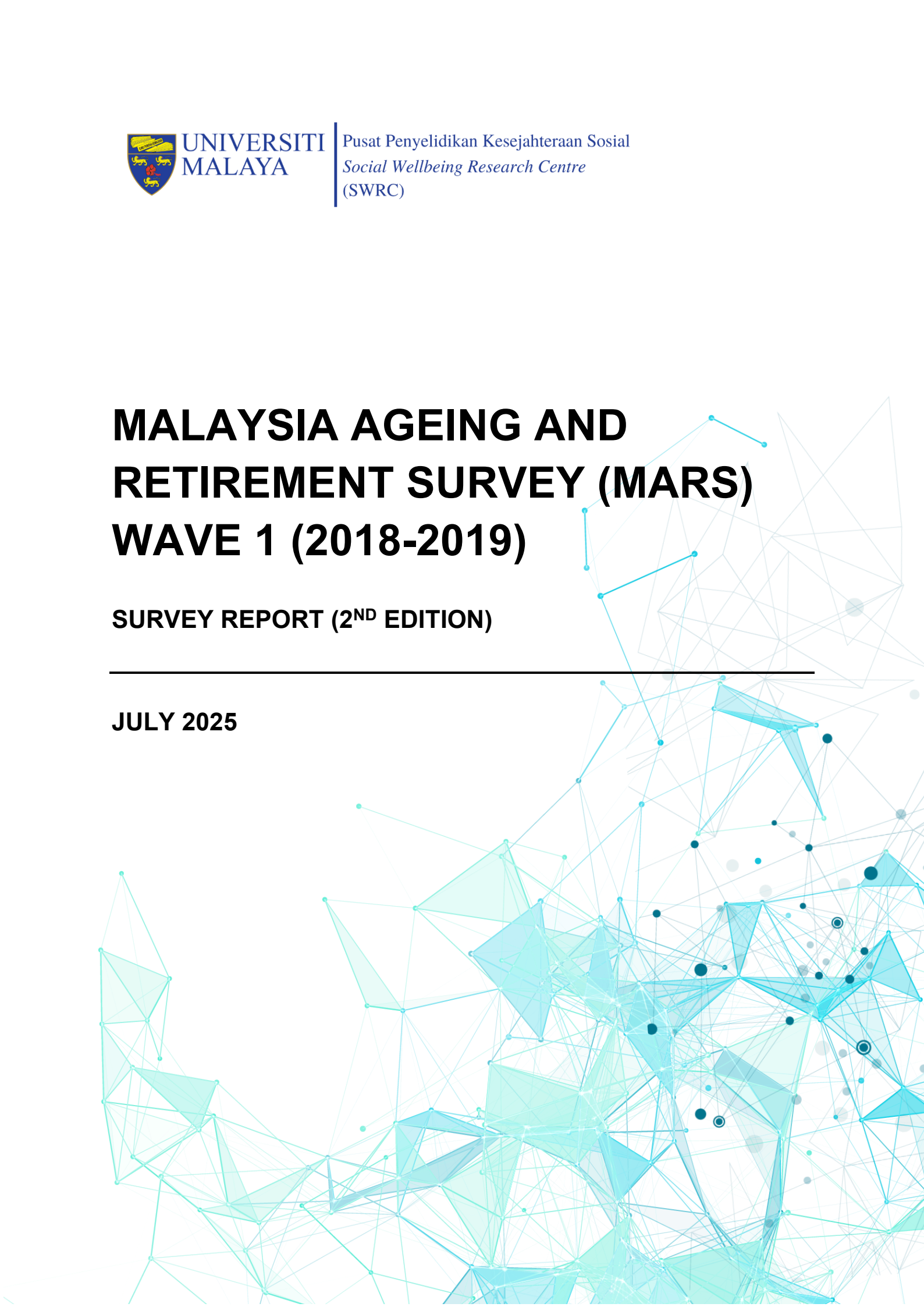
UNIVERSITI MALAYA
Pusat Penyelidikan Kesejahteraan Sosial
Social Wellbeing Research Centre
(SWRC)

MALAYSIA AGEING AND RETIREMENT SURVEY (MARS) WAVE 1 (2018-2019)

SURVEY REPORT (2ND EDITION)

JULY 2025



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PREFACE

This is the second edition of the report on Malaysia Ageing and Retirement Survey (MARS) that was conducted by the Social Wellbeing Research Centre (SWRC) in 2018/2019. MARS is one of SWRC's flagship projects, an ambitious undertaking with the objective to promote research on ageing related issues, share MARS data within the scientific community and offer evidence-based policy recommendations and strategies for healthy and active ageing Malaysia to relevant stakeholders. In this report, we provide an overview of MARS Wave-1 with additional analyses on the main components across the different sub-groups of the sample.

The idea of collecting empirical data on older persons was mooted much earlier given the importance and absence of such data in the country. National and international experts were consulted on the viability and sustainability of a large-scale longitudinal study as it requires huge financial and other resources commitment. These experts include Professor Robert Holzmann and Professor Naohiro Ogawa, former chairholders of SWRC, Professor David Weir, Principal Investigator of Health and Retirement Survey (HRS), University of Michigan, Professor Axel Börsch-Supan, Principal Investigator of Survey on Health, Ageing and Retirement Europe (SHARE) and Professor Hidehiko Ichimura, Principal Investigator of Japanese Study on Aging and Retirement (JSTAR). Local subject matter and survey experts engaged include Dr. Tey Nai Peng and Dr. Ng Sor Tho, Faculty of Economics and Administration, Universiti Malaya (UM), Professor Sarinah Low Abdullah and Professor Noran Naqiah Mohd Hairi, Faculty of Medicine, Universiti Malaya (UM) and the Department of Statistics Malaysia. With financial and technical support from the Employees Provident Fund (EPF) and the Survey Research Center, University of Michigan. Work on MARS project officially started in November of 2017 and data collection for MARS Wave-1 was completed in June 2019.

MARS collects information on various aspects of an adult life and experiences involving household members aged 40 years and above. The questionnaire contains 400 over questions covering five main components that include demographic and family background, health and healthcare utilisation, psychosocial and outlook on life, work and employment, income, savings, and assets. In addition to the traditional questions, physical measurement of height, weight, waist and hip circumference, grip strength and blood pressure were measured during the field interviews. Information on all these components were collected and recorded using the Computer Assisted Personal Interviewing (CAPI) method.

One of the objectives of MARS is to generate a longitudinal dataset on middle-aged and older Malaysians that is comparable with other similar studies to enable scientific investigation on ageing related issues from an international perspective. Subsequently, MARS became a member of the Gateway to Global Aging, a platform for population survey data on ageing around the world with its secretariat at the University of Southern California. Being the latest addition to this global platform, we have learned a lot from the experiences of our sister studies, from the planning of MARS project to designing the survey instrument, training of field interviewers, and in conducting the actual fieldwork.

MARS project would not have materialised without the support of many organisations and individuals. We would like to express our utmost gratitude to the Employees Provident Fund (EPF) for believing in MARS and providing the necessary funding. Our heartfelt thanks to the Survey Research Center, University of Michigan for the technical support for CAPI development, training and data management. The collaboration, made possible through an MOU between Universiti Malaya and University of Michigan, has enabled three SWRC's researchers to participate in the training of enumerators in Michigan in March 2018 and two Survey Research Center's technical experts to assist SWRC in conducting similar training in UM in June 2018. The technical support provided to SWRC continued throughout the field survey and data management through weekly virtual meeting. We would also like to thank the Department of Statistics Malaysia (DOSM) for providing the enumeration blocks and household samples based on the population and sampling frame of 2010 Population and Housing Census.

MARS data collection would not have been completed without the tireless efforts and dedication of our field interviewers as well as the willingness and trust of the respondents to participate in the survey. The experience of going to the ground, meeting respondents from all walks of life, capturing how they perceive, think and value things in life had a lasting impact on our own perception and thinking about life. We owe a big thank you to all the respondents of the survey without which, valuable information on various aspects of ageing would not have been obtained.

This report presents some preliminary analyses of MARS baseline data with further analyses on selected components across the various demographic and socio-economic variables. This is only a first step in our efforts to have a better understanding of ageing issues surrounding mid-aged and older persons in Malaysia. In-depth analyses will be performed to examine these issues with the hope that they would shed some light which could stimulate further research and engagements within the scientific community. We hope that you will be as excited as we are, by the rich potential of the current MARS data and its subsequent waves in the foreseeable future.

Norma Mansor & Halimah Awang
Principal Investigators

ABBREVIATIONS

ADL	activity of daily living
BMI	body mass index
BR1M	*Bantuan Rakyat 1 Malaysia*
BSH	*Bantuan Sara Hidup*
CAPI	computer-assisted personal interviewing
COVID-19	coronavirus disease 2019
DOSM	Department of Statistics Malaysia
EB	enumeration block
HRS	Health and Retirement Survey
IADLs	instrumental activity of daily living
ISR	Institute for Social Research
JSTAR	Japanese Study of Aging and Retirement
MARS	Malaysia Ageing and Retirement Survey
NGO	non-governmental organisation
SHARE	Survey of Health, Ageing and Retirement Europe
SRC	Survey Research Center
SWRC	Social Wellbeing Research Centre

EXECUTIVE SUMMARY

Malaysia Ageing and Retirement Survey (MARS) was launched in 2018 to produce nationally representative data on issues related to ageing. MARS was motivated by the fact that Malaysia is heading towards an ageing society and realising the importance of having such data for the formulation and implementation of relevant policies.

MARS collects comprehensive information on various aspects of personal life and experiences of people aged 40 years and above in Malaysia. MARS baseline data consists of 5,613 sample respondents with a response rate of 84% and is comparable with other international family surveys such as Health and Retirement Survey (HRS) in the US and Survey of Health, Ageing and Retirement Europe (SHARE) involving more than 20 countries in Europe.

Female account for about 56% of the total respondents and those aged 60 years and above comprise about 41%. Majority are married with the proportion of married respondents decreasing with age. A high proportion of the respondents live with at least one family member (84%) while respondents living with spouses only and those living alone comprise about 12% and 4%, respectively.

About 48% of the respondents have 2-4 living children and 35% have at least 5 living children with 80% of them reported that at least one child lives together with them. The data shows there are active transfers between respondents and children in both directions. About 68% of the respondents receive some form of support from their children with 45% receiving both financial and non-financial support while 43% reported giving both financial and non-financial support to their children. More respondents receive financial support as age increases while the opposite is true of those giving financial support.

Among married respondents, majority (75%) reported having a very close relationship with their spouses and having equal say in decisions about major family issues (62%). About 77% of the respondents admitted their spouses often/always understand how they feel about things and 69% can often/always open to their spouses to talk about their worries. About 15% reported their spouses make too many demands.

Respondents who are currently working comprise about 39%, homemakers 37% and those retired or no longer working 19%. The proportion of working respondents is higher among male (59%) than female respondents (23%). Expectedly, the proportion of those working gradually declines with age. Among those who are working, the highest proportion is in agricultural, forestry and fishery related jobs (21%), followed by elementary occupation (19%) and service and sales worker (15%). About 26% of working respondents cited they will work until their health fails while 33% have not given much thought about retirement.

Among respondents who are retired, the main reason for them to retire is reaching mandatory retirement age (42%) and health condition (22%). When asked about life in retirement, 47% are very satisfied and 38% are moderately satisfied. In comparison to before retirement, 43% of the respondents reported that their life now is better while 20% is worse than before.

Majority of the respondents receive some form of income (60%), 75% among male and 48% among female respondents. Top three sources of income include salary or income from business (50%), subsidies/cost of living allowance from government (40%) and pension (14%). A large proportion of the respondents (77%) receive monthly income of less than RM2000, with 49% receiving less than RM1000 per month.

In terms of monthly expenditure, the highest proportion of respondents spent on groceries (82%) followed by electricity and water (77%), telecommunication (71%) and personal care (70%). The median amount spent on groceries and food is RM350 per month, transportation RM150, house repairs and utilities RM119. About 38% of the respondents reported they are the one managing their household finances, 30% are managing together with their spouses and that 45% of them admitted they are managing their household finances well/very well.

About half of the respondents have some savings (50%) and assets (52%). The proportion of respondents having savings is slightly higher among male (53%) than female respondents (48%) and higher among urban (55%) than rural respondents (42%). However, the total amount of savings is very low, with a median of RM10,000. Similarly, male respondents reported a higher proportion of asset ownership than female respondents while the trend reverses by locality, with rural respondents (58%) reporting higher asset ownership compared to urban respondents (49%). The median value of their assets, which include mainly property and land, is RM180,000.

Slightly more than half of the respondents (51%) reported they are in good health and that self-rated health declines with age. However, about 58% have at least one doctor-diagnosed disease with hypertension topping the list (64%) followed by high cholesterol (37%) and diabetes (34%). About 16% of them have all three diseases.

Physical measurements were taken during field interview which include blood pressure, height, weight, waist and hip circumference indicates. Based on the blood pressure readings measured during the field interview, approximately 42% of the sample respondents have hypertension. These respondents could come from both who have been doctor-diagnosed and have not been doctor-diagnosed. Measurements of weight and height indicates that 38% of the respondents are obese, male 31% and female respondents 43%. The waist circumference measurement shows 71% of the respondents are abdominal obese, male 56% and female respondents 82%.

About 74% of the respondents have gone for medical check-up in the past 12 months, of which 98% did general health screening, 28% cholesterol test and 8% pap smear. Nearly all respondents had visited a doctor for outpatient treatment in the past 12 months while 11% had been hospitalised in the same period. Reasons for hospitalisation include heart diseases (13%), ulcer/other gastrointestinal disorders (9%), hypertension (8%), diabetes (7%) and asthma (7%). Majority of respondents utilise government healthcare facilities for outpatient treatment, medical check-up and hospitalisation. Only a small proportion of the respondents are covered under private health insurance (15%).

In terms of activities of daily living (ADLs), approximately 1-7% of respondents need help with climbing stairs (7%), grooming (2%) and getting in-and-out of bed (2%) while 5-33% need help with instrumental activities of daily living (IADLs) especially driving (33%), visiting friends/family (21%) and shopping (19%).

For cognition, respondents were first asked to rate their memory and answer simple arithmetic, immediate and delayed word recall and general knowledge. A composite score of cognition was computed and normalised to 100 which generates a mean of 57 for the whole sample and that cognitive functioning mean score declines with age from 63.1 among respondents aged 40-49 to 34 among those aged 80 and above.

With regards to attitudes towards life, majority of respondents often/always feel in tune with people around them (79%), people they are close to (79%), people who understand them (73%), feel part of the group (73%), people they can turn to and talk to (73%). Only a small proportion feel isolated (4%), lack of companionship (10%), lonely (11%). Majority agreed that they can still contribute to society (78%)

and that they are financially independent (71%). However, 75% of the respondents are not prepared to live in assisted living facilities such as nursing homes while 80% agreed that government should make it mandatory for adult children to look after their aged parents.

1 INTRODUCTION

1.1 The World is Ageing

Population ageing is experienced by virtually every country in the world as indicated by the steady increase in the number and proportion of older persons over the past decades. Within a span of 35 years, the world's population aged 60 years and above is projected to increase from 909 million in 2015 to 2.1 billion by 2050, with the increase in proportion nearly double from 12% to 22% (United Nations, 2024b). A total of 62 million persons were aged 65 or over in 2015 and projected to double to 158 million in 2050 (United Nations, 2024b). It is also estimated that 1 in 10 persons in the world in 2015 was over the age of 65 and that the ratio will increase to 1 in 6 persons or 16% in 2050 (United Nations, 2024b). In the South-Eastern Asia region, approximately 6.1% of the population were aged 65 and above in 2015, increasing to 7.1% in 2020. This proportion is projected to rise significantly to 16.3% by 2050. Japan, one of the fastest-ageing countries in the region, had 28.9% of its population aged 65 and above in 2020, a figure expected to reach 37.5% by 2050 (United Nations, 2024b). Survival beyond age 65 is improving globally, but more concerning is the rapid acceleration of the ageing population. Statistics indicate that global life expectancy at age 65 steadily increased from 15.5 years in 2000 to 17.4 years in 2019. Although a slight decline was observed during the COVID-19 pandemic in 2020 and 2021, life expectancy at age 65 rebounded to 17.6 years by 2023 (United Nations, 2024a). In other words, individuals aged 65 in 2023 are expected to live, on average, for another 18 years.

The changing in demographic profile of the world, with ageing population on the increase, has led to many important social and economic implications. While there are variations in the structure and pace of ageing across regions and countries, the rising trend has posed challenges to not only the older persons themselves as they are becoming more dependent on the younger working age group but also governments will have to withstand fiscal and political pressures due to the increasing demand for social protection which includes goods and services such as housing, transportation, healthcare, and pensions as well as family structures and intergenerational ties. Certainly, there has been a growing interest and debate on various issues related to population ageing. On one hand, it has been argued that population ageing has substantial impact to diminish the productive capacities of national economies. On the other hand, studies seemed to suggest that any negative effect on economic growth is likely to be no more than modest (Bloom et al., 2010; Boersch-Supan & Ludwig, 2010). Across countries, older adults are increasingly seen as contributors to development, whose abilities to act for the betterment of themselves and their societies should be woven into policies and programmes at all levels. However, one common fact remains and that regardless of the effect on the economy as a whole, population ageing will lead to increased need for elder care and support, at a time when, in developing countries and especially so in Asian societies, traditional family-based care, which was once a common practice, has been on a declining trend over time.

Population ageing is the result of declining fertility and mortality and increasing life expectancy which raises concerns with respect to the wellbeing of older persons (Cherchye et al., 2012). Wellbeing is defined as a subjective perception of quality of life or life experience identified as the global perception of life satisfaction, combined with the predominance of positive over negative effects in daily life (Kahneman et al., 1999; Watson et al., 1988). As such, wellbeing is a complex construct, measured as a dynamic process encompassing multiple indicators including income, living conditions, physical and mental health, and the dimensions of perceived social coherence, actualization, integration, acceptance, and contribution (Hugo, 2011; Huta & Waterman, 2014; Prilleltensky & Prilleltensky, 2006). Wang et al. (2004) noted that measure of wellbeing is an important outcome measure in understanding the life experiences of older persons.

Perhaps nowhere in the world is this demographic transition as inevitable as in many parts of Asia, where unprecedented speed of population ageing is occurring at the same time as dramatic transformation in the social and economic spheres are taking place. Many low-income individuals in Asia and the Pacific, with few assets and unstable earnings, face vulnerability to economic crises, natural disasters, pandemics, and climate change. With the rapid changes, there is a clear need to enhance our understanding of the experiences and life histories of older persons, how their wellbeing will be affected as well as long-standing societal and familial arrangements that have been a vital part of old age support in the region. While population ageing is a cause for celebration as more and more people are living longer due to improvements in nutrition and health, societies must be prepared for the demographic shift to ensure that the wellbeing of older persons are taken care of to enable a more purposeful life during these extra years.

1.2 What about Malaysia?

Malaysia's population rose by 17.8% from 28.4 million in 2010 to 33.9 million in 2020 and projected to reach 38 million by 2030 and 41.5 million by 2040 (United Nations, 2024b). Malaysia is experiencing a change in demographic profile with a steady increase in the number of older population as well as its proportion to the total population and this can be observed from the population pyramids shown at four different points in time (Figure 1.1). From a very broad base consisting of bigger proportions of young people and declining sharply at older ages in 1950, the proportion of younger generation has become smaller and almost equal to the middle-aged group giving almost a straight shape of the population pyramid which tapers at the very old ages in 2050. The projected pyramid in 2100 indicates a slightly fatter shape at the very old age groups.

The median age in Malaysia is expected to increase from 26.3 years in 2010 to 38.3 years in 2040 while the population aged 65 years and above accounted for about 7% in 2020, making Malaysia an ageing nation (Department of Statistics Malaysia, 2022). Malaysia is projected to become an aged nation by 2044, with 14% of its population aged 65 and above and a super-aged nation by 2056, when this proportion is expected to reach 20% (United Nations, 2024b).

The life expectancy at birth for the total population is showing an increasing trend from 72.7 years in 2000 to 76.1 years in 2020 and 76.7 years in 2023 (United Nations, 2024a). The life expectancy at birth for males increased from 70.2 years in 2000 to 73.7 years in 2020 while for females, the life expectancy increased from 75.6 years to 78.8 years in 2020. In 2023, the life expectancy of both males and females were 74.3 and 79.4 respectively (United Nations, 2024a). Life expectancy at age 65 has steadily improved over the years, rising from 14.8 years in 2000 to 17.1 years in 2020, and reaching 17.6 years in 2023. Females aged 65 consistently have a higher life expectancy than their male counterparts. In 2000, life expectancy at age 65 was 15.8 years for females and 13.7 years for males, increasing to 18.4 years and 16.0 years respectively by 2020. By 2023, this further improved to 18.9 years for females and 16.4 years for males (United Nations, 2024a).

The current and expected future demographic realities warrant the country to address the short- and long-term considerations in facing major challenges to ensure sound and sustainable socio-economic, health and social care systems are ready for this demographic shift. While ageing is associated with biological changes and other life transitions such as a gradual decline in physical and mental capacity, susceptibility to diseases and ultimately death, a longer life brings with it opportunities for older persons to continue to be active and contribute to their families and communities.

Currently, there are three policies related to the wellbeing of older persons in Malaysia namely the National Health Policy for Older Persons 2008, the National Policy for Older Persons and Plan of Action for Older Persons 2011, and Physical Planning Guidelines for the Elderly 2013. While these policies act as the foundation for the welfare of older persons, not much attention is given to the promotion of active

ageing for Malaysia. To this end, the Malaysia Active Ageing Index (MAAI) was developed based on the Asian Active Ageing Index Framework proposed by Zaidi and Um (2019), using data primarily from the MARS (Tan et al., 2025).

Figure 1.1: Malaysia Population Pyramid (%)

1.3 The Need for a Longitudinal Study

Large scale longitudinal studies on crucial issues impacting the lives of mid-aged and older persons have been conducted worldwide in recent decades, more so in developed nations. For example, the Health and Retirement Survey (HRS) in the United States, which started its First Wave in 1992, has been continuing with subsequent waves every two years. The Survey of Health, Ageing and Retirement Europe (SHARE) started in 2002, covering more than 20 countries in Europe. Among the countries in Asia, China, Japan, Korea, India, and Thailand have joined these leading international groups in embarking on similar longitudinal studies. The Korean Longitudinal Study of Ageing (KLoSA), started in 2006, was followed by the Japanese Study of Aging and Retirement (JSTAR) which carried out its full-scale survey in January 2007. Both the China Health and Retirement Longitudinal Study (CHARLS) and

the Health, Aging and Retirement in Thailand (HART) were launched in 2015 while the Longitudinal Aging Study in India (LASI) in 2016.

While Malaysia is heading towards an older society and notwithstanding the increased recognition of the importance and relevance of population ageing, to date, there has been no longitudinal study conducted nationally to explore and understand these issues. Recent empirical research on topics related to population ageing in Malaysia have been documented (Mansor et al., 2018). Earlier studies were mostly conducted in specific regions or locations with limited coverage in terms of the areas of concern. The National Health and Morbidity Study (NHMS) 2018, is a cross-sectional nationwide study, specifically focused on elder health. The Longitudinal Study of Ageing in Malaysia (AGELESS) [formerly known as Malaysian Elders Longitudinal Research (MELoR)] is a multi-dimensional study which completed its first and only wave in 2015, covered Petaling Jaya and parts of Kuala Lumpur. The Retirement Preparedness and Productive Ageing among Government Employees and Retirees in Klang Valley conducted in 2018 is also a cross-sectional study.

Given the importance and the lack of availability of such data for formulation and implementation of effective mid- and long-term policies to address the trends that emerge amid population ageing, Malaysia Ageing and Retirement Survey (MARS) was initiated to fill this gap through a large-scale, nationally representative, longitudinal survey on ageing, health, and retirement. MARS aims to produce the data needed to understand the situation of Malaysia's older population, to formulate and implement policies that can protect and support the growing ageing community.

1.4 Objective of MARS

The main objective of MARS is to produce comprehensive micro-level data on various aspects of ageing and retirement impacting the lives of mid-aged and older persons which will provide useful input for policy making and strategy formulation for healthy and active ageing Malaysia and towards strengthening social protection system in the country.

Specific objectives of MARS:

1. To produce a comprehensive baseline data on the individual, family, social, economic and health of middle-aged and older persons
2. To collect longitudinal data on life histories and experiences of middle-aged and older persons over time so as to gain a deeper understanding of the issues and challenges related to retirement and ageing
3. To offer evidence-based recommendations on opportunities and policies to address the trends that emerge in the midst of population ageing in Malaysia
4. To be part of the global platform on retirement and ageing research comparable with similar longitudinal surveys that can provide the basis for policy making and academic studies.

1.5 Significance of MARS

The initiation of MARS began with a series of consultation involving local and international experts as well as key people of leading international research including HRS (Health and Retirement Survey, USA), SHARE (Survey of Health, Ageing and Retirement Europe) and JSTAR (Japanese Study on Aging and Retirement). MARS benefited much from these studies in terms of useful advice and input especially from HRS in the development of MARS study design, training, and technical support. This was made possible through an official Memorandum of Understanding between Survey Research Center, University of Michigan and SWRC of the Universiti Malaya in early 2018.

MARS will be a national landmark in scientific research that will provide a much-needed foundation for a better understanding of ageing related issues in Malaysia and designing appropriate evidence-based policies for adults and older persons. Due to its harmonised design with parallel international studies, MARS can learn and gain much from the experiences of other participating countries. At the same time, MARS will be able to contribute to scientific insights and policy development in those countries and be part of the conversation on how different societies, cultures and policies are preparing for their ageing population.

MARS is adapted from the HRS in the United States through a collaboration between SWRC, Universiti Malaya and the Survey Research Center, University of Michigan. The Survey Research Center provides support in the development of MARS study design, training, and technical assistance prior to, during and post-production of MARS data to ensure quality data as validated through regular monitoring of the fieldwork and random call backs. Over the years, HRS has inspired many similar studies worldwide with more than 35 countries on four continents undertaking HRS-type research. Hence, there are endless opportunities for MARS to widen and deepen research on the nature, implications, and emerging issues of ageing. While overall comparability with the HRS model was maintained, several changes were made to reflect the cultural, religious and realities of the local context, Malaysia.

Another key attribute of this research is the longitudinal setup which allows data on the same individuals to be assembled over an extended period, enabling researchers to follow their life histories and experiences and examine occurring changes and trends while at the same time have access to current data. Ageing is a continuous process. To understand that process and to track the movement of individuals through the various stages of life including employment, morbidity, disability, and mortality requires longitudinal data. In this sense, MARS is Malaysia's first-ever globally comparable panel survey data of mid-aged and older persons which will become a pivotal source for policy making on active and healthy ageing.

1.6 Sampling Framework

The baseline sample of MARS consists of individuals aged 40 years and above residing in all the states of Malaysia, including Sabah and Sarawak. Selection of sample was done by the Department of Statistics Malaysia (DOSM) based on the 2010 Population and Housing Census. The geographical areas in Malaysia were divided into Enumeration Blocks (EBs). Altogether, about 75,000 EBs were identified with each EB containing between 500 to 600 Living Quarters (LQs).

To ensure widest coverage possible across the country, each state was first stratified by urban and rural EBs. A multi-stage sampling procedure was adopted beginning with the selection of EBs in each stratum followed by selection of living quarters or households, and finally selection of household members as potential respondents according to age eligibility criterion.

The number of EBs selected in each state was based on proportionate allocation to the population size of the state and systematic sampling was used in the selection of EBs. This means that bigger number of EBs were allocated to states with large population size such as Selangor, Johor, and Sabah. Following the common practice, 10 to 12 households per EB were randomly selected to maintain heterogeneity of the sample representing the various sub-groups of the population. A list of selected EBs and LQs, also called households with addresses, referred to as sample IDs (SIDs), was provided by the Department of Statistics Malaysia (Table 1.1). For each SID, any member aged 40 or older who has lived in the household most of the time would be eligible to be selected as a respondent. Should there be more than one eligible member, a maximum of three oldest eligible members would be selected as possible respondents.

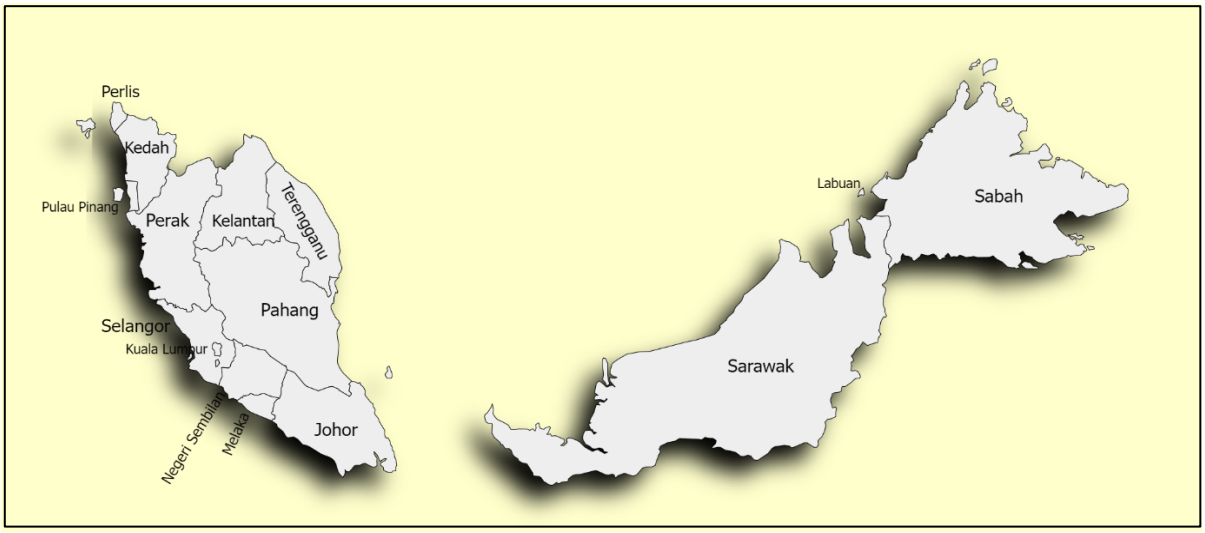

Figure 1.2: Map of Malaysia

A total of 900 EBs with a total of 9,542 households or sample IDs (SIDs) were received from the Department of Statistics Malaysia. The distribution by state shows Selangor, Sabah and Johor top the list in terms of the number of selected EBs and SIDs (Table 1.1).

Table 1.1: Distribution of EBs & SIDs by State

State	EBs	SIDs
Selangor	178	1,952
Sabah	107	1,080
Johor	105	1,240
Sarawak	77	770
Perak	70	780
Kedah	60	600
Federal Territories	58	580
Kelantan	52	580
Pulau Pinang	48	480
Pahang	47	470
Terengganu	34	340
Negeri Sembilan	31	310
Melaka	26	290
Perlis	7	70
Total	**900**	**9,542**

1.7 MARS Instrument

To enable comparability on the global platform, the development of the main components of MARS survey instrument was guided by JSTAR and HRS questionnaires, in consultation with its respective principal investigators. Subsequently, the interview topics and related questions were discussed among MARS research team members to examine in terms of applicability, suitability, and practicality of those questions in the local context. After much deliberation, MARS survey questions were completed for pilot test. A total of Two rounds of pilot tests were conducted, first using Paper Assisted Personal Interviewing (PAPI) then by CAPI, based on the revised version of MARS questionnaire to also test the CAPI SurveyTrak system.

MARS survey contains traditional questions and physical measurement. There are altogether 260 traditional questions covering five core components as shown in Figure 1.3. Physical measurements were administered on site during the field interview using standard protocols and procedures. The measurements taken from participating respondents include height, weight, waist and hip circumference, blood pressure and grip strength.

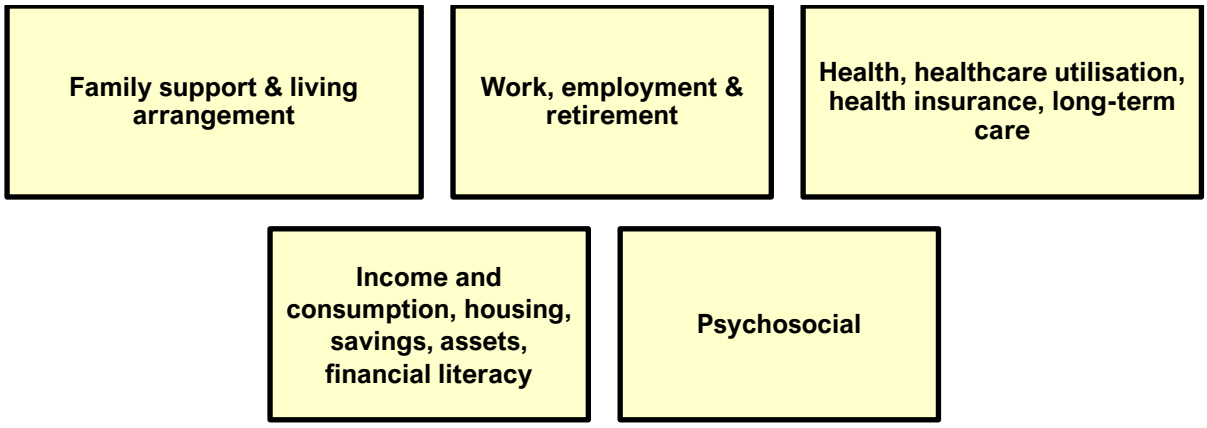

Figure 1.3: Core Components of MARS Survey Questionnaire

MARS survey questionnaire is divided into the following sections:

Table 1.2: MARS Survey Questionnaire by Sections

Section A: Background Information	(1) Birth information, age, sex (2) Ethnicity, religion, marital status, education (3) Native language, language spoken, language written (4) Living arrangement
Section B: Family Support and Transfer	(1) Living children including stepchildren and adopted children: • Personal details of children • Living arrangement of children • Contact with children • Support received from and given to children (2) Living parents and/or parents-in-law: • Personal details of parents and/or parents-in-law • Living arrangement of parents and/or parents-in-law • Contact with parents and/or parents-in-law • Support received from and given to parents and/or parents-in-law • Care for parents and/or parents-in-law (3) Living siblings including step siblings and adopted siblings: • Personal details of siblings • Living arrangement of siblings • Contact with siblings • Support received from and given to siblings
Section C: Health	(1) Health Status: • Overall health status • Pains and aches • Doctor-diagnosed diseases

	• Accidents, falls • Eyesight, hearing, oral health (2) Risk Factors: • Smoking habit • Alcohol consumption (3) Psychosocial: • Attitudes and perception about life • Emotional relationship with spouse • Personal, social and religious activities (4) Physical Activities: • Participation in vigorous, moderate and light physical activities • Activities of Daily Living (ADL) • Instrumental Activities of Daily Living (IADL) (5) Cognition: • Memory testing • Counting and simple arithmetic • General knowledge (6) Healthcare Utilisation: • Medical examination • Hospitalization • Health insurance (7) Physical Measurement: • Height, weight, waist and hip circumference • Blood pressure • Grip strength
Section D: Work, Employment and Retirement	(1) Working status, occupation, industry (2) Aspects of current job/employment (3) Retirement decision
Section E: Income and Expenditure	(1) Sources of income (2) Monthly expenditure
Section F: Savings and Assets	(1) Savings (2) House ownership (3) Assets

1.8 System Design

MARS data were collected through face-to-face survey using Computer-Assisted Personal Interviewing (CAPI) by trained field interviewers. The SIDs were released in batches to the field interviewers and to ensure that SIDs were aware of MARS project, letters were sent out a few weeks prior to the fieldwork. Among other information, the letter introduces what MARS study is all about, how SIDs are selected and the importance of their participation to the overall purpose of the study.

To conduct CAPI, trained field interviewers were equipped with laptop computers pre-loaded with the survey questions, structured in such a way that only one question appears on the screen at a time and allows the interviewers to directly input the responses on to the same screen. Use of CAPI allows for

efficient data entry, crosschecking of data in real time thereby minimizing data recording errors and ensuring internal consistency.

MARS CAPI uses a sample management system called SurveyTrak and survey processing tool called Blaise which were developed and programmed by the Technical Team from the Survey Research Center, University of Michigan. The software uses Malay and English for its language interface and questionnaire instrument. Hardcopy of MARS questionnaire in Chinese/Mandarin and Tamil were also provided for Chinese/Mandarin and Tamil speaking field interviewers, respectively. In addition to the data collected on the subject matter, contact observation by the interviewers were collected on the attitudes and behaviours of the respondents towards the survey, household surrounding and the community they live in. The experiences of the interviewers during the fieldwork were also recorded for purposes of para-data analyses and planning for future waves survey.

1.9 Ethical Considerations

Ethics approval was obtained from the Universiti Malaya's Research Ethics Committee (UMREC) (Reference No: UM.TNC2/UMREC – 341). Both verbal and written consent were obtained from the respondents during fieldwork prior to the survey interview.

1.10 Data Collection

A total of two pilot tests of MARS questionnaire were carried out. The first pilot of the final draft questionnaire was conducted in selected areas in and around Selangor using PAPI. Following the first pilot study, revisions were made to MARS questionnaire which was subsequently tested in selected EBs in four states namely Selangor, Johor, Kelantan, and Perak using CAPI. The second pilot survey was also to identify issues related to supervision of fieldwork and the CAPI interview system.

The data collection was carried out in August 2018 to May 2019 involving 150 trained enumerators. The first training, attended by about 100 participants, was conducted by SWRC in July 2018 with assistance from technical experts of the Survey Research Center, University of Michigan. Subsequent trainings were conducted in batches involving a smaller number of participants per training. On-site coaching was also conducted to assist enumerators needing help in conducting the interviews.

Most of the interviewers employed were fluent in at least two languages, Malay, and English. There were also Mandarin speaking and Tamil speaking interviewers to address Mandarin and Tamil speaking SIDs, respectively. Native speakers of local dialects of Sabah and Sarawak were recruited to conduct the survey in East Malaysia. About 84% of completed interviews were conducted in Malay, 7% in English, and less than 5% were conducted in Mandarin or other Chinese dialects with the remaining balance in Tamil and other dialects. On average, 4.8 attempts were needed to obtain one completed interview for SIDs located in urban areas and more attempts were required for areas beyond its vicinity.

1.11 Quality Control

To ensure quality data were being collected, the team regularly monitored the field progress of interviewers using para-data. Interviewer behaviours were observed in terms of the length of interview time, number of questions asked, number of negative or don't know responses. For example, interviewers who displayed tendency of short interview length and high negative response were closely monitored so that early intervention can be taken.

In addition, 10% of completed interviews were verified through call backs. These cases were selected using three approaches: (i) initial completed interview, (ii) random completed interview, and (iii) para-data completed interview. The first two selections were based on the overall interview order by field interviewers while the last selection was made based on field interviewers that displayed worrying or suspicious behaviour through their para-data.

Call-backs for verification were done through phone interviews where the respondents were asked questions to verify on the time and length of interview, location, background information, physical measurements and cash incentives received. Questions that were not captured during the actual interview were included to ascertain interviewer behaviour. For example, respondents were asked whether the interviews were conducted separately if there were multiple respondents. Respondents were also asked whether they have any comments regarding the field interviewer or the study itself.

MARS is Malaysia's first-ever globally comparable panel survey data of mid-aged and older persons which will become a pivotal source for policy making on active and healthy ageing.

2 MARS WAVE 1 RESPONDENTS

2.1 Sample Respondents

Of the total 900 EBs covering 9,542 SIDs, 7,387 SIDs were successfully tracked and visited, with 5,613 completed interviews. Table 2.1 shows the distribution of respondents by state.

Table 2.1: Respondents by State

State	No	Percentage (%)
Sabah	1,010	18.0
Selangor	763	13.6
Sarawak	587	10.5
Johor	569	10.1
Perak	509	9.1
Kedah	481	8.6
Kelantan	405	7.2
Pahang	366	6.5
Terengganu	267	4.8
Pulau Pinang	228	4.1
Negeri Sembilan	157	2.8
WP Kuala Lumpur	130	2.3
Melaka	82	1.5
Perlis	39	0.7
WP Labuan	11	0.2
WP Putrajaya	9	0.2
Total	**5,613**	**100.0**

2.2 Response Rate

The response rate was calculated as a ratio of the number of respondents who participated in the interview to the sum of respondents who participated and the number of respondents who refused to participate. In total, MARS sample consists of 5,613 respondents giving an overall response rate of 84%. The response rate by state is also presented in Table 2.2 and Negeri Sembilan has the highest response rate (89%).

$$\text{Response rate} = \frac{\text{Completed interview}}{\text{Number of respondents + Number of refusals}} = \frac{5{,}613}{5{,}613 + 1{,}059} = 84.1\%$$

Table 2.2: Response Rate by State

State	Response Rate (%)
Negeri Sembilan	89.4
Sabah	88.7
Perlis	88.6
Sarawak	87.5
Perak	87.4
Melaka	84.3
Johor	84.1
Kedah	83.7
Kelantan	83.7
Pulau Pinang	82.9
Pahang	80.9
Selangor	78.3
Labuan	74.3
Terengganu	72.9
WP Kuala Lumpur	71.8
Putrajaya	63.3

2.3 Profile of Respondents

The questions that are captured include core demographic information such as sex, age, ethnicity, place of residence, marital status, education, religion and other information in the context of a respondent's life. The information is important for the examination of certain variables such as employment, health and psychological wellbeing across the subgroups of the sample. For example, educational attainment has been shown to have a significant influence on employment, income, health and mortality (Almond et al., 2007; Hahn & Truman, 2015; Zajacova & Lawrence, 2018). Employment, lifestyle and accessibility to information and communication technologies may be dependent on the place of residence. Literature also shows that marital status may play an important role in older adults' health status and behaviours, social relationships, and quality of life (Gutiérrez-Vega et al., 2018; Rook & Zettel, 2005). Psychosocial wellbeing of older adults may be associated with religion and participation in religious activities while ethnicity is another important variable to be included in socio-economic research in the context of multi-ethnic Malaysia (Teh et al., 2014).

Demographic information that includes gender, age and relationship to the respondent were obtained on each household member residing with the respondent. In addition, information on demographic and socioeconomic characteristics of the respondent's living parents, children and siblings as well as respondents' relationships with them were gathered. Parents, children, and siblings defined in MARS data include biological, foster, step and adopted parents, children and siblings.

The distribution of the 5,613 sample respondents by gender, age, location and education level is shown in Table 2.3. Female constitutes about 56% and those aged 40-59 about 60% while 14% are aged 70 and above. Slightly more than three quarters of the total sample are married (78%) while widowed, divorced or separated comprise 18%. The remaining 4% of the respondents were never married. Majority of the respondents are from the urban areas (62%) and have at least lower secondary education (56%) while 14% have no schooling experience. Malay accounts for 56% followed by Other Bumiputera (22%), Chinese (11%), Indian (8%) and Non-Majority Group (2%) (Table 2.3). The Non-Majority Group includes respondents of mixed parentage and those with permanent residence status. In terms of

religion, Muslims comprised 71% followed by Christians (12%), Buddhists (10%) and Hindus (7%). 'Other' religion includes atheist and believers of other faiths (Table 2.3).

Table 2.3: Sociodemographic Background of Respondents

Variable	Frequency	Percentage (%)
Gender		
Female	3,119	55.6
Male	2,494	44.4
Marital status		
Married	4,353	77.6
Widowed	840	15.0
Never married	224	4.0
Divorced/Separated	195	3.5
Age		
40-49	1,500	26.7
50-59	1,827	32.5
60-69	1,476	26.3
70-79	636	11.3
80+	174	3.1
Place of residence		
Urban	3,455	61.6
Rural	2,158	38.4
Education Level		
No schooling	776	13.8
Primary school	1,715	30.6
Lower secondary	1,216	21.7
Upper secondary	1,341	23.9
Post-secondary/Tertiary education	564	10.0
Ethnicity		
Malay	3,181	56.7
Other Bumiputera	1,242	22.1
Chinese	624	11.1
Indian	452	8.1
Non-Majority Group	113	2.0
Religion		
Islam	3,957	70.5
Christian	661	11.8
Buddhist	530	9.4
Hindu	363	6.5
Other	101	1.8

2.4 Languages Spoken

About 57% of the respondents reported Malay as their native language, followed by other languages (24%), Tamil (7%), Other Chinese dialect (7%), Mandarin (3%) and English with less than 1% (Figure 2.1). Other languages comprise mainly of ethnic dialects of respondents in Sabah and Sarawak.

