

CHAPTER 4

DESCRIPTION OF COMMUNITIES & REPRESENTATIVENESS OF STUDY POPULATIONS

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CHAPTER 4

DESCRIPTION OF COMMUNITIES & REPRESENTATIVENESS OF STUDY POPULATIONS

4.0 INTRODUCTION

The main objective of this chapter is to set the scene for the study, by briefly describing the communities, their history, culture, geography and living environment, which will be expanded upon in subsequent chapters. The demographic characteristics of the study populations will also be described, including their representativeness.

4.1 DESCRIPTION OF COMMUNITIES

4.1.1 GEOGRAPHY AND CLIMATE

a) Spata

Spata is located about 20km from Athens in the state of Greece called Attiki. There is very little rain in summer (June-August) and the rocky terrain presents limited opportunities for modernised agriculture. Temperatures do not fluctuate much within seasons. In winter, the temperature is around 5°C and can remain below 10°C in the early hours of the morning. In summer, temperatures are normally about 30°C, and rarely rise to 40°C. Humidity ranges from 50% in summer to 70% in winter.

b) Melbourne

Melbourne is located on the South coast of the state of Victoria. Temperatures are variable within seasons and humidity is moderate. Melbourne can experience four seasons in one day. The hottest months are normally January and February when the average temperature is 26°C, but can reach as high as 40°C and can drop as low as 10°C. The coldest months are June and July and temperatures are warmer (10-15°C) than winter temperatures in Greece. Temperatures rarely drop below zero. Victoria is known as the Garden State because of its plentiful rainfall, especially in Melbourne.

4.1.2 CULTURE, HISTORY, CUISINE & RELIGION

a) *Spata*

Spata was chosen because generations of families have remained there for hundreds of years and there have been limited numbers of young people migrating to more urban parts of Greece. In contrast to other areas of Greece, there were only one or two families from Spata who migrated to Australia in the 1950's. The community studied was a stable one, with the local culture nicely intact. The level of education amongst the elderly was less than 5 years of primary school.

The traditional Greek culture was evident in Spata (as opposed to more urban areas of Greece eg Athens). It took the form of more traditional Greek-style cooking (including the making of goat yoghurt and feta cheese), farming procedures and knowledge and practice of certain health remedies. These include eating only grapes for 40 days during grape season, known as grape therapy or 'stafilotheapia'.

Also, according to custom the traditional white-washed family homes were still passed onto siblings, especially the daughters as a dowry, along with the chickens and goats. Donkeys were sometimes still used by older farmers as a form of transportation and for carrying farm produce. Historically, the traditional Greek diet consumed in this town was typical of foods and dishes eaten by southern Greeks and islanders, which is characterised by many vegetarian-style dishes.

For example, the diet featured olive oil, a large variety of legumes and vegetables (especially wild greens and tomatoes), olives, limited meat (mainly lamb eaten less than once a week), plenty of fish and fruit (especially grapes and figs but little citrus fruits) (see chapter 8). Due to climatic differences, the cuisine of northern Greece was once quite different. This demarcation in cuisines is no longer apparent in Greece due to modern agricultural procedures allowing widespread availability of produce (Spiller, 1991).

In Spata today, the traditional Greek diet is still evident except that meat is eaten more frequently and legumes less often. The elderly in this community are staunch followers of the Greek Orthodox religion performing most religious practices, namely fasting. The children and especially the grand-children of the elderly were not so strict about following these religious practices (see Chapter 7, section 7.1.8).

b) Melbourne

Australia's immigration program after the Second World War has directly defined the ethnic dimension of population ageing in Australia. The United Kingdom was once the major source country of migrants, although its dominance has been reduced since the late 1970s. From 1950 to the early 1960's, continental Europe became the major source region. Dutch, German and Italian immigration was predominant, followed by Greeks and Yugoslavs which continued until the early 1970's, subsequently being very minor contributors to the migrant intake.

The vast majority of Italian and Greek-born migrants arrived in the 1950s and 1960s. Migration from Asian countries have been the major source countries over the past 15 years. Most migrants arriving in the 1950's were aged in their twenties. By the year 2000, the proportion of the population aged 60 years and over formed by these diverse groups will double from 20 to 40%. The increase will be greater within the groups that arrived in Australia in the 1950's, especially from the Baltic states, eastern Europe, Greece and Italy. There will be a rapid increase in those aged 75 years and over with a corresponding fall in the group aged 60-74 years.

The majority of Greeks migrating to Australia came from villages in rural mainland Greece, particularly from the north (eg Macedonia) with little or no formal education, but with experience in farming. A minority migrated from major cities, such as Athens and Thessaloniki with higher levels of education. The level of education of Greek-born in Victoria as a whole is much lower than that of the total Victorian population - 64.2% of Greek-born Victorians left school before the age of 16 with the majority having less than 5 years of primary school, compared with 39% for the Victorian population as a whole.

Anecdotal evidence indicates that the Greeks in Australia appear to have maintained many traditional practices, such as folk dancing and the consumption of traditional Greek foods. Greek food shops are common in the metropolitan areas and Greek people can buy many of their own specialty food stuffs. The need to maintain their cultural identity in a foreign land may facilitate such practices. The first generation Greeks (particularly the elderly) in Australia are still preparing traditional Greek foods typical of the region from which they migrated (Girkinezis et al., 1977).

Southern and island Greeks consumed a lot of olive oil, a large variety of legumes and vegetables (especially wild greens and tomatoes), olives, limited meat (mainly lamb less than once a week), plenty of fruit (especially grapes and figs but little citrus fruits) and fish

(see also Chapter 8, section 8.1.2). Due to climatic differences, the cuisine of the north was quite different from the south and the islands - little olive oil was used because olives did not grow successfully in cold climates. As a source of fat, olive oil was replaced by pig fat and butter for cooking, pork and beef were also eaten more frequently than lamb (Girkinezis et al., 1977; Valassi, 1962; Tzakou 1967; Kosmidis 1979). The Northern diet also had a limited variety of legumes (namely lentils and haricot beans), less fish (especially salt water fish), less fruits (particularly grapes but more citrus fruits, melons and berries) and vegetables (mainly pumpkin, cabbage and wild greens) (see also Chapter 8).

Northern Greeks in Australia still tend to eat more pork and butter and less olive oil compared to southerners and islanders. The second generation Greeks have lost some of the cooking skills for preparing traditional Greek foods, particularly the vegetarian style dishes such as those containing legumes. When Greeks migrated to Australia in the 1950's, meat was comparatively cheap resulting in marked changes to traditional food habits with meat being part of meals on a daily basis. This over consumption of meat occurred in the first twenty years of migration. Meat intake has now been curtailed given the 'unfavourable' publicity it has received over the years and the rising prevalence of heart disease in Greek Australians.

