεύετε ότι σας προστατεύουν από αρρώστιες?

(Interviewer: Circle all that apply, prompt if necessary)

1. Confession / Εξομολόγηση
2. Communion / Θεία Κοινωνία
3. Church liturgy / Θεία Λειτουργία
4. Church sermon / Κήρυγμα
5. Fasting / Νηστεία
6. Readings from the Bible/Reading religious books / Ανάγνωση της Αγίας Γραφής
7. Other (specify)
8. None
9. Don’t know
10. Refused

62. How much is religion a source of strength and comfort to you?

Σε ποιο βαθμό η θρησκεία σάς δίνει δύναμη και παρηγοριά;

(Interviewer: Read options, circle one response only)

1. None (Καθόλου)
2. A little (Λίγο)
3. A great deal (Πάρα πολύ)
4. Don’t know
5. Refused
### Social Capital

The following questions are about your family, friends and community life....
Οι παρακάτω ερωτήσεις αφορούν την οικογένειά σας, τους φίλους σας και την κοινωνική σας ζωή...

#### 63. How many biological brothers and sisters do you have? (Πόσα βιολογικά αδέλφια έχετε;)

*Interviewer: respond to all that apply*

1. Number of brothers __________
2. Number of sisters__________
3. Don’t know
4. Refused

*Interviewer: Please fill in information for all living siblings*

<table>
<thead>
<tr>
<th>Sibling 1</th>
<th>Sibling 2</th>
<th>Sibling 3</th>
<th>Sibling 4</th>
<th>Sibling 5</th>
<th>Sibling 6</th>
<th>Sibling 7</th>
<th>Sibling 8</th>
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</thead>
</table>

**Name**

**Age**

**Marital status***

**Current location**
(suburb, state or country)

**Primary mode of contact**

**Frequency of contact***

* Single, Married, Divorced or Widowed  
** In-person, by phone, email, internet, mail/post  
*** Daily, Several times a week, Weekly, Fortnightly, Monthly, Less often
64. How many children do you have? (Πόσα παιδιά έχετε?)

(Interviewer: respond to all that apply)
1. Number of daughters __________
2. Number of sons __________
3. No children
4. Don’t know
5. Refused

(Interviewer: Please fill in information for all living children)

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<th>Child 1</th>
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<th>Child 4</th>
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<td>Current location (suburb, state or country)</td>
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<td>Primary mode of contact**</td>
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<tr>
<td>Frequency of face-to-face visits***</td>
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<tr>
<td>Frequency of telephone conversations***</td>
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</tbody>
</table>

* Single, Married, Divorced or Widowed
** In-person, by phone, email, internet mail/post
*** Daily, Several times a week, Weekly, Fortnightly, Monthly, Less often
65. Who do you mostly keep in contact with that is currently living in Greece? (Με ποια κυρίως άτομα που ζουν στην Ελλάδα έχετε επαφές;)

(Interviewer: respond to all that apply, relevant to those who participant keeps in touch with from Greece most frequently)

| Relationship | | | |
| Mode of contact** | | | |
| Frequency*** | | | |

** In-person, by phone, email, internet, mail/post
*** Daily, Several times a week, Weekly, Fortnightly, Monthly, Less often

66. When was the last time you visited to Greece

Πότε ήταν η τελευταία φορά που επισκεφτήκατε την Ελλάδα;

(Interviewer: Circle one response only)

1. YEAR __________
2. Don’t know
3. Refused

67. How often do you visit Greece?

Πόσο συχνά επισκέπτεστε την Ελλάδα;

(Interviewer: Circle one response only)

1. Specify frequency __________
2. Don’t know
3. Refused

68. Is there anything that prevents you going to Greece as often as you like?

Υπάρχει κάτι που σας εμποδίζει να πηγαίνετε στην Ελλάδα όσο συχνά θα θέλατε;

(Interviewer: Circle all that apply, prompt if necessary)

1. Poor health (Κακή υγεία)
2. Age (Ηλικία)
3. Lack of travel companion (Ελλειψη συντροφιάς στο ταξίδι)
4. Finances (Οικονομικοί λόγοι)
5. Other (specify)
6. None
7. Don’t know
8. Refused
69. Do you ever miss Greece?
Σας λείπει ποτέ η Ελλάδα;
(Interviewer: Circle one response only)
1. Yes
2. No
3. Don’t know
4. Refused

70. Looking back on my life, I regret my decision to migrate to Australia?
Κοιτώντας πίσω τη ζωή σας, μετανιώνετε για την απόφασή σας που μεταναστεύσατε στην Αυστραλία;
(Interviewer: Circle one response only and any additional comments made)
1. Yes
2. No
3. Don’t know
4. Refused
Comments: ____________________________________________
.......................................................................................
.......................................................................................
.......................................................................................
.......................................................................................
.......................................................................................
.......................................................................................