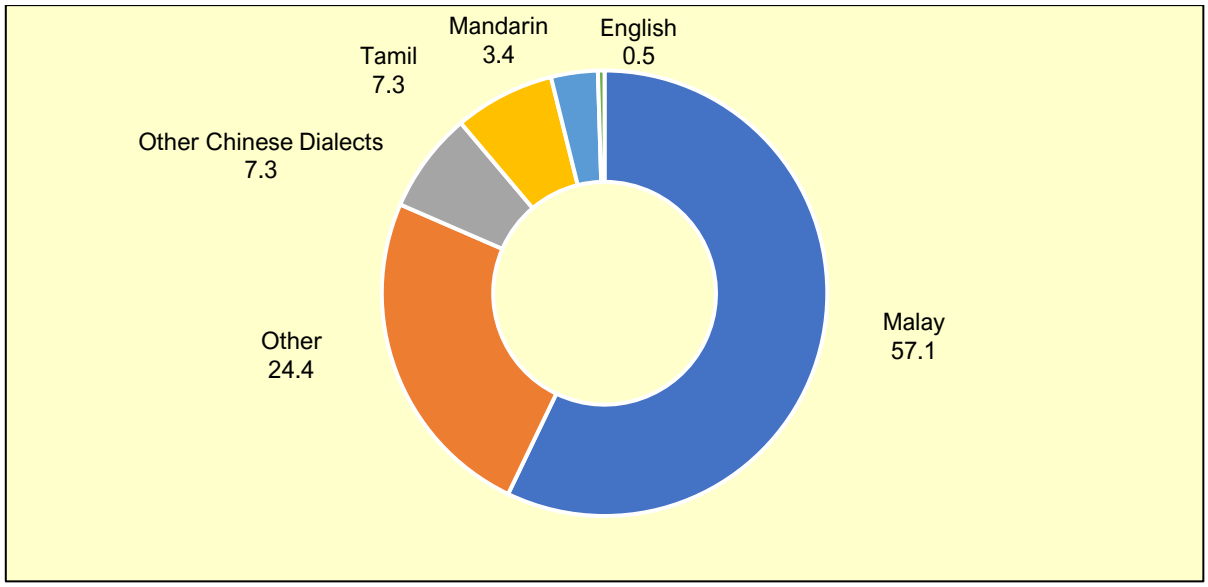

Figure 2.1: Native Language Spoken by Respondents (%)

Similar to the distribution of native language, Malay is the language used most at home as reported by about 65% of the respondents, followed by other languages, Mandarin and other Chinese dialects combined (Figure 2.2). The "Other" category (16%) primarily consists of ethnic dialects from Sabah and Sarawak such as Bajau, Melanau and etc.

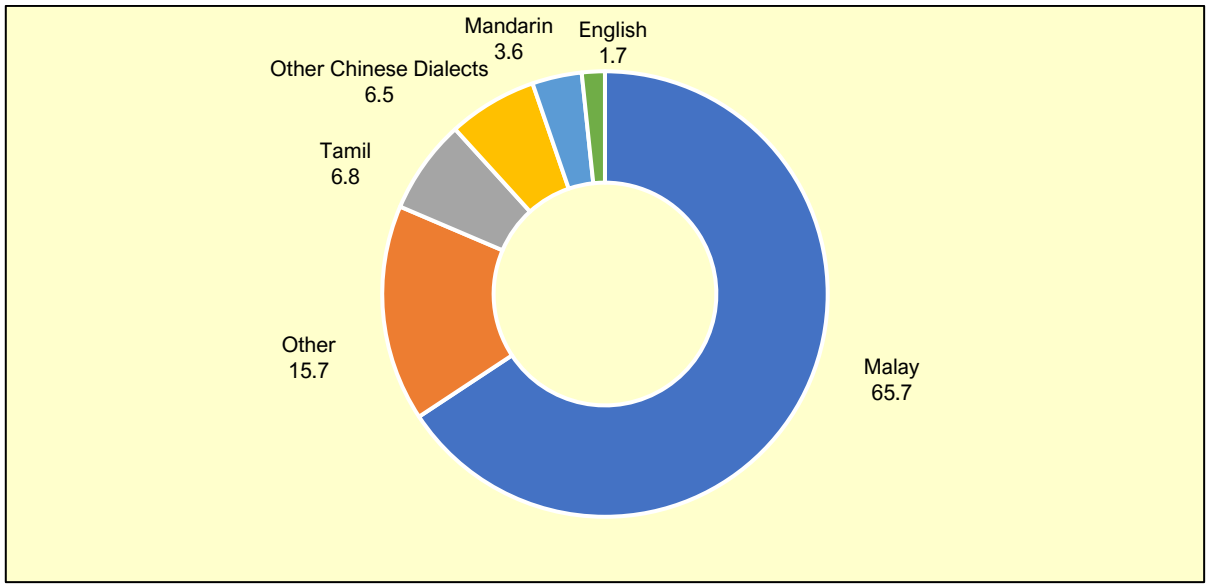

Figure 2.2: Most Commonly Spoken Language by Respondents (%)

3 FAMILY

In most cases, the relationships between older parents and their adult children remain intact over the life course through co-residence, contact, care, support, and assistance that are exchanged. These exchanges provide the foundation of sustainable bonding and reciprocal obligation, which is an important element in times of need especially so in the context of the wellbeing of older adults in later years. For instance, Abdul Aziz and Yusooff (2012) stressed on the importance of family and kinship network in strengthening intergenerational relationships.

One of the measures of intergenerational relationships is co-residence which is captured by the question on living arrangement. The living arrangement of respondents would provide useful information for detection of vulnerable groups for possible intervention. Bongaarts and Zimmer (2002) examined the living arrangement of older adults across 43 developing countries and found that co-residence with adult children is most common in Asia and that is more frequent with sons than with daughters. Studies have also shown that living arrangement of older adults is associated with their health status, wellbeing, life satisfaction and social support (Kooshiar et al., 2012; Teh et al., 2014).

3.1 Household Information

Overall, the average household size is four members per household while the highest proportion of respondents are in households consisting of size 2-3 members (35%) followed by households with 4-5 members (30%) and 6-7 members (19%). About 7% of the respondents reported they are from one member household while about 10% reported that their household consists of at least 8 members (Figure 3.1).

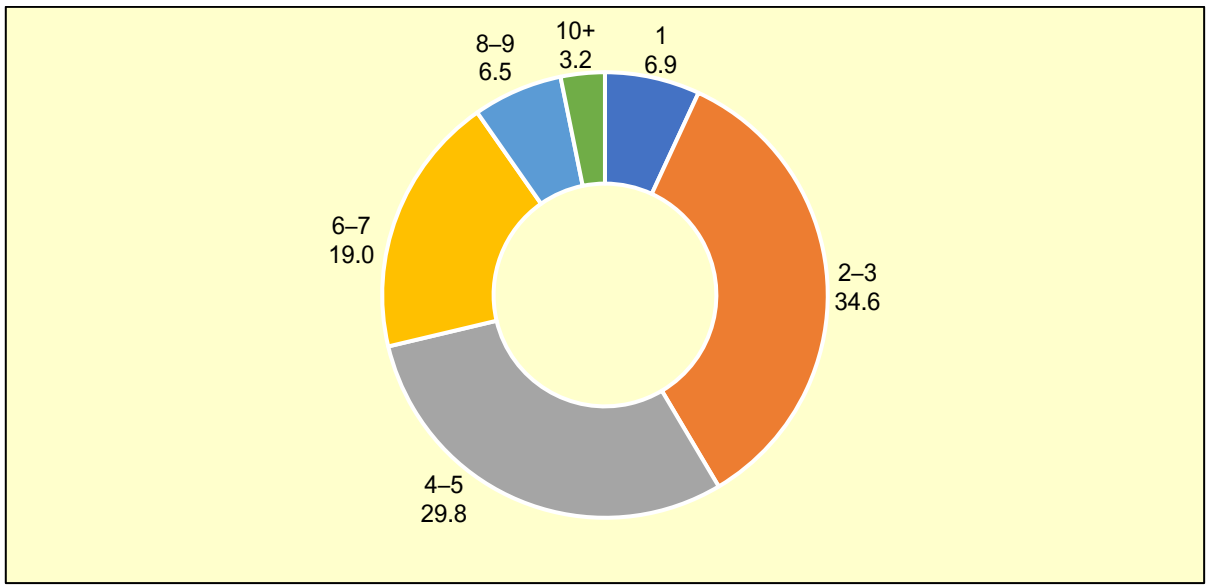

Figure 3.1: Household Size (%)

Majority of the households (64%) are single-generation household consisting of respondents living with parents/parents-in-law or with their children/sons and/or daughters in-law (Figure 3.2). Multi-generation households which include parents, grandparents, children, grandchildren as well as their respective in-laws account for 19%.

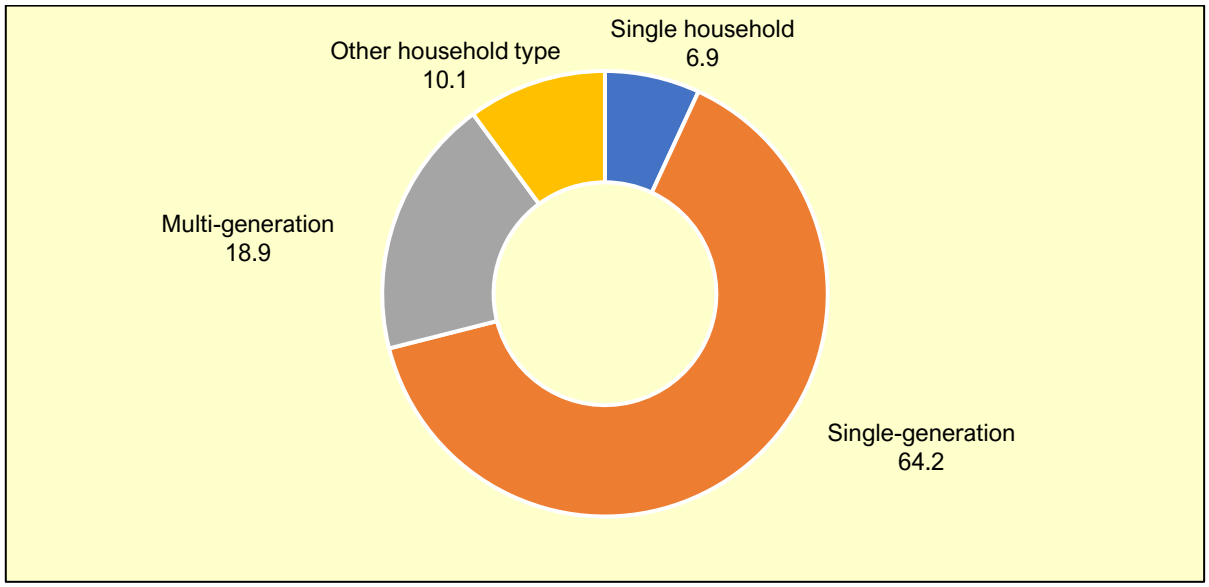

Figure 3.2: Types of Households (%)

Among multi-generation households, nearly all households consist of at least one child/adult child while 77% of the households comprise grandchildren. The proportion of households having spouses as members of the households is 61% while households with parents/parents in-law comprise about 25% (Figure 3.3).

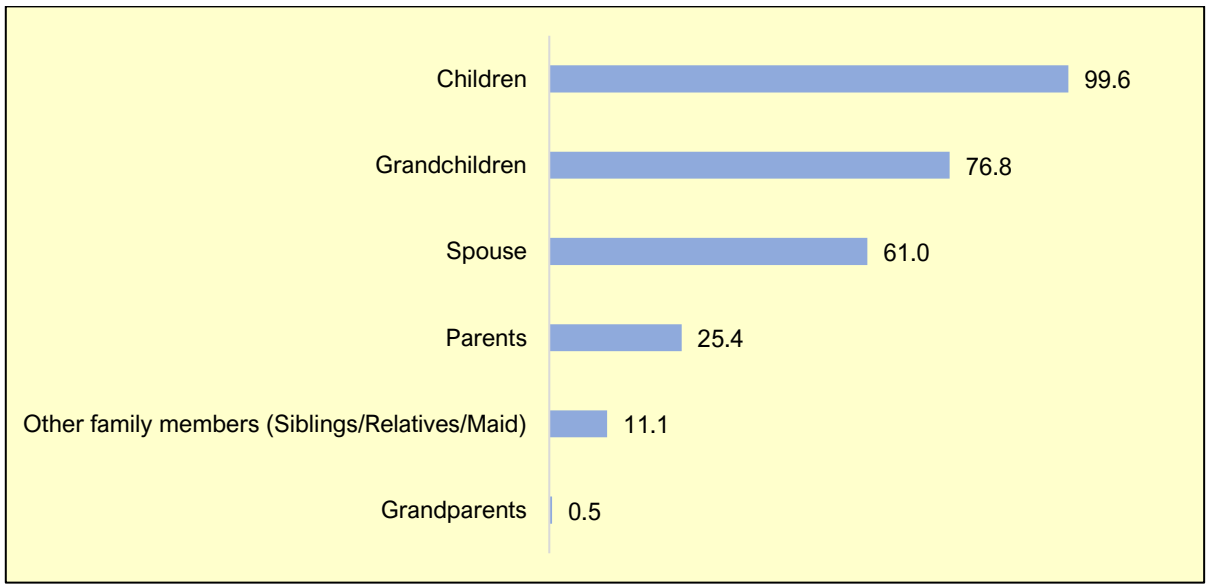

Figure 3.3: Members in Multi-Generation Household (%)

3.2 Living Arrangements

In Figure 3.4, living arrangements of respondents were grouped into three categories namely living alone, living with spouse only and living with other people. A high proportion of the respondents reported they live with other people (84%), female just slightly higher than male respondents (85% and 83%, respectively). The proportion of respondents living with spouse only is higher among male (13%) than among female respondents (11%) while the opposite is true of those living alone (female 5% and male 4%).

Across age the proportion of respondents living with other people decreases from 93% among respondents aged 40-49 to 78% among those aged 60-69 and 70% among those aged 70-79 but increases to 83% among the oldest age (Figure 3.4). Living with spouse only increases sharply from 4% among respondents aged 40-49 to 21% among those aged 70-79 but drops to 8% among respondents aged 80 and above. The proportion of respondents who live alone increases with age from 3% among those aged 40-49 to 5% among respondents aged 60-69 and 9% among those aged 80 and above (Figure 3.4).

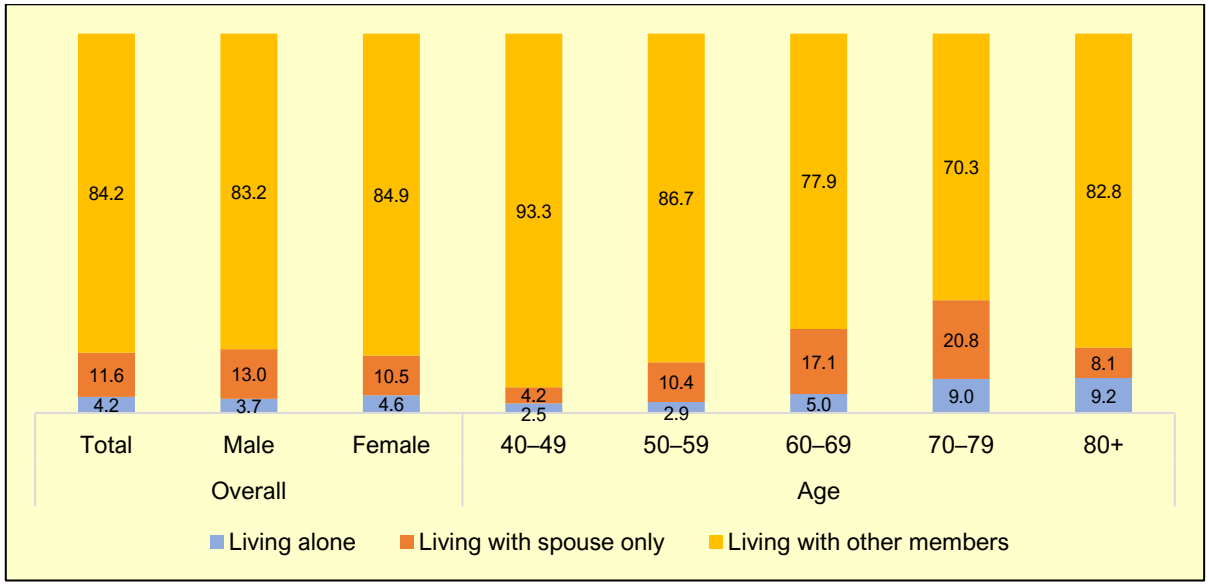

Figure 3.4: Respondents' Living Arrangements by Gender and Age (%)

The proportion of respondents living with other members is highest among Other Bumiputera (89%) and lowest among Chinese (74%). The proportion of respondents living with spouse only is highest among Chinese (18%) followed by Indian (12%) and Malay (12%). Chinese respondents also reported the highest proportion of those living alone (8%) followed by Malay (4%) and lowest among Indian respondents (3%) (Figure 3.5).

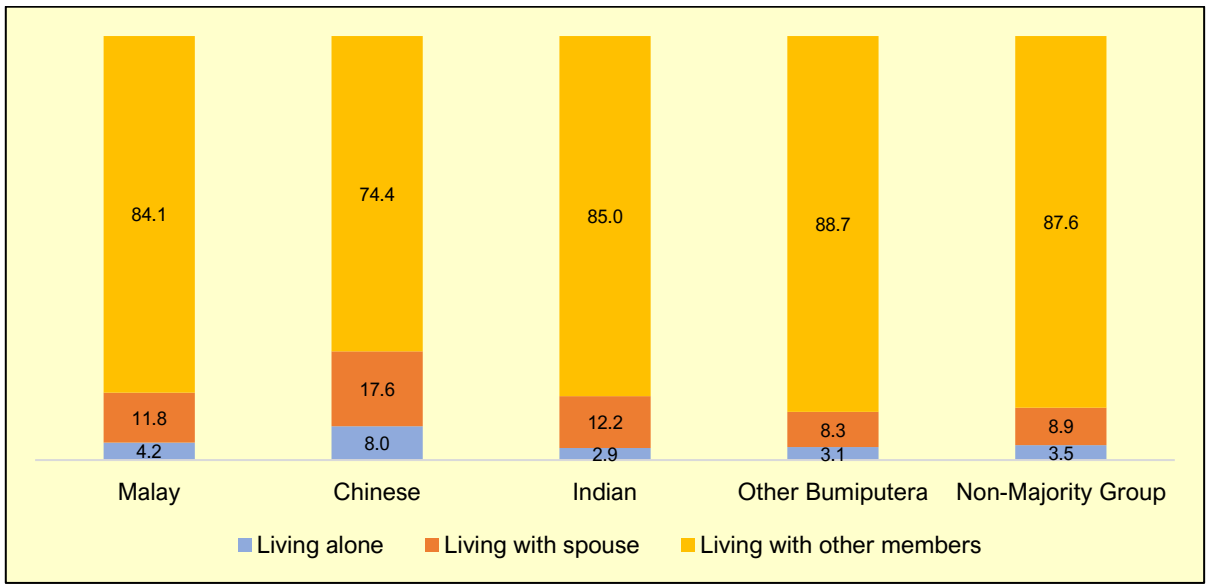

Figure 3.5: Respondents' Living Arrangements by Ethnicity (%)

A high proportion of the respondents have at least two living children, with 48% indicating they have between two and four children, including adopted and stepchildren (Figure 3.6). The proportion of respondents having 2-4 children is slightly higher among male (50%) than female respondents (47%). About 7% of the respondents have 8 or more children while about 8% do not have any children. Percentage of respondents who do not have any children is highest among those aged 40-49 (11%) and lowest among respondents aged 70 and above (4%). The proportion of respondents with one child decreases with age from 11% among those aged 40-49 to 7% among respondents aged 70 and above. Similar trend is observed in the proportion of respondents having 2-4 children decreasing from 56% among those aged 40-49 to 41% among those aged 70 and above. The proportion of respondents having at least five children increases with age from about 23% among those aged 40-49 to about 49% among respondents aged 70 and above (Figure 3.6).

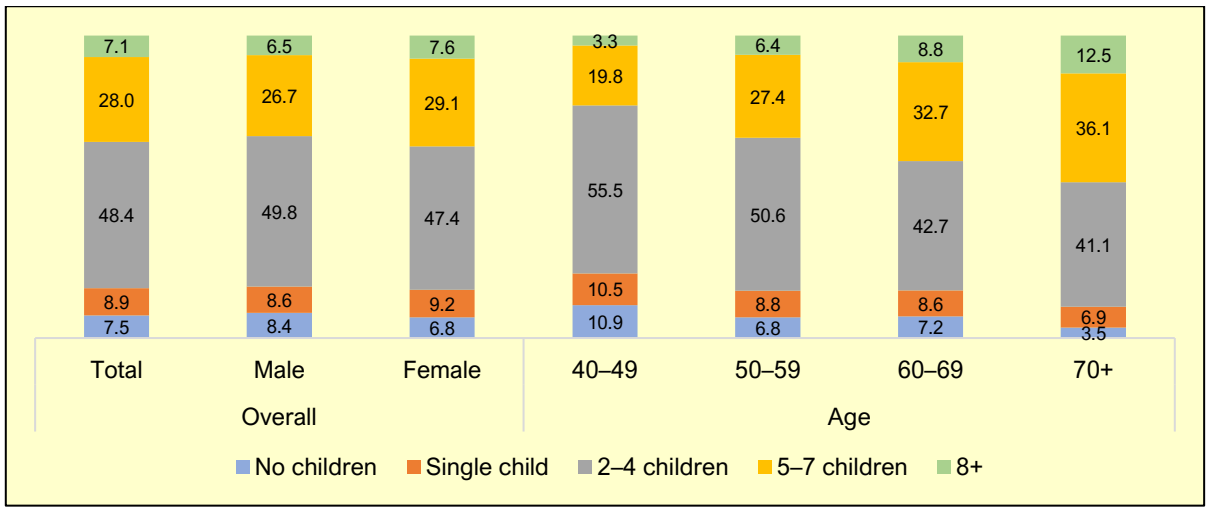

Figure 3.6: Number of Living Children by Gender and Age (%)

Among respondents who have living children, 80% reported that at least one of their children live with them while 30% of the respondents have at least one child living close by and about 65% of the respondents reported having children living elsewhere in and outside of Malaysia (Figure 3.7).

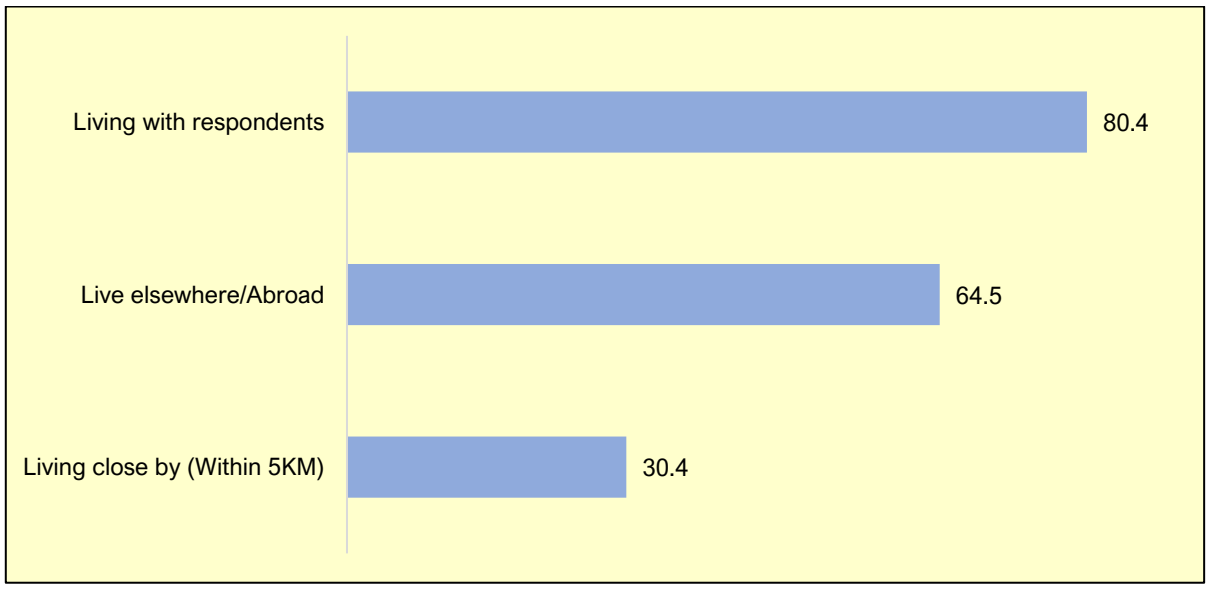

Figure 3.7: Respondents' Children Living Arrangements (%)

Nearly 70% of the respondents received some form of support from their children, financial and/or non-financial support with about 45% reported receiving both (Figure 3.8). The proportion of respondents who received both support is higher among female (51%) than male respondents (39%) while the opposite is observed in the proportion who did not receive any support from their children (male 36% and female 29%). Figure 3.8 also shows that the proportion of respondents who did not receive any support decreases with age from 55% among respondents aged 40-49 to 13% among those aged 70 and above while the proportion who received both financial and non-financial support increases from 20% among respondents aged 40-49 to 62% among those aged 70 and above.

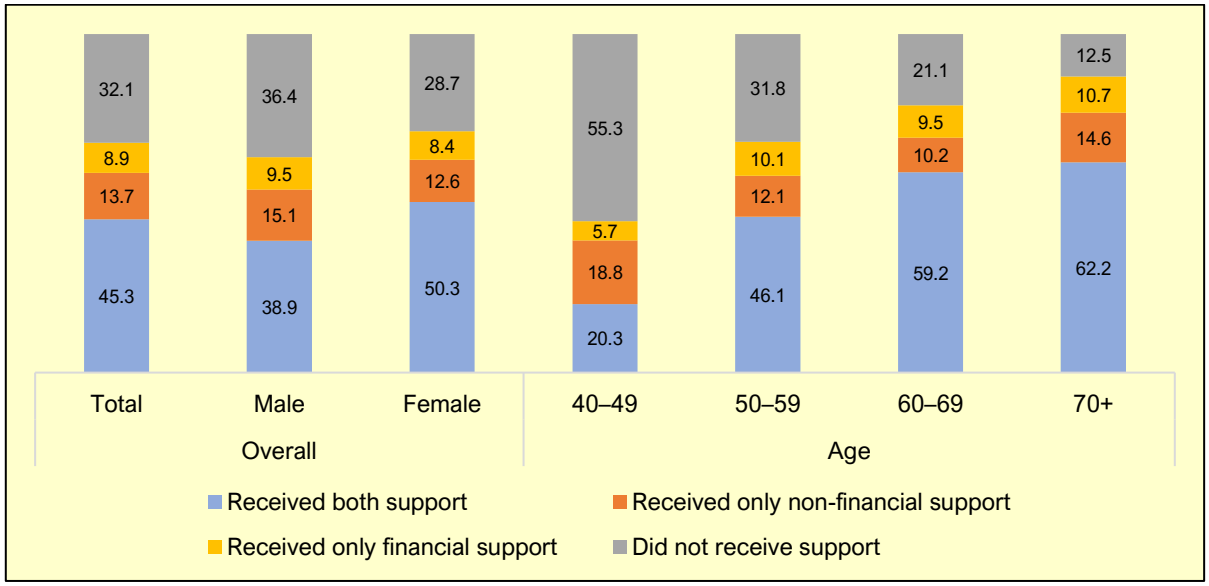

Figure 3.8: Respondents Receiving Support from at Least One Child by Gender and Age (%)

On the question of support that respondents gave to their children, 43% of the respondents gave both financial and non-financial support while 21% gave only non-financial support and 32% reported they did not give any support to their children (Figure 3.9). A higher proportion of male respondents (50%) provided both financial and non-financial support to their children compared to female respondents (38%). In contrast, a greater proportion of female respondents reported giving only non-financial support (24%) and not providing any support at all (35%).

Across age, the proportion of respondents who gave both financial and non-financial support decreases from about 70% among those aged 40-49 to 24% among respondents aged 60-69 and 12% from those aged 70 and above. Figure 3.9 also shows that the proportion of respondents who did not give any support to their children increases from 14% among those aged 40-49 to 58% among respondents aged 70 and above.

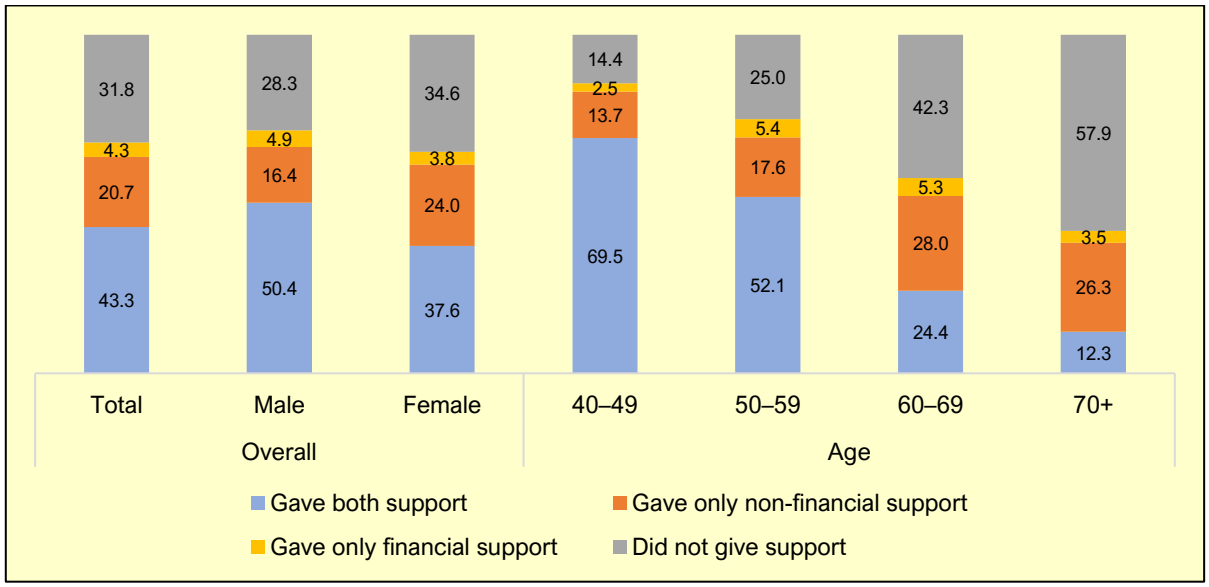

Figure 3.9: Respondents Who Gave Support to at Least One Child by Gender and Age (%)

Figure 3.10 shows the annual mean amount of financial support that respondents gave to and received from their children across age. The mean amount given to children exceeds the mean amount received starting from age 40 until about age 57 after which the reverse starts to take effect which can be observed in the net mean amount of transfer gradually increasing with age.

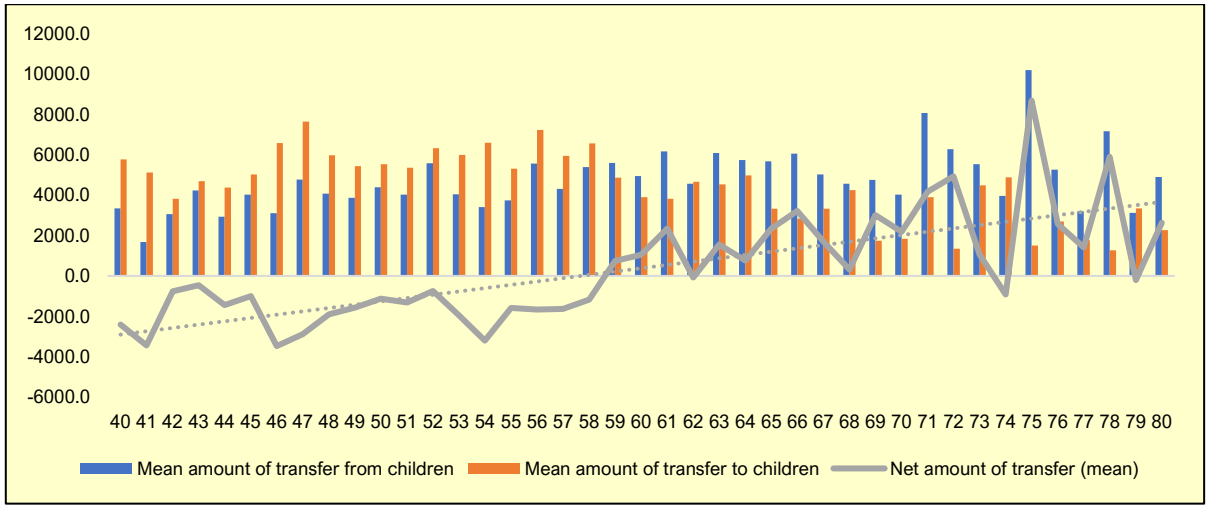

Figure 3.10: Annual Mean Amount of Monetary Support from and to Children (RM)

Among respondents whose children are not living together with them, majority reported meeting in person with at least one child very regularly, 37% several times a week and 34% several times a month (Figure 3.11)。

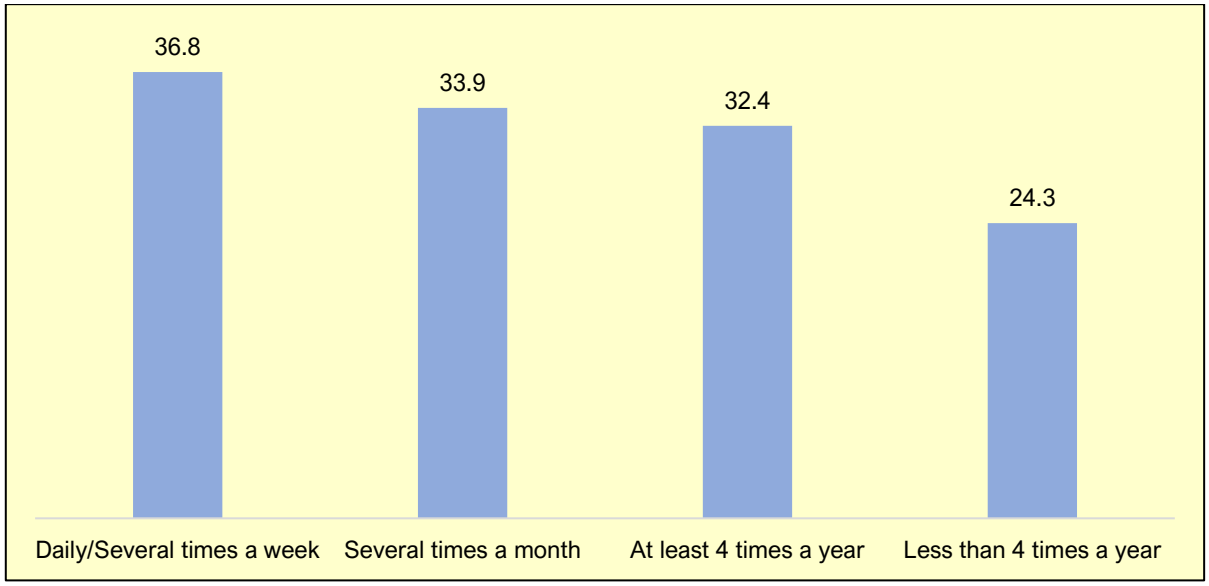

Figure 3.11: Meet with at Least One Child in Person (%)

With regards to the frequency of communicating with their children either through telephone and/or email, Figure 3.12 indicates that 54% of respondents reported they communicate with at least one child daily or several times a week, and 29% reported several times a month. About 12% indicated they are in contact with their children less than four times a year.

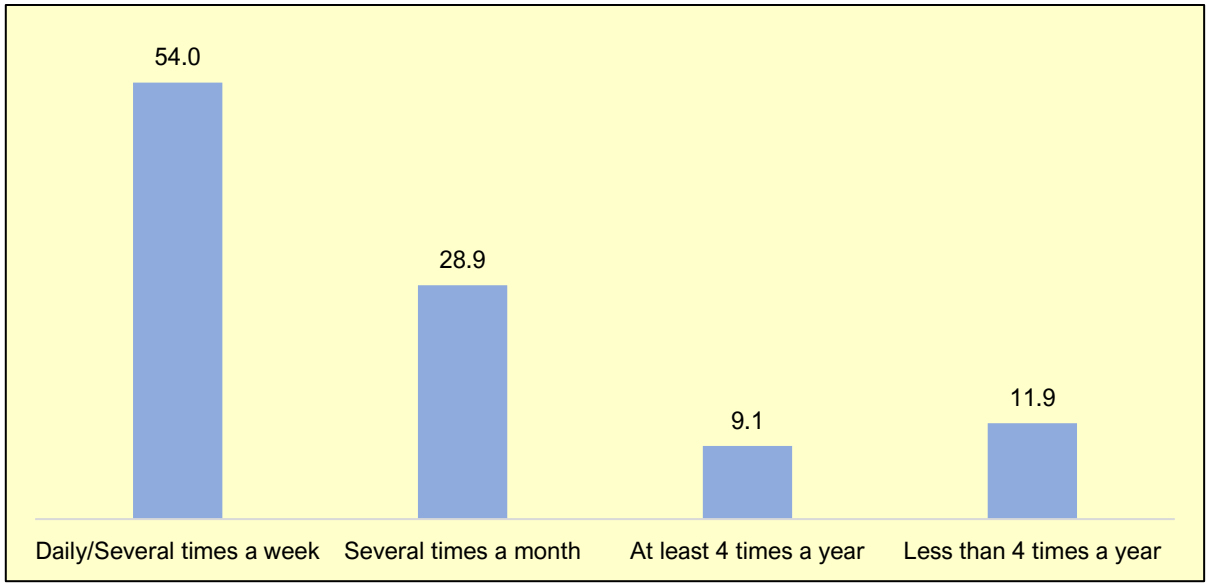

Figure 3.12: Contact with at Least One Child Through Phone/Email (%)

3.3 Parents

Approximately 47% of the respondents have at least one living parent which includes parent-in-law, male reported a higher proportion than female respondents (50% and 44%, respectively). (Figure 3.13). The proportion of respondents having living parent/s decreases with age from 79% among those aged 40-49 to 24% among respondents aged 60-69 and 6% among those aged 70-79. A very small proportion of respondents aged 80 and above (1%) reported they still have at least one living parent/parent in-law.

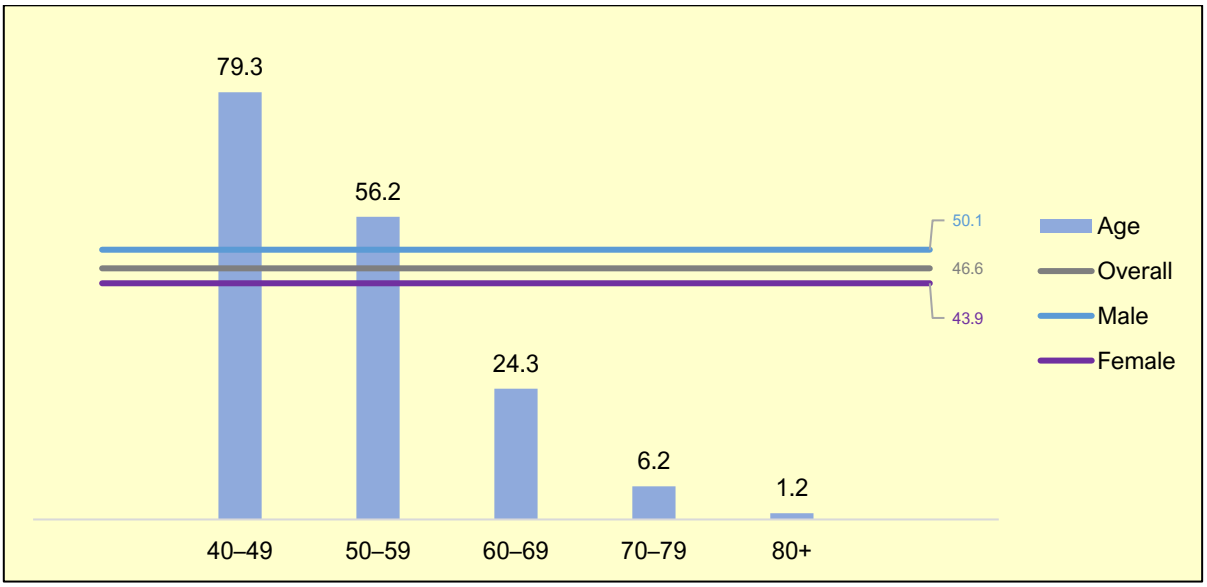

Figure 3.13: Respondents with Living Parents/ Parents-in-Law (%)

Figure 3.14 presents the percentage distribution of living parents or parents-in-law among respondents who have at least one living parent or parent-in-law. Approximately 64% of respondents reported that their mother is still alive, followed by 49% with a living mother-in-law, 29% with a living father, and 23% with a living father-in-law.

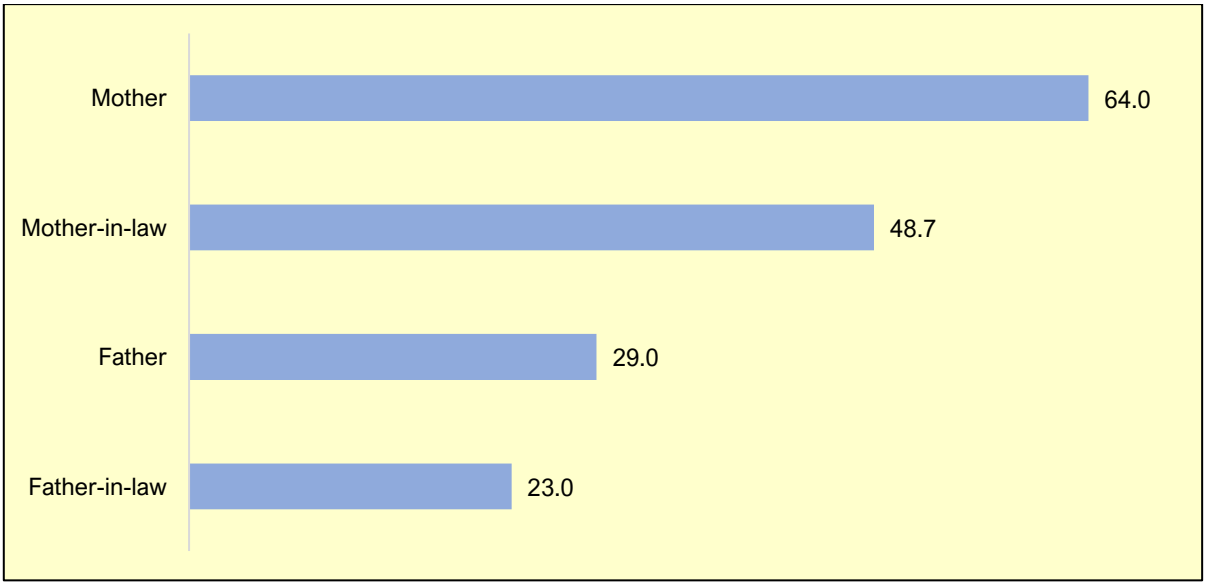

Figure 3.14: Living Parents and Parents-in-Law (%)

Among respondents whose parents and/or parents-in-law were still alive, 37% reported meeting with their parents at least several times a week while 25% see their parents several times a month (Figure 3.15). About 17% of the respondents admitted meeting their parents less than four times a year.