Culture retention is associated with maintaining the language as well as the religion. In this respect, the Greeks in Australia have retained many aspects of their culture. According to the 1986 census, 95% of people claiming Greek ancestry in Victoria spoke Greek at home and 89.6% gave their religion as Greek Orthodox. Similarly to Spata elderly, Melbourne elderly are staunch followers of the Greek Orthodox Religion. However, fasting practices were not as evident in Melbourne (Chapter 7, section 7.1.8).

4.1.3 HOUSING

a) Spata

The housing in Spata ranged from two storey ostentatious homes to the more modest traditional white washed ground level dwellings. Overall, the housing was an indication of relative affluence in this community. Gardening (including vegetable gardening) was not a preoccupation of the residents. However, most homes had chickens (for their fresh eggs) as well as goats (for fresh goats milk) whereas dogs and cats were not evident in homes.

Most residents of this community still owned land on which they grew mainly grapes (to make wine and for consumption) and olives (to make olive oil and for consumption) and occasionally figs and almonds. 'Flower' gardening is not as popular as 'farm work' (such as grape picking) or vegetable gardening. Grandparents in most cases lived with their children in a separate more traditional looking dwelling which was originally the family home. When the children married they would build their more modern and affluent home adjacent to the family home on the same block of land (see also Chapter 6).

b) Melbourne

In contrast to Spata elderly, a significant proportion of elderly Greeks in Melbourne did not live with their children; they either lived alone and received home help or they lived with their spouse. A minority lived in granny flats or in dwellings adjacent to their children's homes. The elderly who lived alone or with their spouse resided in the original family dwelling purchased in the 1950's on arrival in Australia from Greece (see also Chapter 6). These homes tended to be made of weatherboard and to be located near the city centre where employment was available on migration. Elderly who lived with their children resided in more modern and affluent homes that tended to be located further from the city centre. 'Flower' gardening was not a preoccupation of elderly Greeks in Melbourne. However, 'vegetable' gardening was a favourite pastime of the study subjects, with more than 70% of the gardens containing a large variety of vegetables.

4.1.4 STATE OF DEVELOPMENT & ECONOMY

a) Spata

The economic basis of this semi-rural area is subsistence agriculture. Olive oil, olives for eating, grapes and wine are the main products, supplied to the rest of Greece. Figs, nuts (almonds), pomegranates, pulses, goats milk and chicken eggs are also produced. Impressions suggest that Spata is above the rural Greek average for 'affluence' and 'modernisation' given that 10 years ago the Greek Government encouraged residents to sell their land so that the new Greek airport could be built in the vicinity.

b) Melbourne

The largest proportion of Greek-born (83%) have been resident in Australia between 15 and 40 years and thus migrated to Australia between 1947 and 1971. The Greek-born population is gradually moving away from the central city suburbs where they initially congregated (eg Richmond, Prahran, Brunswick, Footscray and South Melbourne) until they were established and able to afford better homes in the outer suburbs. However, numbers in many of these city areas still remain high. Areas of increasing settlement include the inner eastern area (eg Doncaster, Templestowe, Waverly) and Keilor in the west. The majority of Greek immigrants are found in the food business (characteristically in 'fish-and-chip' shops), and in factories. According to the 1986 census, the largest proportion of Greek-born were employed as labourers and related workers (M 27%; F 30%). The proportions of Greek-born who were self-employed, employers or unemployed were slightly higher than those for the Victorian population as a whole. Only a minority of Greek immigrants entered the farming industry, even though they were familiar with this kind of work in their homeland. Impressions suggest that the majority of Greeks in Melbourne are above average for 'affluence' (Girkenezis et al., 1970).

4.1.5 GENERAL DEMOGRAPHY

4.1.5.1 Greece

In 1991, the total population of Greece was 10,063,000 persons. The annual rate of the real increase was 3.1 per 1000 population, while the rate of the natural increase was 2.3 per 1000, resulting from a birth rate of 11.9 and a death rate of 9.7 (WHO, 1992). The excess of the real net increase was due to the return migration. The number of persons aged 65 and over increased by 36% between 1971 and 1985, and their proportion of the total population increased from 11.1% in 1971 to 13.7% in 1991. Migration is an important demographic component of the population change in Greece. There was a net emigration from Greece during the post-war period. After reaching a peak in the mid-1960's, it declined irregularly until 1974. But since then a net migration gain has occurred, due to return migration and repatriation of Greeks from abroad. According to the census results of 1981, 233 900 persons had returned to Greece during 1976-80 (Council of Europe, 1986).

The latest World Health Organization report (1992) showed Greece as ranking second in the world (after Japan) in average life expectancy at birth (men 74.3, women 79.4);

Australia ranking 12th (men 73.2, women 79.8). The life expectancy for Greek males increased from 63.4 years in 1950 to 67.3 in 1960 to 70.1 in 1970 and to 73.8 in 1984. For females, the expectancy of life at birth was 3.2 years higher than that for males in 1950 and grew to 4.8 years in 1984. The gain in life expectancy was mainly at young ages and limited at older ages. Age structure, demographic characteristics and morbidity statistics for Spata were not available. The only data available was from the electoral rolls (see section 4.2.1). Mortality data was available only for 1981 from the local council. In 1981 there were 52 deaths; the sex specific mortality rate for men was 3.6 per 1000/year and for women 4.2 per 1000/year.

4.1.5.2 Australia

Over 30% of Melbourne's population of 3 million are either foreign-born or the children of foreign-born parents. Melbourne has been the commonest destination for Greek migrants to Australia making it the third-largest overseas-born community in the country. At the 1986 census (ABS, 1991) there were 137,640 in Victoria who claimed Greek ancestry, of which 65,515 were born in Greece. Almost half the Greek-born community live in Victoria, with 96.6% of those residing in Melbourne. The Victorian Greek-born community comprises 49.3% of the total Australian Greek-born community.

The number of Greek-born men and women was respectively: 55-64 years 5660 & 3961; 65-74 years 1312 & 1400; 75 and over 625 & 969 (ABS 1991). The percentage of Greek-born elderly in Victoria in 1986 was considerably lower (78% 15-54, 6.3% 65+, 2% 70+) than the total percentage of elderly in Victoria in 1991 (57.4% 15-54, 11.6% 65+, 7.7% 70+, 2.3% 80+). There is a slightly higher proportion of Greek-born males (50.7%) to females (49.2%), which is in contrast to the wider Australian population (M 49%, F 50%).

Elderly women normally outnumber men, but among the ethnic aged, males slightly outnumber females, especially in the age group 60-64 and 65 to 74. In the 75+ age group, the balance is reversed, with the number of women exceeding the number of men. In 1986, the sex ratio for those aged 75 and over was 69 men to every 100 women for the overseas-born, and 53 men to every 100 women for the Australian-born (ABS, 1991). This distinctive pattern of age structure has its source in post-war migration patterns, with more men than women coming to Australia. The 75+ age cohort can probably be explained by the longer life expectancy of females, and is thus not necessarily related to migration.