71. Do your children and/or children-in-law support you in any of the following ways?
Τα παιδιά σας και/ή οι γαμπροί και οι νύφες σας σας υποστηρίζουν με κάποιον από τους παρακάτω τρόπους;
(Interviewer: Circle all that apply, prompt if necessary)
1. Give gifts
2. Shop or run errands for you
3. Help out with money
4. Help keep the house or fix things around the house for you
5. Prepare meals for you
6. Drive you places such as doctor, shopping or church?
7. Other (specify)
8. Don’t know
9. Refused

For the following statements can you please tell me if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree...
Παρακαλώ πείτε μου αν συμφωνείτε απόλυτα, συμφωνείτε, ούτε συμφωνείτε ούτε διαφωνείτε, διαφωνείτε, διαφωνείτε τελείως με τις παρακάτω προτάσεις...

72. My family really tries to help me.
Η οικογένειά μου προσπαθεί πραγματικά να με βοηθήσει
(Interviewer: Read Options. Circle one response only)
1. Strongly agree (Συμφωνώ απολύτως)
2. Agree (Συμφωνώ)
3. Neither Agree or Disagree (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree (Διαφωνώ)
5. Strongly disagree (Διαφωνώ τελείως)
6. Don’t know
7. Refused
73. I get the emotional help and support I need from my family.

(English) I get the emotional help and support I need from my family.

(Translator) Παίρνω τη συναισθηματική βοήθεια και υποστήριξη που χρειάζομαι από την οικογένειά μου.

(Interviewer: Circle one response only, read options if necessary)
1. Strongly agree (Συμφωνώ απολύτως)
2. Agree (Συμφωνώ)
3. Neither Agree or Disagree (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree (Διαφωνώ)
5. Strongly disagree (Διαφωνώ τελείως)
6. Don’t know
7. Refused

74. I can talk about my problems with my family.

(English) I can talk about my problems with my family.

(Translator) Μπορώ να μιλώ για τα προβλήματά μου με την οικογένειά μου.

(Interviewer: Circle one response only, read options if necessary)
1. Strongly agree (Συμφωνώ απολύτως)
2. Agree (Συμφωνώ)
3. Neither Agree or Disagree (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree (Διαφωνώ)
5. Strongly disagree (Διαφωνώ τελείως)
6. Don’t know
7. Refused

75. [Do you agree or disagree with the following statement...] My family is willing to help me make decisions.

(English) My family is willing to help me make decisions.

(Translator) Η οικογένειά μου είναι πρόθυμη να με βοηθήσει να πάρω αποφάσεις.

(Interviewer: Circle one response only, read options if necessary)
1. Strongly agree (Συμφωνώ απολύτως)
2. Agree (Συμφωνώ)
3. Neither Agree or Disagree (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree (Διαφωνώ)
5. Strongly disagree (Διαφωνώ τελείως)
6. Don’t know
7. Refused

76. Do you agree or disagree with the following statement... Older people should be able to depend on their adult children for the help they need, if so why or why not...

(English) Older people should be able to depend on their adult children for the help they need, if so why or why not...

(Translator) Οι ηλικιωμένοι άνθρωποι πρέπει να βασίζονται στα ενήλικα παιδιά τους για βοήθεια, αν χρειαστούν. Αν ναι, γιατί; – αν όχι, γιατί όχι; ...