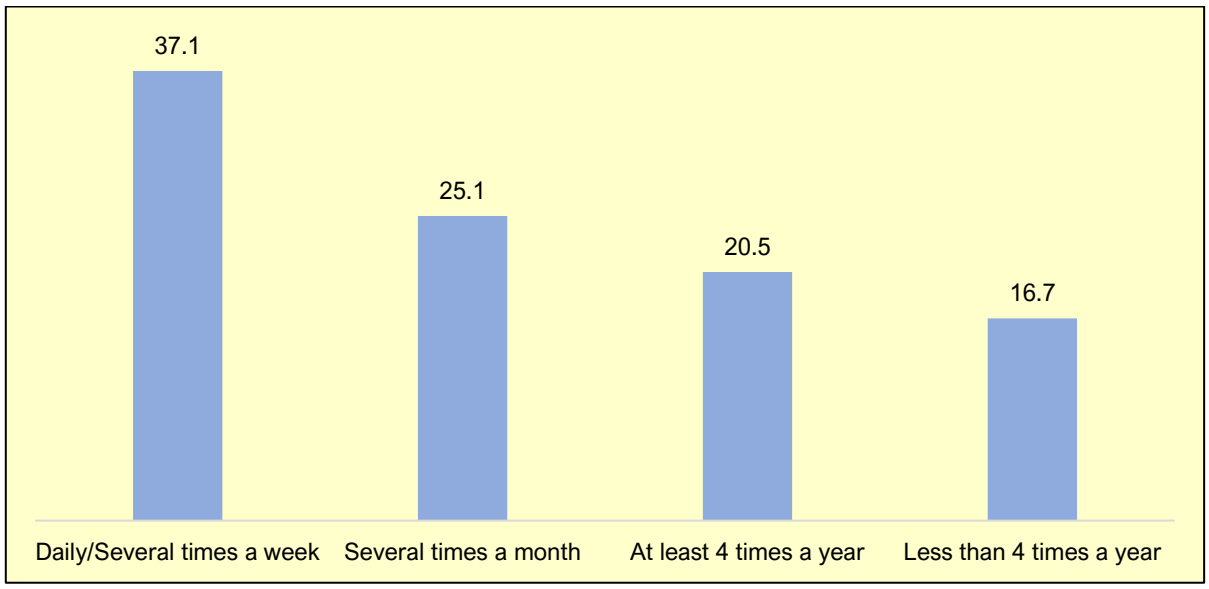

Figure 3.15: Meet with at Least One Parent/ Parent-in-Law in Person (%)

In terms of communication through phone or email, Figure 3.16 shows that 46% communicate with their parents or in-laws several times a week, 23% reported several times a month and 22% less than four times a year.

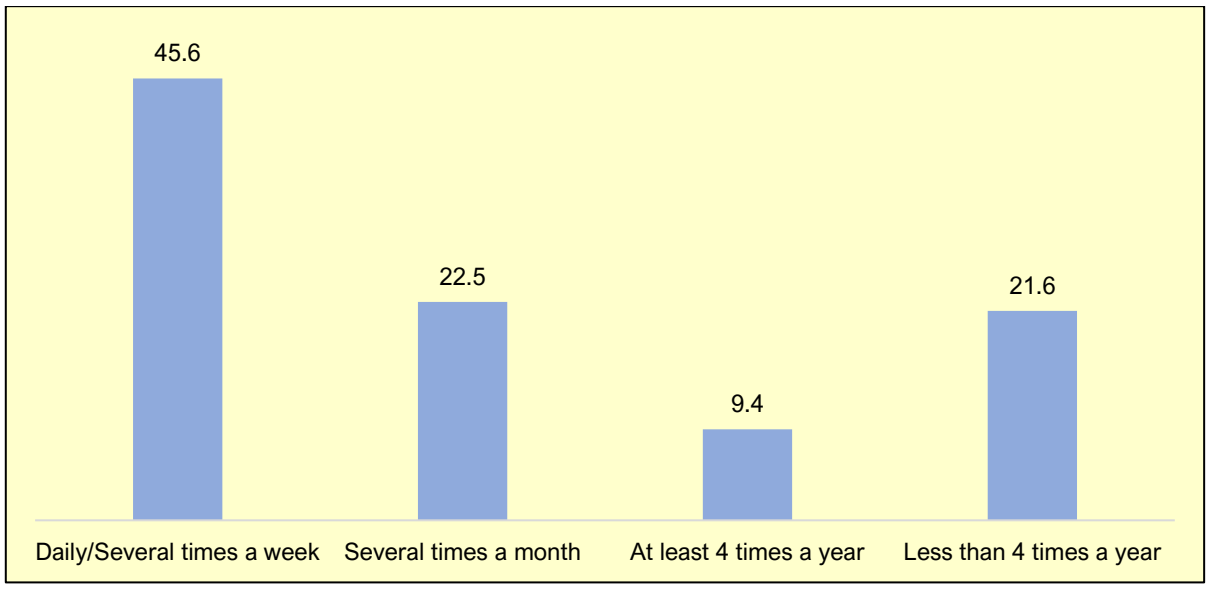

Figure 3.16: Contact with at Least One Parent/ Parent-in-Law through Phone/Email (%)

A high proportion of the respondents (80%) no longer received any support from their parents or parents-in-law and this proportion is higher among respondents aged 60 and above (88%) than those below 60 (79%) (Figure 3.17). The proportion of respondents who received non-financial support accounts for 15% in general, 16% among those aged 60 and below and 10% among respondents aged 60 and above. Only 4% of the respondents reported they received both financial and non-financial support from their parents or in-laws.

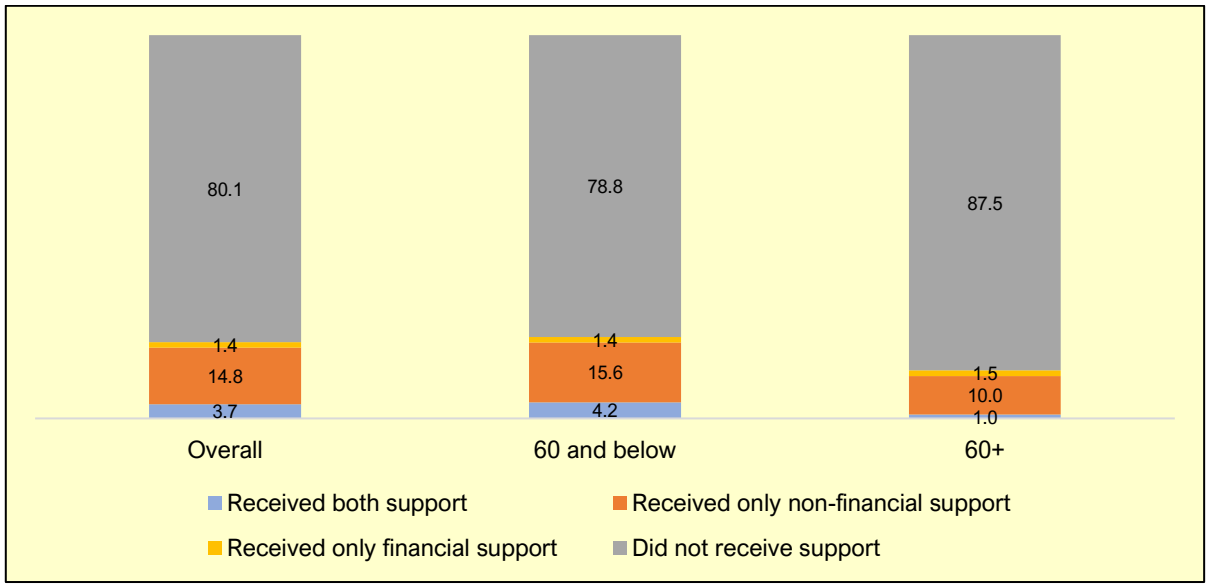

Figure 3.17: Respondents Receiving Support from at Least One Parent/ Parent-in-Law by Age (%)

Respondents who gave both support to their parents comprise 38%, 40% among those aged below 60 and 28% among respondents aged 60 and above (Figure 3.18). About 23% reported they only gave non-financial support, slightly higher among respondents aged 60 and above (26%) than those below 60 (23%) while there is no difference in the proportion of respondents giving only financial support between the two age groups (about 9%).

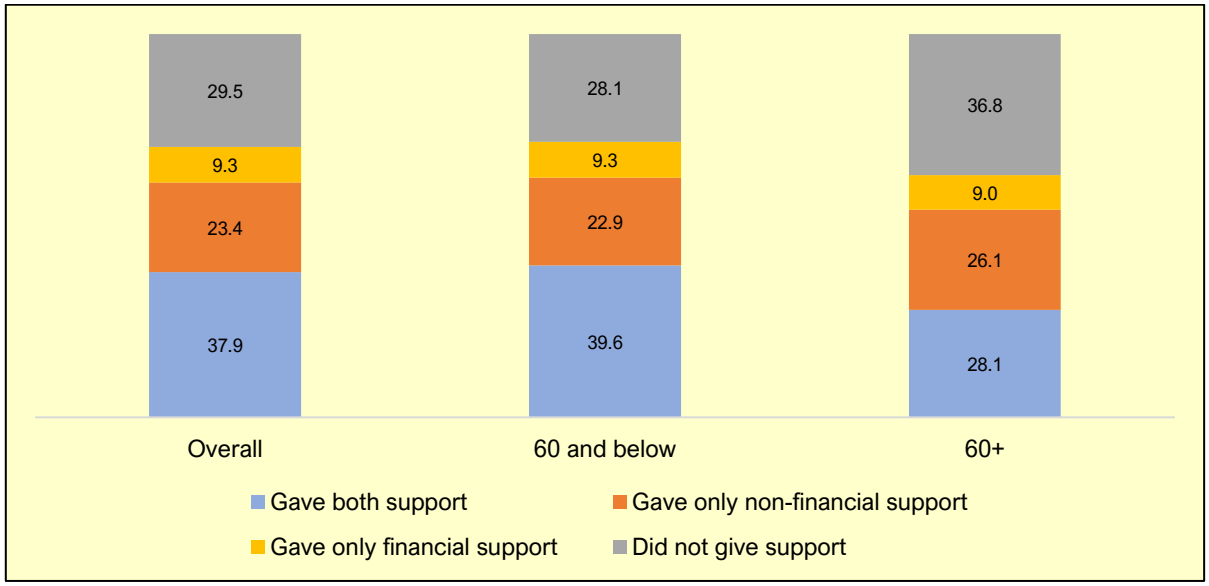

Figure 3.18: Respondents Who Gave Support to at Least One Parent/ Parent-in-Law by Age (%)

3.4 Marital Relationship

Questions related to spousal relationship were asked to married respondents. Majority of the respondents have positive social support from their spouses with 77% reported their spouses often/always understand how they feel about things and 69% reported they can often/always open to their spouses to talk about their worries. However, about 15% of the respondents admitted that their spouses often/always make too many demands, 7% often/always get on their nerves and 6% of the respondents reported their spouses often/always let them down (Figure 3.19).

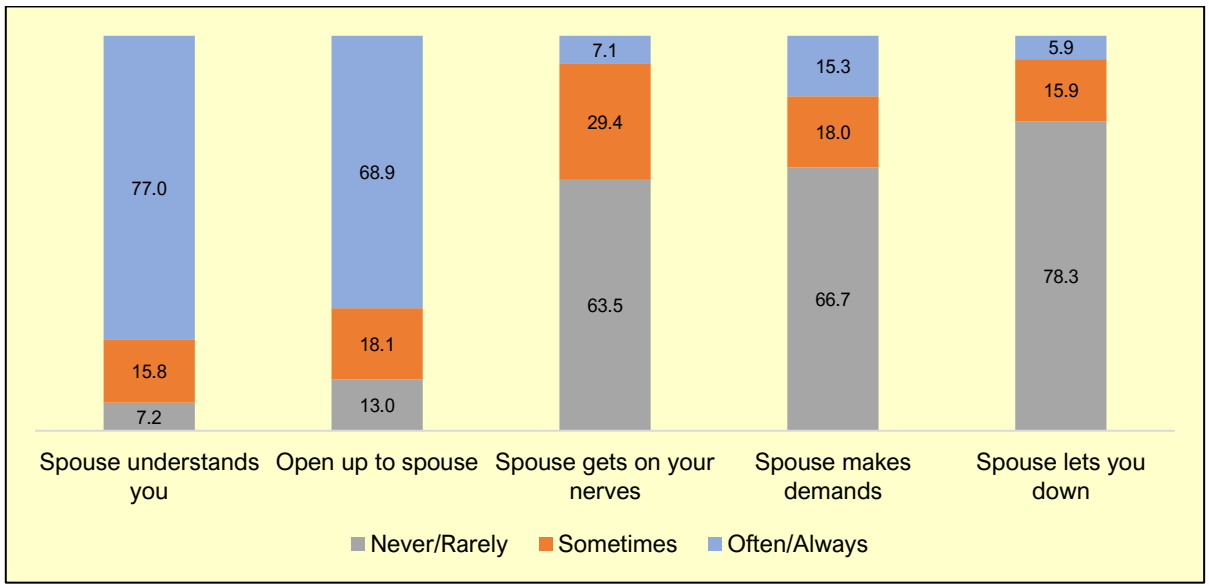

Figure 3.19: Marital Relationship Statement (%)

Comparing across gender, male respondents reported a higher proportion than female respondents that their spouses understand the way they feel about things (83% and 72%, respectively) and that they can always open to their spouses to talk about their worries (male 70%, female 68%) (Figure 3.20). A higher proportion of the female than male respondents reported that their spouses often/always make too many demands (female 16%, male 15%), often/always let them down (female 8%, male 4%) and that their spouses often/always get on their nerves (female 9%, male 5%).

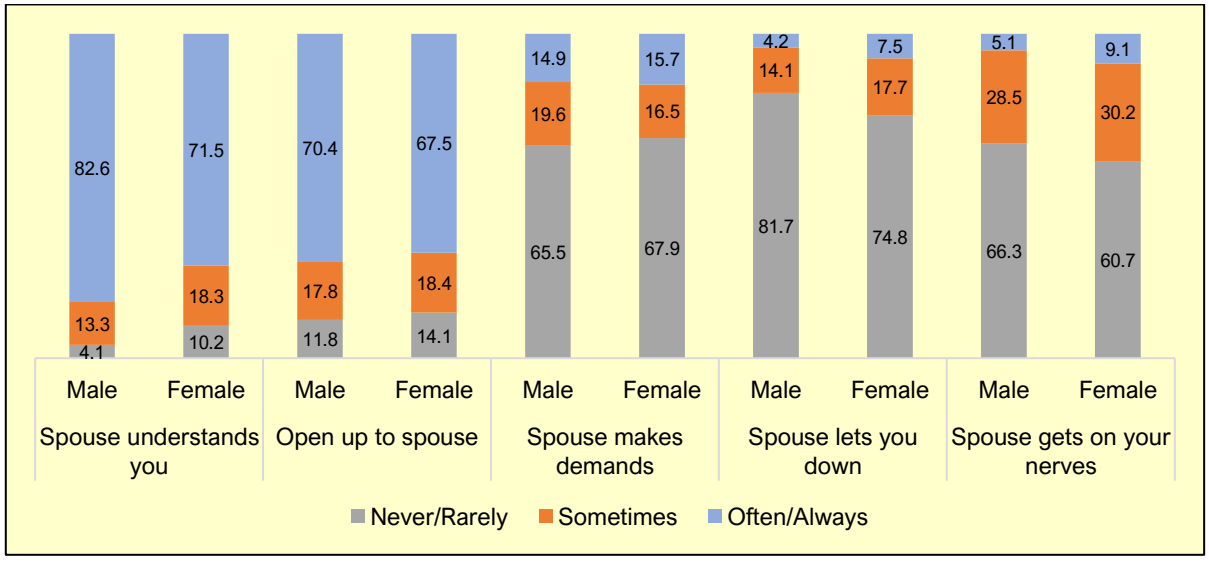

Figure 3.20: Marital Relationship Statement by Gender (%)

As shown in Figure 3.21, majority of the respondents reported they have a close relationship with their spouses with 75% reported a very close relationship, higher proportion among male (78%) than female respondents (72%). About 3% of the respondents reported not having a very close relationship with their spouses. Across age, the proportion of respondents having a very close relationship with their spouses is highest among respondents aged 40-49 and lowest among those in the oldest age group.

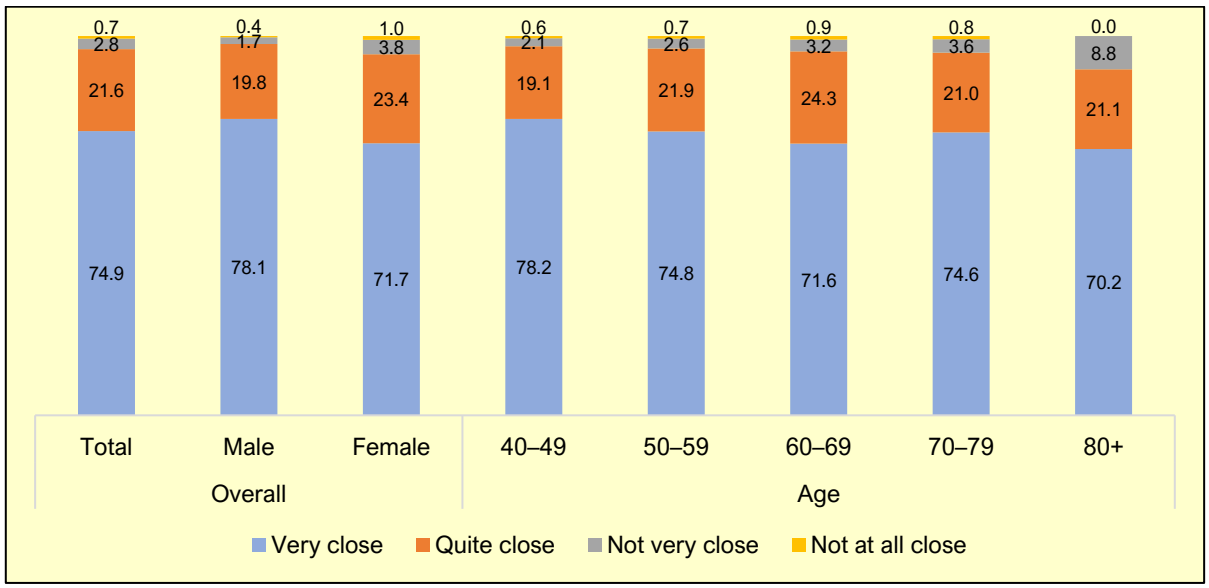

Figure 3.21: Closeness of Marital Relationship by Gender and Age (%)

When asked about who has the final say in decisions about major family issues, about 62% of the respondents reported having equal say while 22% claimed that they always or mostly had the final say (Figure 3.22). Male respondents reported a higher proportion that do have the final say in decision making than female respondents (28% and 15%, respectively) and similarly for those who reported they have equal say (male 63%, female 60%). The proportion of respondents who claimed they have equal say in decision making decreases with age from 64% among those aged 40-49 to 53% among respondents aged 80 and above. Respondents who claimed they have the final say is highest among those aged 50-79 (21%-23%) and lowest among respondents aged 40-49 (20%).

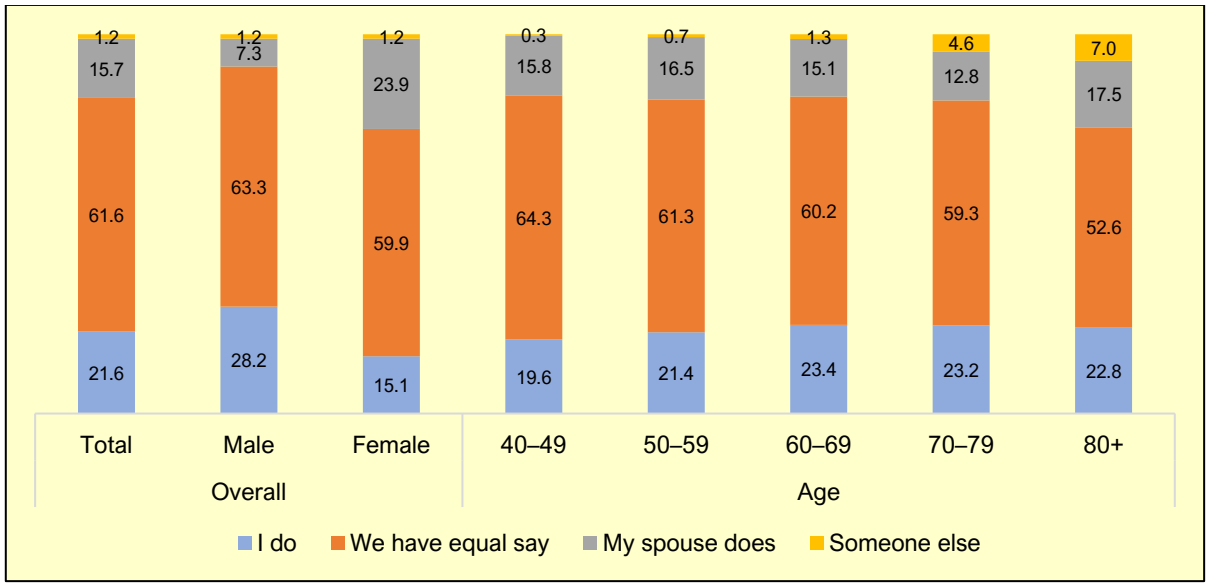

Figure 3.22: Final Say on Important Issues by Gender and Age (%)

4 EMPLOYMENT

One significant concern regarding an ageing population is the increased proportion of older individuals who are no longer employed. This significant shift will affect their financial wellbeing, particularly if they have not accumulated sufficient retirement savings and become more dependent on the family (Idayuwati Alaudin et al., 2016; Tung & Dennis Comeau, 2012). MARS collects information on work, employment history and characteristics as well as retirement planning and life in retirement.

4.1 Working Status

Overall, 39% of the respondents are currently working. 'Working' comprises respondents involved in any economic activity. Those who are not working include homemakers, retirees, disabled, unemployed and temporarily not working (Figure 4.1).

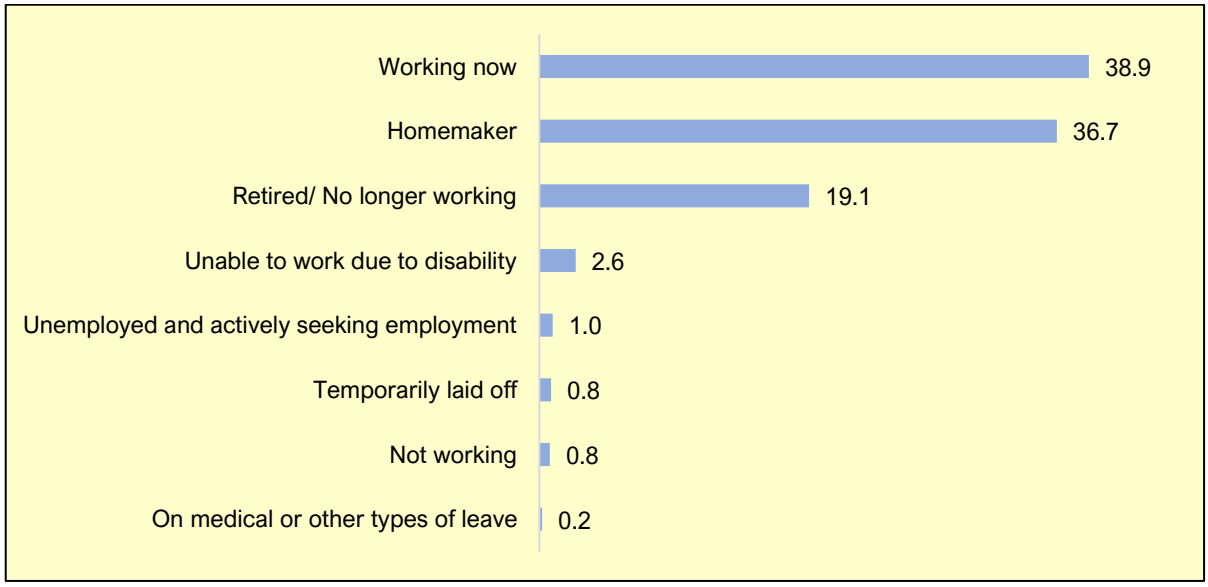

Figure 4.1: Working Status of Respondents (%)

The proportion of male respondents who are still working (59%) is substantially higher than female respondents (23%) for the overall sample as well as for every age group (Figure 4.2). For example, among respondents aged 50-59, 75% of the males are working compared to only 30% of the females. It is also observed that 21% of the males aged 70-79 and eight percent of males aged 80+ are still working.

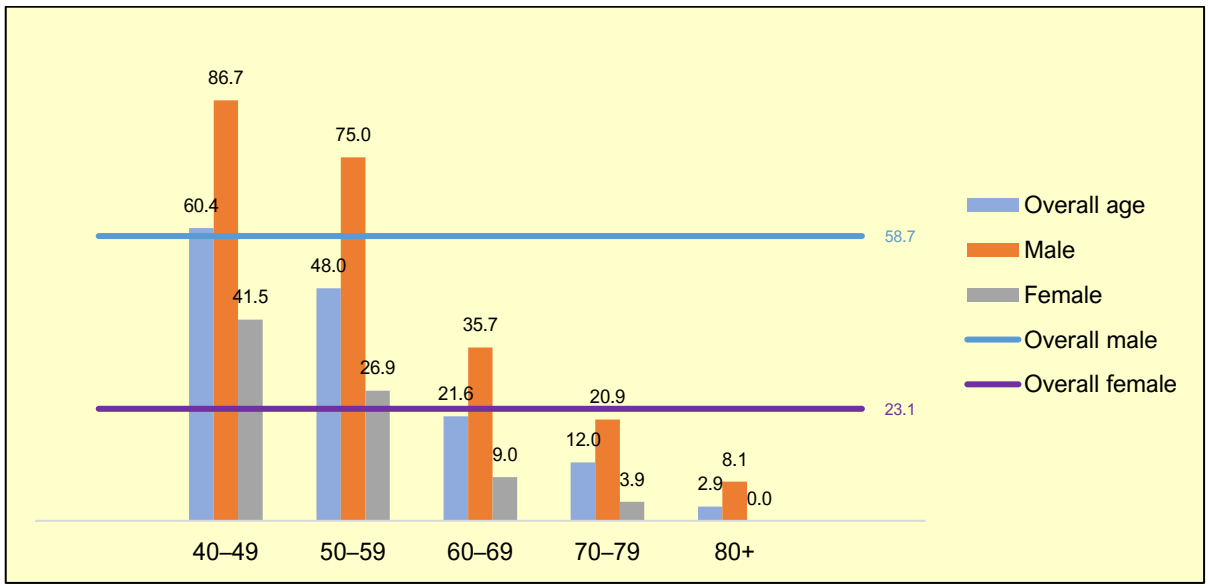

Figure 4.2: Working Now Respondents by Age and Gender (%)

Among respondents who are working (39% in Figure 4.1), the data also show that 61% are working for someone else or working as employees while 39% are self-employed or running their own business (Figure 4.3).

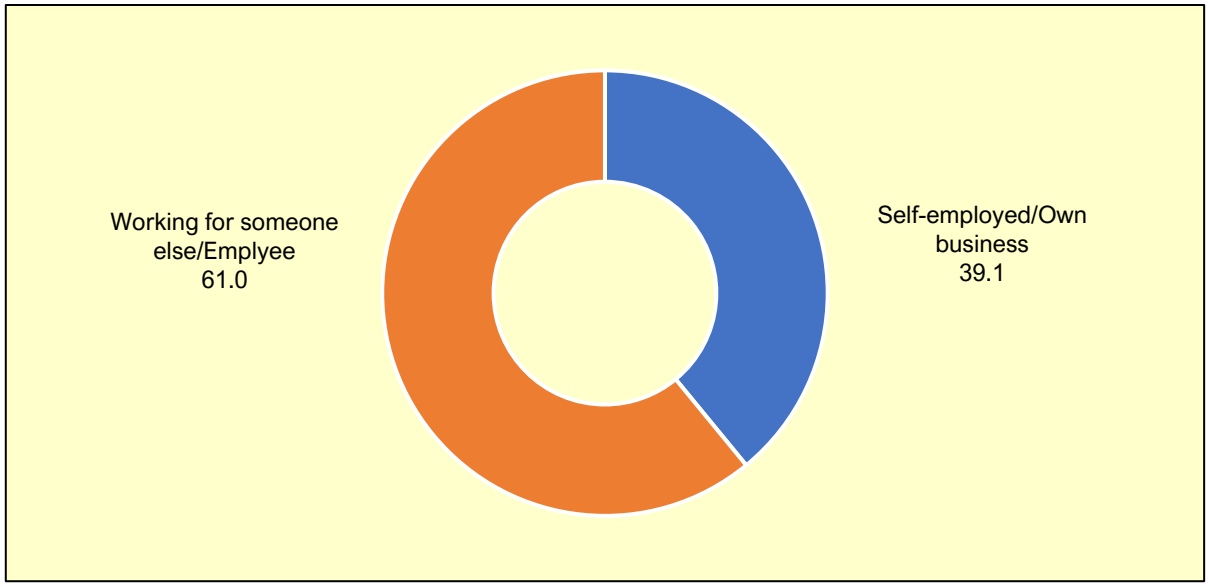

Figure 4.3: Respondents' Work Category (%)

Among respondents who work for someone else or work as employees (61% in Figure 4.3), majority (64%) work in private organisations followed by with the government (22%) (Figure 4.4). The "Other" category (10%) consists of respondents who are own account workers or currently engaged in unpaid family work.

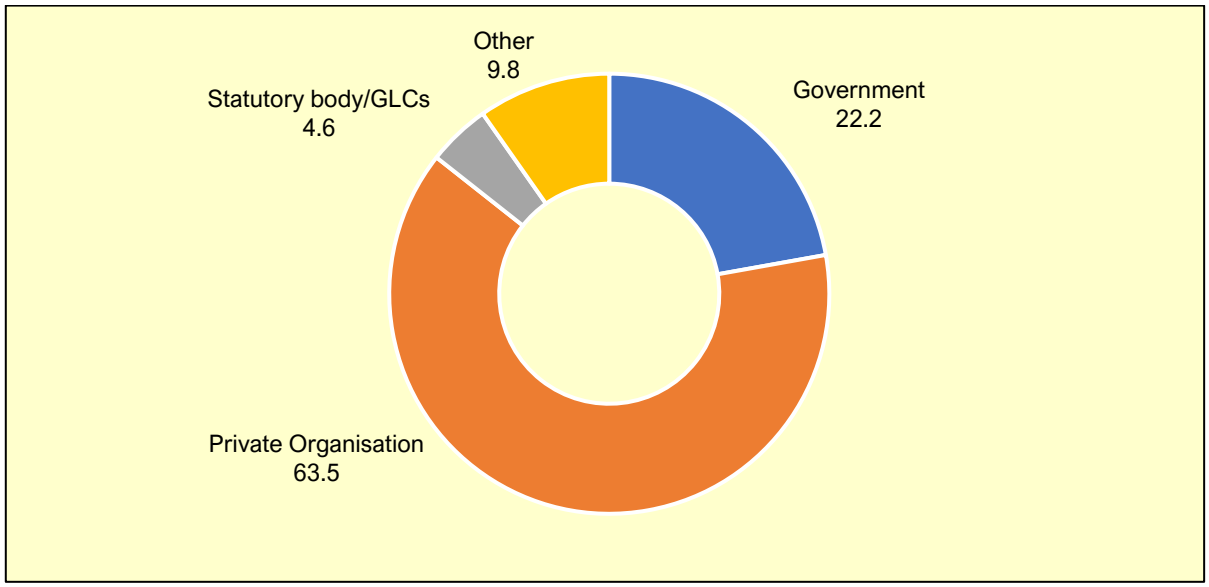

Figure 4.4: Work Sectors Among Respondents Worked for Someone Else or Work as Employees (%)

In terms of occupation the highest proportion of working respondents are in agriculture related jobs (21%), followed by elementary occupation (19%), service and sales (15%), craft and trades (9%), clerical support (9%) and professional (9%). Data indicates that a high proportion of respondents are in low-paying jobs and occupations (Figure 4.5).

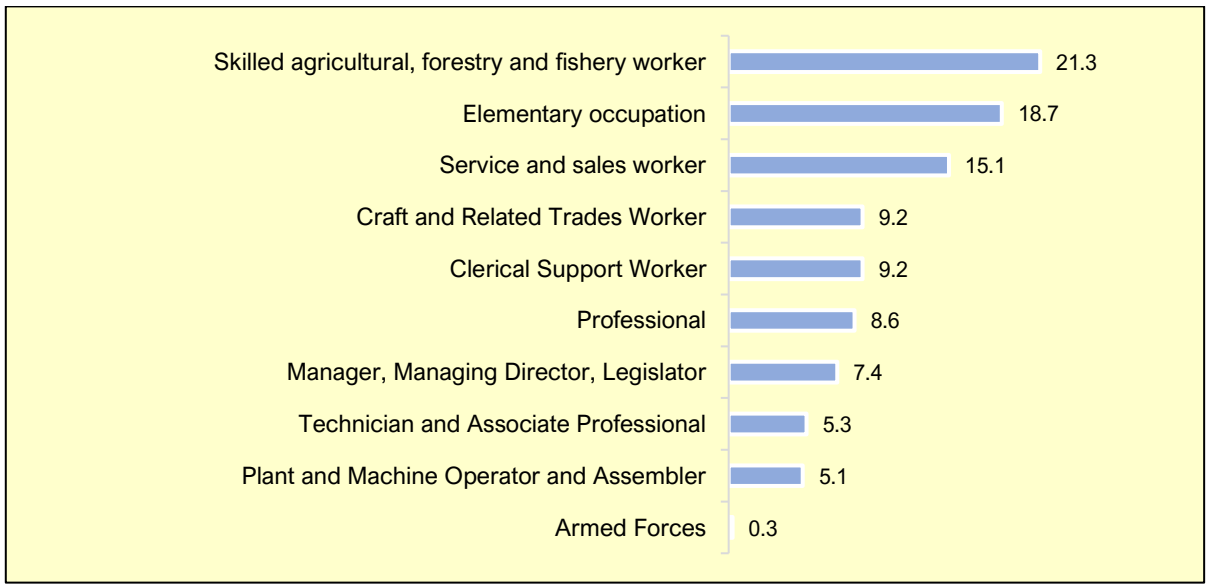

Figure 4.5: Working Respondents by Occupation (%)

Examining respondents' work by industry sector, Figure 4.6 shows the largest proportion is in the agriculture related sector (26%) followed by accommodation and food services (10%), manufacturing (9%), education (7%) and transport and storage (7%).

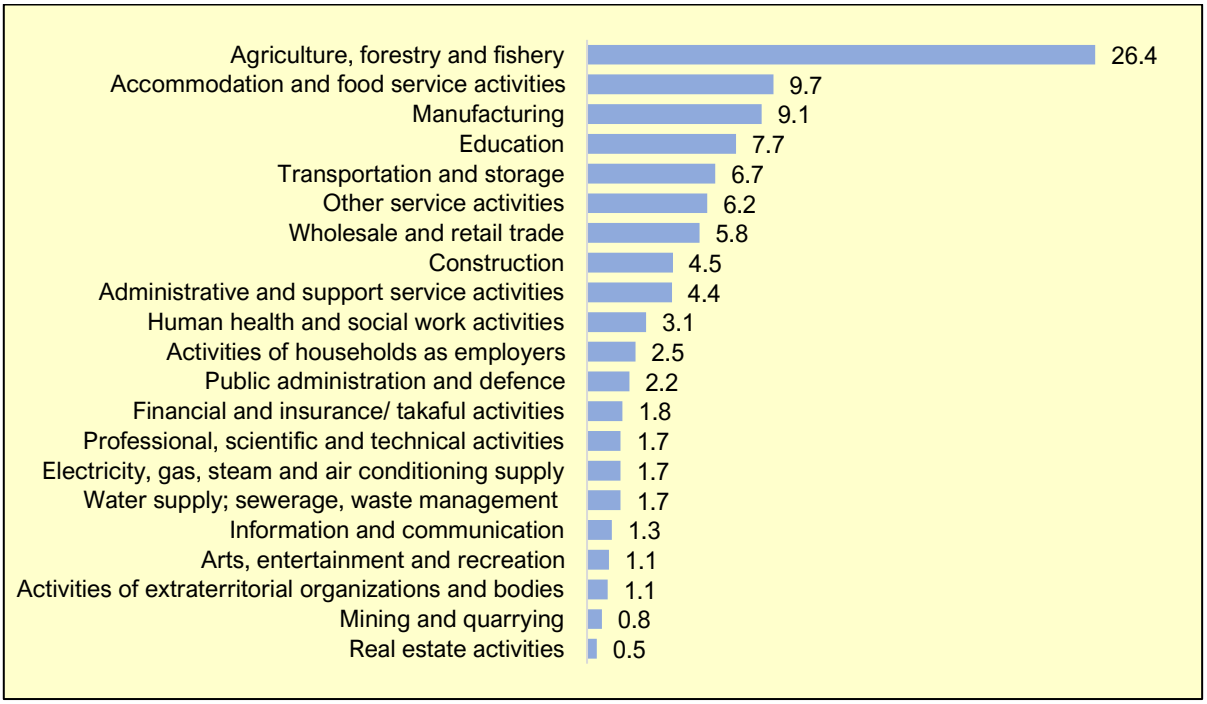

Figure 4.6: Respondents' Working Industry (%)

4.2 Job Characteristics

The MARS questionnaire included questions on the nature and characteristics of respondents' jobs (Figure 4.7). About 81% of the respondents reported their jobs often or always require concentration and good eyesight while about 69% admitted that their jobs often or always require dealing with people, 60% often or always require lots of physical effort and 53% require often or always require stooping/kneeling/crouching. Respondents whose jobs often or always require heavy lifting account for about 40% of the total number of working respondents.

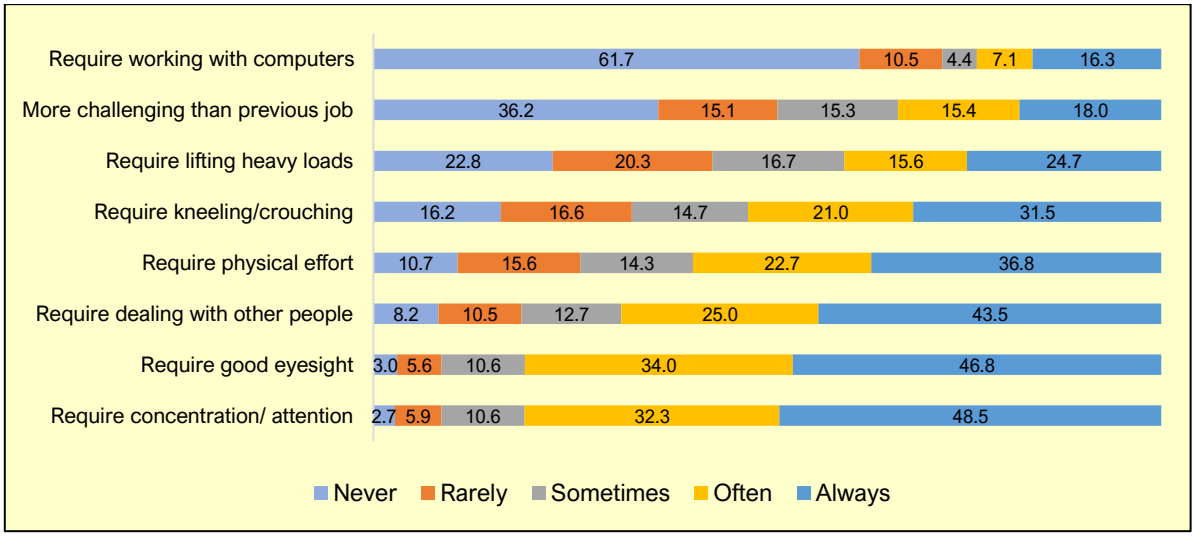

Figure 4.7: Job Characteristics of Respondents' Jobs (%)

Factor analysis was conducted to identify and group related statements, revealing two distinct job characteristics: (1) Physical demand which consists of the statements that respondents' jobs require physical effort, heavy lifting and kneeling/crouching, and (2) Cognitive and interpersonal demand consisting of jobs that require dealing with people, good eyesight and concentration/attention and that their jobs are more challenging than previous jobs.

The scores were then computed and harmonised into 0 to 100 giving a mean of 57.7 and standard deviation 32.2 for physical demand and a mean of 76.6 with standard deviation 21.2 for cognitive and interpersonal demand (Table 4.1).

Table 4.1: Factor Scores of Respondents' Job Demands

Job characteristics	Raw score		Harmonised score		
	Min	Max	Min	Max	Mean (SD)
Physical demand	3.0	15.0	0.0	100.0	57.7 (32.2)
Cognitive and interpersonal demand	3.0	15.0	0.0	100.0	76.6 (21.2)

As shown in Figure 4.8, the mean score for physical demand of rural respondents' jobs is higher than that of urban respondents (65.0 vs 53.1) indicating the difference in their nature of work. The mean score for physical demand of respondents' jobs decreases with increasing level of education from 70.4 of respondents with no schooling to 59.4 of those with lower secondary education and 40.0 of those with post-secondary and higher.

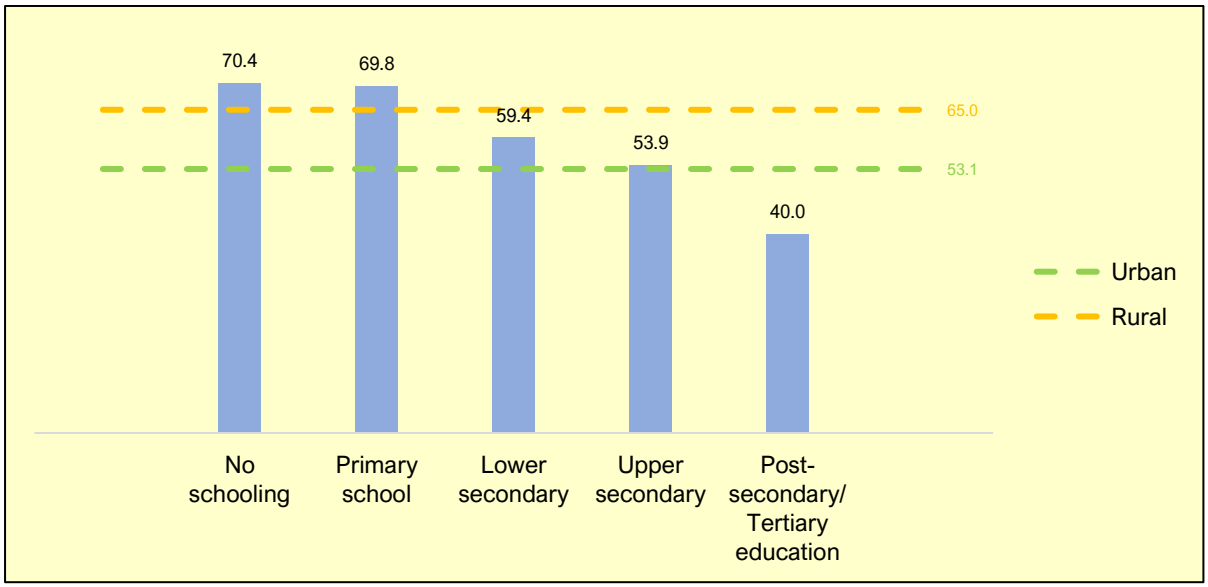

Figure 4.8: Physical Demand Mean Score by Place of Residence and Education Level

Agriculture related sector and construction top the list of industry sectors with high physical demand (mean score 74.3 and 74.0, respectively) followed by activities of extraterritorial organisations and bodies (64.3), mining and quarrying (61.1) and accommodation and food service activities (60.4) (Figure 4.9).

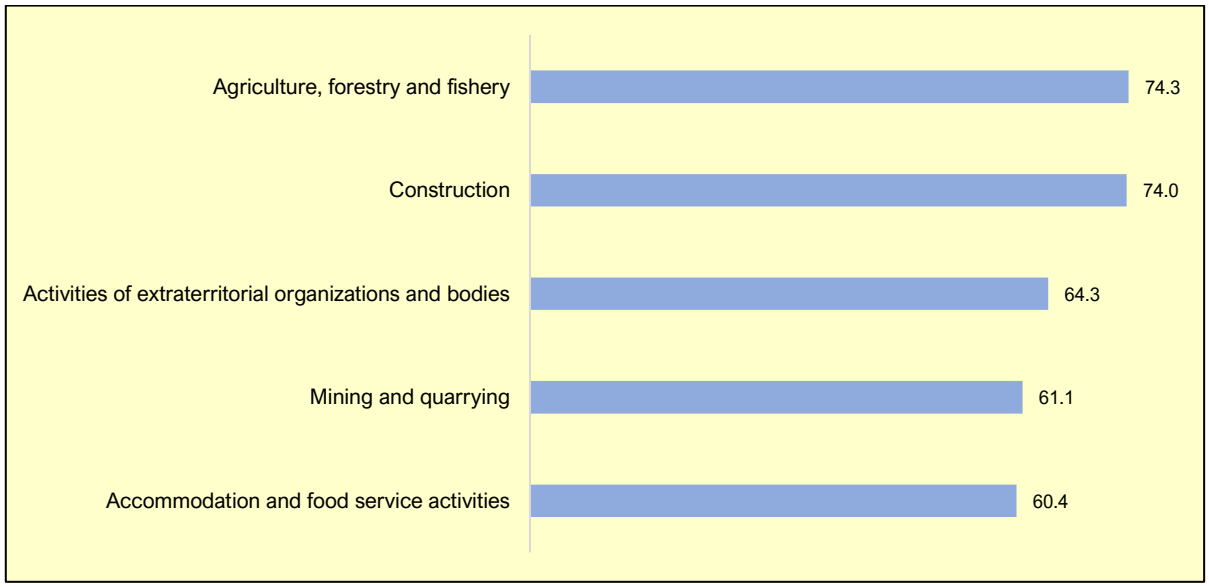

Figure 4.9: Top Five Industries with High Physical Demand (Score)

The opposite pattern is observed with respect to cognitive and interpersonal demand mean score of the respondents' jobs (Figure 4.10). The mean score for cognitive and interpersonal demand of urban respondents' jobs is slightly higher than that of rural respondents (77.3 and 75.6, respectively) and increases by education. The mean score increases from 69.4 among respondents with no schooling to 75.9 among those with lower secondary education and 82.8 for those with post-secondary and higher.