Overall however, there appear to be more women than men respectively aged 65+ for both Greek-born (7.1%, 5.6%) and the wider Victorian community (13.4%, 10.2%) (ABS, 1991; Cozzi, 1988). In Victoria in 1986, people aged 65-74 and 75+ of various birthplaces were as follows: Australia 178 441 (5.9%), 118 321 (3.9%); United Kingdom 25 346 (10.1%), 20 345 (8.1%); Italy 9448 (8.7%), 5157 (4.7%); Germany & Netherlands 5584 (8.9%), 2069 (3.3%); Poland 5032 (20.4%), 1905 (7.7%); Greece 2712 (4%), 1594 (2.4%); Yugoslavia 2271 (3.8%), 1101 (1.9%) (ABS 1991). In 1981 the percentage of specific ethnic communities aged over 60 years were as follows: Baltic states (45%), USSR (43%), Polish (38%), Hungary (28%), United Kingdom (25%), China (24%), Netherlands (20%), Italy (18%), Germany (15%), Australia (14%), Greece (10%), Yugoslavia (10%) and Lebanon (5%). By 2001, the order will have changed to: Baltic states (55%), Italy (50%), Greece (45%), Hungary (42%), Germany (35%), Netherlands (33%), Yugoslavia (32%), United Kingdom (30%) USSR (29%), Poland (26%) and China (25%) (Kabala 1990).

For the overseas-born, the population 75 years and over is expected to be the fastest growing age group in the last decade of this century. The most rapid increases in this age group are expected among those born in the Netherlands (nearly sixfold), Poland (over fivefold), Yugoslavia (over fourfold), Greece and Germany (well over threefold). For these groups, the increase in the number of their aged will imply a dramatic change in the age structure of their whole community, with an increasing proportion of the aged looking for support from a diminishing proportion of younger people. This may have profound consequences for the provision of care for the ethnic aged.

4.2 REPRESENTATIVENESS OF THE STUDY POPULATIONS

A given sample will be truly representative of the population from which it is selected and will provide accurate estimates of the characteristics of that population only if all members of the population have an equal chance of being selected in the sample (Babbie, 1973; Campbell and Stanley, 1963). Studies can be divided into three groups a) a true random population sample b) a convenience random sample or c) a non-random sample. Convenience random samples are those in which selection bias is a likely threat to the representativeness of the sampling frame, and therefore to the external validity of the study (Campbell and Stanley, 1963).

In other words, all members of the elderly population do not have an equal chance of selection. The advantage of convenience random samples over non-random samples is

that findings based on the former will be more closely representative of those elderly people that comprise the particular sampling frame (e.g members of senior citizens clubs) (Horwath, 1989a). Another important factor requiring consideration is the response rate which is a guide to the representativeness of the sample respondents. The higher the response rate achieved, the lower the chance of significant response bias. The response rate is the number of participants divided by the sample size after allowing for those people who could not be traced due to a change in address, or who were dead. As a rough guide, Babbie (1973) has considered a *response rate of at least 60%* as necessary for reasonable representativeness, *while 70% or more was considered good*.

4.2.1 GREEKS IN SPATA, GREECE

The representativeness of the sample was checked against the 1981 electoral rolls for Spata, by comparing the percentage of women and men in two age brackets (70-79, 80+) (see Table 4.2.1). The 1981 electoral rolls were updated by a local council employee by removing data of deceased individuals and adding that of any new elderly residents. The male/female proportion and age group distribution of the study sample (M 49%, F 51%) was not significantly different to the wider elderly community in Spata (electoral rolls M 45%, F 55%). Furthermore, the response rate was high (89%). Thus the study sample can be assumed to be representative of the elderly Spata population (Table 4.2.1).

Table 4.2.1
Comparison of the % men and women aged 70-79 and 80+ from the 1981 Spata electoral rolls & 1988 Spata sample

Age group	ELECTORAL ROLLS n=640 (M 284, F 356)		SPATA SAMPLE n=104 (M 51, F 53)	
	Men	Women	Men	Women
70-79	30%	36%	31%	30%
	n=190	n=231	n=32	n=31
80+	15%	19%	18%	21%
	n=94	n=125	n=19	n=22

Chi-Square test, not significant at 5% level

4.2.2 GREEKS IN MELBOURNE, AUSTRALIA

Similarly to Spata, the representativeness of the sample was checked against the 1986 census data by comparing the percentage of Greek-born men and women in two age brackets (70-79, 80+). Also, it was important to check that elderly Greeks had not been under or over-sampled from various suburbs in Melbourne. This was achieved by comparing the percentage of elderly Greeks in the sample living in various regions in Melbourne to data obtained from the 1986 census on the geographic distribution of all Greeks aged over 70.

4.2.2.1 Age & Gender representativeness

The male/female proportion of the study sample (M 49.7%, F 50.3%) was significantly different (5% level) from Greek elderly aged over 70 in the 1986 census (M 41%. F 59%). The age distribution of the men in the sample did not vary significantly from the ABS 1986 census data. However, there were significant differences (5% level) between the women aged 70-79 in the sample and the census data, indicating undersampling of women in this age group (see table 4.2.2.1).

Table 4.2.2.1

Comparison of the % men and women aged 70-79 and 80+ from the 1986 ABS census & 1990-91 Melbourne sample

Age group	ABS CENSUS 1986 n=2686 (M 1104, F 1582)		MELBOURNE SAMPLE 1990-91 n=189 (M 94, F 95)	
	Men	Women	Men	Women
70-79	30.4% n=818	43.4%* n=1166	35% n=66	31.2%* n=59
80+	10.6% n=286	15.5% n=416	14.7% n=28	19% n=36%

* Chi-Square test, significant at 5% level

4.2.2.2 Geographic representativeness

Large-scale survey data containing persons of Greek ancestry aged 70+ were located in the 1986 census. This data was diagrammatically colour coded (using CDATE, a computer programme from the ABS) to represent the density of elderly Greeks across the Melbourne Statistical Regions (MSR) (see Figure 4.2.2.2a).

Each MSR is made up of many suburbs from which elderly were sampled. The inner regions, north-eastern and western suburbs are historically more industrially oriented (i.e. lower-socioeconomic level) and the inner east, outer east, and bay side areas (southern and peninsula), to which many younger Australians of Greek ancestry are now moving, are less industrial and of a higher socioeconomic level.

The suburbs randomly sampled from each MSR in the study are shown in Figure 4.2.2.2b. The names of each suburb actually sampled are also listed according to their MSR. The percentage distribution of elderly Greeks from the study sample is diagrammatically presented in Figure 4.2.2.2c in accordance with the colour codes provided for population density of Greeks >70y from the ABS data in Figure 4.2.2.2a.

A new colour was introduced (orange) if the density of the sample elderly in a certain region differed to ABS data. The percentage distribution of elderly Greeks over 70 from the sample was almost identical to 1986 ABS data for 5 out of 7 regions (see Table 4.2.2.2d). The western region was slightly undersampled and the peninsula oversampled in comparison to ABS data, thus the different colour code (orange). However, these differences were not significant at the 5% level.