(Interviewer Open Ended)
1. Strongly agree (Συμφωνώ απολύτως)
2. Agree (Συμφωνώ)
3. Neither Agree or Disagree (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree (Διαφωνώ)
5. Strongly disagree (Διαφωνώ τελείως)
6. Don’t know
7. Refused

Comments
__________________________________
__________________________________
__________________________________
__________________________________
__________________________________
__________________________________
__________________________________
__________________________________

__________________
__________________
Now a few questions about your friends, can you please tell me how much you agree or disagree with the following...

Και τώρα μερικές ερωτήσεις σχετικά με τους φίλους σας, μπορείτε σας παρακάτω να μου πείτε κατά πόσο συμφωνείτε ή διαφωνείτε με τα παρακάτω...

77. [Do you agree or disagree with the following statement...] My friends try to help me.

Οι φίλοι μου προσπαθούν να με βοηθήσουν

(Interviewer: Circle one response only, read options if necessary)
1. Strongly agree  (Συμφωνώ απολύτως)
2. Agree  (Συμφωνώ)
3. Neither Agree or Disagree  (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree  (Διαφωνώ)
5. Strongly disagree  (Διαφωνώ τελείως)
6. Don’t know
7. Refused

78. I can count on my friends when things go wrong.

Μπορώ να βασιστώ στους φίλους μου όταν τα πράγματα δεν πάνε καλά

(Interviewer: Circle one response only, read options if necessary)
1. Strongly agree  (Συμφωνώ απολύτως)
2. Agree  (Συμφωνώ)
3. Neither Agree or Disagree  (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree  (Διαφωνώ)
5. Strongly disagree  (Διαφωνώ τελείως)
6. Don’t know
7. Refused

79. [Do you agree or disagree with the following statement...] I have friends with whom I can share my joys and problems.

Έχω φίλους με τους οποίους μπορώ να μοιράζομαι τις χαρές και τα προβλήματά μου

(Interviewer: Circle one response only, read options if necessary)
1. Strongly agree  (Συμφωνώ απολύτως)
2. Agree  (Συμφωνώ)
3. Neither Agree or Disagree  (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree  (Διαφωνώ)
5. Strongly disagree  (Διαφωνώ τελείως)
6. Don’t know
7. Refused

80. If you get sick you feel that you could seek support from family or friends?

Αν αρρωστήσετε πιστεύετε ότι μπορείτε να ζητήσετε βοήθεια από την οικογένειά σας ή τους φίλους σας;

(Interviewer: Circle one response only, read options if necessary)
1. Strongly agree  (Συμφωνώ απολύτως)
2. Agree  (Συμφωνώ)
3. Neither Agree or Disagree  (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree  (Διαφωνώ)
5. Strongly disagree  (Διαφωνώ τελείως)
6. Don’t know
7. Refused

81. In general, are you satisfied with your current levels of contact with your friends?

Γενικά, είστε ικανοποιημένος/ή με το βαθμό επαφής που έχετε με τους φίλους σας;

(Interviewer: Read options, circle one response only)
1. Extremely satisfied  (Απολύτως ικανοποιημένος/ή)
2. Very satisfied  (Πολύ ικανοποιημένος/ή)
3. Somewhat satisfied  (Αρκετά ικανοποιημένος/ή)
4. Slightly satisfied  (Λίγο ικανοποιημένος/ή)
5. Not at all satisfied  (Καθόλου ικανοποιημένος/ή)
6. Don’t know
7. Refused
I would now like to ask you some questions about what kind of things you do socially...
Θα ήθελα τώρα να σας κάνω μερικές ερωτήσεις σχετικά με τις κοινωνικές σας δραστηριότητες ...

<table>
<thead>
<tr>
<th>82. What types of social institutions or organisations are you involved with?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Σε τι είδους κοινωνικές ομάδες ή οργανώσεις συμμετέχετε;</td>
</tr>
<tr>
<td>(Interviewer: Circle all that apply)</td>
</tr>
<tr>
<td>1. Sport or physical recreation group</td>
</tr>
<tr>
<td>2. Religious or spiritual group or organisation</td>
</tr>
<tr>
<td>3. Hobby group</td>
</tr>
<tr>
<td>4. Ethnic/multicultural group/club</td>
</tr>
<tr>
<td>5. Other (specify)</td>
</tr>
<tr>
<td>6. None</td>
</tr>
<tr>
<td>7. Don’t know</td>
</tr>
<tr>
<td>8. Refused</td>
</tr>
</tbody>
</table>