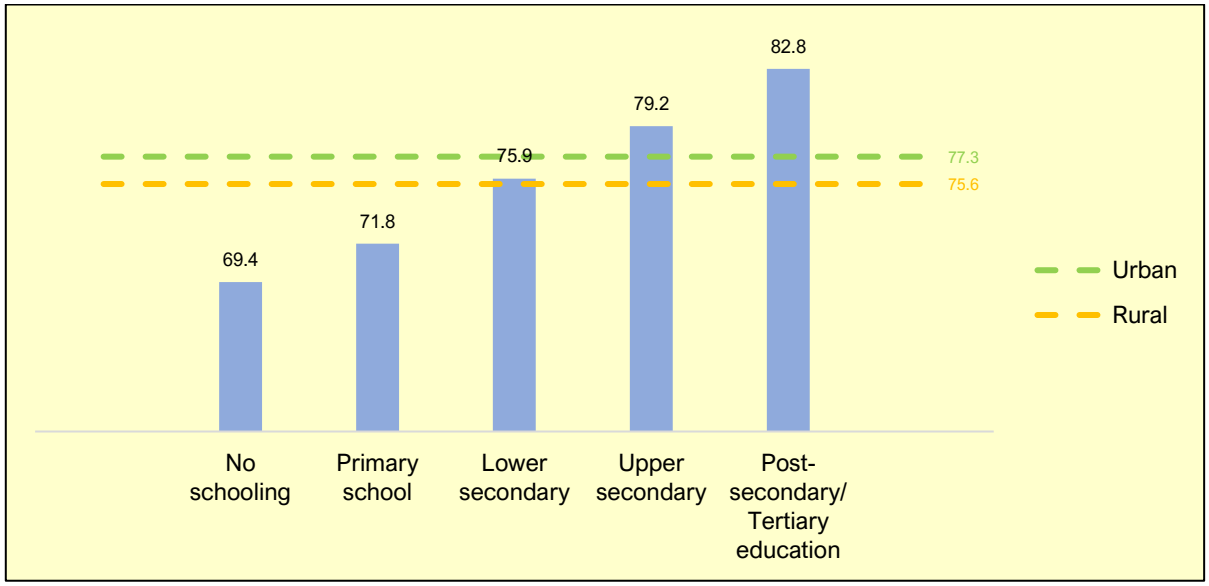

Figure 4.10: Cognitive and Interpersonal Demand Mean Score by Place of Residence and Education Level (Score)

The top five industries requiring high cognitive and interpersonal demand mean score include education (85.1), professional, scientific and technical (83.1), public administration and defense (82.4), information and communication technology (81.3) and manufacturing (80.6) (Figure 4.11).

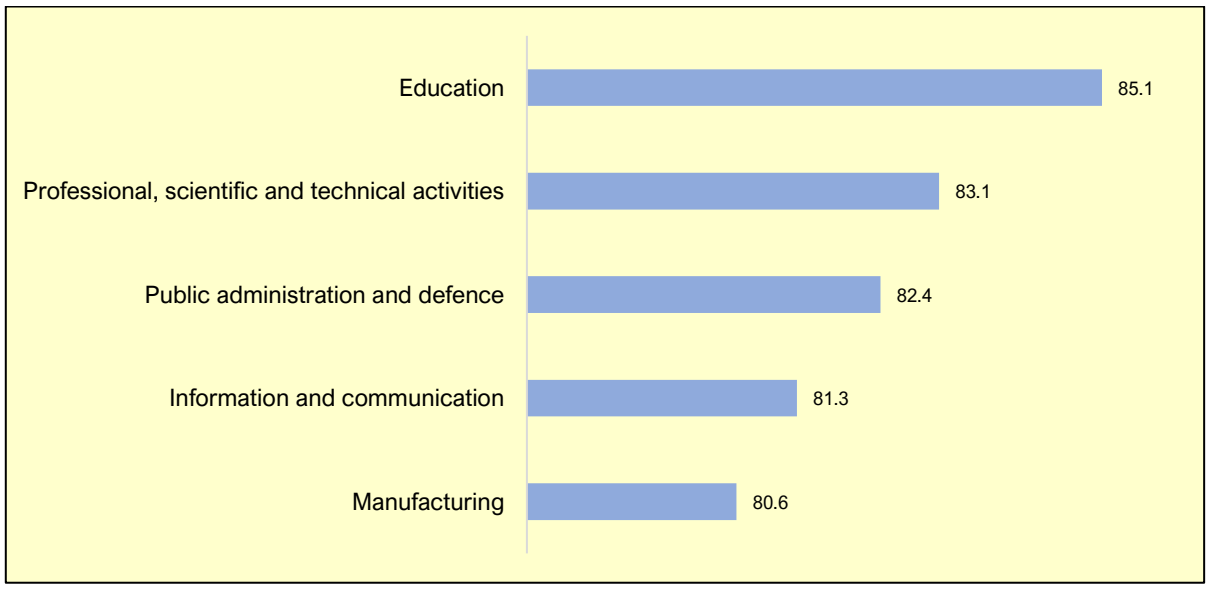

Figure 4.11: Top Five Industries with High Cognitive and Interpersonal Demand Mean Score

4.3 Job Satisfaction

Several questions were asked regarding job satisfaction. Overall, more than 80% (agree and strongly agree) of the respondents were satisfied with their current jobs. About 80% enjoyed going to work and were satisfied with the environment. While about 65% of the respondents agreed that they have good job security, nearly half agreed that they received an adequate salary. Respondents who admitted that their jobs are stressful account for about 35% while 30% agreed that seniority is important. Slightly more than 10% agreed that their jobs are less demanding or paid less and that older workers are under pressure to retire (Figure 4.12).

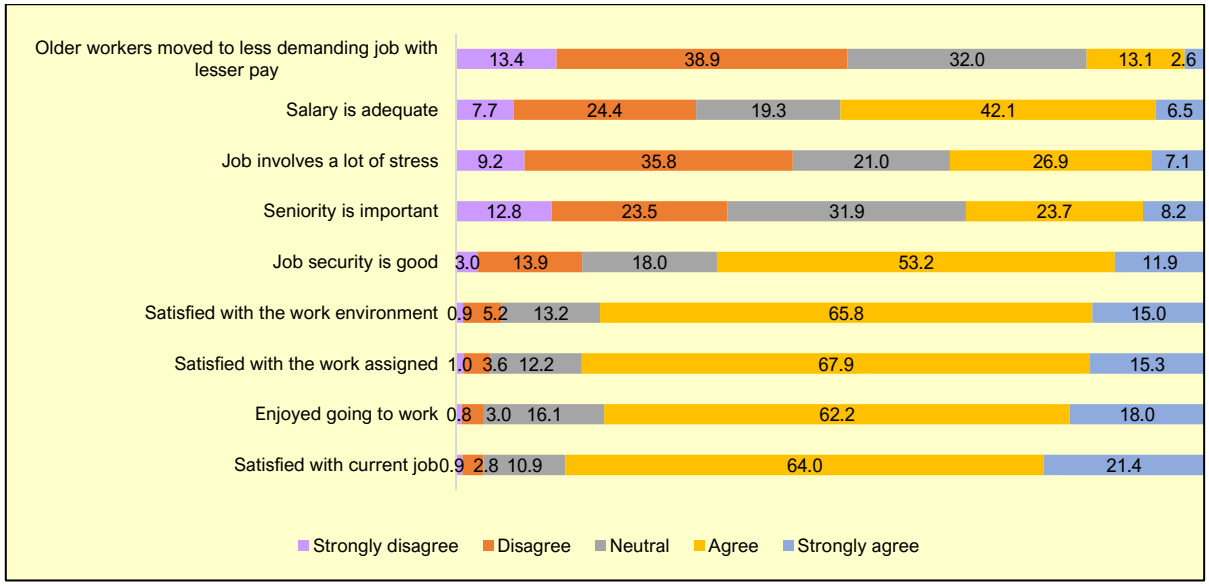

Figure 4.12: Job Satisfaction of Respondents' Jobs (%)

The statements above represent three domains, namely general job satisfaction, seniority and workplace pressures and compensation and security. “General job satisfaction” consists of four statements (1) Satisfied with work environment, (2) Satisfied with work assigned, (3) Enjoyed going to work and (4) Satisfied with current job. The domain “seniority and workplace pressures” comprise three statements (1) Older workers moved to less demanding job with lesser pay (2) Job involves a lot of stress and (3) Seniority is important while two statements (1) Salary is adequate and (2) Job security is good, make up for the domain “compensation and security”.

The harmonised scores 0 to 100 show a high mean score of 88.9 and standard deviation 20.5 for the general job satisfaction domain, mean 41.4 with standard deviation 18.7 for seniority and workplace pressures domain and mean 59.1 with standard deviation 21.7 for the compensation and security (Table 1.1).

Table 4.2: Factor Scores of Job Satisfaction

Job satisfaction	Raw score		Harmonised score		
	Min	Max	Min	Max	Mean (SD)
General job satisfaction	4.0	12.0	0.0	100.0	88.9 (20.5)
Seniority and workplace pressures	3.0	15.0	0.0	100.0	41.4 (18.7)
Compensation and security	2.0	10.0	0.0	100.0	59.1 (21.7)

For general job satisfaction, it can be observed in Figure 4.13 that the mean score increases gradually with education level from 83.0 among respondents with no schooling to 89.3 among those with lower secondary education and 90.2 with post-secondary education and above. However, there is no difference in the mean score of general job satisfaction between urban and rural respondents.

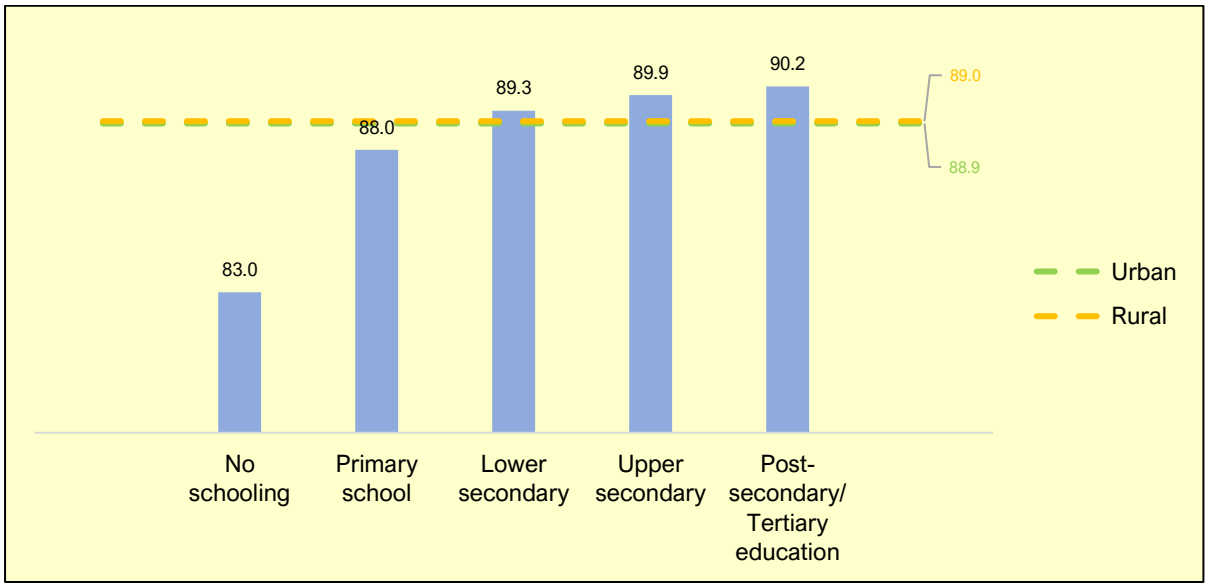

Figure 4.13: General Job Satisfaction Mean Score by Place of Residence and Education Level

Across occupations, the general job satisfaction mean score is lowest among respondents working as plant and machine operators and assemblers (85.7) followed by skilled agriculture related workers (86.7) and those in elementary occupations (87.8) (Figure 4.14).

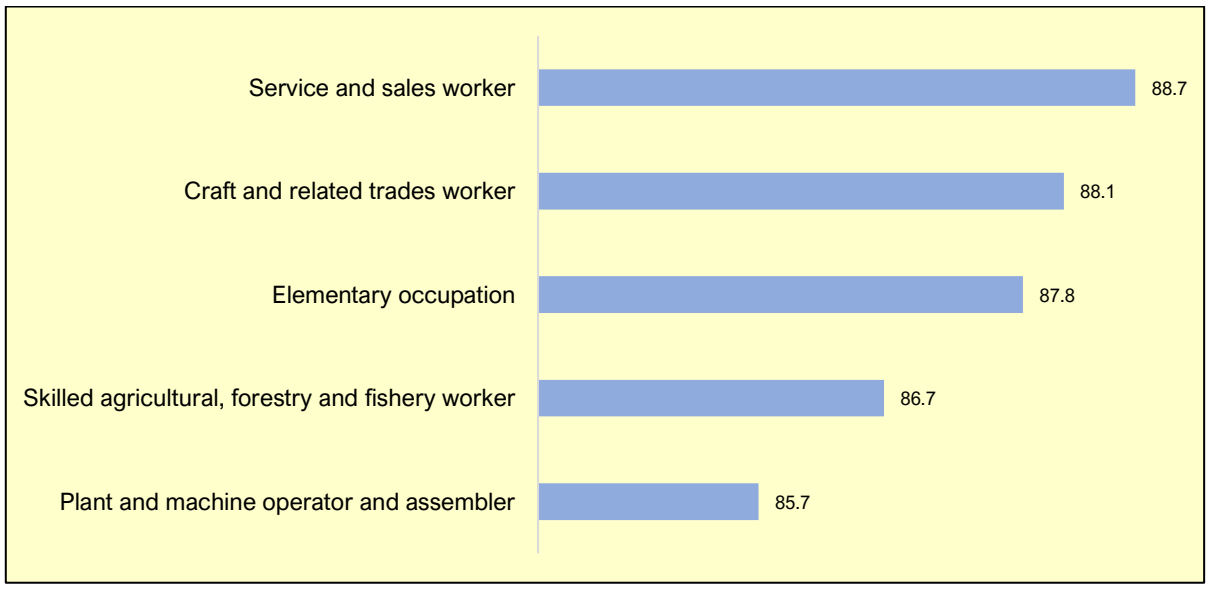

Figure 4.14: Top Five Occupations with Low Job Satisfaction Mean Score

Regarding seniority and workplace pressures, the mean score is slightly higher among urban respondents (42.7) compared with rural respondents (39.3). Across education level, the mean score drops from 39.9 among respondents with no schooling to 38.5 among those with primary education then rises to 41.6 among those with lower secondary and 44.2 for those with post-secondary and higher (Figure 4.15).

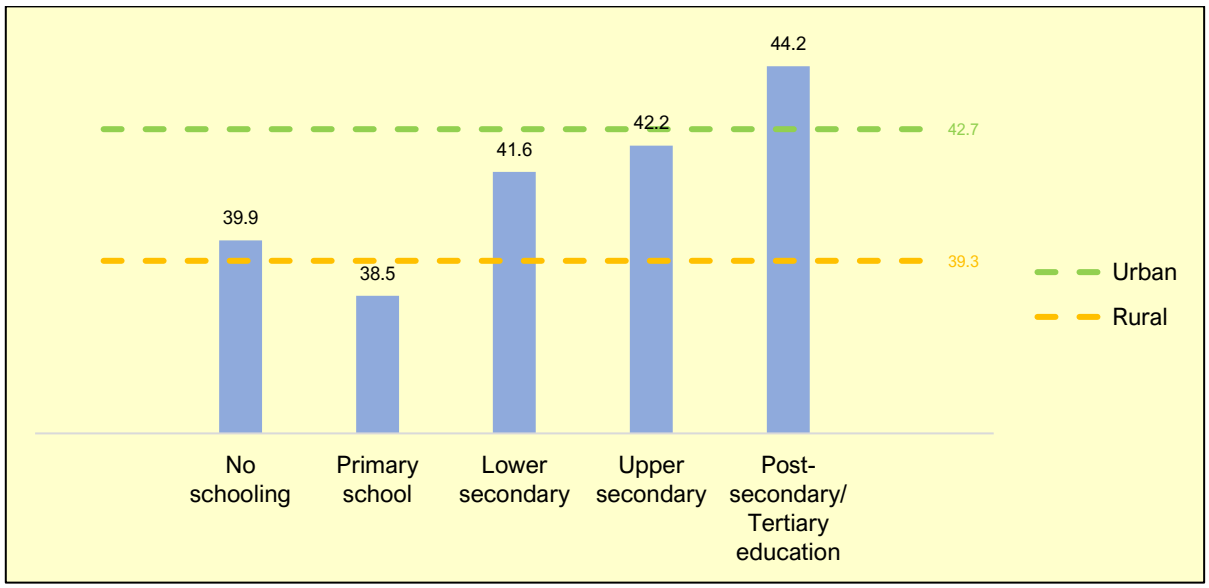

Figure 4.15: Seniority and Workplace Pressures Mean Score by Place of Residence and Education Level

Figure 4.16 indicates that seniority and workplace pressure is lowest among skilled agriculture, forestry and fishery workers (36.8) followed by elementary occupation workers (39.7), craft and related trades workers as well as services and sales workers (40.6 and 40.7, respectively).

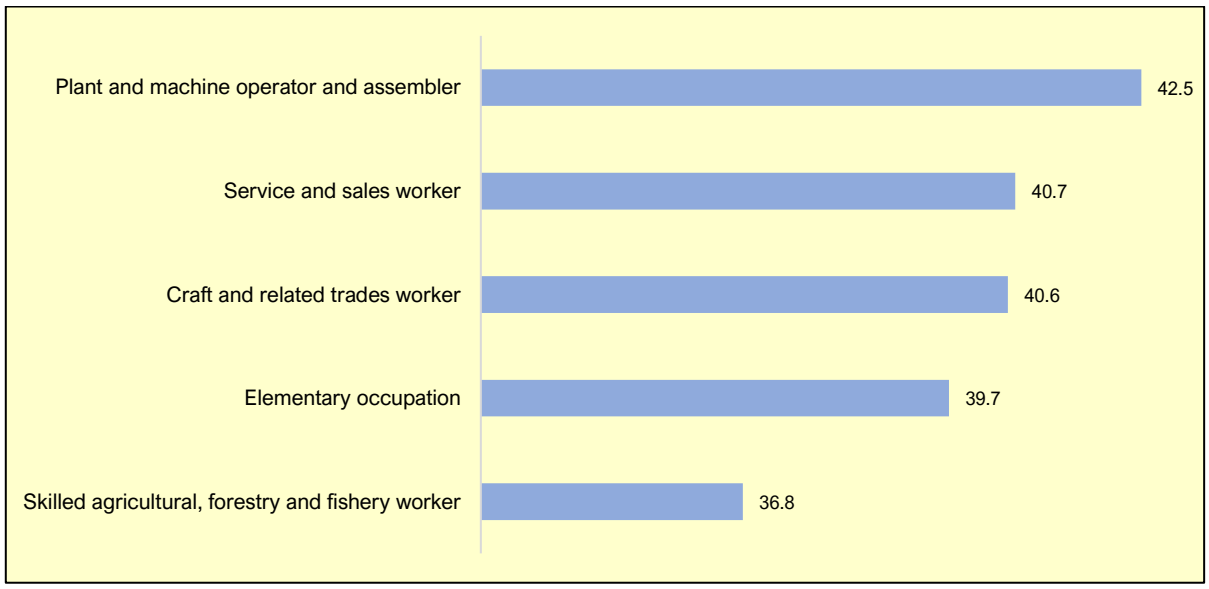

Figure 4.16: Top Five Occupations with Low Seniority and Workplace Pressures Mean Score

In terms of compensation and security, the mean score increases gradually with education level from 51.5 among respondents with no schooling to 56.5 among those with lower secondary education and 67.8 among those with at least a post-secondary education (Figure 4.17). Urban respondents have a slightly higher mean score (60.0) than rural respondents (57.5).

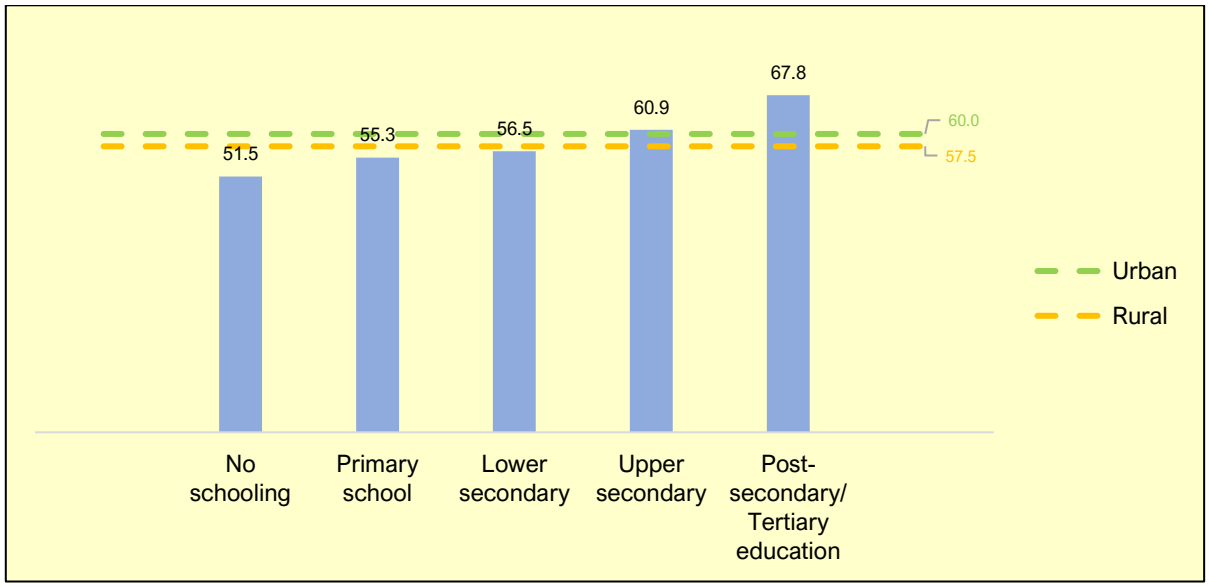

Figure 4.17: Compensation and Security Mean Score by Place of Residence and Education Level

Occupation with the lowest compensation and security mean score is skilled agriculture related (54.3) followed by elementary occupation (55.0) and craft and related trades (56.1) (Figure 4.18). The top five occupations with low compensation and security mean scores are the same top five occupations with low seniority and workplace pressures.

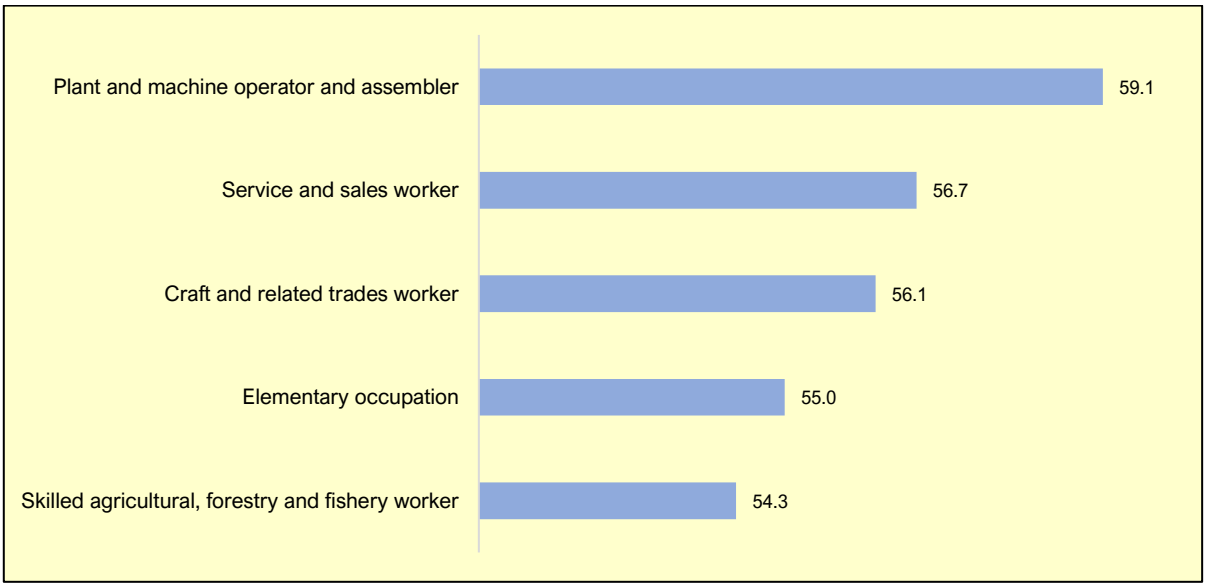

Figure 4.18: Top Five Occupations with Low Compensation and Security Mean Score

4.4 Retirement Plan

Among respondents who are still working, they were asked about their retirement plans as shown in Figure 4.19. Overall, slightly more than a quarter reported they will work until their health fails (26%) while about 33% have not given much thought about retirement or have no current plans. About 18% of the respondents plan to stop work altogether upon retirement.

Across age, the proportion of respondents who plan to continue working until their health fails increases from 21% among those aged 40-49 to 28% among those aged 50-59 and 36% aged 60 and above. Respondents who have not given much thought or no plans on retirement range between 29% among those aged 50-59 to 36% among the 40-year-olds. Those who will stop work completely comprise 16% of respondents aged 40-49 and those aged 60 and above each, and 21% of respondents aged 50-59.

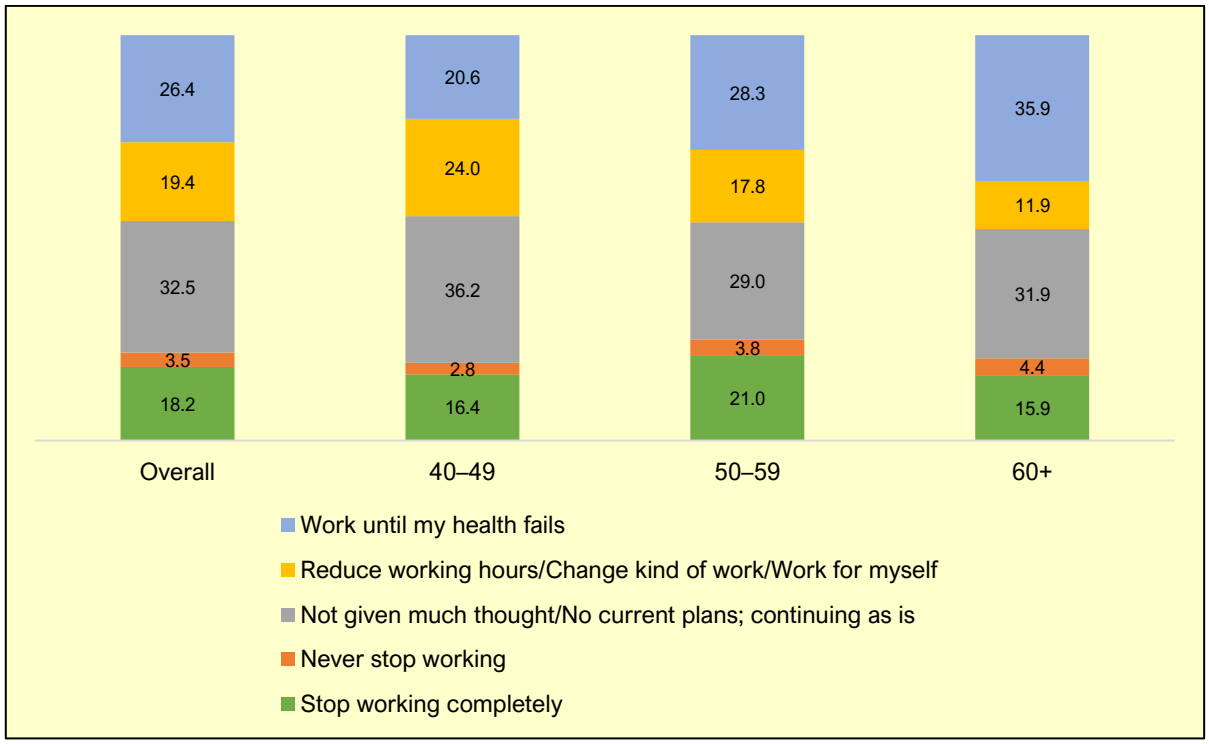

Figure 4.19: Retirement Plan by Age (%)

Examining retirement plans by education level reveals that the proportion of respondents who will work until their health fails decreases with increasing education from 37% among those with no schooling to 29% with lower secondary education and 16% among those with at least a post-secondary education (Figure 4.20). The opposite pattern is observed for respondents who reported that they would reduce working hours or change jobs from 11% among respondents with no schooling to 19% among those with lower secondary and 24% for those with post-secondary and higher. Similar rising trends with education level are observed for respondents who have not given much thought or have no plans for retirement, as well as those who will stop work completely upon reaching retirement age.

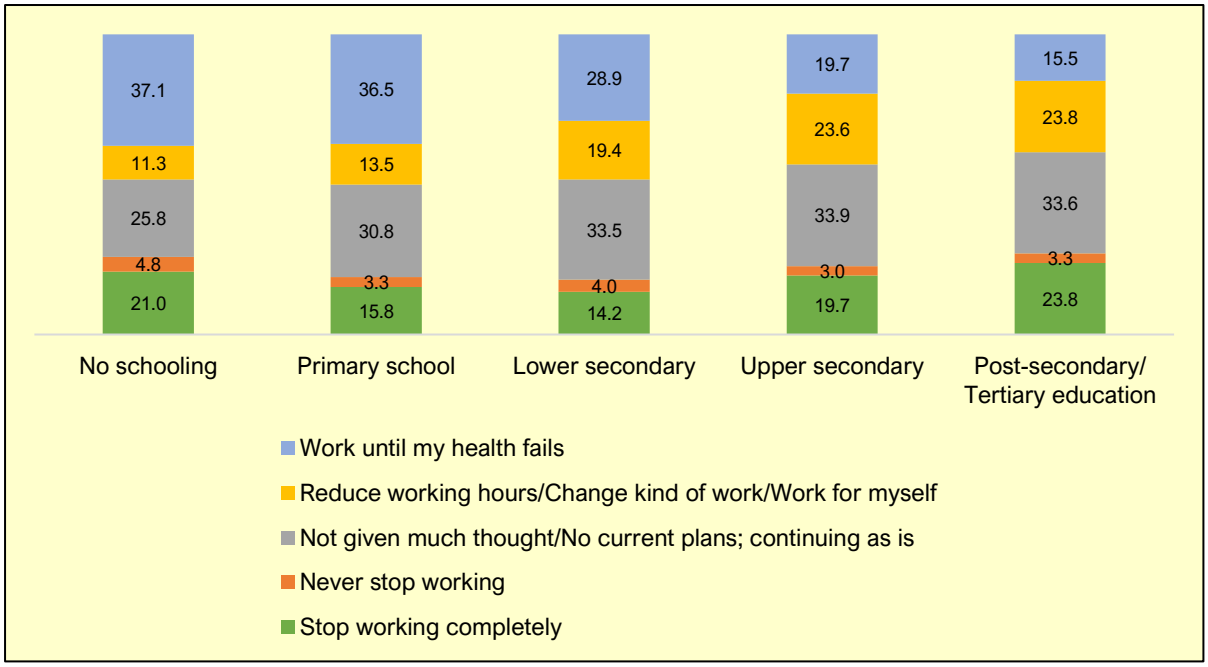

Figure 4.20: Retirement Plan by Education Level (%)

The data also shows some differences between urban and rural respondents (Figure 4.21). The proportions of respondents who will work until their health fails and those who will stop work completely are higher among rural compared with urban respondents (30% vs 24% and 20% vs 17%, respectively). The opposite is true of the respondents who will reduce working hours or change jobs (urban 20%, rural 17%) and those who have not given much or have no plans for retirement (urban 34% and rural 30%).

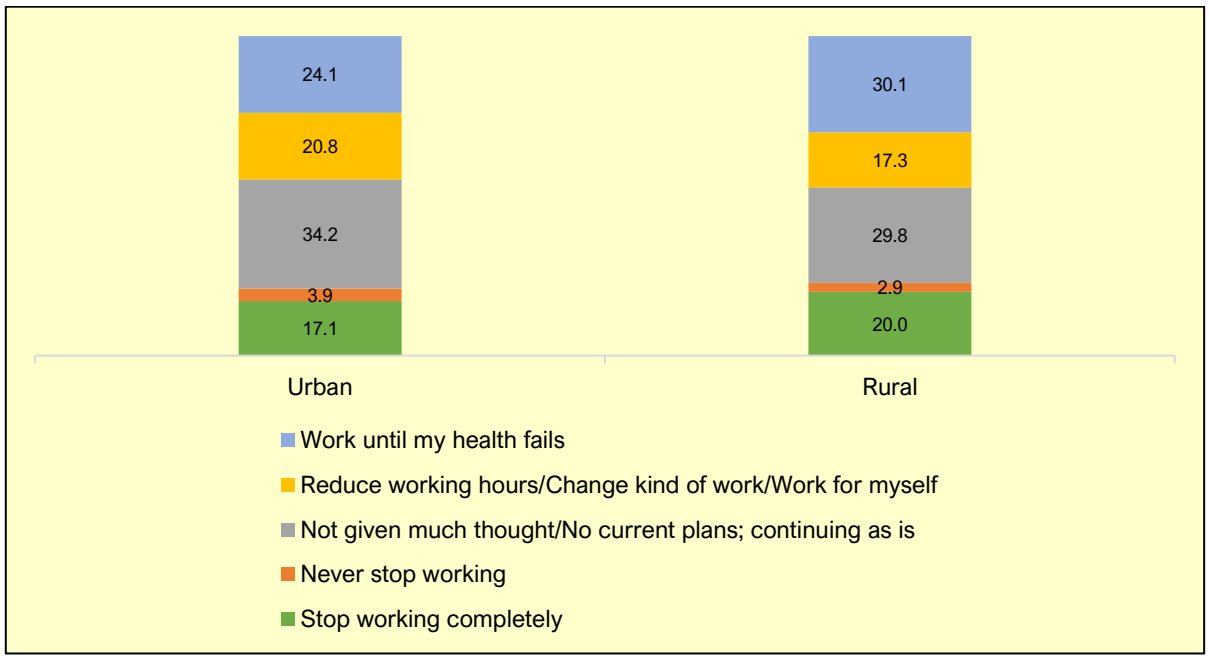

Figure 4.21: Retirement Plan by Place of Residence (%)

4.5 Retirement

Among respondents who are retired or no longer working, 42% retired because of mandatory retirement age while 22% cited health condition as the reason for their retirement. About 8% of the respondents are no longer interested in continuing to work (Figure 4.22). Other “reasons" (14%) primarily include personal matters. Respondents who cited mandatory retirement increase sharply from 12% among those aged 40-49 to 23% among respondents aged 50-59 and 49% among those aged 60 and above. Given that official retirement age in Malaysia is 60, mandatory retirement could refer to the termination of employment contract for respondents who retired before age 60.

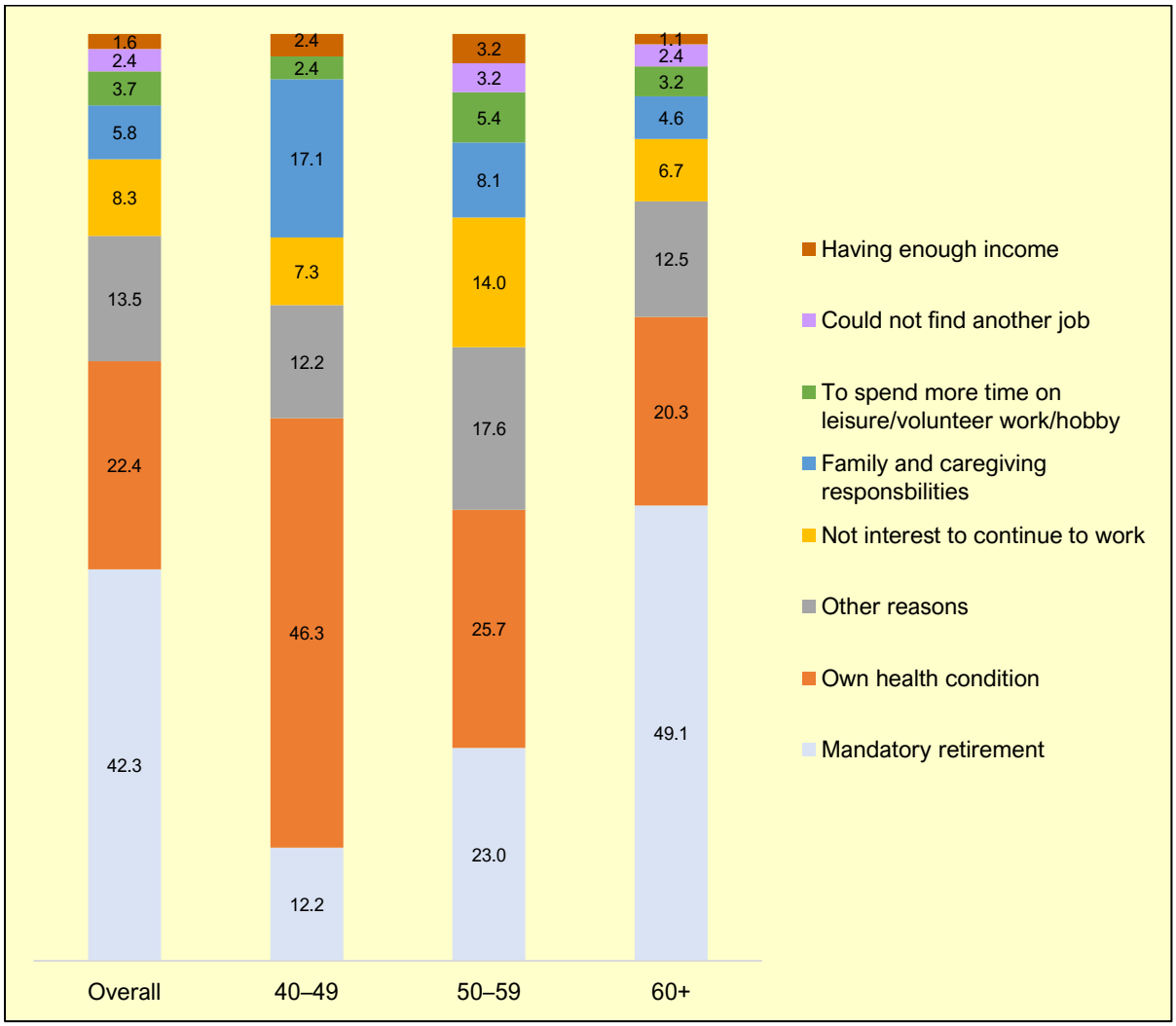

Figure 4.22: Main Reason for Retirement (%)

Among respondents who are retired, 49% intentionally wanted to retire while 39% of them reported they were forced to retire (Figure 4.23). Across age the proportion of respondents who intentionally wanted to retire is highest among those aged 50-59 while the proportion of respondents who were forced to retire is highest among those aged 60 and above.

Figure 4.23: Retirement Circumstances (%)

Among respondents aged 60 and above who were or partly forced to retire, Figure 4.24 shows that slightly more than half (55%) retired because they have reached mandatory retirement age while about 24% due to health reasons. A small percentage of them were forced to retire as they could not find another job (4%) or had to commit to family and caregiving responsibilities (2%).

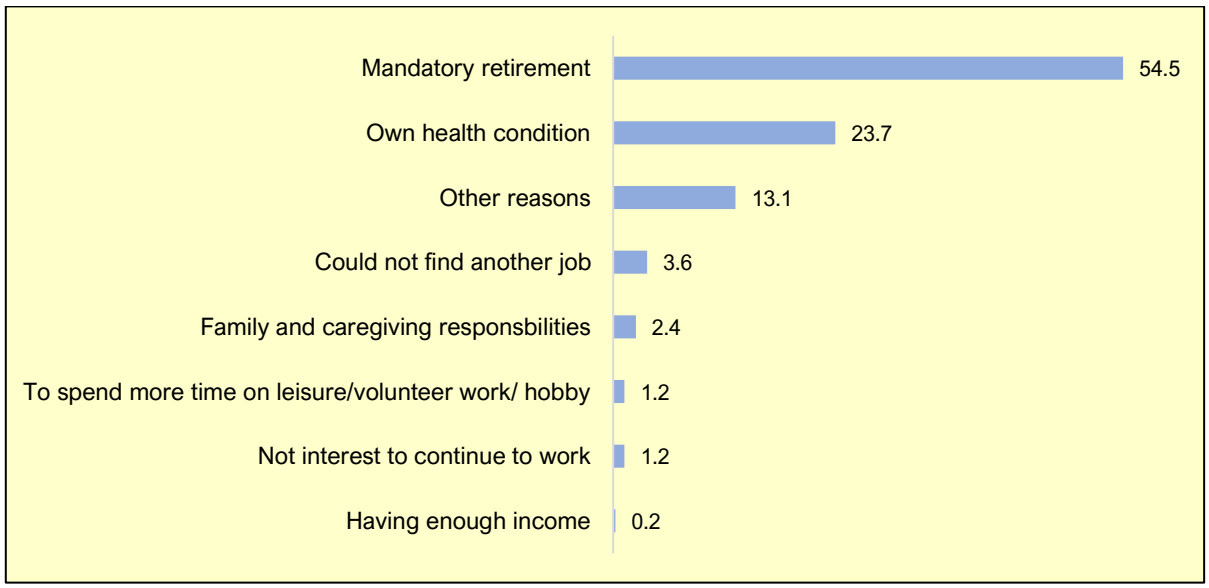

Figure 4.24: Retirement Reason Among Those Aged 60+ (Forced or Partly Forced) (%)

When asked about life in retirement, 47% of the respondents are very satisfied, and 38% are moderately satisfied (Figure 4.25).

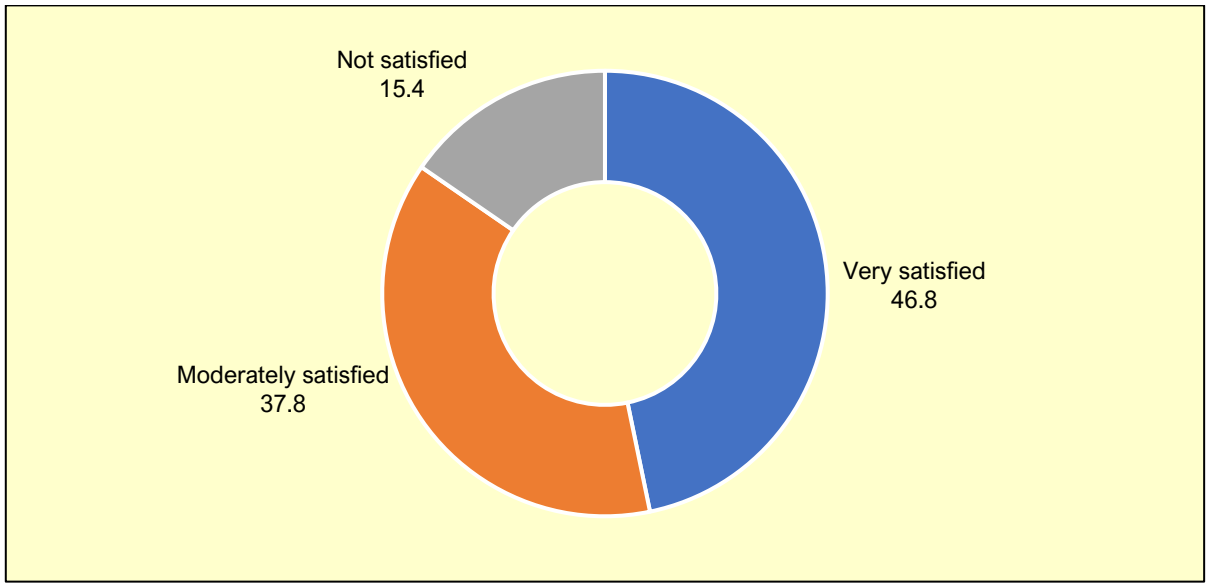

Figure 4.25: Life Satisfaction after Retirement (%)

Respondents were also asked about their life before retirement in comparison to their current situation. Figure 4.26 indicates that 43% of the respondents admitted their present life is better than before retirement, 36% reported about the same, and 20% said their life is worse than before retirement.