Table 4.2.2.d

**Comparison of the % distribution of Greeks >70 yrs
from the 1986 ABS census & 1990-91 Melbourne sample**

MELBOURNE STATISTICAL REGION (MSR)	ABS DATA 1986 n = 2686 Greeks >70y M 1104, F 1582			MELB. SAMPLE 1990-1991. n = 189 M 94, F 95		
	N	%	colour code	N	%	colour code
INNER MELB.	596	22.2	RED	49	26	RED
NORTH EAST	640	23.9	RED	43	22.8	RED
INNER EAST	536	19.9	BLUE	41	21.6	BLUE
WESTERN	404	15.0	GREEN	16	8.5	ORANGE*
SOUTHERN	373	13.9	GREEN	25	13.2	GREEN
PENINSULA	112	4.2	LIME	14	7.4	ORANGE*
OUTER EAST	25	0.9	YELLOW	1	0.5	YELLOW

*Chi-Square test: not significant

In summary, the sample of elderly Greeks in Melbourne was representative according to geographic distribution but under represented for elderly women aged 70-79. This is possibly related to the fact that two thirds of the non-responding women (n=18) were aged under 80. If these non-responders had agreed to be in the study then the percentage of women 70-79 would not have been statistically different to the ABS data. Nevertheless, these limitations are accommodated by the high response rate (84%). The sampling method developed for this study, i.e the use of the telephone directory and presumed Greek family surnames to establish the sampling list for recruitment, and the system of referral (no more than two eligible relatives per contact), had limited selection bias.

Figure 4.2.2.2a

AUSTRALIAN BUREAU OF STATISTICS DATA, 1986

GEOGRAPHIC DISTRIBUTION

Greeks >70 yrs in the Melbourne Statistical Regions (%)

Colour coded according to population density of Greeks >70years

RED = Inner Melbourne & North Eastern suburbs, high density (22%-24%)

BLUE = Inner eastern suburbs, medium density (20%)

GREEN = Western and southern suburbs, low density (14%-15%)

LIME = Mornington peninsula, very low density (4%)

YELLOW = Outer Eastern suburbs, sparse (1%)

Figure 4.2.2.2b

MELBOURNE SAMPLE 1990-91

SUBURBS SAMPLED FROM EACH MELBOURNE STATISTICAL REGION

SUBURBS SAMPLED

Inner Melbourne (RED - high) = Brunswick, Carlton, Collingwood, Fitzroy, Melbourne, North Melbourne, Port Melbourne, South Melbourne, Prahran, Richmond, St Kilda, Abbotsford, South Yarra.

North-eastern suburbs (RED - high) = Northcote, Coburg, Preston, Thomastown, Lalor, Thornbury, Heidelberg, Ivanhoe, Greensborough.

Inner eastern suburbs (BLUE - medium) = Camberwell, Doncaster, Kew, Waverly, Mulgrave, Balwyn, Bulleen, Burwood

Western suburbs (GREEN - low) = Altona, Broadmeadows, Sunshine, Williamstown, Newport

Southern suburbs (GREEN - low) = Caulfield, Carnegie, Malvern, Oakleigh, Bentleigh, Clayton, Sandringham, Highett, Cheltenham, Mordialloc.

Mornington peninsula (LIME - very low) = Springvale, Noble park.

Outer Eastern suburbs (YELLOW - sparse) = Wantirna

Figure 4.2.2.c

MELBOURNE SAMPLE 1990-91

GEOGRAPHIC DISTRIBUTION

Greeks >70 yrs in the Melbourne Statistical Regions (%)

Colour coded according to ABS 1986 population density of Greeks >70years

- RED = Inner Melbourne & North Eastern SUBURBS, high density (22%-24%)
- BLUE = inner eastern suburbs, medium density (20%)
- GREEN = western and southern suburbs, low density (14%-15%)
- LIME = Mornington peninsula, very low density (4%)
- YELLOW = outer Eastern suburbs, sparse (1%)
- ORANGE = 7%-8%, undersampled western suburbs and oversampled peninsula, not significant using Chi-Square test.

4.3 SOCIO-DEMOGRAPHIC CHARACTERISTICS

4.3.1 AGE

The mean age of the men and women was 77 and 78 respectively in both centres (see Table 4.3.1a). Additionally, the samples were similar with respect to age and gender distribution. A significantly greater proportion of subjects were aged 70-79 (M 30%, F 30%) compared with the 80+ group (M 15%, F 20%) in both centres (see Table 4.3.1b).

Table 4.3.1a

AGE						
	n	Mean	SD	SEM	Min	Max
SPATA						
Men	51	77.4	5.5	0.8	70	91
Women	53	77.7	5.9	0.8	70	94
MELBOURNE						
Men	94	77.0	5.7	0.6	70	97
Women	95	78.2	6.7	0.7	70	104

Table 4.3.1b

	SPATA		MELBOURNE	
	70 - 79	80 +	70 - 79	80 +
MEN				
N	32	19	66	28
Mean	74.0	83.0	74.0	84.0
SD	2.8	3.4	3.1	4.3
Minimum	70.0	80.0	70.0	80.0
5%	70.0	80.0	70.0	80.0
25%	72.0	81.0	71.0	81.0
50%	73.5	82.0	74.0	82.0
75%	76.0	85.0	77.0	87.0
95%	79.0	91.0	79.0	91.0
Maximum	79.0	91.0	79.0	97.0
WOMEN				
N	31	22	59	36
Mean	73.0	84.0	74.0	85.0
SD	2.6	3.1	2.9	5.4
Minimum	70.0	80.0	70.0	80.0
5%	70.0	81.0	70.0	80.0
25%	71.0	82.0	71.0	81.0
50%	73.0	82.5	74.0	83.0
75%	75.0	84.0	77.0	87.0
95%	78.0	88.0	79.0	97.0
Maximum	78.0	94.0	79.0	104.0

4.3.2 REGION OF BIRTH

Reporting region of birth is important since the cuisine from south to northern Greece has been historically quite different - mainly because of differences in availability of certain food stuffs. The cuisine on the islands and in major cities is closer to foods eaten in the south. This is of interest when analysing food intake data since exposure to such cuisines may have had varying effects on health in later life.

The majority of participants in the Spata sample (88%) were born and raised in Spata, located in southern Greece, near Athens. The remaining 12% were born and raised in other parts of mainland Greece (of which only 2% came from Athens). In the Melbourne sample, the majority were born in Greece (77%), 15% in Cyprus, 5% in Egypt and 3% in Asia Minor. Table 4.3.2 shows the frequency of region of birth (e.g northern or southern Greece, islands, cities, Egypt, Asia Minor) of the Melbourne sample. About 30% of the sample were from the north (of which 5% actually migrated from Asia Minor), 30% from the islands, 15% from the south, 15% from Cyprus and the remaining 10% from Egypt, Asia Minor and Athens/Thessaloniki, with only one subject born in Australia. The north included Macedonia and Ipiros; the south included Peloponisos, Sparta, Kalamata; islands included Crete, Levkada, Lesvos; cities included Athens and Thessaloniki. Overall, two thirds of the sample had been exposed to the 'southern style cuisine'.