[Guide: If Q82>7, go to Q85]

<table>
<thead>
<tr>
<th>83. Do you participate in social activities involving the Greek community?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Συμμετέχετε σε κοινωνικές δραστηριότητες που σχετίζονται με την ελληνική παροικία;</td>
</tr>
<tr>
<td>(Interviewer: Circle one response only)</td>
</tr>
<tr>
<td>1. Yes</td>
</tr>
<tr>
<td>2. No</td>
</tr>
<tr>
<td>3. Don’t know</td>
</tr>
<tr>
<td>4. Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>84. How often do you participate in Greek social activities of a club, society, or an association?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Πόσο συχνά συμμετέχετε σε ελληνικές κοινωνικές εκδηλώσεις κάποιας λέσχης, συλλόγου, ένωσης;</td>
</tr>
<tr>
<td>(Interviewer: Read options, circle one response only)</td>
</tr>
<tr>
<td>1. Almost every or almost everyday (Σχεδόν καθημερινά)</td>
</tr>
<tr>
<td>2. At least once a week (Τουλάχιστον μία φορά την εβδομάδα)</td>
</tr>
<tr>
<td>3. One-three times a month (Μία έως τρεις φορές το μήνα)</td>
</tr>
<tr>
<td>4. Less often (Πιο αραιά)</td>
</tr>
<tr>
<td>5. Never (Ποτέ)</td>
</tr>
<tr>
<td>6. Don’t know</td>
</tr>
<tr>
<td>7. Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>85. Do you listen to Greek radio or watch Greek TV?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ακούτε ελληνικό ραδιόφωνο ή παρακολουθείτε ελληνική τηλεόραση;</td>
</tr>
<tr>
<td>(Interviewer: Circle one response only)</td>
</tr>
<tr>
<td>1. Yes, Greek TV</td>
</tr>
<tr>
<td>2. Yes, Radio</td>
</tr>
<tr>
<td>3. Yes, Both</td>
</tr>
<tr>
<td>4. No</td>
</tr>
<tr>
<td>5. Don’t know</td>
</tr>
<tr>
<td>6. Refused</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>86. Do you ever feel lonely?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Νιώθετε ποτέ μοναξία;</td>
</tr>
<tr>
<td>(Interviewer: Read options, circle one response only)</td>
</tr>
<tr>
<td>1. All of the time (Συνεχώς)</td>
</tr>
<tr>
<td>2. Most of the time (Τις περισσότερες φορές)</td>
</tr>
<tr>
<td>3. Some of the time (Μερικές φορές)</td>
</tr>
<tr>
<td>4. A little of the time (Λίγο)</td>
</tr>
<tr>
<td>5. None of the time (Καθόλου)</td>
</tr>
<tr>
<td>6. Don’t know</td>
</tr>
<tr>
<td>7. Refused</td>
</tr>
</tbody>
</table>

The next few questions ask about how you normally get around...
Οι επόμενες ερωτήσεις αφορούν τις μετακινήσεις σας με μεταφορικό μέσο ...

<table>
<thead>
<tr>
<th>87. Do you hold a current driver’s licence?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Έχετε ισχύον δίπλωμα οδήγησης;</td>
</tr>
<tr>
<td>(Interviewer: Circle one response only)</td>
</tr>
<tr>
<td>1. Yes</td>
</tr>
<tr>
<td>2. No</td>
</tr>
<tr>
<td>3. Refused</td>
</tr>
</tbody>
</table>
88. **What is your main form of transport – that is, how do you normally get about?**
Ποιο είναι το κυριότερο μέσο μετακίνησής σας; - με άλλα λόγια, πώς μετακινείστε συνήθως;
(Note: emphasis main that this question refers to their main form of transport)

(Interviewer: **Read options, circle one response only**)
1. Car as a driver (Αυτοκίνητο – οδηγώ εγώ ο ίδιος/η ίδια)
2. Car as a passenger (Αυτοκίνητο – ως συνεπιβάτης)
3. Public transport (Λεωφορείο, τραμ ή τρένο)
4. Taxi/Access taxi (Ταξί)
5. Community bus (Κοινοτικό λεωφορείο)
6. Walk, bicycle (Περπάτημα / ποδήλατο)
7. Other (specify)
8. Don’t know
9. Refused