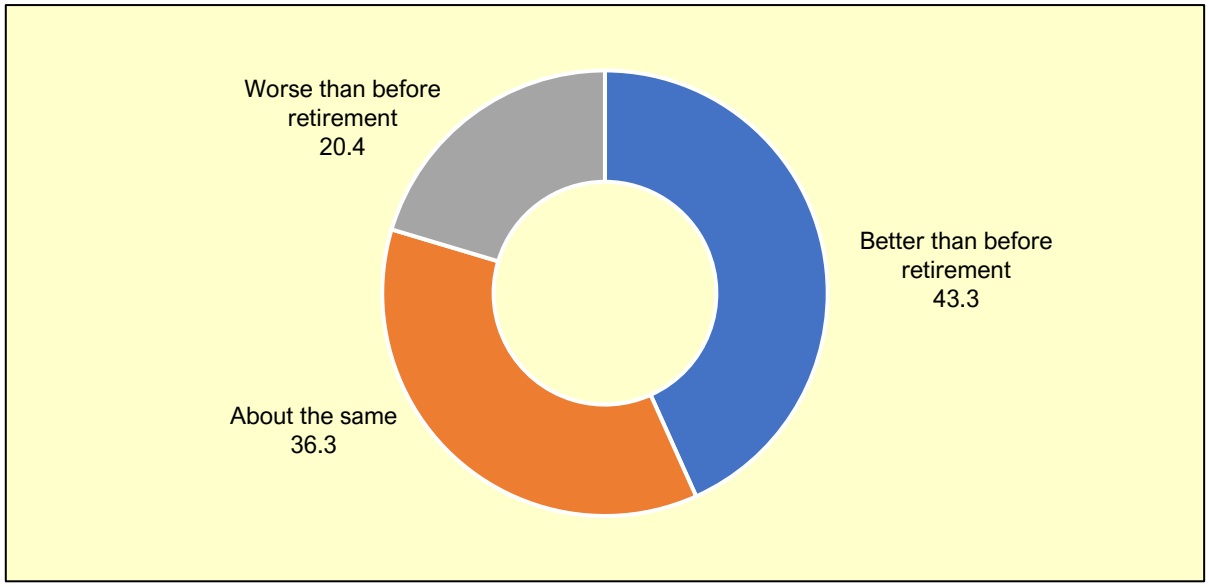

Figure 4.26: Life Before and After Retirement (%)

5 INCOME AND EXPENDITURE

Generally, older persons are less likely to have paid employment, more vulnerable to uncertainties as they are more likely to have health issues and are in need for long-term care compared to younger adults. Hence, income security is an important issue in old age. Income of older persons are mostly generated from a combination of their formal pension schemes, their own savings which are often small and with low interest yield, and support from family members. While there will be limited capacities and resources, the needs of older persons will be more complex as they get older.

Information on income collected from MARS respondents includes sources and amount of income. Income entails salary and wages, profit from business, rental, dividend from investment, private transfers and social assistance from government and other agencies. Average monthly expenditure on household needs, which include transportation, utilities, groceries, hygiene, and personal care, was obtained. Respondents were also asked how they manage their monthly expenditure.

5.1 Income

Respondents were asked whether they receive any income in the past one year excluding income given by other household members (private transfer). Overall, 60% of the respondents reported they receive some form of income (Figure 5.1) with the proportion of male respondents receiving annual income substantially higher than female respondents (75% and 48%, respectively). The gender variations are observed across all age groups with the biggest difference among respondents aged 50 to 59 where the proportion of male respondents receiving income is 78% compared to 46% of the female respondents. Figure 5.1 also shows that the proportion of respondents receiving income is slightly higher among rural compared to urban respondents (62% and 59%, respectively).

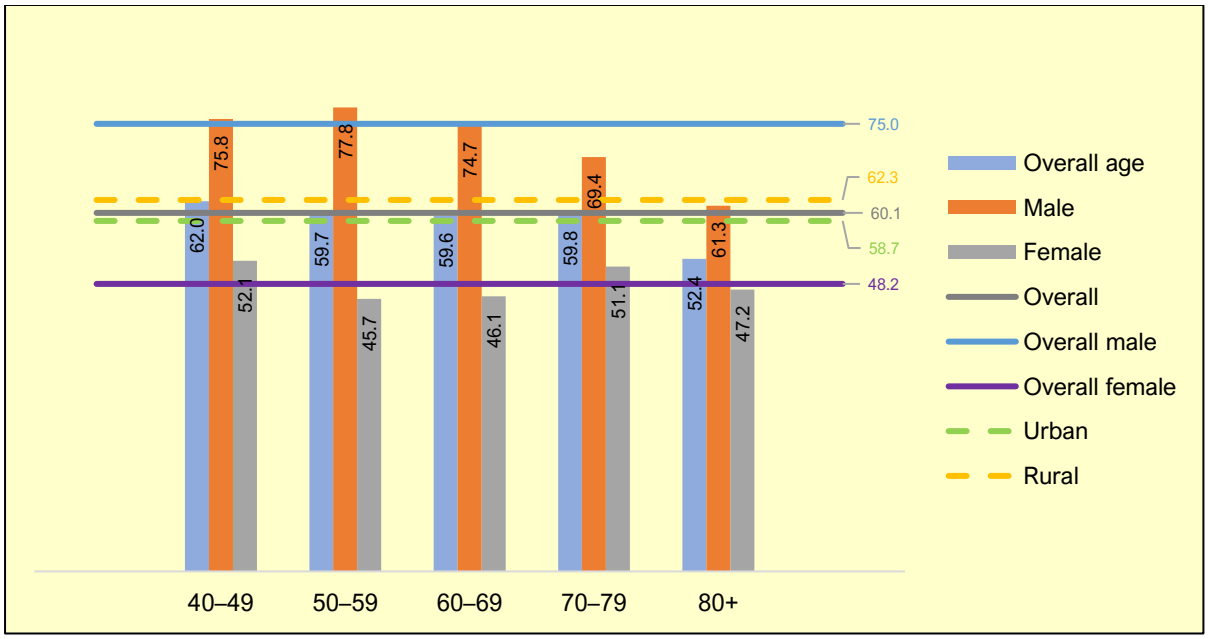

Figure 5.1: Respondents Receiving Income by Age, Gender and Place of Residence (%)

The proportion of respondents receiving income increases with education attainment from about 50% among respondents with no schooling to 60% among respondents with lower secondary education and 70% among those with at least a post-secondary education (Figure 5.2).

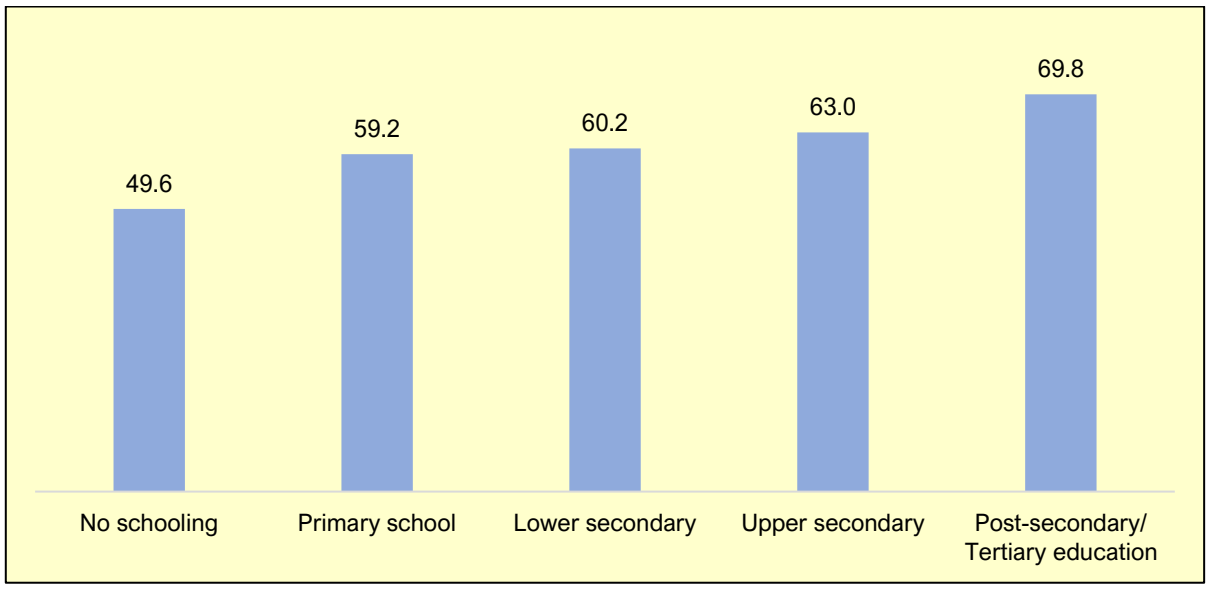

Figure 5.2: Respondents Receiving Income by Education Level (%)

The top three sources of income received by the respondents are Salary/Income from business (50%), Subsidies or Cost of Living Allowance from the Government which include BR1M/BSH[1] (40%) and Pension (14%) (Figure 5.3). Other income (11%) primarily consists of irregular income sources. A small proportion of respondents reported that they receive income from shares/unit trust dividend (3%) and insurance (Less than 1%).

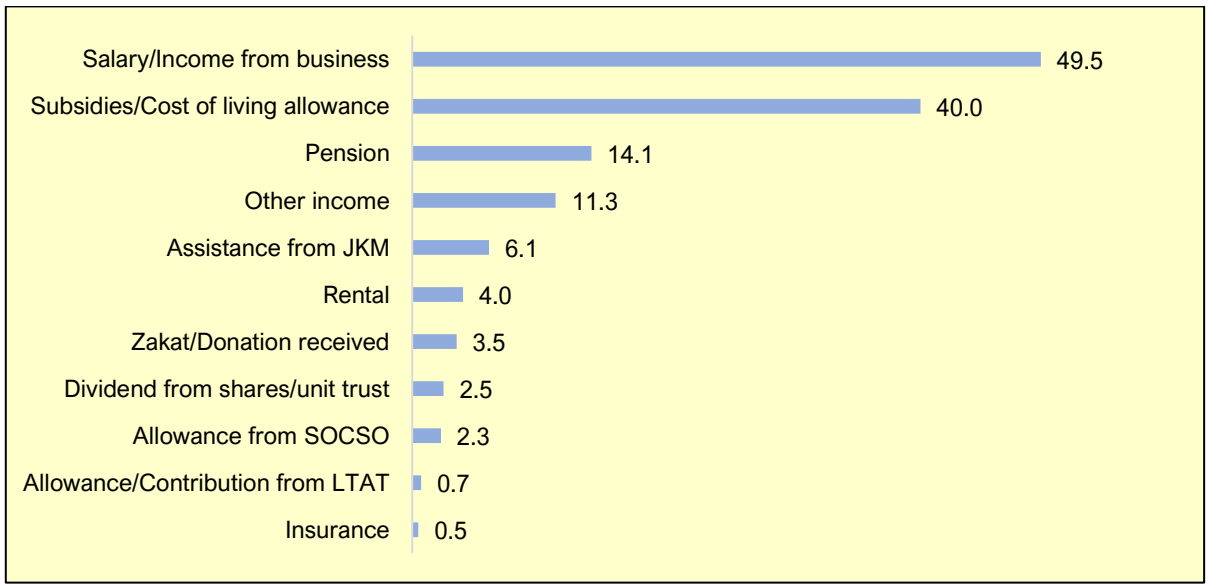

Figure 5.3: Sources of Income (%)

[1] BR1M (*Bantuan Rakyat 1 Malaysia*) or BSH (*Bantuan Sara Hidup*), is a government cash transfer program aimed at assisting low-income households.

Sources of income received by the respondents were then grouped into four different types of income as shown in Figure 5.4. Work-related income which consists of pension, salary or income from business was cited by 62% of the respondents followed by public transfers 45%. Public transfers refer to income received from government agencies such as cost of living allowance/subsidies, allowance/cash assistance from SOCSO, Arm Forces Fund Board (LTAT) and Department of Social Welfare (JKM). A small proportion of income consists of contributions from family members, referred to as private transfer (4%).

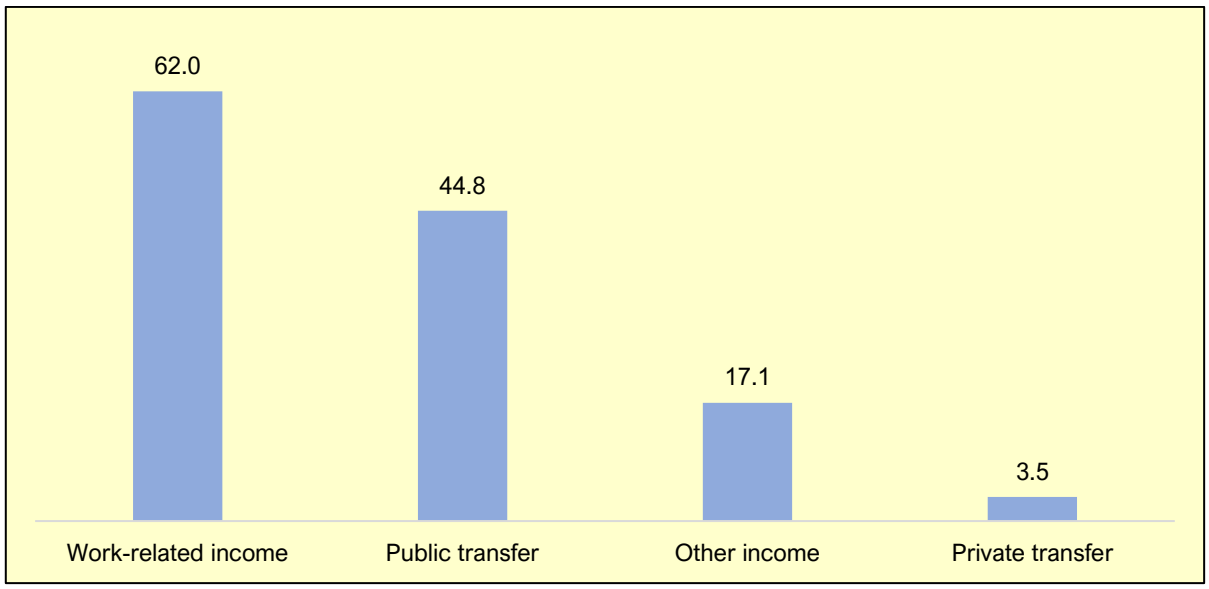

Figure 5.4: Types of Income Received (%)

Figure 5.5 suggests that the proportion of respondents receiving work-related income is substantially higher among those younger than 60 (69%) compared to 60 and above (52%). Male respondents reported much higher proportion of work-related income than female respondents for both age groups. Respondents aged 60 and above reported higher public transfer income (54%) compared to those younger than 60 (38%) while not much difference is observed between male and female respondents receiving public transfer for both age groups.

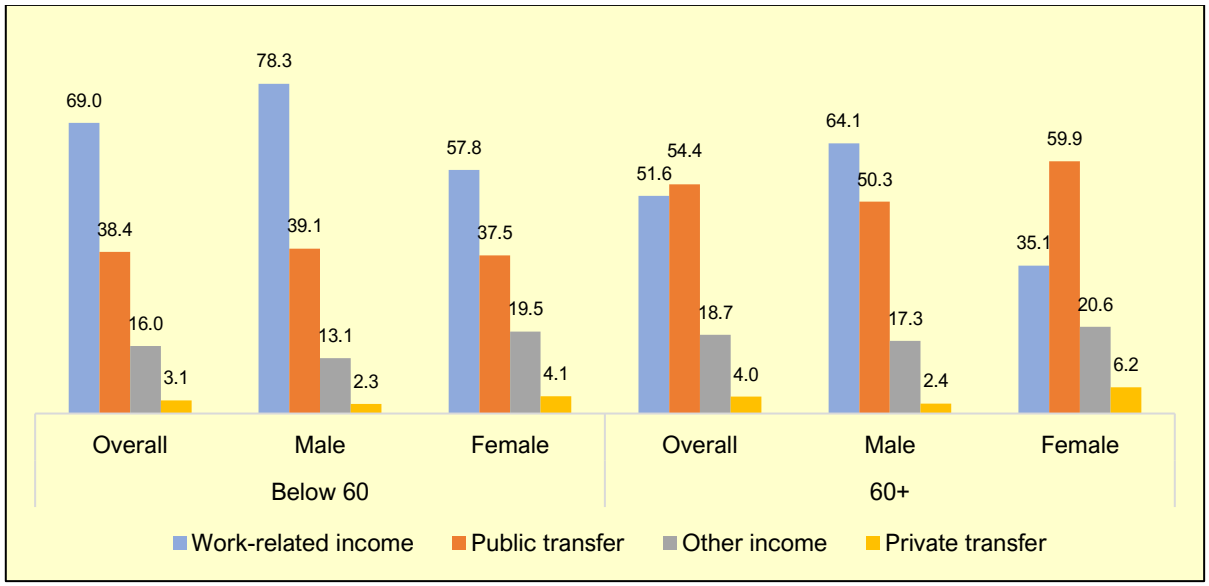

Figure 5.5: Types of Income Received by Age and Gender (%)

Examining income types by education level shows a sharp increase in work-related income with increasing education attainment from 33% among respondents with no schooling to 65% among those with lower secondary education and 86% among respondents with at least a post-secondary education. Expectedly the opposite trend is observed for respondents receiving public transfer indicating a sharp decline with increased education (Figure 5.6).

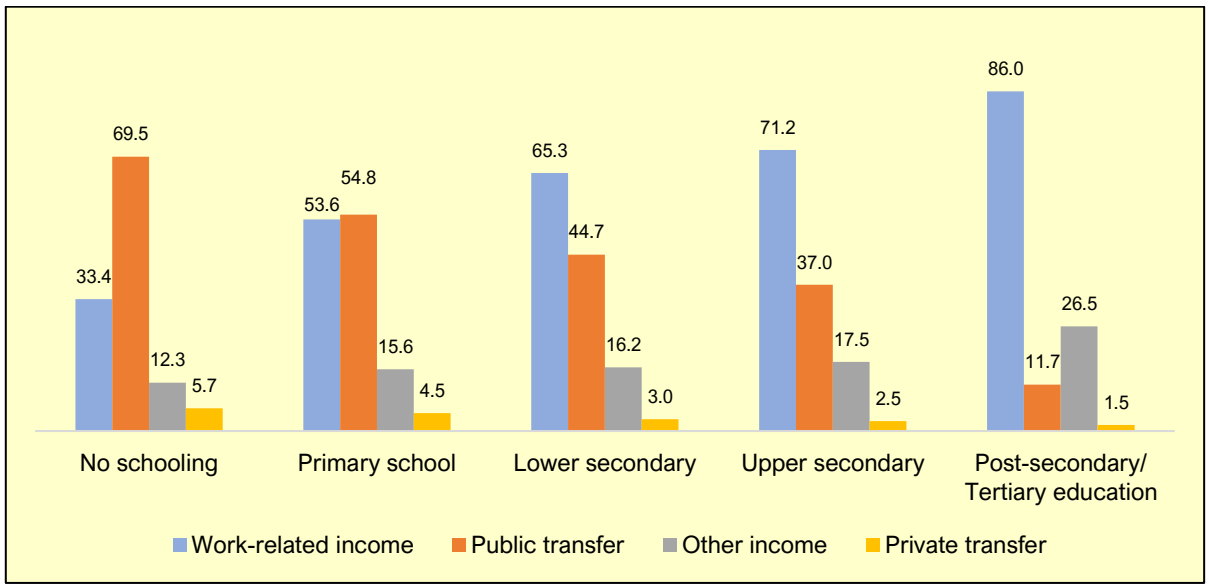

Figure 5.6: Types of Income Received by Education Level (%)

In terms of the amount of monthly income received including private transfer indicates that nearly half of the respondents (49%) receive less than RM1,000 while 28% receive between RM1,000 to less than RM2,000 per month. Only about 5% of the respondents reported having monthly income of RM5,000 or more (Figure 5.7).

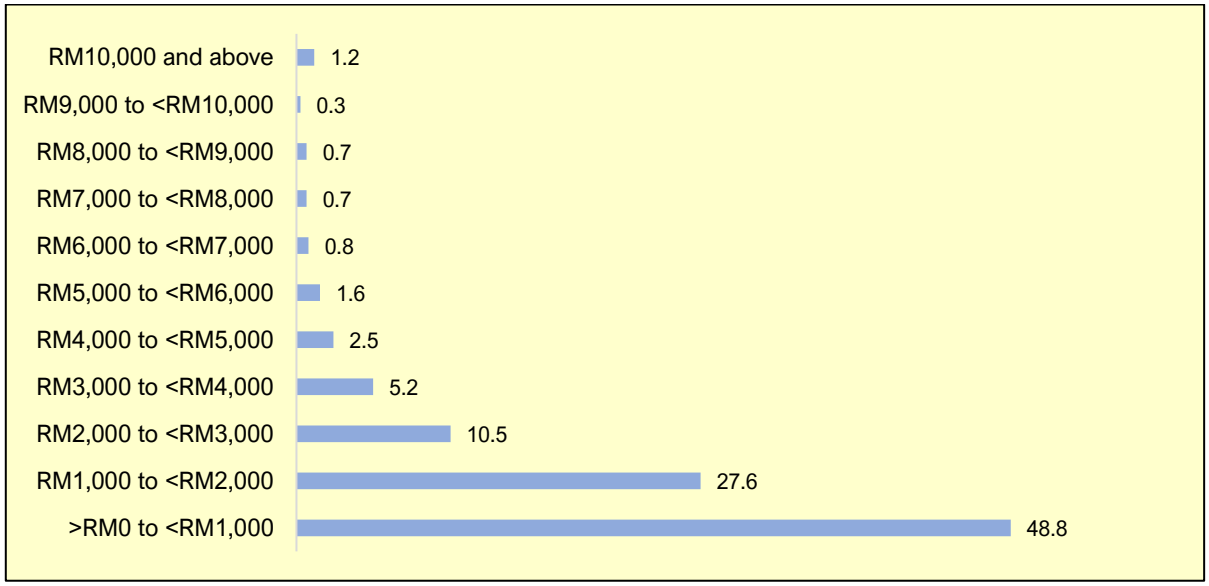

Figure 5.7: Monthly Net Income (%)

The proportion of respondents with income of less than RM1,000 is substantially higher among respondents aged 60 and above (61%) compared to its younger counterparts (41%). For both age groups, the proportion of female respondents receiving less than RM1,000 per month is much higher than that of male respondents (Figure 5.8).

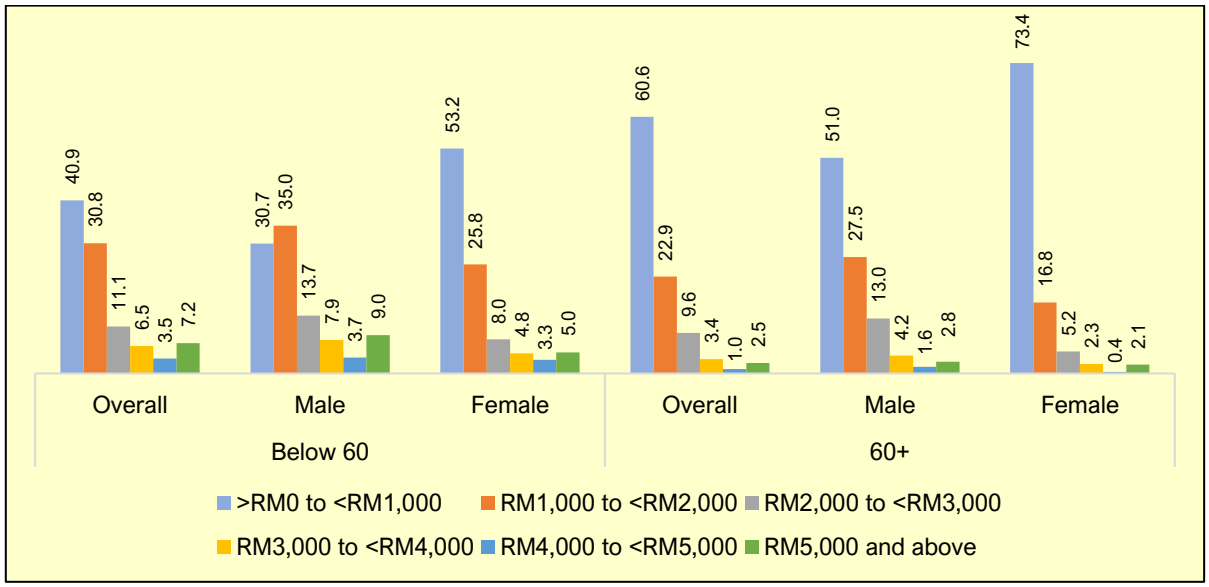

Figure 5.8: Monthly Net Income by Age and Gender (%)

5.2 Expenditure

Respondents were asked about their monthly expenditure for typical household needs in the past 12 months excluding housing costs. Overall, about 88% of the respondents reported having monthly household expenditure with the proportion of male respondents higher than female respondents (94% and 82%, respectively). The proportion of respondents with monthly household expenditure decreases with age from 92% among those aged 40-49 to 87% aged 60-69 and 74% aged 80 and above (Figure 5.9).

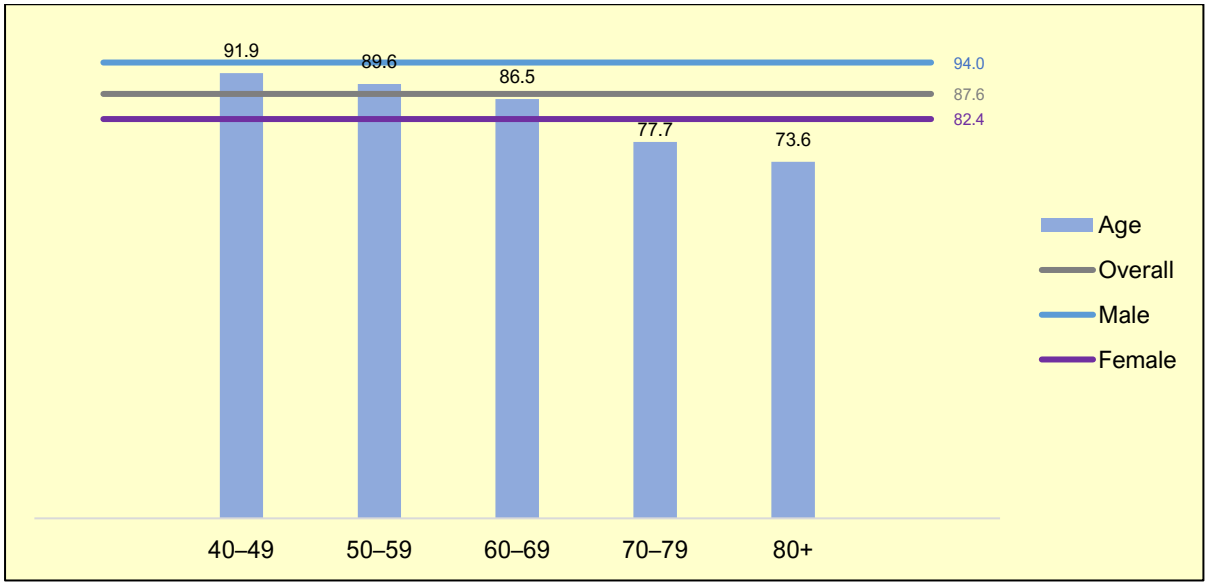

Figure 5.9: Respondents with Monthly Expenses (%)

Figure 5.10 shows a high proportion of the respondents reported that their monthly household expenditure is spent on groceries (82%) followed by electricity (77%), telecommunication (71%) and toiletries/personal care (70%).

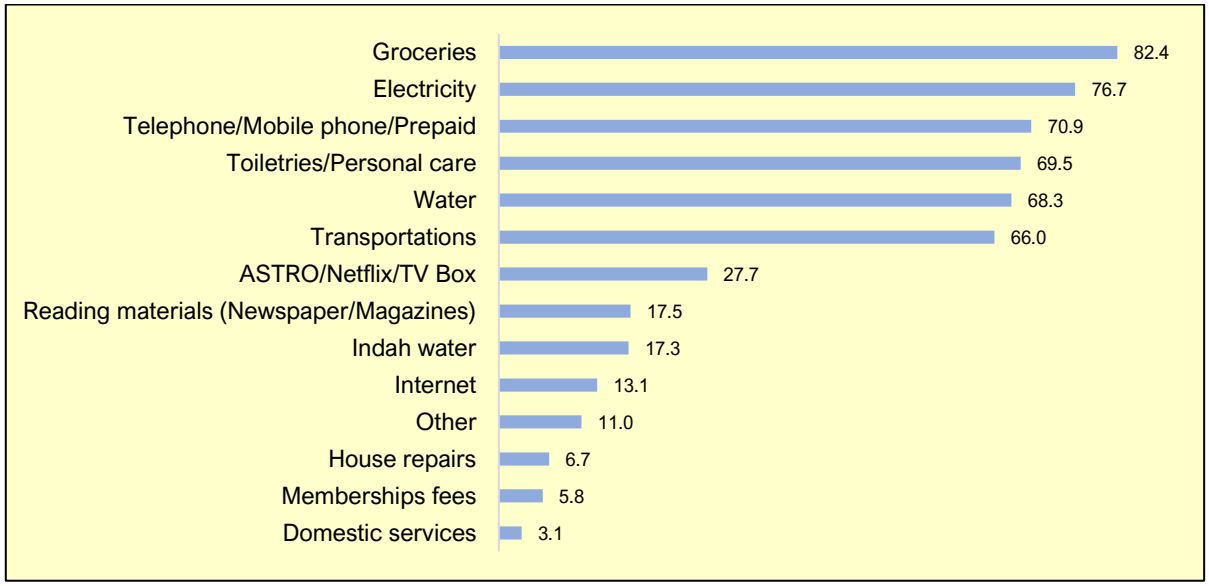

Figure 5.10: Types of Expenses Among Respondents with Monthly Expenditure (%)

Further examination of the monthly household expenditure by gender reveals that a high proportion of male respondents spent on transportation (88%), groceries (87%) and electricity (86%) (Figure 5.11). The proportion of male respondents is much higher than that of female respondents for all household expenditure except for toiletries/personal care. The highest proportion of female respondents was spent on groceries (78%) followed by toiletries/personal care (71%) and electricity (69%).

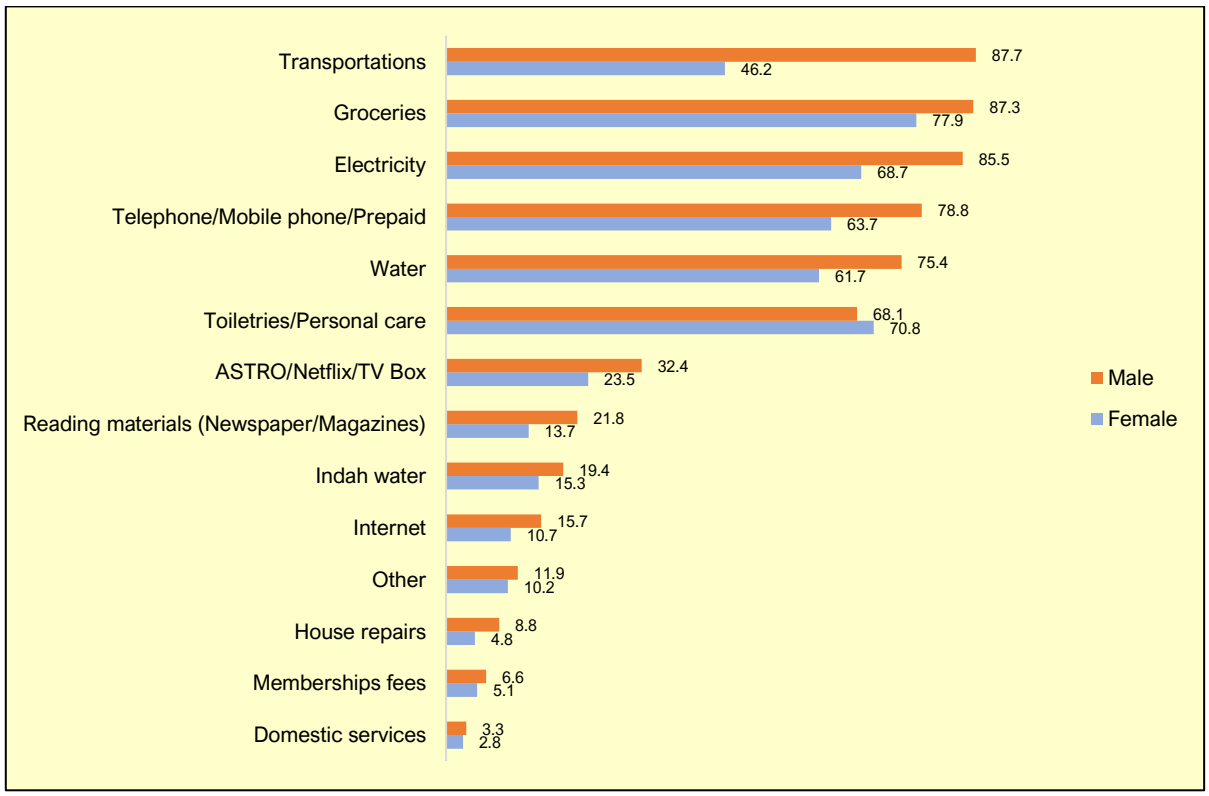

Figure 5.11: Types of Expenses by Gender (%)

The types of household expenses were grouped into fewer related categories as shown in Figure 5.12 with the median amount spent per month. The highest median amount of spending is on groceries and food at RM350 per month for the overall sample with median for male respondents at RM400 and female respondents at RM300. Median amount spent on transportation is RM150 with male spending RM200 and female RM150. Housing and utilities which include house repairs, internet, Indah water charges, water and electricity shows a median of RM119 while the median spending for household (domestic services) and personal care is RM100.

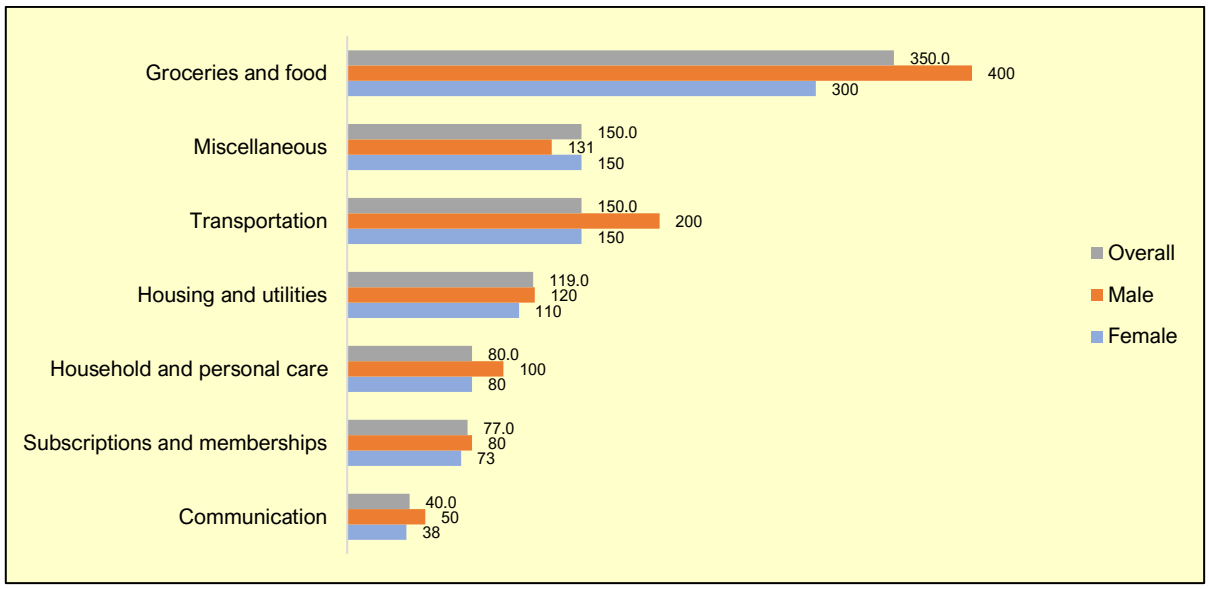

Figure 5.12: Median Amount of Expenses by Gender (RM)

The total monthly expenses shown in Figure 5.13 indicate that 36% of the respondents spend less than RM500 while about an equal proportion spend more than RM500 but less than RM1,000 per month. About 8% of the respondents reported that their monthly household expenditure is at least RM2,000.

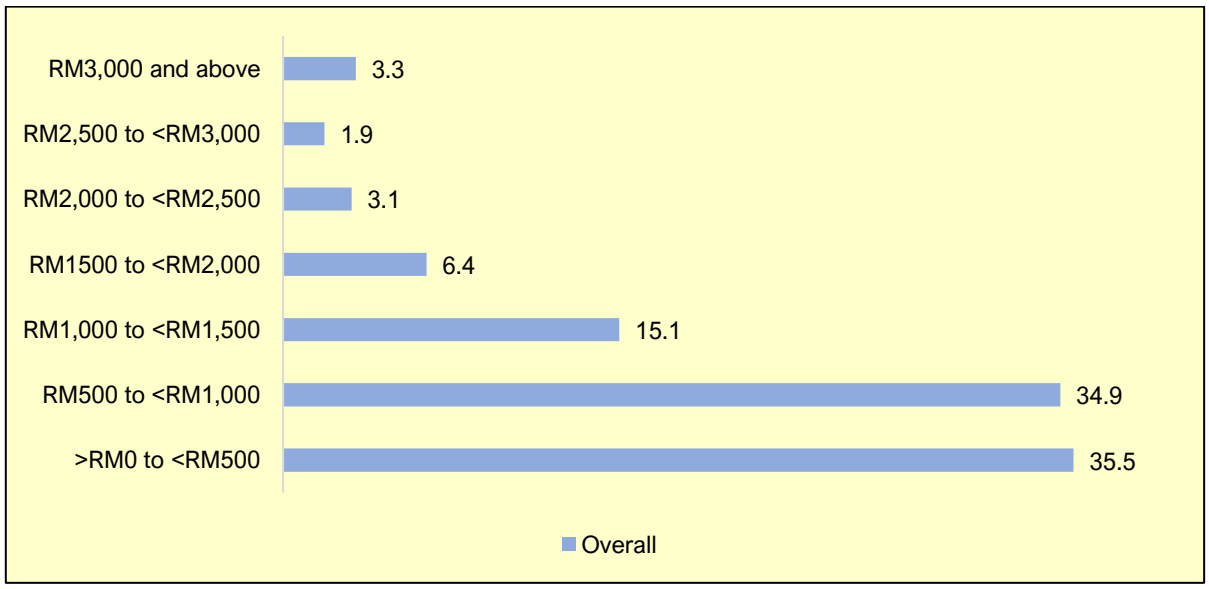

Figure 5.13: Total Monthly Expenses (%)

To questions on household finance management, about 38% of the respondents admitted to self-management. While 30% of the respondents reported that they jointly manage their household finances together with their spouses, 21% of them reported that it was mostly managed by their spouses. For those whose household finances are managed by family members, they are mostly done by their children (Figure 5.14). The proportion of respondents who reported that they manage the household finances by themselves is higher among male (44%) than female respondents (33%).

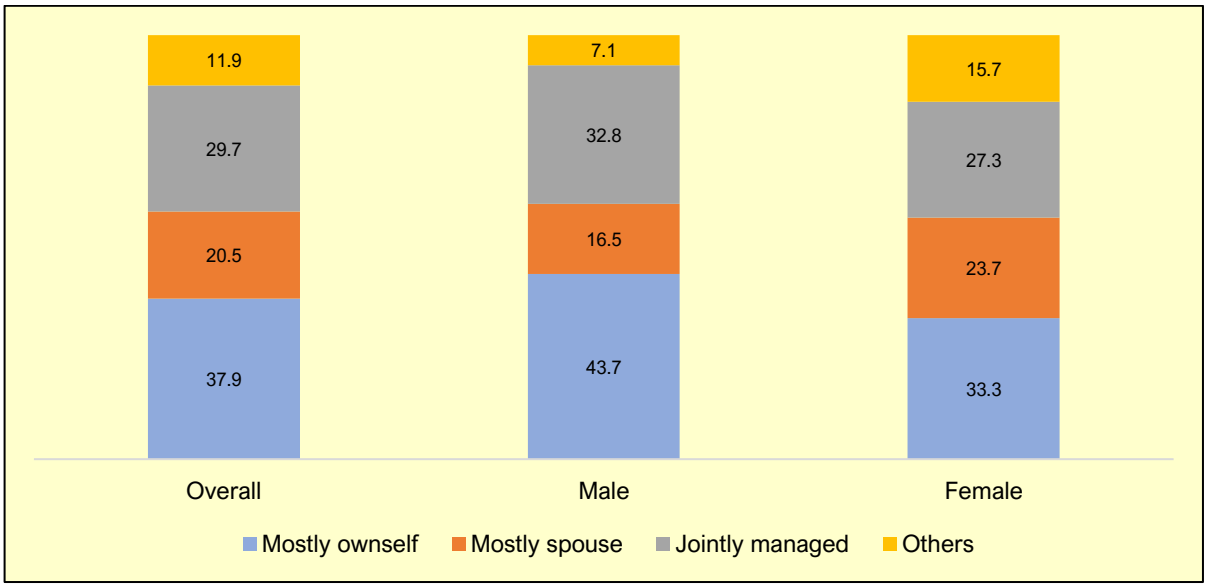

Figure 5.14: Person Managing Household Finances by Gender (%)

The proportion of respondents who mostly manage their own household finances by themselves is highest among those aged 60-69 (41%) and decreased to 39% among the 70-79 and 29% age 80 and above. The proportion of respondents who reported their household finances are managed by others increased substantially with increasing age from 4% among those age 40-49 to 16% age 60-69 and 51% among respondents aged 80 and above (Figure 5.15).

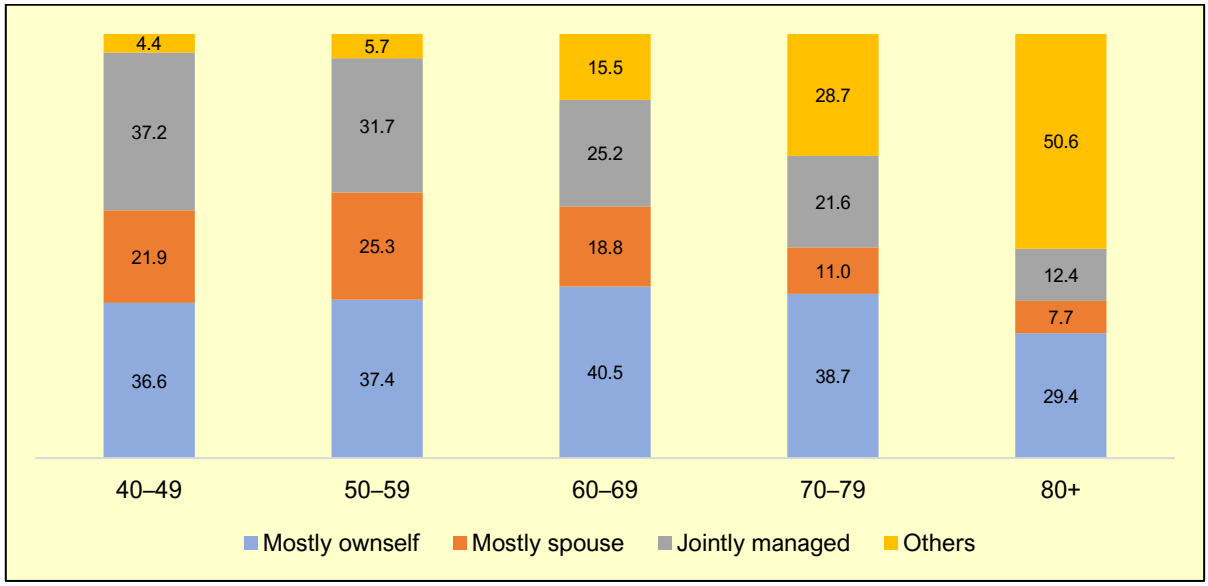

Figure 5.15: Person Managing Household Finances by Age (%)

As shown in Figure 5.16, the proportion of respondents who claimed that they manage their own household finances increases with education level from about 33% among respondents with no schooling to 38% among those with lower secondary and 43% for those with post-secondary and higher. A similar pattern is observed for respondents who reported they jointly manage their household finances with their spouses while the opposite is true of those household finances that are being managed by others.