Table 4.3.2

**The frequency distribution for region of birth, by gender
Melbourne sample 1989-91**

COUNTRY/ REGION	MEN	WOMEN		
		%	%	
N	94		95	
Northern Greece	27.6		30.5	
Greek Islands	25.6		27.3	
Southern Greece	17.6		13.7	
Cyprus	14.9		14.7	
Egypt	6.4		6.3	
Greek cities	5.4		5.0	
Asia Minor	2.4		4.2	
Australia	0.5		1.0	

4.3.3 RURAL OR URBAN BACKGROUND

In Spata, 98% had been exposed to a rural environment as children and as young adults. In the Melbourne sample, similar proportions had been exposed to a rural environment as children (83%) but not as young adults (66%, $p < 0.05$) (see tables 4.3.3a,b).

Table 4.3.3a

Question DC24
As a child did you live in:

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
Urban	0.0	0.0	19.7	10.7
Rural	100.0	100.0	80.3	89.3
WOMEN				
N	31	22	59	36
Urban	3.2	4.5	18.6	16.7
Rural	96.8	95.5	81.4	83.3

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: nil. Age group differences: nil. Centre differences: nil.

Table 4.3.3b

Question DC25
As an adult did you live in:

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
Urban	0.0	0.0	31.8	46.4
Rural	100.0	100.0	68.2	53.6
WOMEN				
N	31	22	59	36
Urban	3.2	0.0	32.2	30.6
Rural	96.77	100.0	67.8	69.4

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: nil.

Age group differences: nil.

Centre differences: men 70-79 and 80+; women 70-79 and 80+.

4.3.4 LENGTH OF STAY

The majority (88%) of elderly participants in Greece had lived in Spata all their life. The remaining 12% had lived for a few decades in other parts of mainland Greece or Athens.

About 84% of the Melbourne sample had been in Australia for more than 20 years which was similar to the ABS data (85% >20 years) for the total Greek-born population in Victoria (see Table 4.3.4a). The average length of stay in Australia was similar for men (32±13 years) and women (28±13 years) in the sample. This coincides with the major wave of migration from southern Europe in the 1950s and 60s. Additionally, the men in the sample appeared to have lived longer in Australia compared with the women, which also agrees with ABS data. Men often migrated to Australia first to find employment and would subsequently bring their family or wife-to-be. This also explains the slightly higher ratio of Greek men to women in Australia. Furthermore, the men and women aged 80+ had lived longer in Australia than their younger counterparts.

Table 4.3.4a

Question: Migration
How many years have you been in this country?

MELBOURNE	MEN		WOMEN	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
N	66	28	59	36
Born here	1.5	0.0	0.0	0.0
<10 years	0.0	3.6	3.4	11.2
10-20 years	12.0	14.4	18.7	16.5
21-30 years	31.7	25.0	28.9	47.1
31-40 years	45.4	28.5	37.4	14.0
41-50 years	7.7	0.0	8.4	0.0
>50 years	1.7	28.5	3.2	11.2

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: 70-79 and 80+.

Age group differences: men and women.

Table 4.3.4b

Comparison of length of stay in Australia of Melbourne sample aged 70+ and the 1986 census of the total Greek born population in Victoria

Number of years in Australia	Melb. Sample >=70 yrs	ABS 1986 All ages
1-8	3.2%	2.3%
9-13	5.8%	2.4%
14-18	6.9%	6.5%
19-23	10.6%	21.4%
24-33	34.9%	45.3%
34-43	30.1%	16.7%
44+	7.9%	1.7%

4.3.5 MARITAL STATUS

In both Spata and Melbourne, a significantly greater proportion of men were married (80%) compared with the women (40%). The proportion of widows(ers) was also greater amongst women (60%) than men (12%) in both centres. The proportion of widowed men and women almost doubled from the age group 70-79 to 80+. Centre differences were not significant. The divorce rate was about twice as high in Melbourne (3%) compared with Spata (see Table 4.3.5a).

Table 4.3.5a

Marital Status

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
Divorced	0.0	0.0	3.0	3.6
Married/defacto	93.7	78.9	90.9	71.4
Widowed	6.3	21.1	6.1	25.0
WOMEN				
N	31	22	59	36
Divorced	10.0	4.5	3.4	2.8
Married/defacto	45.2	27.3	62.7	13.9
Widowed	54.8	68.2	33.9	83.3

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: Spata 70-79 and 80+; Melbourne 70-79 and 80+.

Age group differences: Spata men and women; Melbourne men and women.

Centre differences: nil.

The mean number of years of being a widow in Spata was significantly greater for the women (19.4±3 years) compared with the men (6.5±2 years). Similarly, in Melbourne the women had been widowed longer (22±2 years) than the men (11±4 years). Age group differences were seen in the women only - the 80+ women had been widowed longer than their younger counterparts. Centre differences were not significant (Table 4.3.5b).

Table 4.3.5b

Question WDS
If you are widowed, divorced or separated
how long ago did this occur (in years?)

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
I am not widowed/separated	93.7	78.9	89.4	75.0
1-2	3.1	5.3	3.0	0.0
3-5	0.0	0.0	4.5	10.7
6-10	3.1	10.6	1.5	0.0
11-20	0.0	5.3	1.5	7.2
21-30	0.0	0.0	0.0	0.0
>30	0.0	0.0	0.0	7.2
WOMEN				
N	31	22	59	36
I am not widowed/separated	45.2	31.8	62.7	13.9
1-2	3.2	4.5	3.4	2.8
3-5	6.5	0.0	3.4	0.0
6-10	19.4	13.6	6.8	25.1
11-20	19.3	9.0	11.9	19.6
21-30	6.4	13.6	3.4	14.0
>30	0.0	27.1	8.5	25.2

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: Spata 70-79 and 80+; Melbourne 70-79 and 80+.

Age group differences: Spata women; Melbourne women.

Centre differences: nil.

4.3.6 EDUCATION

Gender differences were significant within centres. A greater proportion of women in Spata (55%) and Melbourne (32%) had never been to school compared with the men (8%, 9% respectively). However, it appears that more educated men and women migrated to Australia (see tables 4.3.6a,b).