89. **In the past twelve months, have you changed your driving habits because of concerns related to your age or your health?**
Κατά τους τελευταίους δώδεκα μήνες αναγκαστήκατε να αλλάξετε τις συνήθειές σας όσον αφορά την οδήγηση εξαιτίας θεμάτων που αφορούν την ηλικία ή την υγεία σας;

(Interviewer: **Circle one response only, prompt if necessary**)
1. No change, still drive as before / Καμία αλλαγή, οδηγώ όπως και πριν
2. Yes, drive less often / Ναι, δεν οδηγώ τόσο συχνά
3. Yes, stopped driving / Ναι, σταμάτησα να οδηγώ
4. Yes, only local driving, short distance / Ναι, οδηγώ μόνο στη γειτονιά, μικρές αποστάσεις
5. Yes, only daylight driving / Ναι, οδηγώ μόνο την ημέρα
6. Yes, other
7. Don’t know
8. Refused

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### MENTAL HEALTH (Κ6)

The following questions are about how you have been feeling recently. Please tell me how often you have had these feeling in the last four weeks...

Οι παρακάτω ερωτήσεις αφορούν το πώς αισθάνεστε τελευταία. Παρακάλω πείτε μου πόσο συχνά νιώσατε τα παρακάτω κατά τις τέσσερις τελευταίες εβδομάδες ...

90. **[In the last 4 weeks...] about how often did you feel nervous?**
[Κατά τις 4 τελευταίες εβδομάδες...] πόσο συχνά νιώσατε νευρικότητα, εκνευρισμό;

(Interviewer: **Read options, circle one response only**)
1. All of the time (Συνεχώς)
2. Most of the time (Τις περισσότερες φορές)
3. Some of the time (Μερικές φορές)
4. A little of the time (Λίγο)
5. None of the time (Καθόλου)
6. Don’t know
7. Refused

91. **[In the last 4 weeks...] about how often did you feel hopeless?**
[Κατά τις 4 τελευταίες εβδομάδες...] πόσο συχνά νιώσατε απελπισμένος/η;

(Interviewer: **Read options, circle one response only**)
1. All of the time (Συνεχώς)
2. Most of the time (Τις περισσότερες φορές)
3. Some of the time (Μερικές φορές)
4. A little of the time (Λίγο)
5. None of the time (Καθόλου)
6. Don’t know
7. Refused
92. In the last 4 weeks... about how often did you feel restless or fidgety?

[Κατά τις 4 τελευταίες εβδομάδες...] πόσο συχνά νιώσατε ανήσυχο/η ή νευρικό/ή;

(Reviewed: Read options, circle one response only)
1. All of the time (Συνεχώς)
2. Most of the time (Τις περισσότερες φορές)
3. Some of the time (Μερικές φορές)
4. A little of the time (Λίγο)
5. None of the time (Καθόλου)
6. Don’t know
7. Refused

93. In the last 4 weeks... about how often did you feel so depressed that nothing could cheer you up?

[Κατά τις 4 τελευταίες εβδομάδες...] πόσο συχνά αισθανθήκατε τόσο θλιμμένος/η ώστε τίποτα δεν μπορούσε να σας κάνει να ευθυμήσετε;

(Reviewed: Read options, circle one response only)
1. All of the time (Συνεχώς)
2. Most of the time (Τις περισσότερες φορές)
3. Some of the time (Μερικές φορές)
4. A little of the time (Λίγο)
5. None of the time (Καθόλου)
6. Don’t know
7. Refused

94. In the last 4 weeks... about how often did you feel that everything was an effort?

[Κατά τις 4 τελευταίες εβδομάδες...] πόσο συχνά νιώσατε ό,τι χρειάζετε να καταβάλετε προσπάθεια για το καθέτι;

(Reviewed: Read options, circle one response only)
1. All of the time (Συνεχώς)
2. Most of the time (Τις περισσότερες φορές)
3. Some of the time (Μερικές φορές)
4. A little of the time (Λίγο)
5. None of the time (Καθόλου)
6. Don’t know
7. Refused