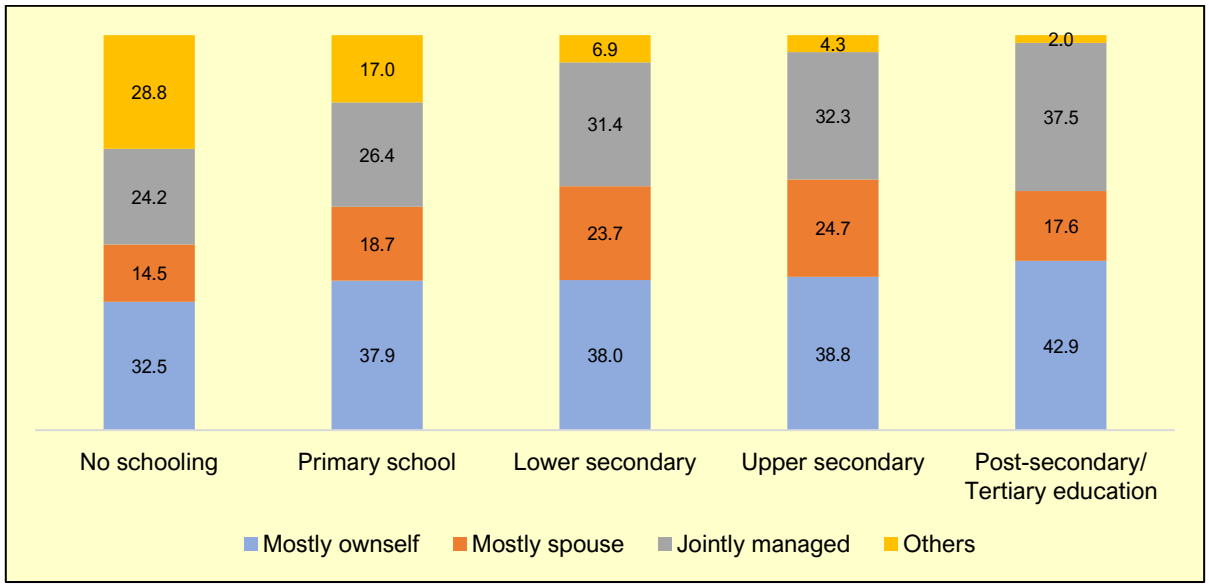

Figure 5.16: Person Managing Household Finances by Education Level (%)

Respondents were asked to rate how they have been managing their household finances. About 45% of the respondents reported that they are managing well or very well while about 14% admitted to managing it poorly or very poorly. (Figure 5.17). Male respondents register a slightly higher proportion at managing their household finances well/very well (47%) compared to female respondents (44%).

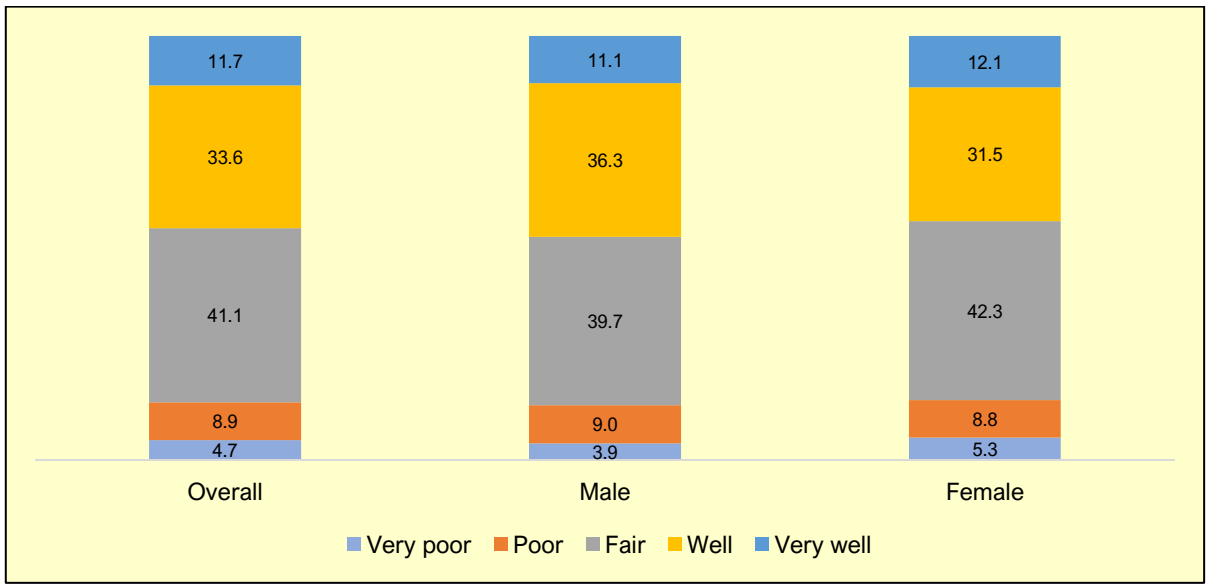

Figure 5.17: Ability to Manage Monthly Expenditure by Gender (%)

It can be observed from Figure 5.18 that the proportion of respondents who have been managing their household finances well/very well decreases with age from 48% among those aged 40-49 to 44% among 60-69 and 24% among those aged 80 and above. The proportion of respondents who reported their household finances are very poorly/poorly managed increases substantially with age from about 10% among those aged 40-49 to 37% among those in the oldest age group.

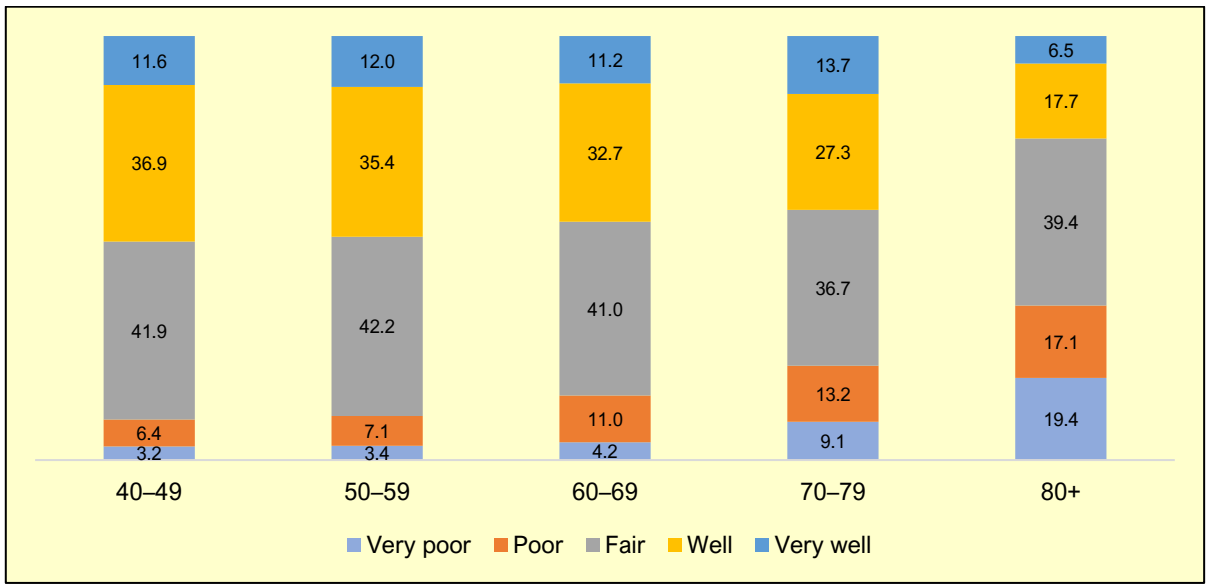

Figure 5.18: Ability to Manage Monthly Expenditure by Age (%)

The proportion of respondents who are managing their household finances well/very well is lowest among those with no schooling (28%) and increases substantially to 47% among those with a lower secondary education to 67% among respondents with at least a post-secondary education (Figure 5.19). The opposite pattern is observed in the proportion of respondents who are managing their household finances poorly/very poorly from about 27% among respondents with no schooling to eight percent among those with a post-secondary education or higher.

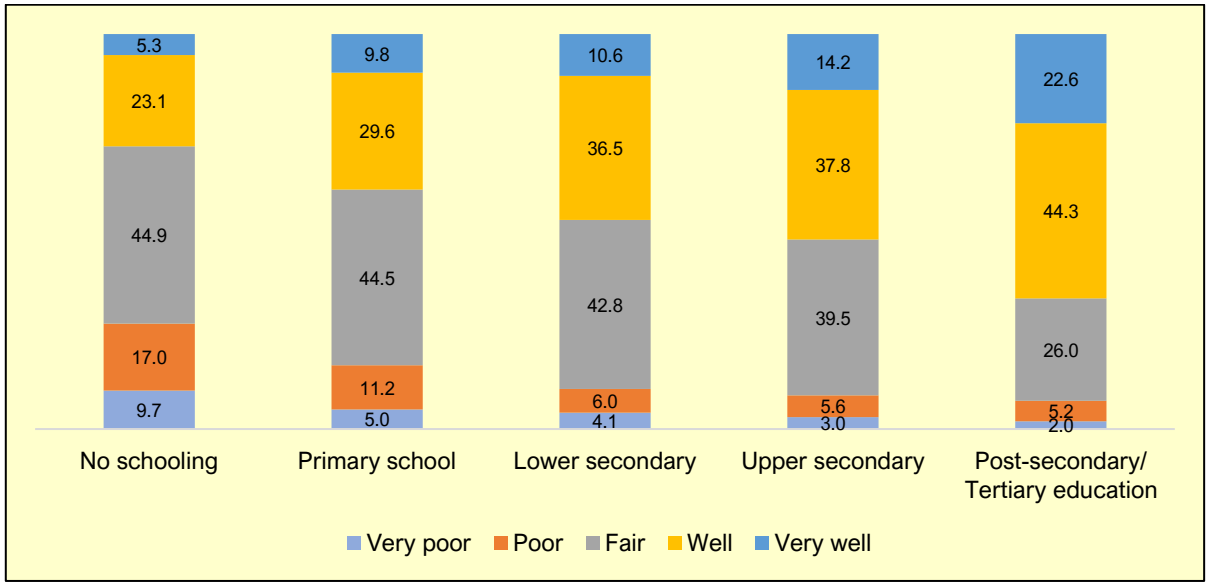

Figure 5.19: Ability to Manage Monthly Expenditure by Education Level (%)

5.3 Monthly Instalments

Figure 5.20 shows that overall, about 20% of the respondents reported they still have commitment for their monthly instalments with urban respondents reporting a higher proportion than rural respondents (22% and 17%, respectively) and a higher proportion among male than female respondents (27% and 15%, respectively). Across age, the proportion of respondents with monthly instalment decreases with age from about 31% among the 40-49 to 12% among 60-69 to about 4% among those aged 80 and above. Within each age group, the proportion of respondents with monthly instalments is substantially higher among male than female respondents.

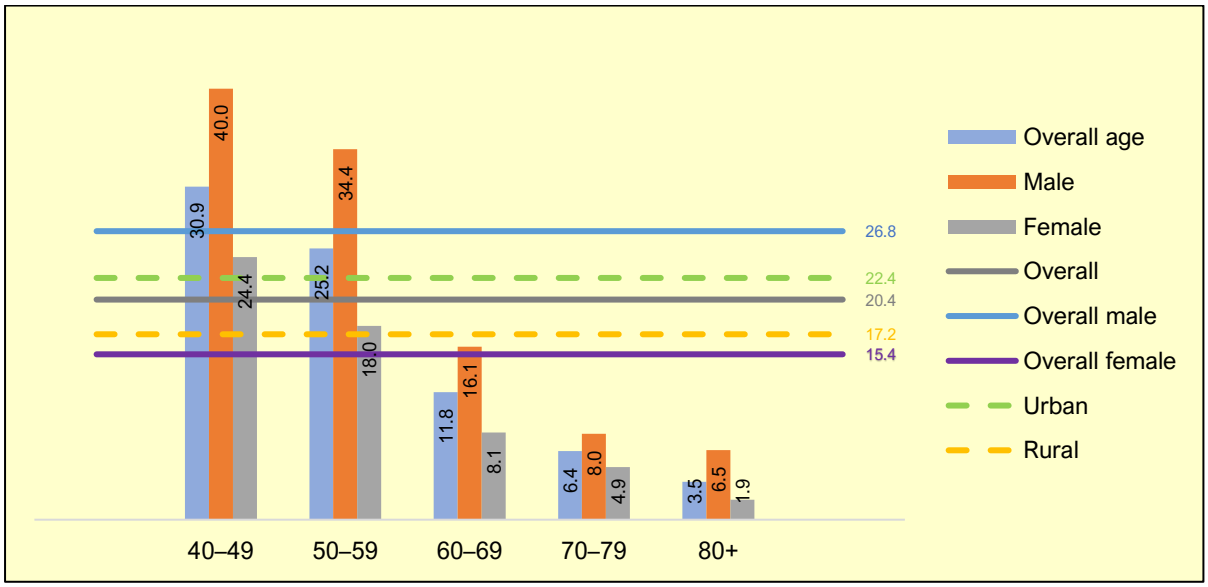

Figure 5.20: Respondents with Monthly Instalments by Gender, Age and Place of Residence (%)

The proportion of respondents with monthly instalments increases substantially with increasing educational attainment from about 5% among those with no schooling to 20% among respondents with lower secondary and 49% among those with at least a post-secondary education (Figure 5.21).

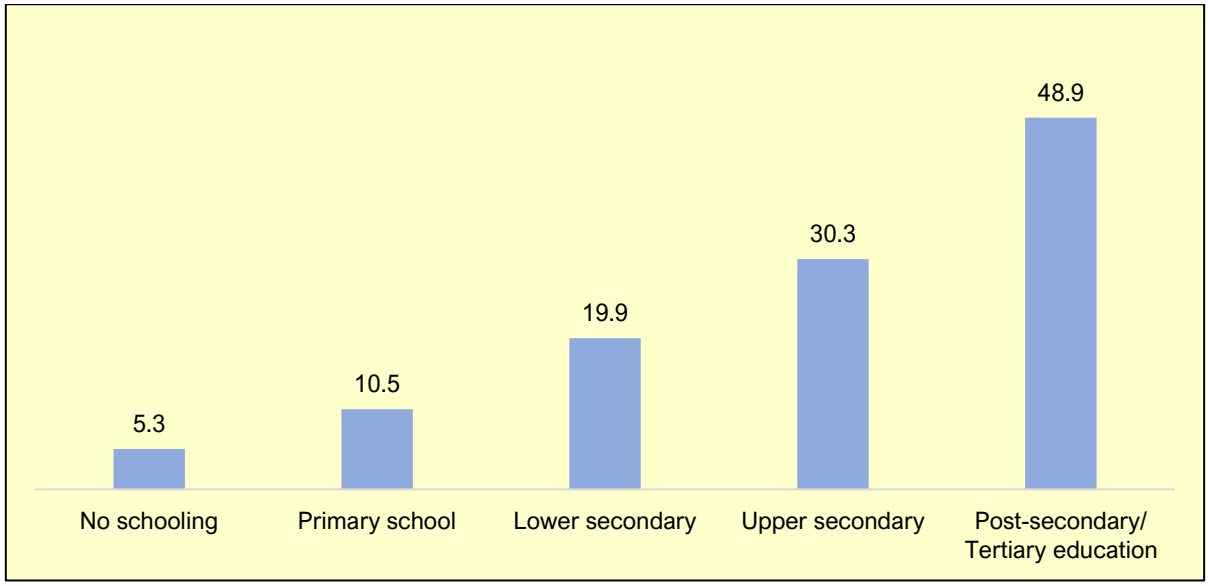

Figure 5.21: Respondents with Monthly Instalments by Education Level (%)

Further examination by income reveals that the proportion of respondents with monthly instalments increases from 11% among those having monthly income of less than RM1,000 to 42% among respondents with monthly income of RM2,000 to less than RM3,000 to 62% among respondents with monthly income of RM4,000 to less than RM5,000. However, the proportion of respondents with monthly instalments drops to 57% among those having monthly income of RM5,000 and above (Figure 5.22).

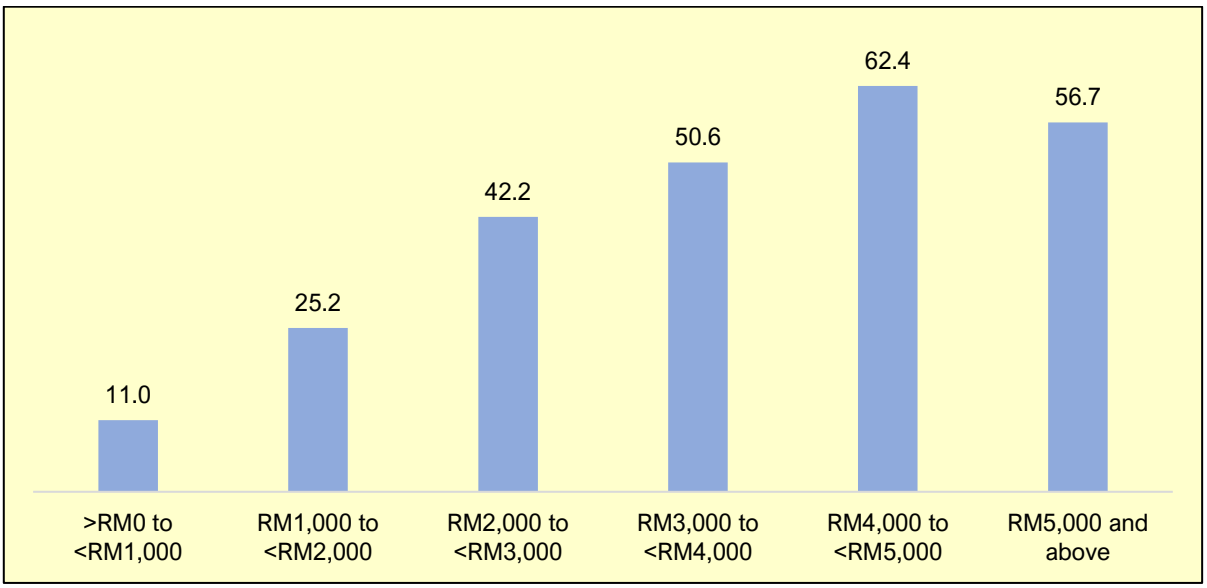

Figure 5.22: Respondents with Monthly Instalments by Income (%)

Car loans lead the list of monthly commitments among respondents (53%), followed by housing loans (37%). Other loans, such as those for water dispensers, credit cards, and similar expenses, account for 21%, while personal loans and investment loans represent 13% and 3%, respectively. (Figure 5.23). For car loan and personal loan monthly instalments, the proportion of male respondents is higher than female respondents while there is no gender difference in the proportion of respondents having monthly instalment for housing loan. The proportion of female respondents with monthly instalment for other loan is higher than that of male respondents (27% and 17%, respectively).

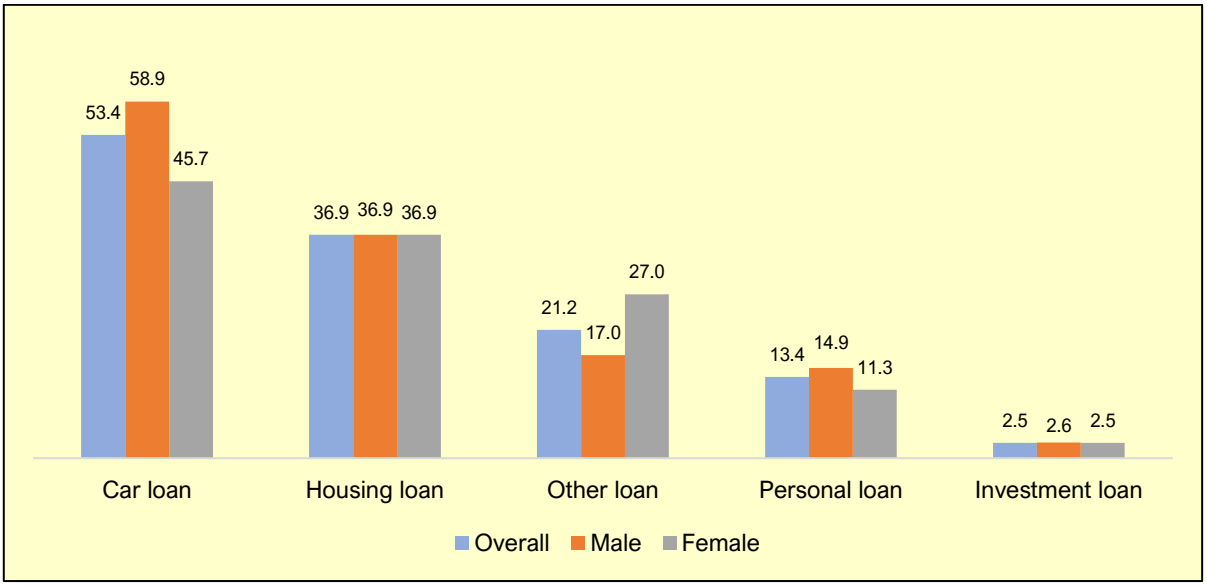

Figure 5.23: Types of Instalments by Gender (%)

Except for other monthly loan instalment, generally the proportion of respondents with monthly instalments increases with education level. About 34% of respondents with no schooling reported having car loan instalment which increases to 55% among respondents with upper secondary and 70% among those with post-secondary and higher (Figure 5.24).

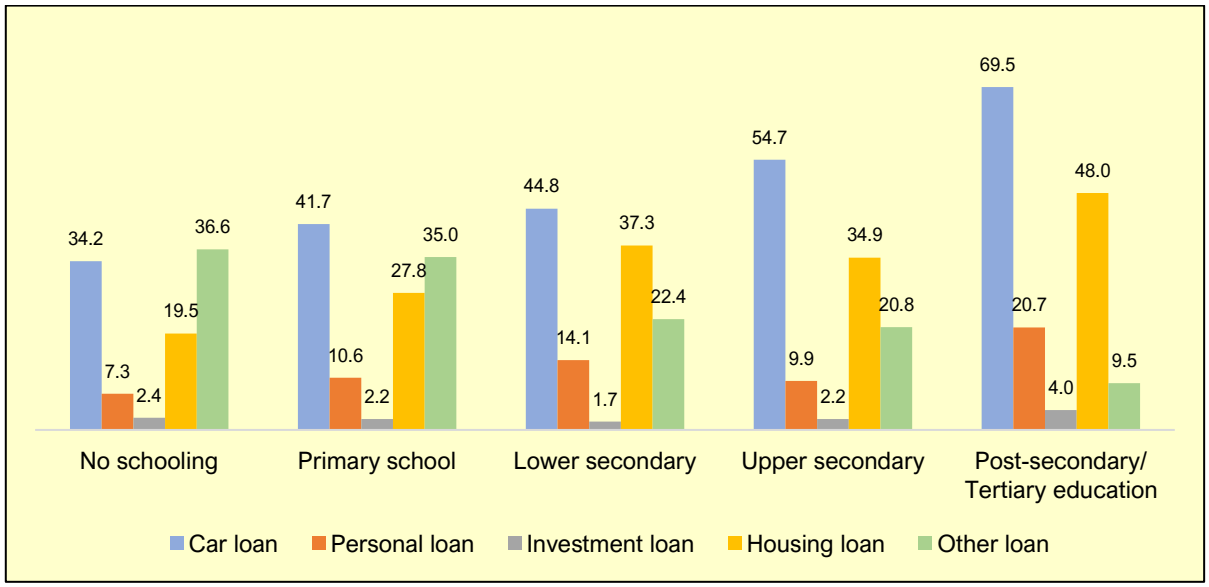

Figure 5.24: Types of Instalments by Education Level (%)

Across income, the proportion of respondents with car loan monthly instalment is highest among those with monthly income of RM5,000 and above (81%) followed by those with income of RM2,000 to less than RM3,000 (64%) (and income of RM3,000 to less than RM4,000 (61%) (Figure 5.25). Monthly instalment for housing loans is highest among respondents with monthly income of RM4,000 to less than RM5,000 (62%) followed by those with income of at least RM5,000 (52%). Respondents in the income category of RM4,000 to less than RM5,000 also register the highest proportion of monthly instalment for personal loan (28%).

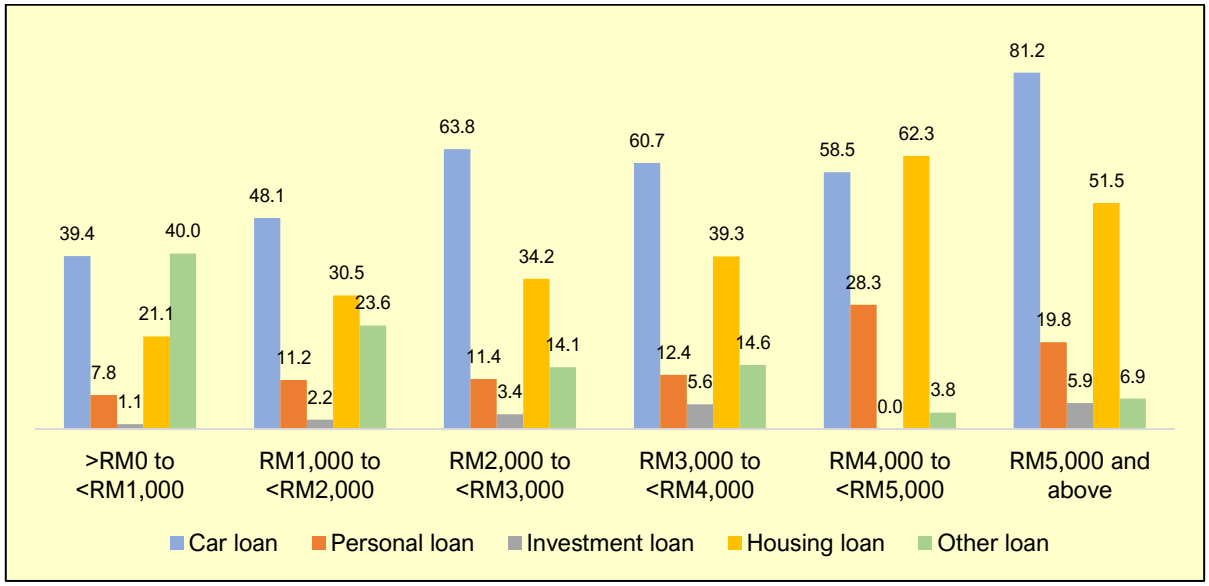

Figure 5.25: Types of Instalments by Income (%)

6 SAVINGS AND ASSETS

With longer life expectancy, retirement planning becomes a critical concern among older people. A study found that while majority of respondents aged 40 years and above residing in Malaysia would like to live to at least 80 years, many do not save specifically for old age (Awang et al., 2017). This could be due to lack of knowledge and awareness of the importance of retirement planning. To ensure a decent life in retirement, Malaysians must plan and start saving early.

6.1 Savings and/or Investment

On the question of savings/investment, 50% of the respondents have some savings/investment (Figure 6.1). The proportion of male respondents having savings/investment is higher compared to female respondents (53% and 48%, respectively). Figure 6.1 also shows that those having savings/investment is higher among urban (55%) than rural respondents (42%). Across age, the highest proportion of respondents having savings/investment is among those aged 50-59 (52%) and lowest among respondents aged 80 and above (39%).

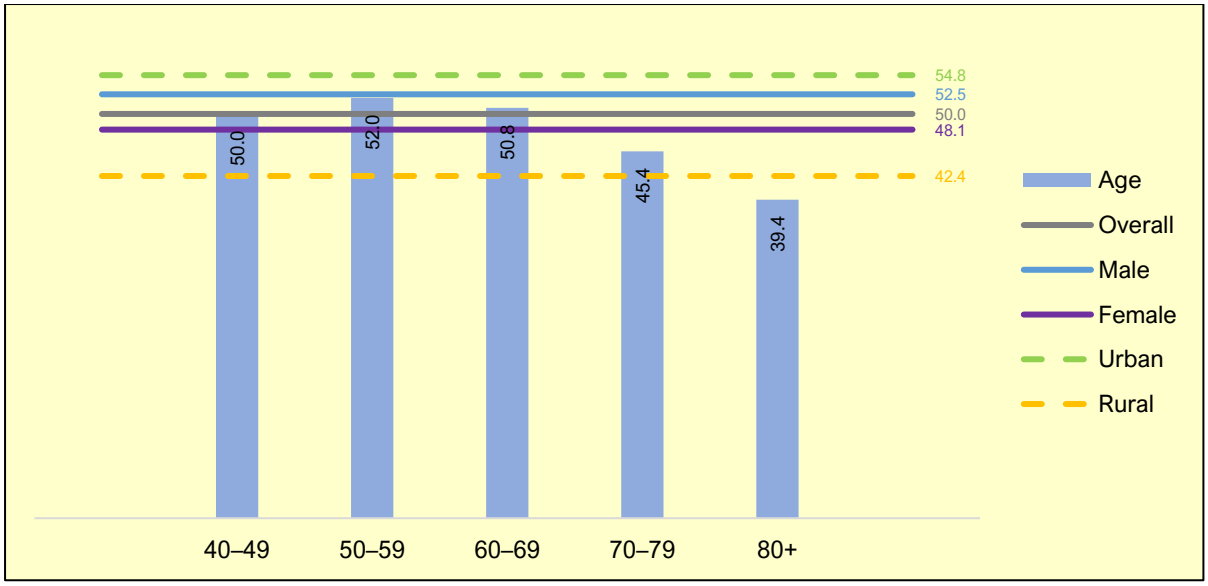

Figure 6.1: Respondents with Savings by Age, Gender and Place of Residence (%)

Examining savings/investment across education level, the proportion of respondents with savings/investment increases with education level from 28% among no schooling respondents to 49% among those with a lower secondary education and 80% among those with at least a post-secondary education (Figure 6.2).

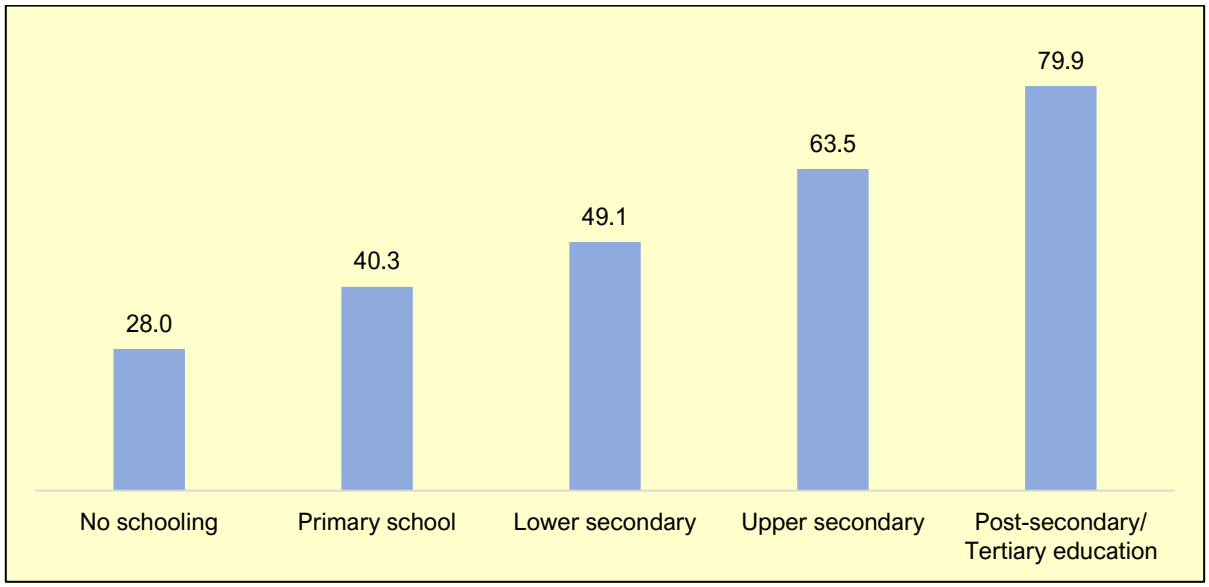

Figure 6.2: Respondent with Savings by Education Level (%)

As shown in Figure 6.3, the highest proportion of respondents having savings/investment is highest among Chinese (64%) followed by Malay (59%) and Indian (40%).

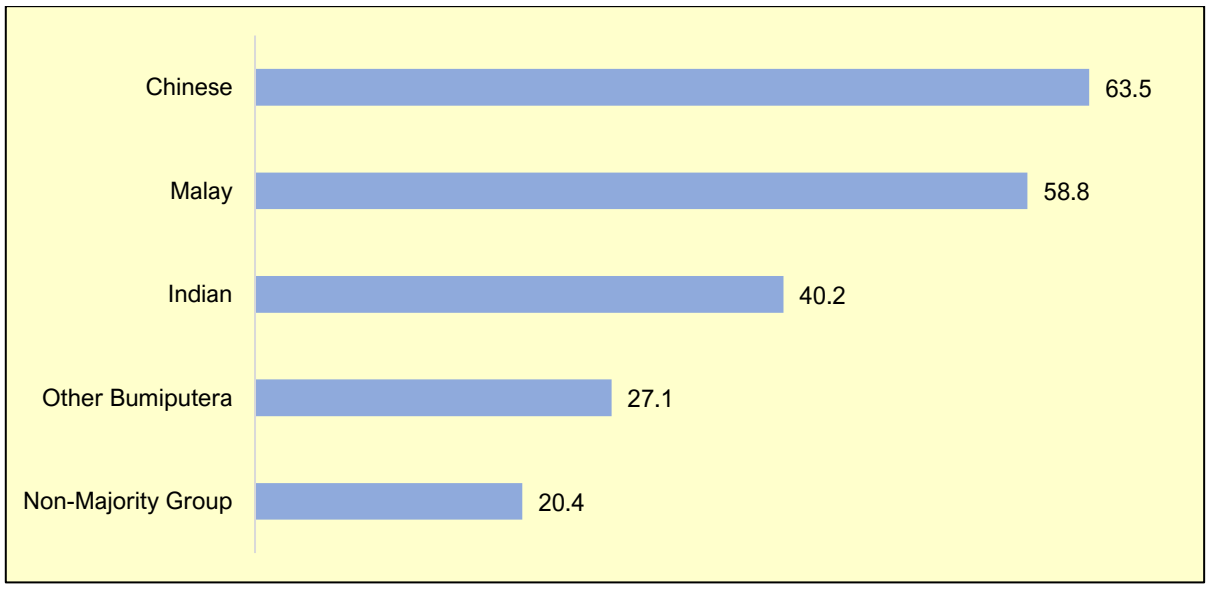

Figure 6.3: Respondents with Savings by Ethnicity (%)

Comparing the proportion of respondents having savings/investment across working status indicates a higher proportion of those who are currently working (56%) compared to respondents who are not working (46%) (Figure 6.4).

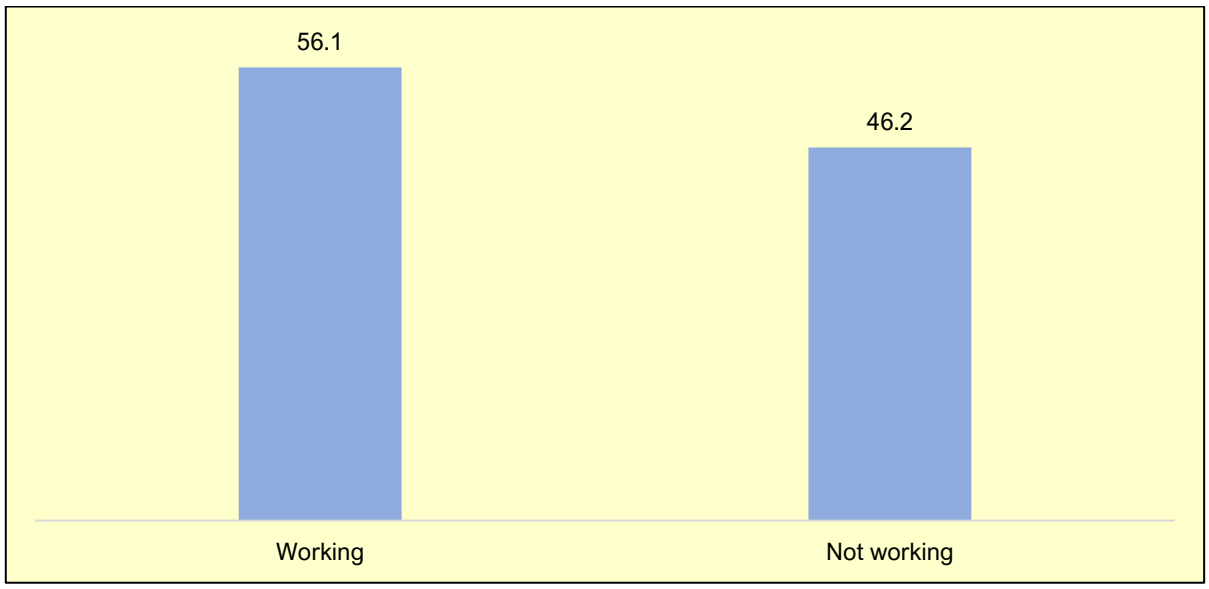

Figure 6.4: Respondents with Savings by Working Status (%)

Among respondents who reported they receive no income, about 45% admitted they have savings/investment. Among those with income, the proportion of respondents having savings/investment increases with income level (Figure 6.5). The proportion of respondents having savings/investment increases from 39% among those with monthly income less than RM1,000 to 72% among respondents with monthly income RM2,000 to less than RM3,000 and 89% among those receiving monthly income of at least RM5,000.

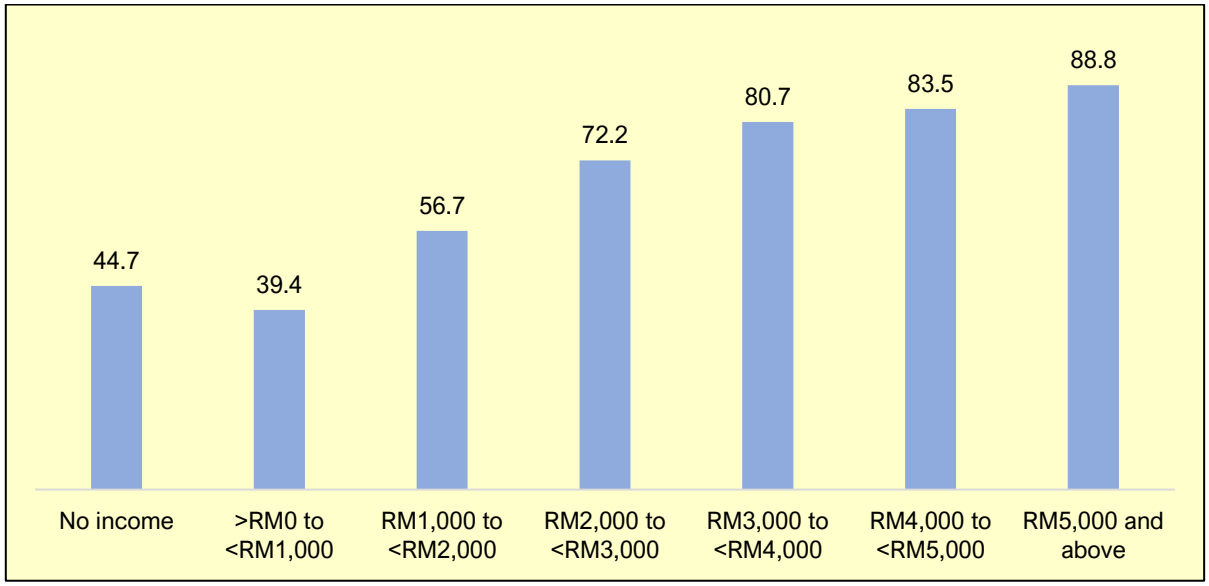

Figure 6.5: Respondents with Savings by Income (%)

6.2 Type of Savings/Investment

The different types of savings/investment that respondents have is shown in Figure 6.6. Bank savings registers the highest percentage at 55% followed by Tabung Haji[2] (38%), EPF Savings (29%) and Unit Trust (26%). Only a small proportion of the respondents reported having investment in properties (6%), shares (4%) and co-operative (3%).

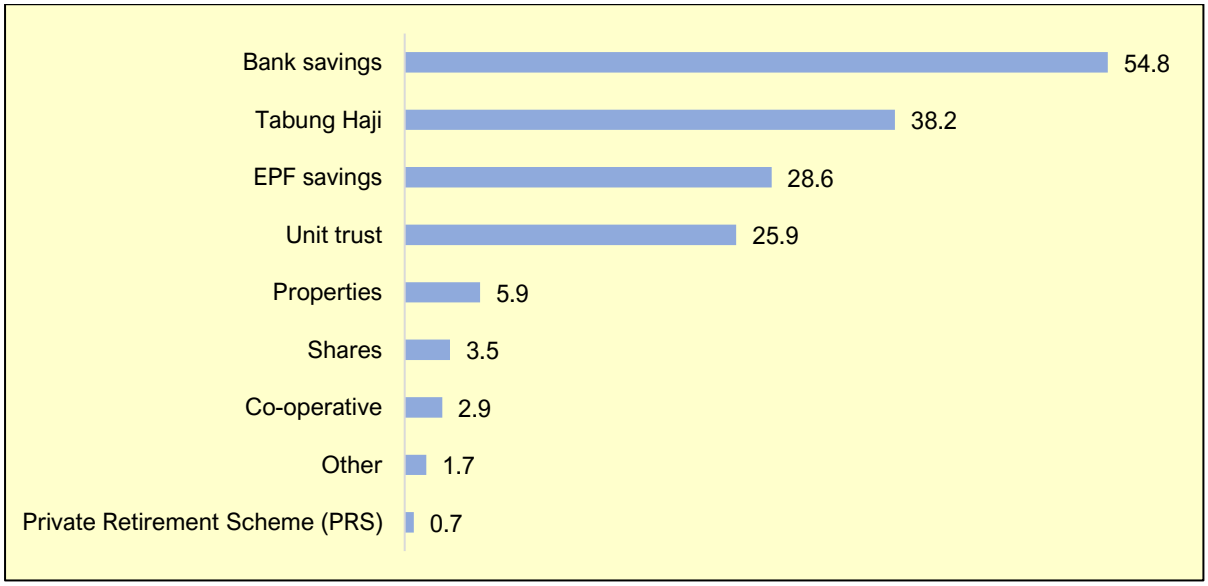

Figure 6.6: Types of Savings

The proportion of male respondents having bank savings is slightly higher compared to female respondents (56% and 53%, respectively) (Figure 6.7). A similar trend is observed for respondents having EPF savings (male 35%, female 23%). A higher proportion of female respondents (42%) have savings in Tabung Haji compared to male respondents (34%). The data shows no gender difference in the proportion of respondents having investment in unit trust with 26% among both male and female respondents.

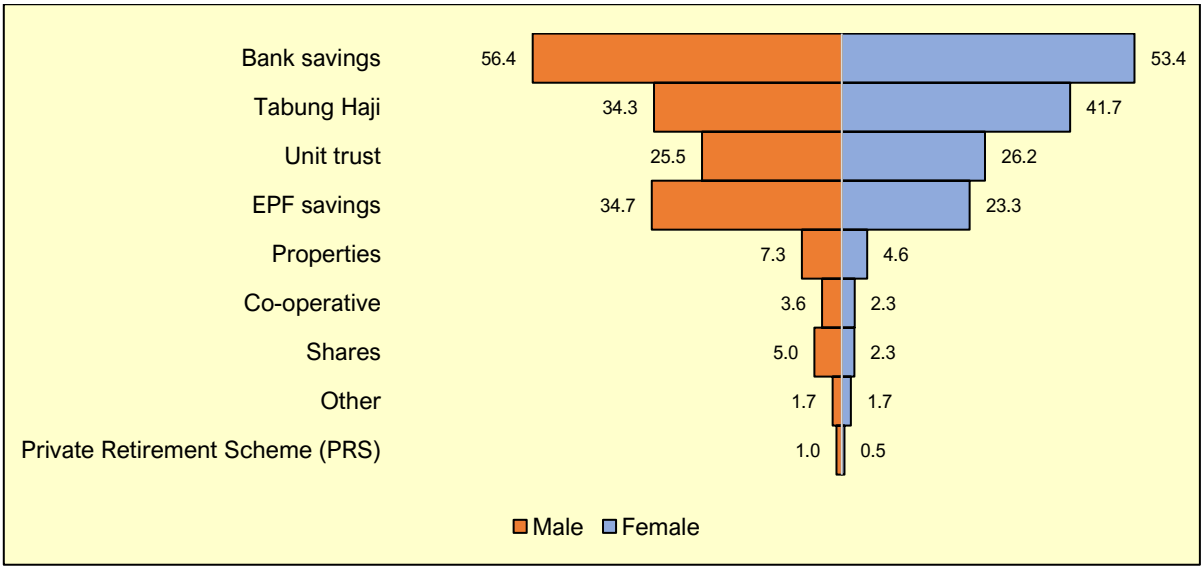

Figure 6.7: Types of Savings by Gender (%)

[2] Tabung Haji is a fund that facilitates savings for the Muslim pilgrimage.