Table 4.3.6a

Question DC28
For how many years did you have full-time education
(i.e school, college)

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
0	9.4	5.3	4.5	17.9
1 - 2 yrs	3.1	21.0	6.1	21.4
3 - 4 yrs	53.1	31.6	25.8	25.0
5 - 6 yrs	21.9	31.6	42.4	25.0
7 - 8 yrs	9.4	10.6	7.6	3.6
9 - 10 yrs	0.0	0.0	6.1	3.6
12 yrs	3.1	0.0	6.1	0.0
16 yrs	0.0	0.0	1.5	3.6
WOMEN				
N	31	22	59	36
None	48.4	63.6	30.5	33.3
1 - 2 yrs	6.4	9.1	15.3	13.9
3 - 4 yrs	38.7	22.7	27.1	22.2
5 - 6 yrs	0.0	4.5	17.0	25.0
7 - 8 yrs	6.4	0.0	3.4	2.8
9 - 10 yrs	0.0	0.0	5.1	0.0
12 yrs	3.1	0.0	1.7	2.8
16 yrs	0.0	0.0	0.0	0.0

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: Spata 70-79 and 80+; Melbourne 70-79 and 80+.

Age group differences: Spata men and women; Melbourne nil.

Centre differences: men 70-79; women 70-79 and 80+.

A significantly greater proportion of Melbourne men (37%) and women (20%) had finished primary school compared with Spata elderly (25%, 2% respectively). Additionally, 5% of the women and 12% of the men in Melbourne had finished high school which was significantly greater than Spata elderly (women 0%, men 2%). All participants had been to school in either Greece or Egypt. Only one subject in the Melbourne sample had completed primary and secondary school in Australia. Only one participant in Spata and three in Melbourne had tertiary education (see Table 4.3.6b).

Table 4.3.6b

Question DC29
Did you undertake studies
beyond secondary school?

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
Yes	3.1	0.0	3.0	0.0
No	96.9	100.0	97.0	100.0
WOMEN				
N	31	22	59	36
Yes	0.0	0.0	1.7	0.0
No	100.0	100.0	98.3	100.0

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: nil. Age group differences: nil. Centre differences: nil.

4.3.7 OCCUPATION

The participants in the study were asked to report their past employment. Since participants may have had several jobs, they were asked to report the occupation they spent most of their working life doing. For example, many Greek migrants in Melbourne had worked as farmers in Greece and in factories in Australia. However, if they reported they had worked as farmers for twice as many years, then 'farming' was coded for their occupation (see Table 4.3.7a).

The majority of the sample in Spata (78%) had spent most of their working life as farmers- 80% of the women and 76% of the men. The remaining 20% of the women had never worked outside the home. In contrast, the remaining 24% of the men had worked as tradesmen or in a clerical job. Similarly in Melbourne, the majority of the women had spent most of their working life as farmers (42%). However, in contrast to the Spata women, 22% had also worked in factories and 10% had done clerical work in an office. The majority of Melbourne men had spent most of their working life in factories or as tradesmen or in transport (50%) and significantly less as farmers (30%).

The participants were also asked to report if they were still currently 'employed' (see Table 4.3.7b). Employment did not necessarily have to be paid employment. For example, helping out in a family business or farm work was still considered as employment even though money did not change hands. In Spata, most of the elderly

were still 'employed' as farmers. This type of work however, was not full-time, but seasonal. The majority of Spata women (89%) in both age groups indicated that they were still 'employed' as farm hands (e.g grape or olive picking).

Table 4.3.7a

Question DC32A
What kind of work did you do
most of your working life?

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
Professional/Administrative	3.1	0.0	4.5	0.00
Clerical/Sales	6.2	5.3	7.6	25.0
Farmer	71.9	84.2	25.8	39.3
Transport/Service	0.0	0.0	15.15	14.3
Tradesman/Factory	12.5	10.5	42.42	17.9
House duties	0.0	0.0	0.0	0.0
Shepherd/Animals	6.2	0.0	4.55	3.6
WOMEN				
N	31	22	59	36
Professional/Administrative	0.0	0.0	3.4	2.8
Clerical/Sales	3.2	0.0	5.1	5.6
Farmer	74.2	86.4	32.2	58.3
Transport/Service	0.0	0.0	1.7	0.0
Tradesman/Factory	0.0	0.0	28.8	11.1
House duties	12.9	4.5	27.1	22.2
Shepherd/Animals	9.7	9.1	1.7	0.0

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: nil.

Age group differences: nil.

Centre differences: men 70-79 and 80+; women 70-79 and 80+.

In contrast, only 44% of the men aged 70-79 and 84% of the 80+ men were still 'farming'. However, the younger men were performing heavier farming activities almost all year round compared to the older men and the women. In Melbourne, only one woman and 17% of the men were still 'employed' in any capacity (such as the unpaid farm work done by the Spata elderly).

Table 4.3.7b

DC32B
Do you work now?

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
Yes	43.7	84.2	22.7	3.6
No	56.3	15.8	77.3	96.4
WOMEN				
N	31	22	59	36
Yes	87.1	90.9	1.7	0.0
No	12.9	9.1	98.3	100.0

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: Spata 70-79; Melbourne nil.

Age group differences: Spata men; Melbourne nil.

Centre differences: men 70-79 and 80+; women 70-79 and 80+.

4.3.8 INCOME & FINANCIAL SUPPORT

4.3.8.1 Income

The majority of Greek elderly were reluctant to disclose their annual income - the question was therefore rephrased to collect data on the source and adequacy of income. The aim of such a question was to determine if the pension was their only source of income (see Table 4.3.8.1). If the subject's spouse was also receiving the pension this was reported as '2 pensions'. These questions were adapted from the instrument used in the WHO Western Pacific Study (Andrews et al., 1986).

Gender differences were significant within centres. In Spata, a greater proportion of women (47%) relied on one pension as a major source of income compared with the men (14%), especially in the 80+ age group. This was related to the much higher percentage of widowed women (60%) to men (12%). Similarly to Spata, a greater percentage of Melbourne women (40%) relied on one pension as a major source of income as opposed to only 12% of the men - especially in the 80+ age group. This was also related to the much higher percentage of widowed women (53%) to men (12%) in the sample. About 45% of the men and 25% of the women had another source of income. Centre differences were not significant. Overall, Greek women (especially in the 80+ age group) in Melbourne and Spata appeared financially less well off than the men.

Table 4.3.8.1

Question ECO103
What is your main source of income?

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
1 pension	15.6	10.5	6.06	25.0
2 pensions	21.9	63.2	47.0	39.3
1 pension & others	12.5	10.5	6.0	0.0
2 pensions & others	50.0	15.8	41.0	25.0
No pension	0.0	0.0	0.0	10.7
WOMEN				
N	31	22	59	36
1 pension	38.71	59.09	23.7	63.9
2 pensions	35.48	36.36	25.4	13.9
1 pension & others	3.23	0.00	11.9	11.1
2 pensions & others	22.58	4.55	32.2	0.0
No pension	0.0	0.0	6.78	11.1

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: Spata 70-79 and 80+; Melbourne 70-79 and 80+.

Age group differences: Spata men and women; Melbourne women.

Centre differences: nil.