95. In the last 4 weeks... about how often did you feel worthless?

[Κατά τις 4 τελευταίες εβδομάδες...] πόσο συχνά νιώσατε ότι δεν αξίζετε;

(Reviewed: Read options, circle one response only)
1. All of the time (Συνεχώς)
2. Most of the time (Τις περισσότερες φορές)
3. Some of the time (Μερικές φορές)
4. A little of the time (Λίγο)
5. None of the time (Καθόλου)
6. Don’t know
7. Refused

96. If you had health problems which made you very dependent on others, do you think you would want to?

Εάν εσείς προσωπικά είχατε προβλήματα υγείας που θα σας ανάγκαζαν να εξαρτάστε από τους άλλους, τι θα θέλατε να κάνετε;

(Reviewed: Read options, circle one response only)
1. Stay at home with outside help / Να μείνετε στο σπίτι έχοντας εξωτερική βοήθεια
2. Move in with children / Να μετακομίσετε στο σπίτι των παιδιών σας
3. Move to a home for the aged / Να πάτε σε κατοικίες για ηλικιωμένους
4. Move to a nursing home / Να πάτε σε γηροκομείο
5. Other (specify)
6. Don’t know
7. Refused
<table>
<thead>
<tr>
<th>Question</th>
<th>Expected Response</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>97. In the future, do you think that you would be cared for in the way that you like?</strong></td>
<td>1. Yes 2. No 3. Don't have any expectations 4. Don't know 5. Refused</td>
</tr>
<tr>
<td><strong>98. Do you think you would have been cared for better if you had stayed in Greece?</strong></td>
<td>1. Yes 2. No 3. Makes no difference 4. Don't know 5. Refused</td>
</tr>
<tr>
<td>For the following statements can you please tell me if you strongly agree, agree, neither agree or disagree, disagree or strongly disagree...</td>
<td>1. Strongly Agree 2. Agree 3. Neither Agree or Disagree 4. Disagree 5. Strongly Disagree</td>
</tr>
<tr>
<td><strong>101. Australia has been good to me.</strong></td>
<td>1. Strongly Agree 2. Agree 3. Neither Agree or Disagree 4. Disagree 5. Strongly Disagree</td>
</tr>
<tr>
<td><strong>102. Do you agree or disagree with the following statement...?</strong></td>
<td>1. Strongly Agree 2. Agree 3. Neither Agree or Disagree 4. Disagree 5. Strongly Disagree</td>
</tr>
</tbody>
</table>

*Interviewer: Circle one response only, read options if necessary*
**103. Greeks in Australia are healthier than the Greeks in Greece (of the same age).**

Οι Έλληνες της Αυστραλίας είναι πιο υγιείς από τους Έλληνες της Ελλάδας (της ίδιας ηλικίας).

*(Interviewer: Circle one response only, read options if necessary)*

1. Strongly Agree (Συμφωνώ απολύτως)
2. Agree (Συμφωνώ)
3. Neither Agree or Disagree (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree (Διαφωνώ)
5. Strongly Disagree (Διαφωνώ τελείως)
6. Don’t know / Not Sure
7. Refused

**104. In general, how satisfied are you with your life... Would you say...?**

Γενικά, πόσο ικανοποιημένος/η είστε από τη ζωή σας; Τι θα λέγατε;

*(Interviewer: Read options, circle one response only)*

1. Very Dissatisfied (Πολύ δυσαρεστημένος/η)
2. Dissatisfied (Δυσαρεστημένος/η)
3. Not Sure (Δεν είμαι σίγουρος/η)
4. Satisfied (Ικανοποιημένος/η)
5. Very Satisfied (Πολύ ικανοποιημένος/η)
6. None
7. Don’t know
8. Refused

**105. If I could live my life over, I would change almost nothing.**

Αν ξαναζούσα τη ζωή μου, δεν θα άλλαζα σχεδόν τίποτα.

*(Interviewer: Circle one response only, read options if necessary)*

1. Strongly Agree (Συμφωνώ απολύτως)
2. Agree (Συμφωνώ)
3. Neither Agree or Disagree (Ούτε συμφωνώ ούτε διαφωνώ)
4. Disagree (Διαφωνώ)
5. Strongly Disagree (Διαφωνώ τελείως)
6. Don’t know / Not Sure
7. Refused
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