Figure 6.8 shows the proportion of respondents having bank savings is higher among urban than rural respondents (56% and 53%, respectively) and EPF savings (33% and 19%, respectively) while the opposite is true of the respondents having savings in Tabung Haji (rural 41%, urban 37%) and unit trust (rural 28%, urban 25%) (Figure 6.8).

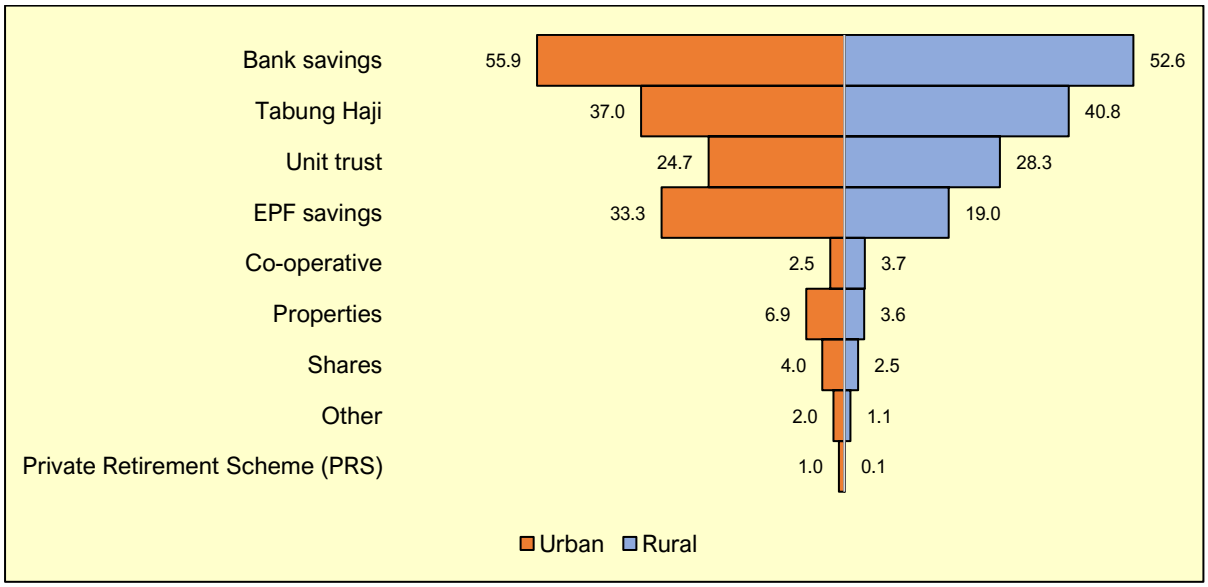

Figure 6.8: Types of Savings by Place of Residence (%)

The proportion of respondents having bank savings is higher among those aged 60 and above (60%) compared to respondents age below 60 (52%) as well as savings in Tabung Haji (44% and 35%) (Figure 6.9). Respondents aged below 60 reported a higher proportion having savings in unit trust than older respondents (29% and 22%) and EPF savings (40% and 11%, respectively).

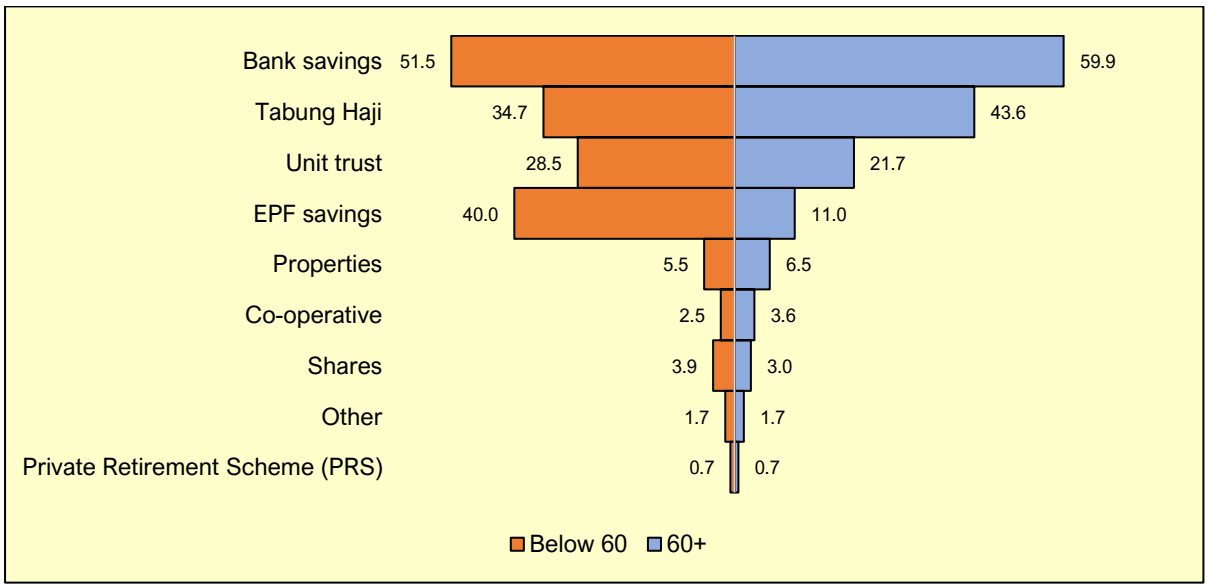

Figure 6.9: Types of Savings by Age (%)

Working respondents reported a higher proportion of EPF savings (44%) as compared to non-working respondents (17%) (Figure 6.10). The same is reported for unit trust (28% & 24%). However, non-working respondents showed a higher proportion of bank savings (57%) than the working respondents (53%). Similarly, 41% of non-working respondents & 34% of working respondents utilise Tabung Haji.

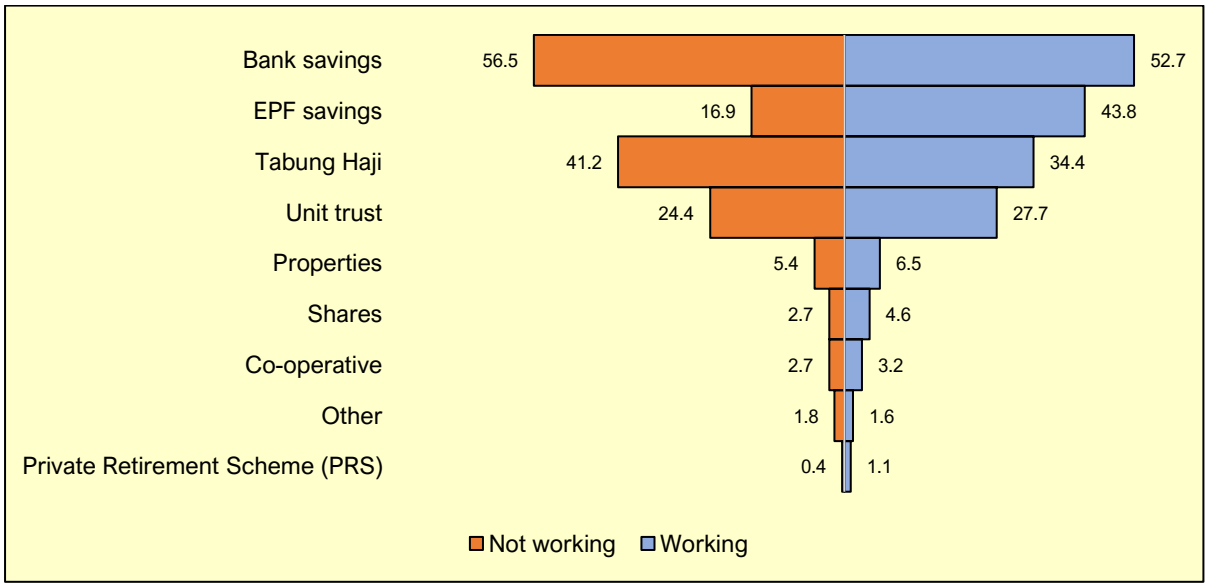

Figure 6.10: Types of Savings by Working Status (%)

The amount of total savings was obtained by adding up all the respondents' savings from various sources which shows that 43% of the respondents have savings less than RM10,000 and 33% have at least RM30,000 (Figure 6.11). The proportion of respondents with total savings less than RM10,000 is higher among male than female respondents (48% and 43%, respectively) while the opposite is observed for those having savings of at least RM30,000 (female 33%, male 29%). The proportion of respondents with savings less than RM10,000 increases with age from 32% among those aged 40-49 to 57% among respondents aged 70 and above while the proportion of respondents with savings of RM30,000 or more decreases with age from 48% among those aged 40-49 to 18% among respondents aged 70 and above (Figure 6.11).

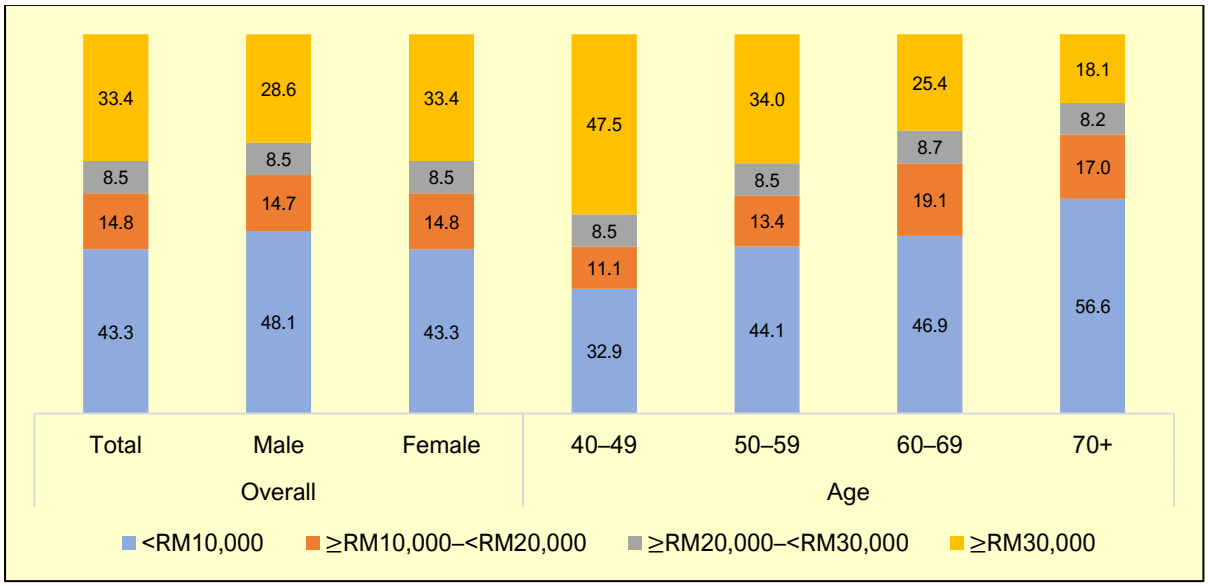

Figure 6.11: Respondents' Total Savings by Gender and Age (%)

Examining total savings across education level, the proportion of respondents with savings amount less than RM10,000 decreases from 74% among no schooling respondents to 42% among those with lower secondary education to 22% among respondents with at least a post-secondary education (Figure 6.12). For total savings amount of at least RM30,000, the proportion of respondents increases from about 10% among non-schooling respondents to 30% among those with lower secondary to 57% among respondents with at least a post-secondary education.

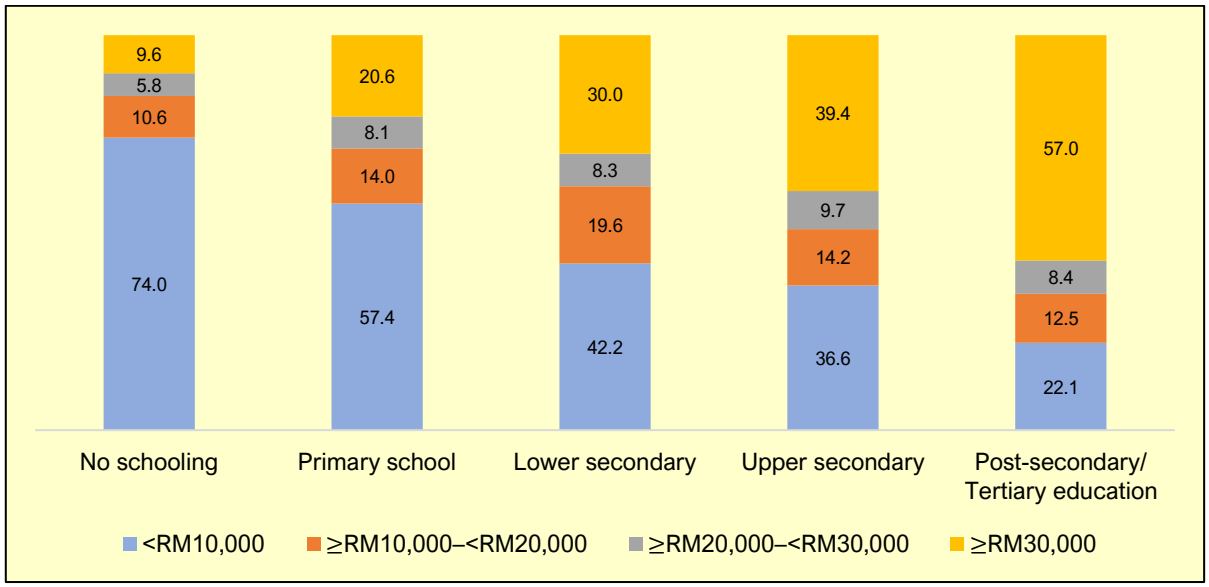

Figure 6.12: Respondents' Total Savings by Education (%)

Across ethnicity, the Non-Majority Group reported the highest proportion of respondents having total savings less than RM10,000 (63%) followed by Other Bumiputera (56%) and Malay respondents (45%) and lowest among Chinese (27%) (Figure 6.13). However, Chinese respondents record the highest proportion of those with total savings of at least RM30,000 (42%) followed by Indian (41%) and Malay (32%).

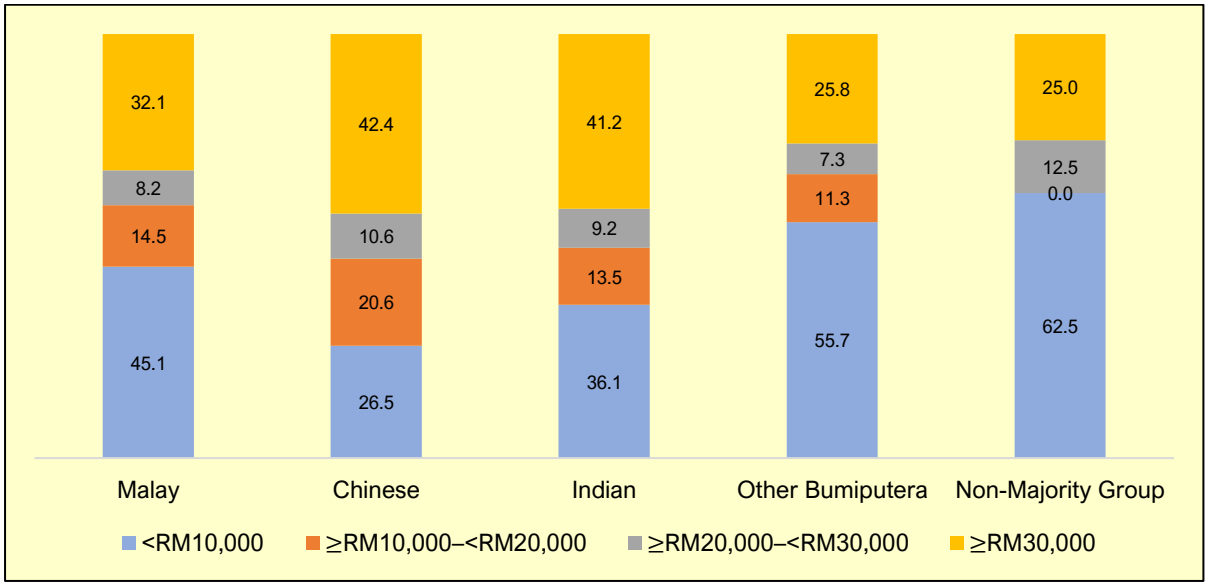

Figure 6.13: Respondents' Total Savings by Ethnicity (%)

The proportion of respondents with total savings of less than RM10,000 is higher among rural than urban respondents while the opposite is observed for total savings of at least RM30,000 showing 38% among urban and 24% of rural respondents (Figure 6.14).

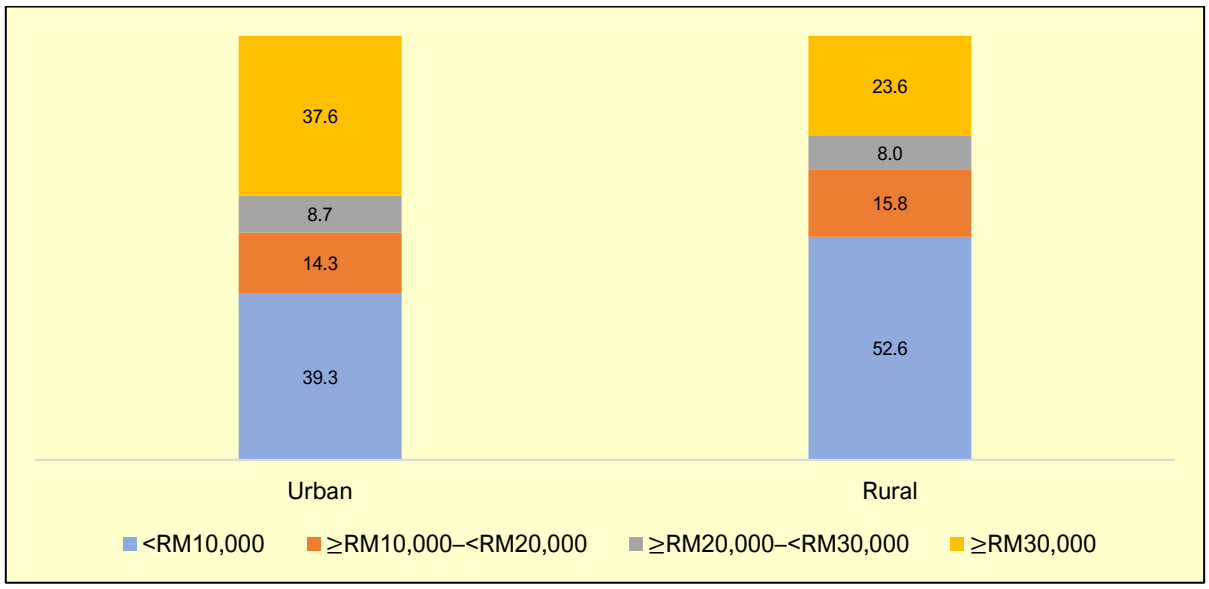

Figure 6.14: Respondents' Total Savings by Place of Residence (%)

Across working status, it can be observed that the proportion of respondents with total savings less than RM10,000 is higher among non-working respondents (50%) than working respondents (36%) while working respondents reported a higher proportion of those with total savings of at least RM30,000 than respondents who were not working (45% and 24%, respectively) (Figure 6.15).

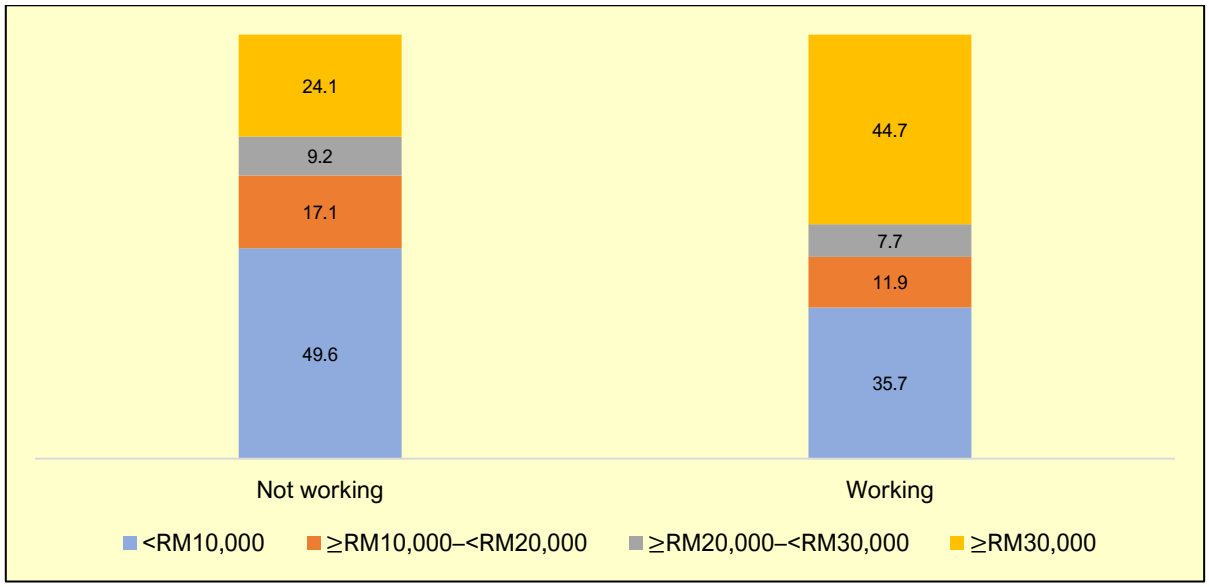

Figure 6.15: Respondents' Total Savings by Working Status (%)

6.3 Assets

In terms of assets, 52% of the total sample reported they own assets. The proportion of male respondents having assets is much higher (62%) than female respondents (45%) and higher among rural than urban respondents (58% and 59%, respectively) (Figure 6.16). Across age, the proportion of respondents having assets is highest among those aged 70-79 (56%) followed by those aged 60-69 (55%) and for those aged 50-59 (54%).

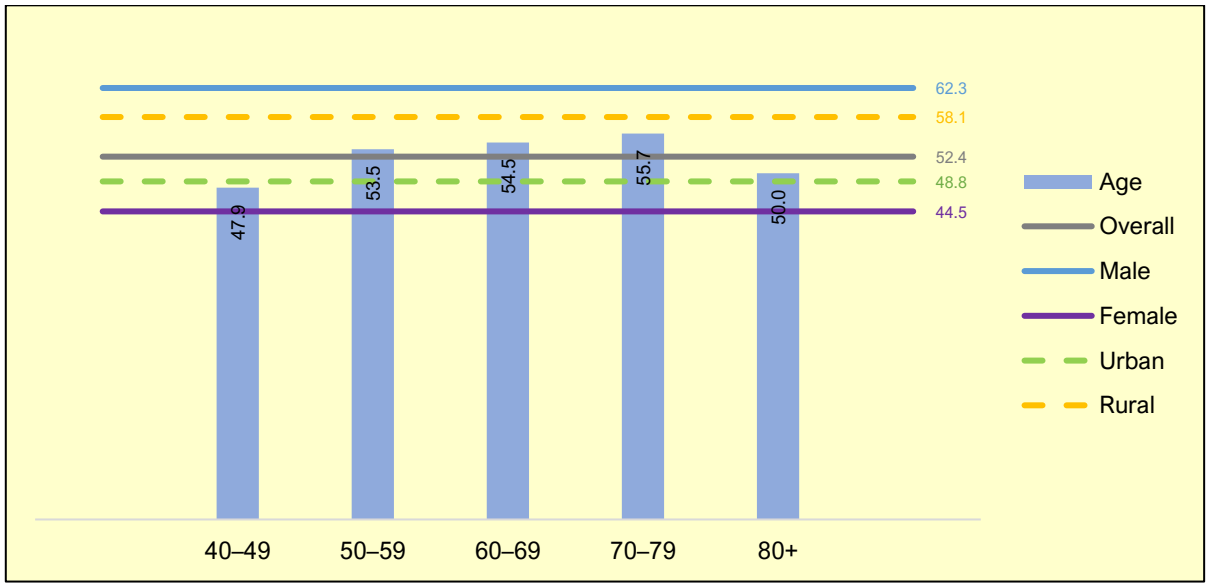

Figure 6.16: Respondents with Assets by Gender, Age and Place of Residence (%)

The proportion of respondents who reported having assets increases with education level from 46% among those with no schooling to 52% among respondents with a lower secondary education and 69% among those with at least a post-secondary education (Figure 6.17).

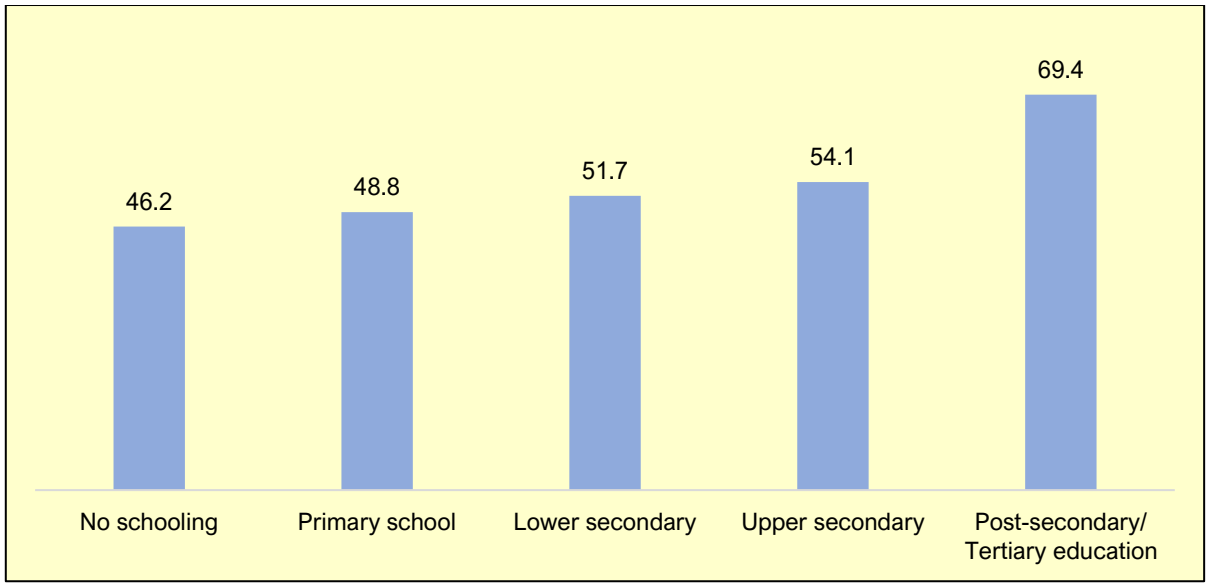

Figure 6.17: Respondents with Assets by Education Level (%)

The proportion of respondents having assets is highest among Other Bumiputera (56%) followed by Malay (54%) and Chinese respondents (51%) (Figure 6.18).

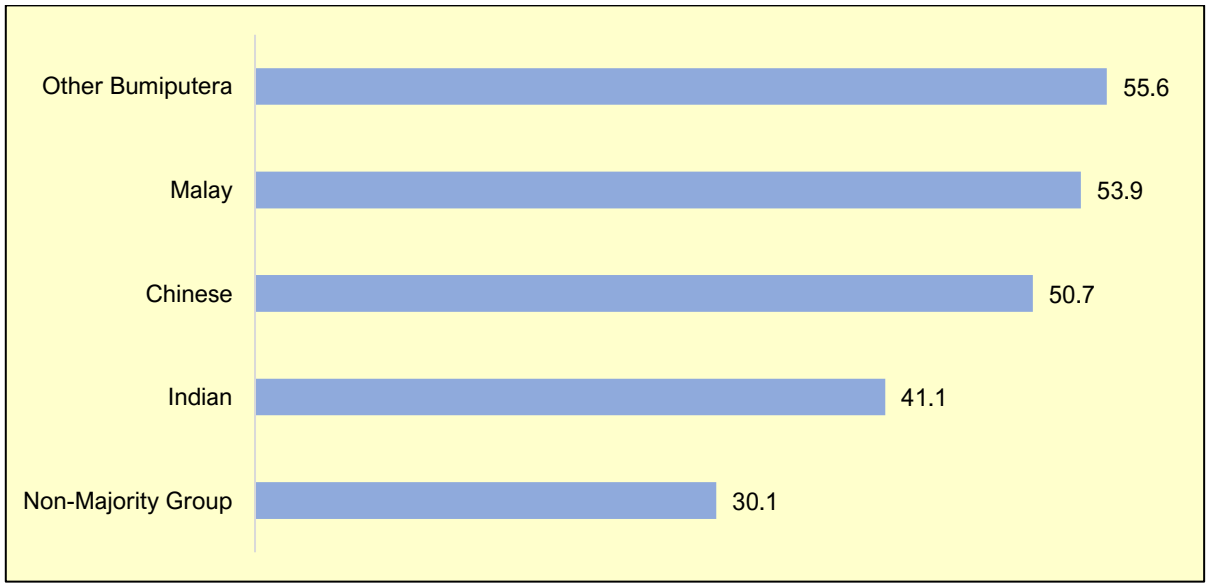

Figure 6.18: Respondents with Assets by Ethnicity (%)

The proportion of respondents having assets is higher among those who were working (58%) than those who were not working (49%) (Figure 6.19).

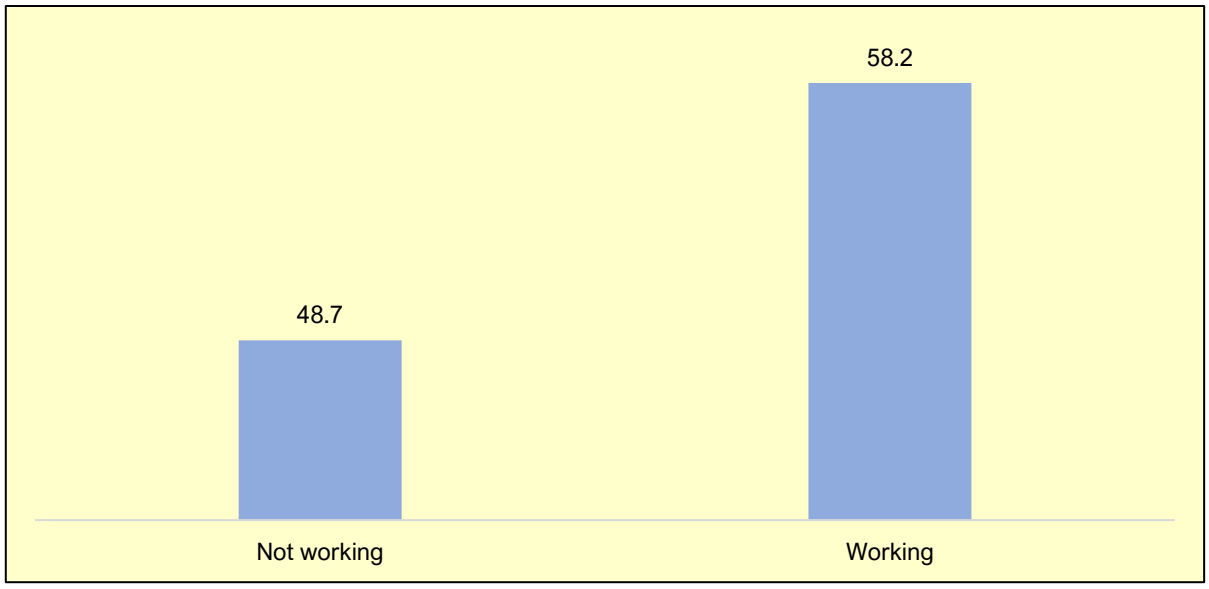

Figure 6.19: Respondents with Assets by Working Status (%)

It can be observed from Figure 6.20 that the proportion of respondents who own assets increases with income level from 42% among those with no income to 73% among respondents with monthly income RM2,000 to less than RM3,000 and 83% among those with monthly income of at least RM5,000.

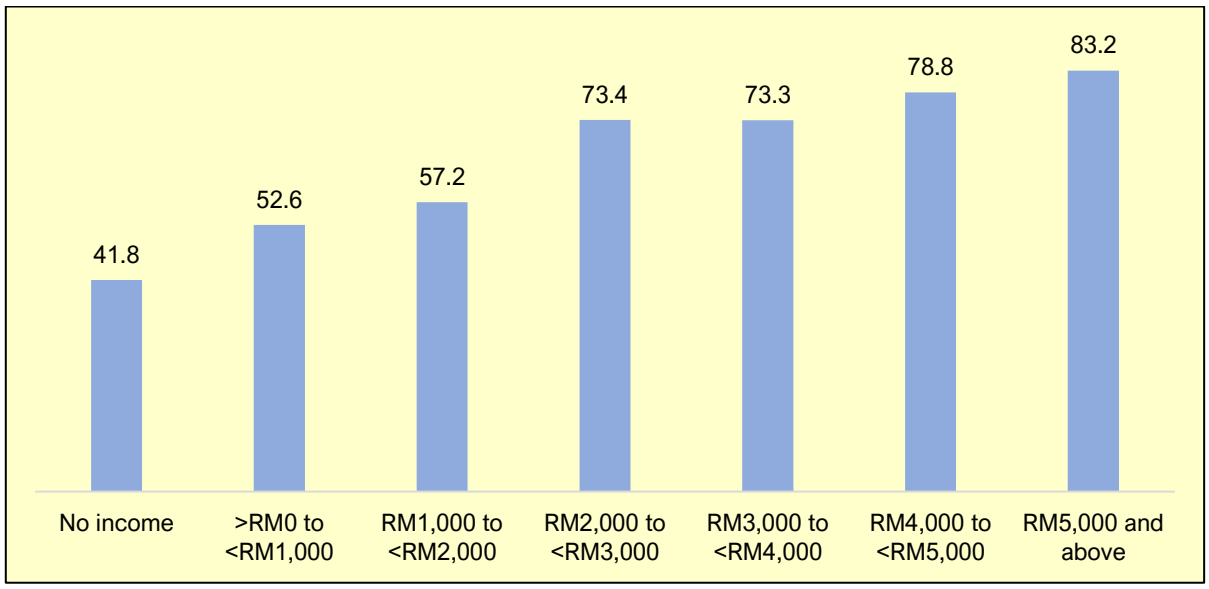

Figure 6.20: Respondents with Assets by Income (%)

6.4 Type of Assets

Among respondents who own assets, the highest proportion of asset owned is house (83%) followed by land (50%). Less than 10% of the respondents own other property, insurance and business shares combined (Figure 6.21).

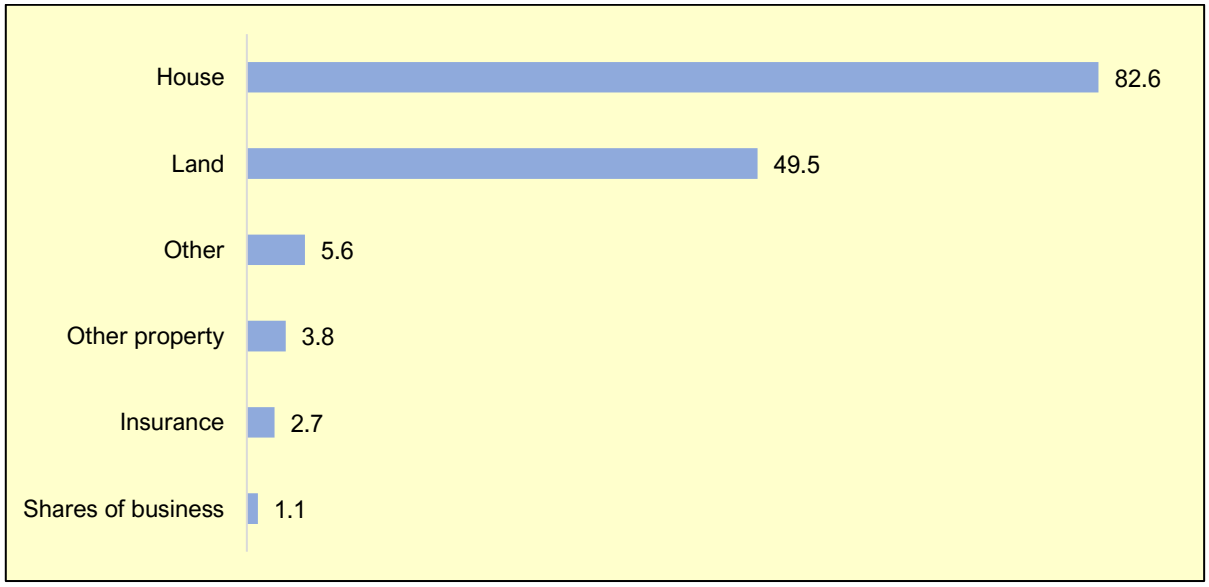

Figure 6.21: Types of Assets Owned (%)

Figure 6.22 shows that the proportion of respondents who own house and land is higher among male than female respondents. About 87% of male respondents own house compared to 78% of female respondents and 51% of male own land compared to 48% of female respondents.

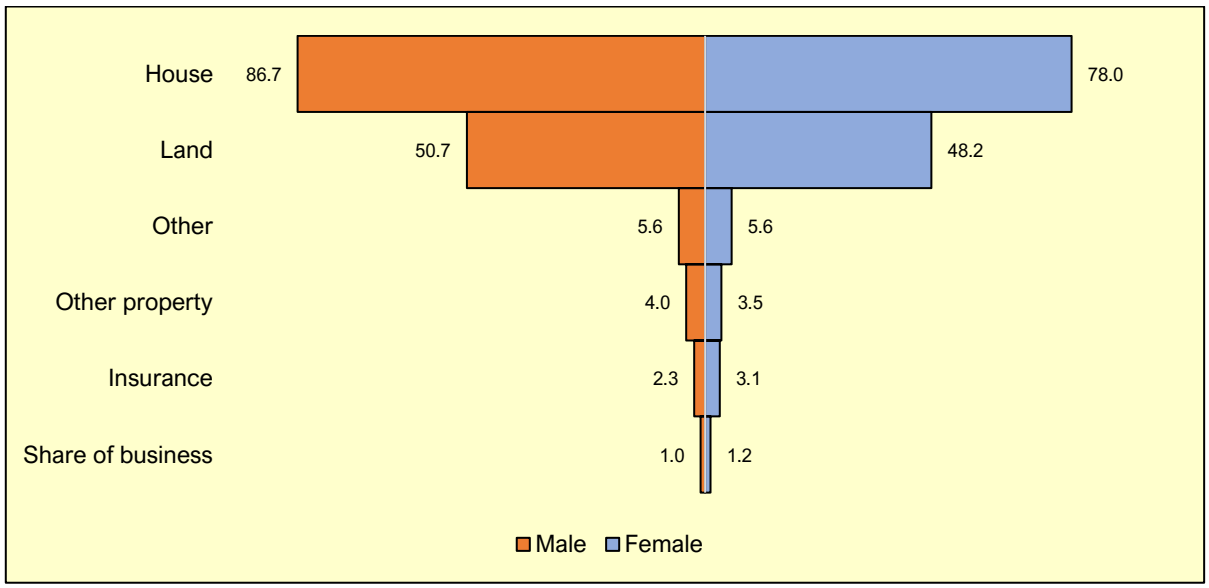

Figure 6.22: Types of Assets Owned by Gender (%)

The proportion of respondents who own houses is higher among urban respondents than rural respondents (85% and 79%), respectively) while those who own land is higher among rural than urban respondents (64% and 39%, respectively) (Figure 6.23).

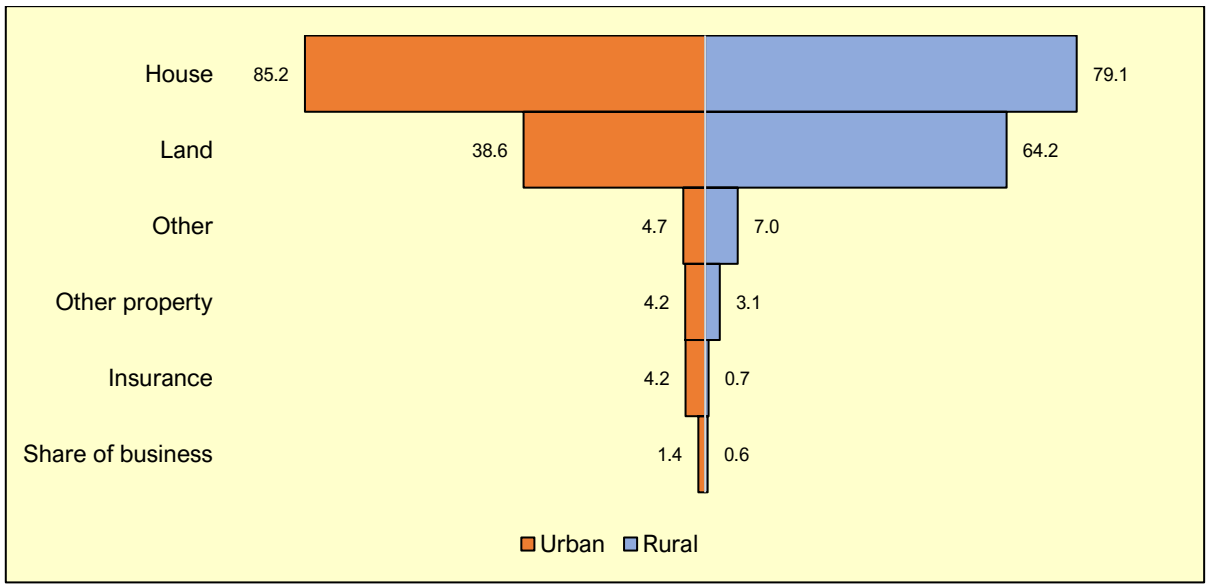

Figure 6.23: Types of Assets Owned by Place of Residence (%)

Across age, about 85% of respondents aged 60 and above reported they own houses, and 54% own land compared to 81% of respondents aged below 60 who own houses and 47% who own land (Figure 6.24). There is no difference between the two age groups with respect to the proportion of respondents who own other properties (4%).

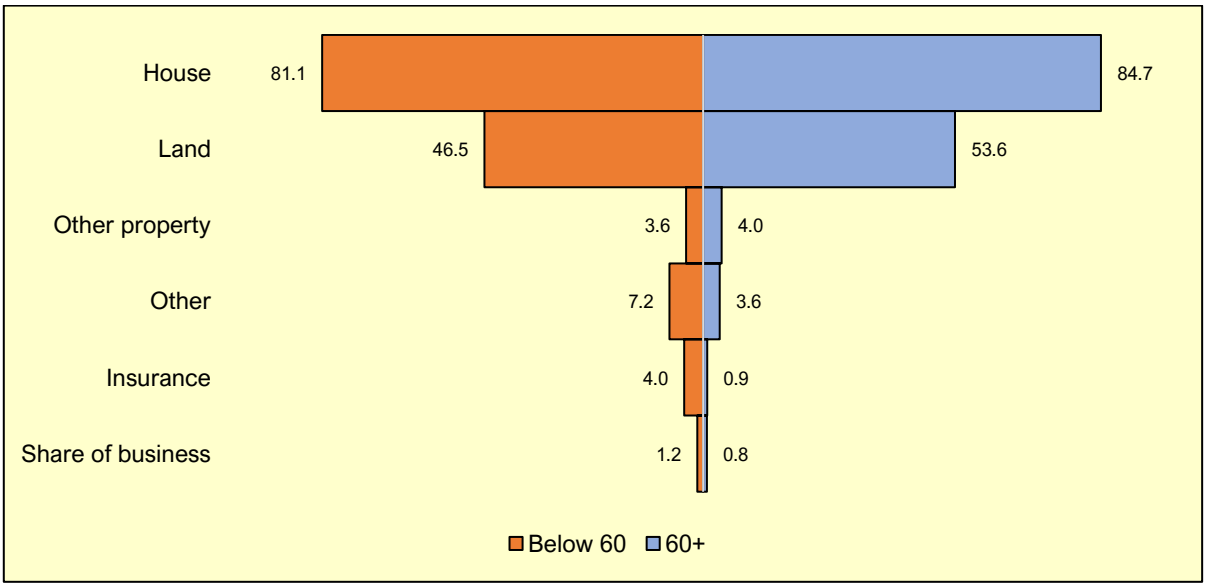

Figure 6.24: Types of Assets Owned by Age (%)

As shown in Figure 6.25 there is really no difference in the proportion of respondents who own houses and land between working and non-working respondents. Working respondents reported a slightly higher proportion of those who own other properties than non-working respondents (5% and 3%, respectively) and have insurance (working 4%, not working 1%).