4.3.8.2 Financial support

Similar proportions of women in Spata and Melbourne (65%) reported to receive support, other than money. Age group differences reached significance - a greater proportion of women aged 80+ (82%) reported receiving help compared with the younger women (50%) (see Table 4.3.8.2a). About two thirds of the women in Spata and Melbourne (mainly aged 80+), reported to receive support for food, clothing, shelter, and medication compared to less than half of the men (see table 4.3.8.2b). A similar proportion of men aged 70-79 (40%) reported receiving support in both centres. However, a greater proportion of Spata men aged 80+ reported receiving help (74%) compared with Melbourne men (43%). Within centres, the most common reported source of support was the provision of food by family members. This was more evident in Spata (M 55%, F 73%) than in Melbourne (M 35%, F 60%).

Table 4.3.8.2a

Question Eco104
Do you receive any other forms of assistance (other than money)?

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
Yes	50.0	73.7	31.8	42.9
No	50.0	26.3	68.2	57.1
WOMEN				
N	31	22	59	36
Yes	58.1	86.4	44.1	77.8
No	41.9	13.6	55.9	22.2

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: Spata nil; Melbourne 80+.

Age group differences: Spata men and women; Melbourne women. Centre differences: men 80+.

Table 4.3.8.2b

Question ECO104Yes
If yes, what sort of support do you receive?

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
food	46.9	63.2	28.8	42.9
clothing	37.5	42.1	27.3	39.3
shelter	25.0	47.4	27.3	35.7
medication	18.8	42.1	27.3	39.3
transport	34.4	57.9	28.8	46.4
WOMEN				
N	31	22	59	36
food	54.8	90.9	44.1	77.8
clothing	41.9	81.8	42.4	75.0
shelter	41.9	77.3	42.4	75.0
medication	48.4	72.7	42.4	75.0
transport	51.6	72.7	42.4	77.8

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: Spata 80+; Melbourne 80+.

Age group differences: Spata men and women; Melbourne men and women.

Centre differences: men 80+.

The interviewer assessed the adequacy of the subjects' material needs (food, shelter, transport, small luxuries) (see Table 4.3.8.2c). More than 80% of the elderly in both centres had most of their needs met. However, only 50% of the elderly were assessed as being able to afford small luxuries. According to the interviewer assessment, the Melbourne elderly appeared better off (not significant) with 100% having most needs met.

Table 4.3.8.2c

Interviewer: Which of the following needs in your opinion are being met?

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
food	93.7	84.2	100.0	100.0
housing	93.7	89.5	100.0	100.0
clothing	87.5	84.2	100.0	100.0
medication	90.6	89.5	100.0	100.0
small luxuries	53.1	42.1	65.2	50.0
WOMEN				
N	31	22	59	36
food	83.9	90.9	94.9	100.0
housing	87.1	90.9	100.0	94.4
clothing	80.6	90.9	100.0	100.0
medication	83.9	90.9	100.0	97.2
small luxuries	58.1	50.0	62.7	69.4

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: nil. Age group differences: nil. Centre differences: nil.

The elderly were asked to assess whether they believed they had enough money or other help for food, housing and clothing (see Table 4.3.8.2d). Only 12% of men and women indicated they did not have enough, 44% felt they had 'just enough' and 44% believed they had 'more than enough'. Gender, age group and centre differences were not seen.

Table 4.3.8.2d

Question ECO105
Thinking about how you live, would you say you had enough money
or other help for food, housing, clothing etc.?

	SPATA		MELBOURNE	
	70 - 79 (%)	80 + (%)	70 - 79 (%)	80 + (%)
MEN				
N	32	19	66	28
No, I do not have enough	12.5	10.5	9.1	10.7
Yes, I have just enough	50.0	47.4	53.0	35.7
Yes, I have more than enough	37.5	42.1	37.9	53.6
WOMEN				
N	31	22	59	36
No, I do not have enough	9.7	18.2	15.3	5.6
Yes, I have just enough	51.6	40.9	30.5	44.4
Yes, I have more than enough	38.7	40.9	54.2	50.0

Chi-Square was used to test for differences in question responses (general associations) between gender, age group or centre, significance level at 5%.

Gender differences: nil. Age group differences: nil. Centre differences: nil.

4.4 DISCUSSION

Spata is a semi-rural town located 20km from Athens. The traditional Greek culture, including the types of foods eaten and the rural lifestyle, was evident in this town, which would act as a good standard to determine degree of acculturation by migrant Greeks to Melbourne. The majority of Greeks migrating to Australia came from rural villages.

In Spata, the total population was about 10 000, of which 7% (44% men, 55% women) were aged 70+. For every 100 women, there were 79 men aged 70+. In Melbourne, at the 1986 census (ABS, 1991) there were 137,640 in Victoria who claimed Greek ancestry, of which 65,515 were born in Greece. The percentage of Greek-born elderly in Victoria in 1986 was considerably lower (65+ 6.3%, 70+ 2%) than the total percentage of elderly in Victoria (65+ 11.6%, 70+ 7.7%, 80+ 2.3%). There is a slightly higher proportion of Greek-born males (50.7%) than females (49.2%) aged <75 years which is in contrast to the wider Australian population (males 49.3% women 50%). This distinctive pattern of age structure has its source in post-war migration patterns, with more men than women coming to Australia. However, the reverse is seen in the 75+ age group in Greek subjects (69 men to every 100 women). Nevertheless, in comparison to Australian-born men aged 75+ (53 men to every 100 women) there is a greater proportion of Greek men in this age group (ABS, 1991; Cozzi, 1988).

The ratio of elderly (>70yrs) men to women was highest amongst Greeks in Spata (79:100), followed by Greeks in Melbourne (69:100) and Australian-born (53:100). This may explain the high proportion of men to women obtained in both Spata and Melbourne. Furthermore, it suggests that Spata men live longer or are healthier than Greek men in Melbourne (see chapters 5 and 11).

Similarly in the AIMA (1984) and ACOTA surveys (1981), of representative samples of elderly Australian immigrants, the ratio of men and women was 101.6% for non-English speaking immigrants compared with 77.4% for immigrants from English speaking countries and 63.3% for Australian-born. The researchers indicate that this reflects the predominance of male workers among early immigrants of the post-war immigration programme (McCallum 1990).

The representativeness of the samples was checked by calculating the *response rates* and by comparing the *sample gender ratios* and *age group distributions* in two age brackets (70-79 and 80+) with the *wider elderly Greek community* in Spata (electoral rolls) and Melbourne (census data). *Geographic distribution* of the Melbourne sample was also checked for representativeness against census data to determine if certain suburbs of Melbourne had been over or under sampled.

The gender proportions and age group distributions of the Spata sample were not significantly different to the wider elderly community. Furthermore, the response rate was high (89%), suggesting that the sample was representative of the wider elderly community in Spata.

In the Melbourne sample, the age group distribution of the men did not vary significantly from the wider elderly Greek community in Melbourne (ABS, 1986). However, there were significant differences at the 5% level between the women aged 70-79 in the sample (31%) and the census data (43%), indicating undersampling of women in this age group. Nevertheless, the response rate was high (84%), the geographic distribution of the sample and mean length of stay (30 years) was not significantly different to the census data. Therefore, the Melbourne sample appeared to be representative of the wider elderly Greek community in Melbourne, although caution may be needed in extrapolating results of the women to the wider community.

The length of stay by migrants in a new country can also be an important confounding variable in an epidemiological study; the longer the exposure to the new environment the greater the potential for dietary acculturation (Webb and Manderson, 1990). About 84%

of the Melbourne sample had been in Australia for more than 20 years which was also similar to the ABS data (85%) for the total Greek-born population in Victoria.

The mean age of the men and women in the total sample was 77 both centres. The samples were also similar with respect to age (70-79 60%, 80+ 40%) and gender distribution (M 49%, F 51%). The similarities in gender and age group distribution within centres would facilitate statistical comparisons of nutritional and non-nutritional variables between centres.

In both Spata and Melbourne, 80% of the men and 40% of the women were married and 12% of the men and 60% of the women were widowed. In other studies from Greece, similar proportions of married (M 84%, F 50%) and widowed (M 13%, F 45%) subjects were reported from representative samples of elderly Greeks (Euronut-Seneca study, de Groot et al., 1991). The marital status of the subjects and therefore living arrangements may play an important role in determining health and nutritional status (see chapter 6).

The level of education in the Spata and Melbourne samples influenced the methodology of the study. In Spata, 55% of the women and 8% of the men had never been to school compared with 32% of the Melbourne women and 9% of the men. Due to the low level of education and literacy, the questionnaire for the study had to be interviewer administered. However, it appears that more educated women and men migrated to Australia - about 37% of the men and 20% of the women in the Melbourne sample had finished primary school which was significantly greater than Spata elderly (M 25%, F 2%). A higher level of education in migrant Greeks has also been observed by Powles et al (1988a,b) in the Levkadian Health Study. In other studies from Greece, similar proportions of Greek elderly had never been to school (M 3%, F 40%) compared with Spata elderly (M 6%, F 56%) (Euronut-Seneca study, de Groot et al., 1991).

In the past, the diets of southern Greeks and islanders was characterised by the large proportion of olive oil, legumes and fish (southern-style cuisine). This is in contrast to the diets of northern Greeks which was lower in olive oil, legumes and fish but higher in meat and pork fat (see chapter 8). By identifying the region of birth of the study subjects, this would indicate the type of dietary exposure they had as children and as young adults prior to migration. Differences in dietary exposures may be important confounding variables when comparing the current health status and food intake of elderly Greeks in Spata and Melbourne.

The majority of elderly in Spata (80%) were born and raised in the rural lifestyle of Spata and exposed to the 'southern-style cuisine'. In the Melbourne sample, 83% came from rural parts of Greece. About 30% were from northern Greece, 30% from the islands, 15% from the south, 15% from Cyprus and the remaining 10% from Egypt, Asia Minor and Athens/Thessaloniki, with only one subject born in Australia. Overall, a similar proportion of the Melbourne sample (70%) had been exposed to the 'southern style cuisine' compared with Spata elderly. This suggests that the differences in health status and food intake between centres is probably not related to different dietary exposures in early adulthood since the majority of subjects were exposed to the high olive oil, legume and fish diet.

The Spata elderly have origins in a truly rural lifestyle. Spata today is still considered semi-rural with many elderly subjects participating in 'rural' activities. The Melbourne elderly also had origins from rural Greece but in Melbourne they are living an 'urban' lifestyle. These differences in lifestyles should be highlighted as they may play an important role in explaining health, lifestyle and dietary differences between Spata and Melbourne elderly.

Urbanization is one of the most pressing changes for young and old alike, having a major impact on both lifestyle and nutrition. World Health Organization statistical data suggests that mortality is primarily influenced by socioeconomic development measures such as urbanization, industrialization and education, and secondarily by such public health measures as access to safe water, adequate nutrition, and health services (Rogers, 1989). Urbanization can also create structural disruption and social disintegration which are contributors to a disease-producing environment. These processes may operate in part, through changes of the food supply (Griffin, 1975).

Past and current employment is not only an indicator of financial status, but more importantly provides information about lifestyle and exercise levels. The majority of Spata elderly (78%) had spent most of their working life as farmers and more than 80% were still 'working' (unpaid) seasonally as farm hands, usually during grape harvest. In contrast, only 42% of Melbourne women and 30% of men had worked as farmers - the majority of the sample had spent most of their working life in sedentary manual labour, mostly in factories. Only one Melbourne woman and 17% of men were still in paid employment. This suggests that Spata elderly should be 'fitter' and 'leaner' than Melbourne elderly (see chapters 5, 11).

An assessment of economic status in the elderly usually includes questions on annual income, sources of income (including home production), support by family, and perceived adequacy of financial status. However, in the elderly, annual income does not necessarily reflect economic status, particularly if support is received from other sources (e.g provision of meals by family). Therefore, more emphasis should be placed in obtaining information on sources of material and financial support and perceived adequacy of the support (Fillenbaum, 1984).

The elderly form the largest group in poverty in Australia, and in the US - about one sixth of the elderly have incomes below federally established poverty levels (Horwath, 1989a). Socio-economic status, has therefore been one of the factors most frequently studied in relation to the dietary intake of elderly people. The majority of studies show a positive relationship between lower income and poor dietary intake (Horwath, 1987; Yearick et al., 1980; Slesinger et al., 1980). Socio-economic status can affect dietary intake via a range of factors from nutritional knowledge, food preferences and perception of the social prestige of foods, to life-style and the ability to purchase foods. The low income groups have been characterised by a lower consumption of high-fibre and vitamin C-rich foods and a higher intake of saturated fat, cholesterol and salt (Horwath, 1989a).

In the current study, there was a significantly greater proportion of women (43%) relying on one pension as a major source of income compared to the men (13%). Financially, the women appeared less well off than the men. This has also been reported in other studies on elderly people (Wahlqvist et al., in press). Furthermore, a significantly greater proportion of women (70%) reported receiving support (other than money) compared with the men (40%). The most common reported source of support was the provision of food by family members, especially in Spata (M 55%, F 73%) compared with Melbourne (M 35%, F 60%).

The interviewer assessed the adequacy of the subjects' material needs (food, shelter, transport, small luxuries). More than 80% of the elderly in both centres had most of their needs met. However, only 50% of the elderly were assessed as being able to afford small luxuries. Overall, the Melbourne elderly appeared better off than the Spata elderly, and the women appeared worse off than the men. This information suggests that Melbourne elderly may have better nutritional status than Spata elderly and that the men may have a greater nutrient and food intake than the women (see chapters 7 and 10).