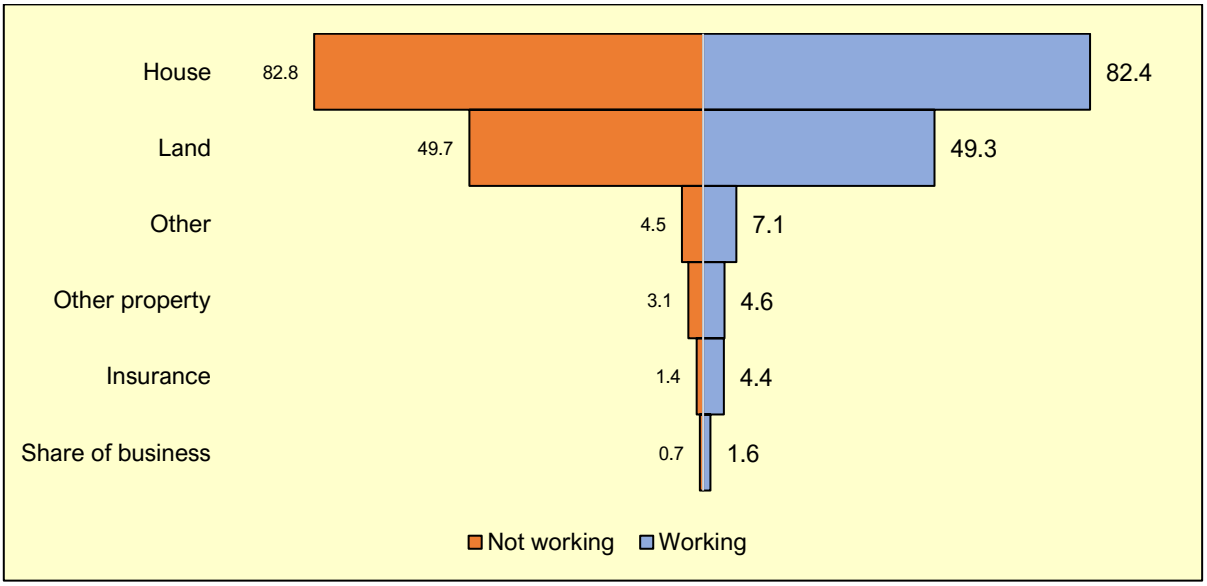

Figure 6.25: Types of Assets Owned by Working Status (%)

Figure 6.26 shows the distribution of total asset values among respondents who own assets. Most respondents across all groups reported owning assets worth RM170,000 or more. There are more male respondents (54%) reported having asset values of RM170,000 or more than female respondents (48%). Additionally, more than 50% of respondents in every age group reported having asset values more than RM170,000 except for those in 50-59 age group (45%).

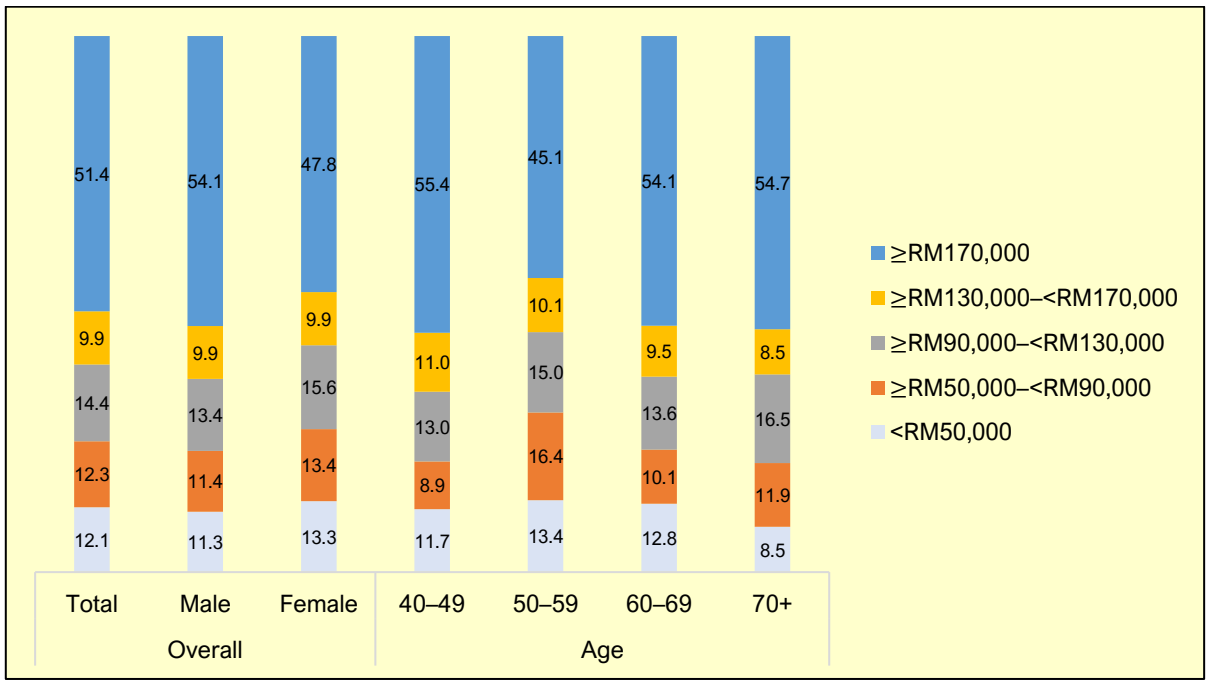

Figure 6.26: Total Values of Assets by Gender and Age (%)

Figure 6.27 shows the distribution of total asset values among respondents who own assets, categorised by education. There is a clear positive correlation between educational attainment and higher asset values. Respondents with post-secondary or tertiary education are the most likely to own assets valued at RM170,000 or more (80%), whereas those with no schooling, a significantly higher proportion owns assets with lower asset values, with 29% reporting assets of RM50,000 or below. Overall, higher educational attainment is associated with greater asset accumulation.

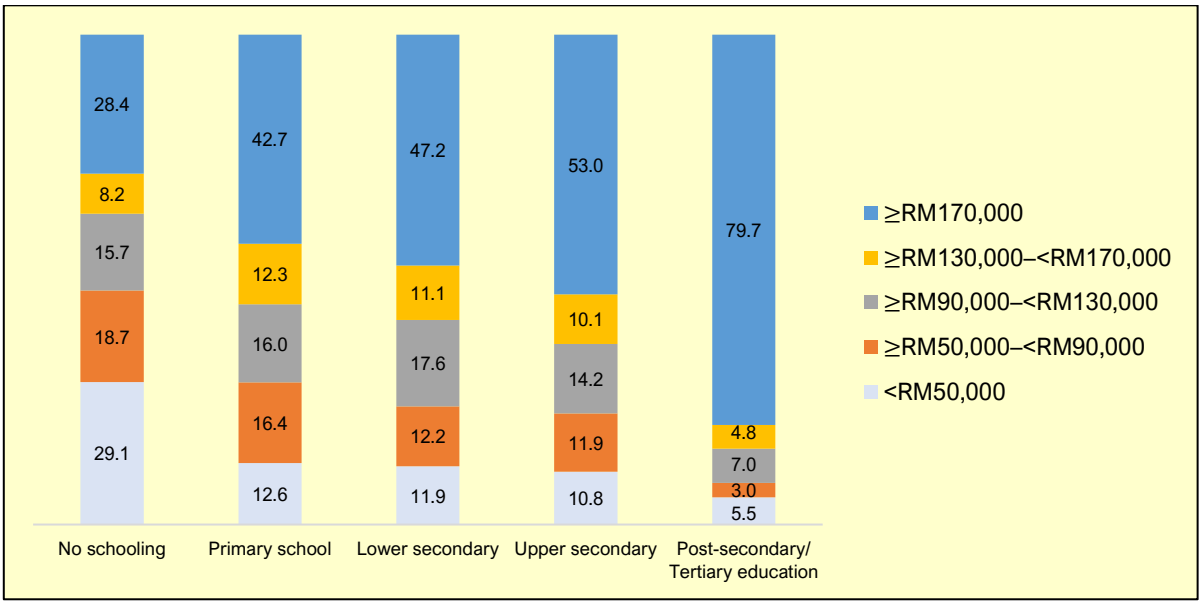

Figure 6.27: Total Values of Assets by Education Level (%)

Figure 6.28 shows that Chinese respondents have the highest proportion with assets valued at RM170,000 or more (64%), followed by Malay (53%) and Indian (53%) respondents. In contrast, the total asset values for Other Bumiputera and Non-Majority Group are low, with Non-Majority Group has the highest proportion in the category of having asset values at RM50,000 and below. These findings suggest significant disparities in asset ownership across ethnic groups.

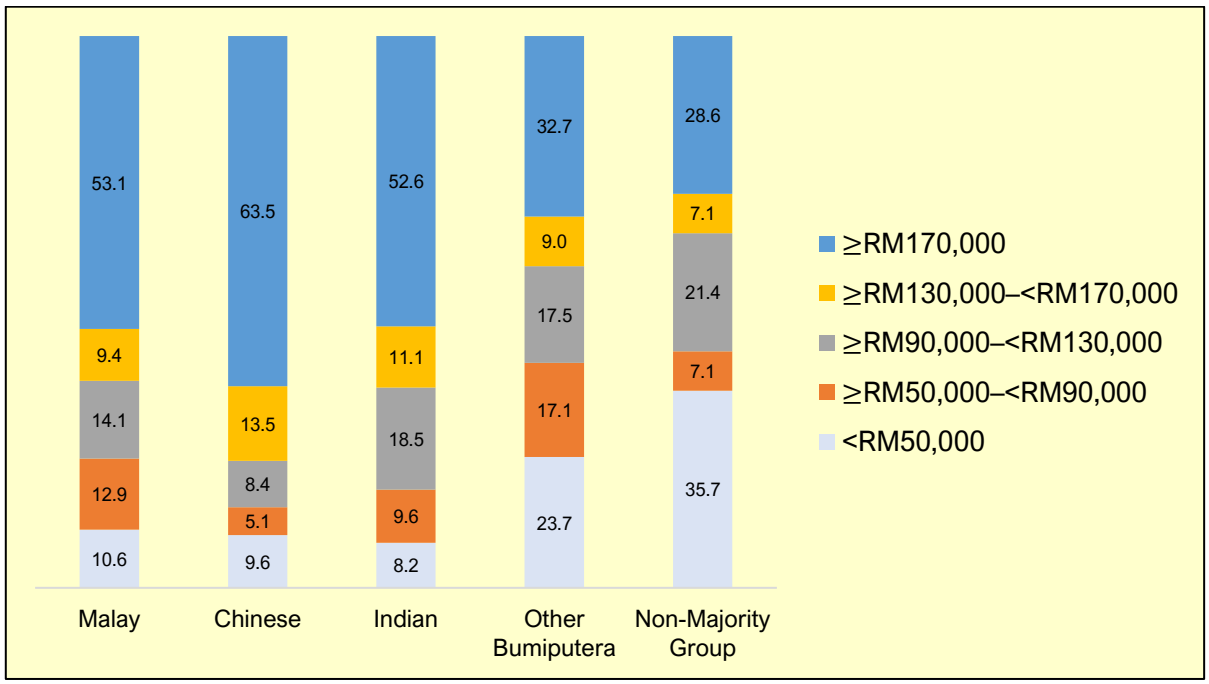

Figure 6.28: Total Values of Assets by Ethnicity (%)

The distribution of total asset values by place of residence shows that respondents from urban areas have a higher asset value than respondents from rural areas (Figure 6.29).

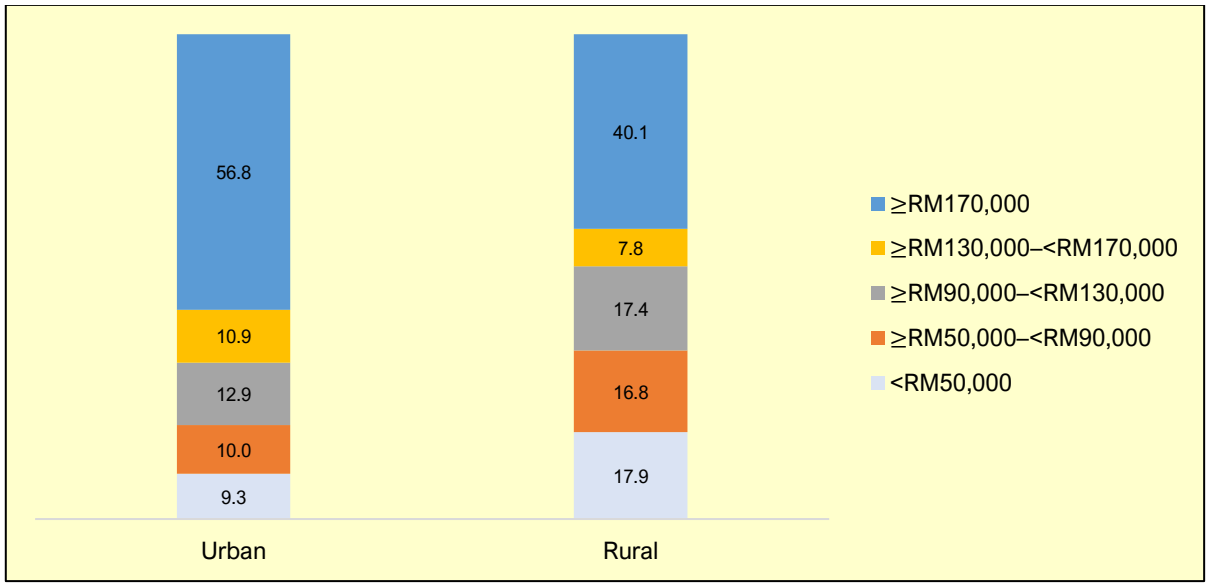

Figure 6.29: Total Values of Assets by Place of Residence (%)

Figure 6.30 shows the distribution of the total asset values of the respondents by their working status. Among both working and non-working respondents, the majority hold assets valued at RM170,000 or more, accounting for 51% and 52%, respectively. Non-working respondents show a slightly higher proportion in having asset value between RM90,000 to RM130,000 (15%) compared to working respondents (14%).

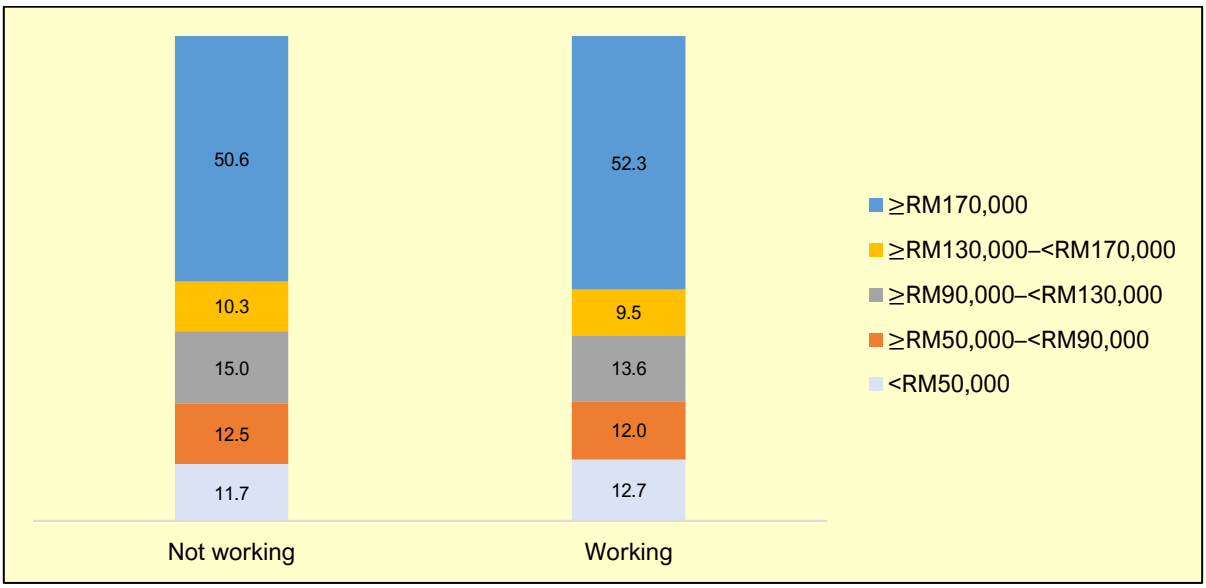

Figure 6.30: Total Values of Assets by Working Status (%)

6.5 House rental

Respondents were asked whether the house they currently live in is a rented property and 13% admitted so (Figure 6.31). No gender difference is observed in the proportion of respondents living in a rented house while the proportion is higher among urban than rural respondents (18% and 4%, respectively). The proportion of respondents living in rented premises decreases with age from about 10% among respondents aged 40-49 to 10% among those aged 60-69 and 3% among those aged 80 and above.

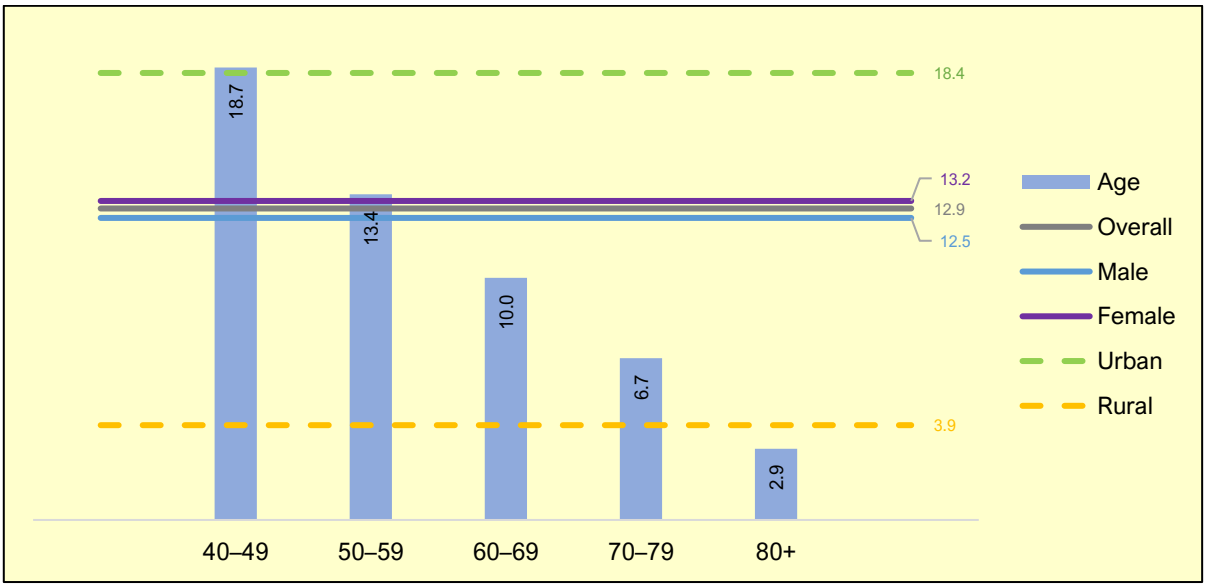

Figure 6.31: Respondents Who Paid Rental for the House that They Stayed by Gender, Age and Place of Residence (%)

Among respondents who are living in rented houses, 43% of them reported that the rental was mostly paid by them, 28% paid mostly by spouse while the remaining 29% reported that their house rental was paid mostly by someone else (Figure 6.32).

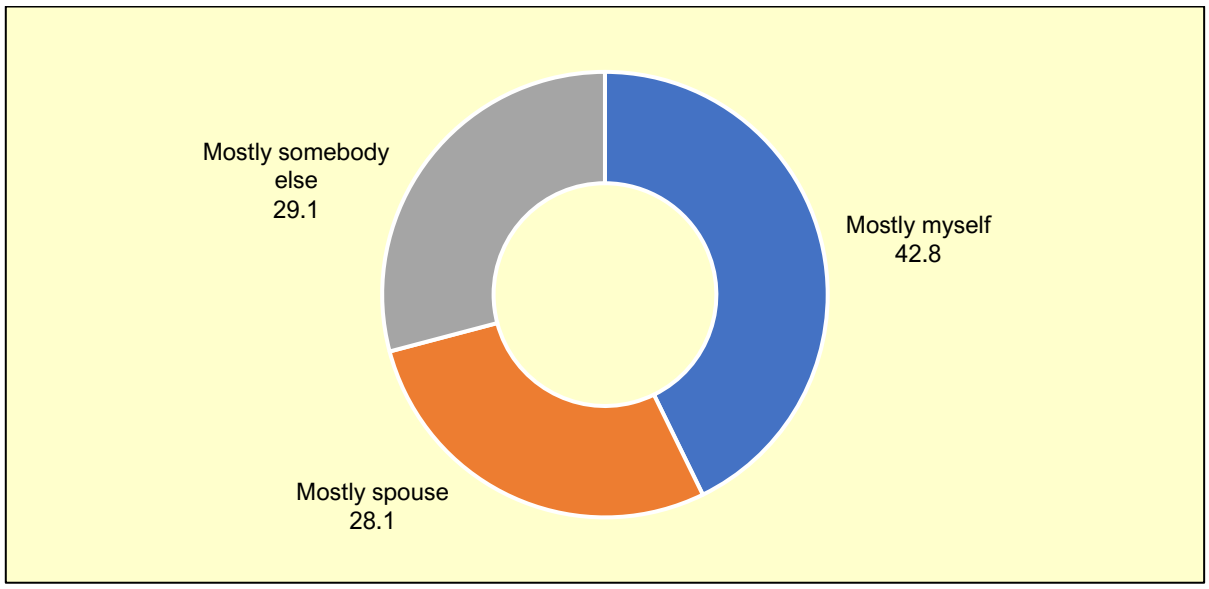

Figure 6.32: Person Who Paid for Rental for the Past 12 Months (%)

7 HEALTH

Increasing longevity does not mean having an extended period of good health. Ageing is often associated with a gradual decline in physical and mental capacities and health. It is also associated with the onset of chronic diseases including hypertension, high cholesterol, diabetes, Alzheimer, arthritis etc. (Steptoe et al., 2015). Various aspects of health are included in MARS questionnaire namely self-rated health, illnesses, treatment, and hospitalisation as well as physical measurement.

7.1 Self-rated Health

Self-rated health could reflect on various aspects of health such as access to healthcare facilities and quality of healthcare. A study shows that self-reported health is positively associated with clinical quality (Feng & Gravelle, 2021).

Overall, about 51% of the respondents reported they are in good health and that the proportion of respondents in good health is slightly higher among males (53%) than females (50%) (Figure 7.1). Expectedly the proportion of respondents in good health declines with age from 68% among respondents aged 40-49 to 42% among those aged 60-69 and 30% among 80 years and above. Except for the youngest age group, 40-49, the proportion of respondents reporting good self-rated health is higher among males than among females across age groups. For example, among respondents aged 70-79, 35% of the male respondents reported they are in good health compared to 31% of the female respondents (Figure 7.1).

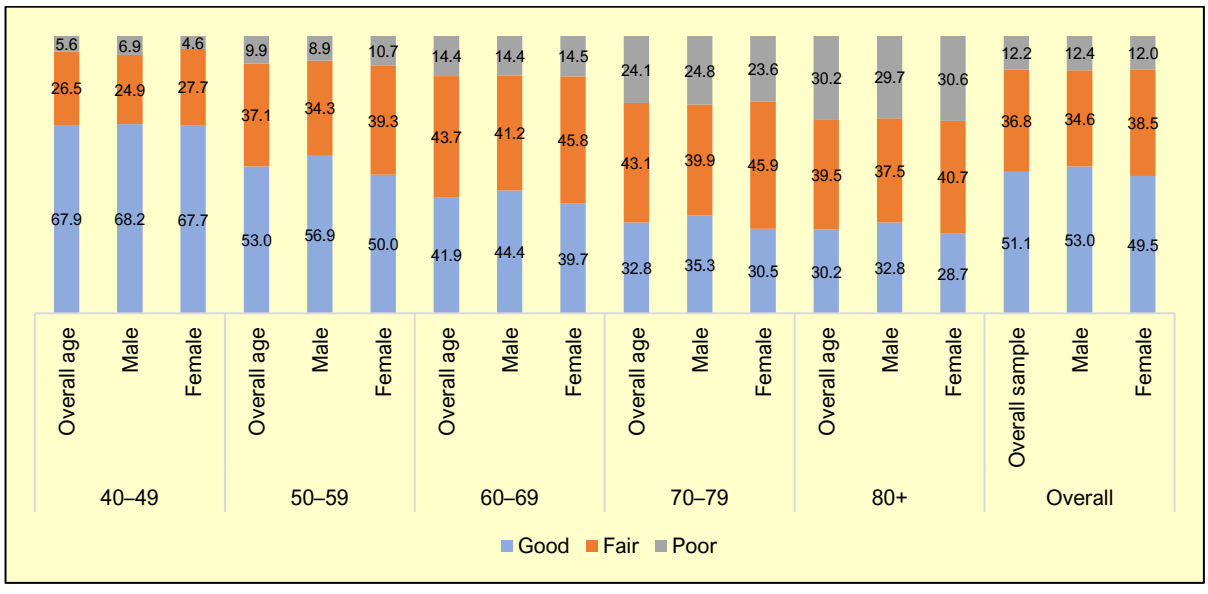

Figure 7.1: Current Self-Rated Health by Age and Gender (%)

Compared to the year before, 61% of the respondents reported no change in their health status, 20% said their health has become worse and 19% claimed they have better health (Figure 7.2). Respondents who reported that their health has become worse compared to one year ago is higher among females (21%) than among males (19%). The proportion of respondents with worsening health increases with age for both sexes.

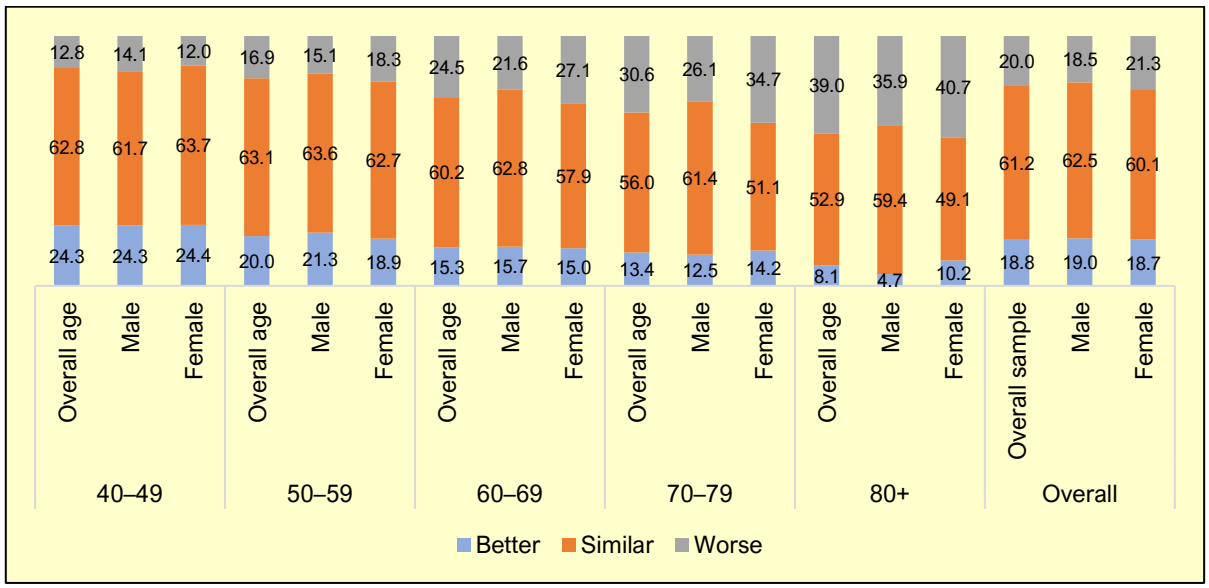

Figure 7.2: Health Status Compared with 12 Months Ago by Age and Gender (%)

Overall, the proportion of respondents who rated themselves in poor health gradually increases with increasing age although some fluctuations are observed for both male and female respondents (Figure 7.3). The trend also indicates that generally the proportion of fair and poor self-rated health is higher among female than male respondents.

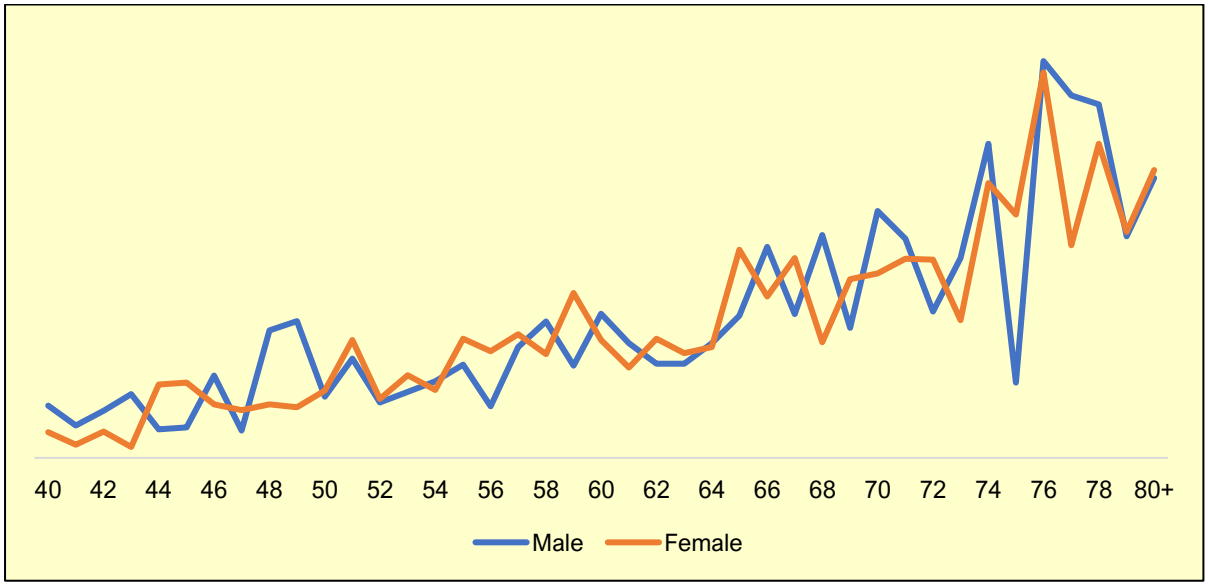

Figure 7.3: Proportion of Poor Health by Age (%)

Figure 7.4 shows that except for respondents with no income, the proportion of respondents in good self-rated health increases with increasing income from 45% among respondents having monthly income of less than RM1000 to 65% among those with RM3000 to less than RM4000 monthly income to 73% among respondents with income of at least RM5000 per month.

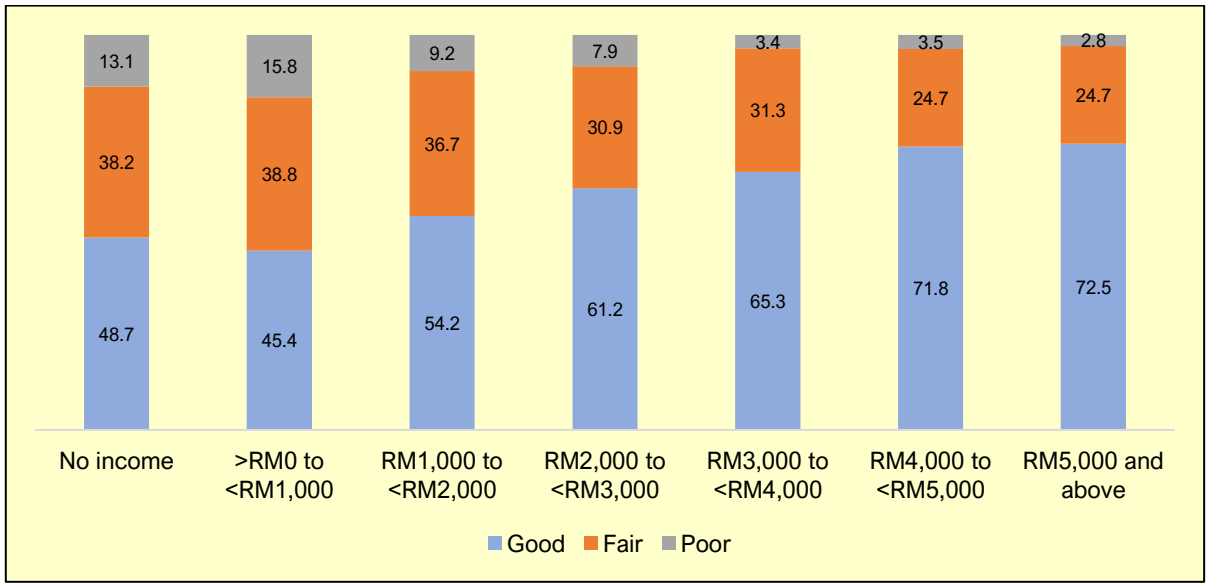

Figure 7.4: Current Self-Rated Health by Monthly Income (%)

A similar pattern is observed in the proportion of respondents who reported good health across education level (Figure 7.4). About 37% of respondents with no schooling are in good health and that proportion increases to 54% among respondents having a lower-secondary education and 72% among those with at least a post-secondary education.

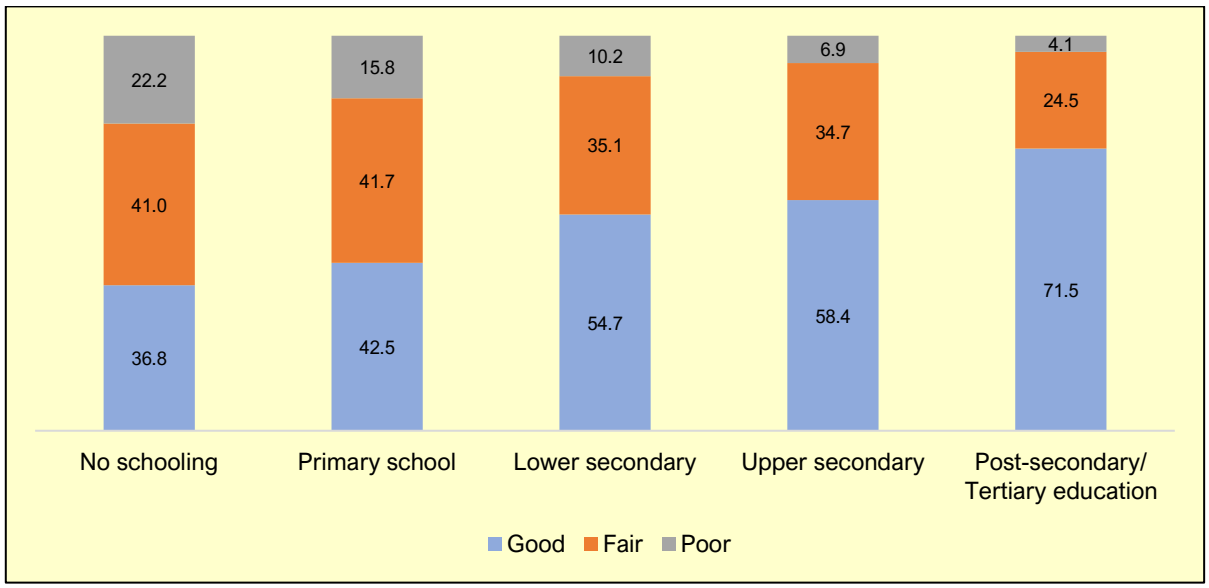

Figure 7.5: Current Self-Rated Health by Education Level (%)

Across ethnicity, the proportion of respondents in good self-rated health as shown in Figure 7.6 is highest among Non-Majority Group (60%) followed by Other Bumiputera (57%), Chinese (53%), Malay (50%) and Indian (40%). Indian respondents register the highest proportion of poor self-rated health (23%) followed by Chinese (12%) and Other Bumiputera (12%).

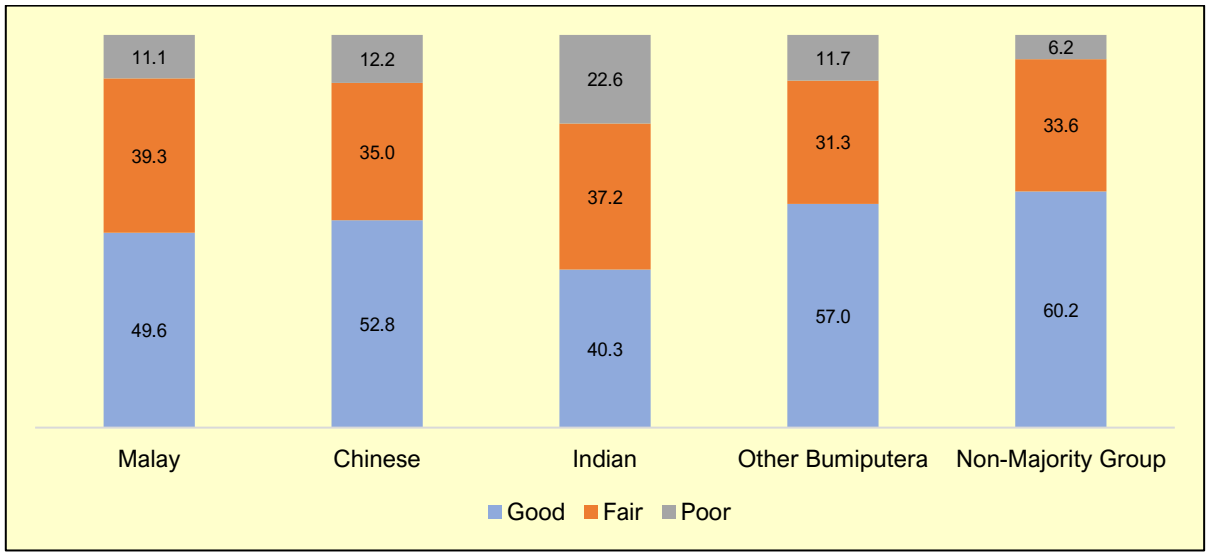

Figure 7.6: Current Self-Rated Health by Ethnicity (%)

7.2 Body Pains or Aches

Pain is a major public health concern in an ageing population as it is often a central component in any chronic condition. It is associated with adverse health consequences and diminished quality of life. A rising prevalence of pain with advancing age, posing significant challenges for physicians across all specialties in managing pain among older adults (Rottenberg et al., 2015).

MARS questionnaire asked whether respondents experienced any pain that limit their daily activities in the past one month. Figure 7.7 shows that overall, 58% of the respondents experienced some form of body pain with the proportion being higher among females (62%) than males (53%) and higher among rural (62%) than urban respondents (56%).

The proportion of respondents with body pain increases from 52% among respondents aged 40-49 to 59% among those aged 60-69, 68% among those aged 70-79 and 77% for those aged 80 and above (Figure 7.7). The proportion of respondents with body pain is higher among female than male respondents across all age groups. For example, among respondents aged 70-79, 76% of female respondents reported experiencing body pain in the past one month compared with about 60% of the male respondents.

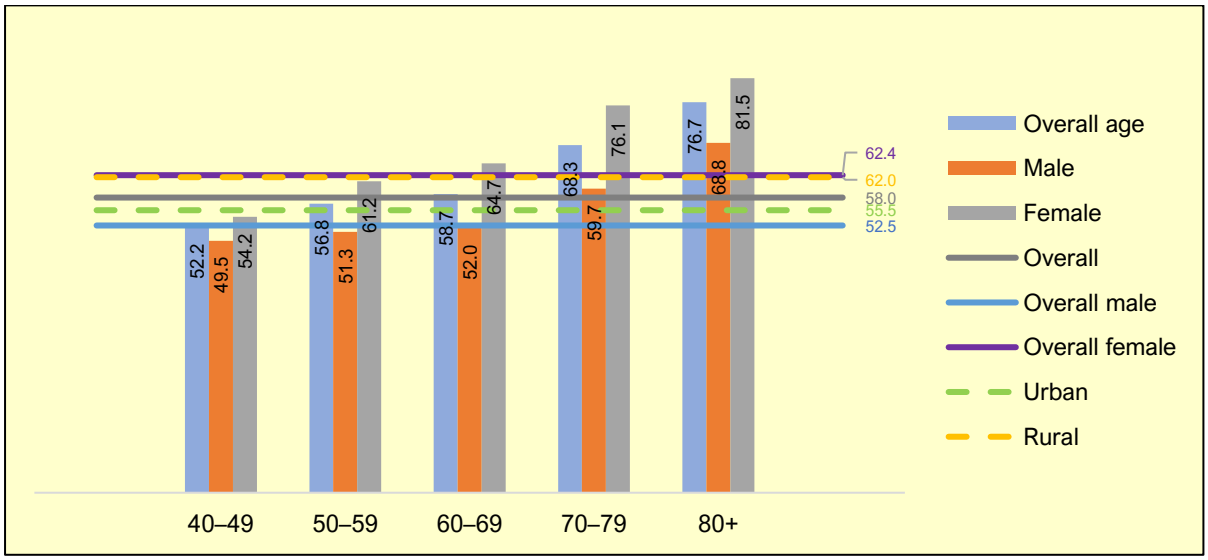

Figure 7.7: Respondents with Body Pain or Ache (%)

Among respondents who experienced body pain, Figure 7.8 shows that the most prevalent pain reported is knee pain (42%) followed by leg pain (35%), back pain (26%) and shoulder pain (21%). Between 9% to 17% of the respondents experienced pain in other parts of the body which include head, arms, hips, neck and wrist.

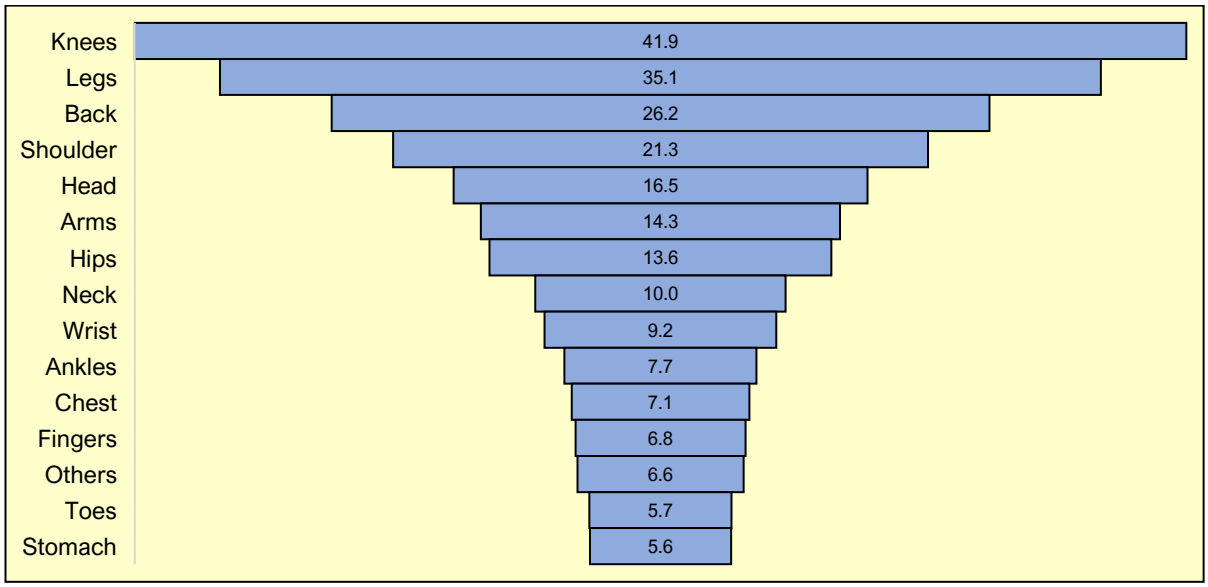

Figure 7.8: Types of Body Pain or Ache (%)

Examining types of body pain by gender, Figure 7.9 indicates that the top four body pains, knee, leg, back and shoulder are common for both male and female respondents with the proportion of female respondents suffering from knee pain, leg, and shoulder is slightly higher than that of male respondents (female 44%, male 38%; female 36%, male 34%; female 22% male 21%, respectively).

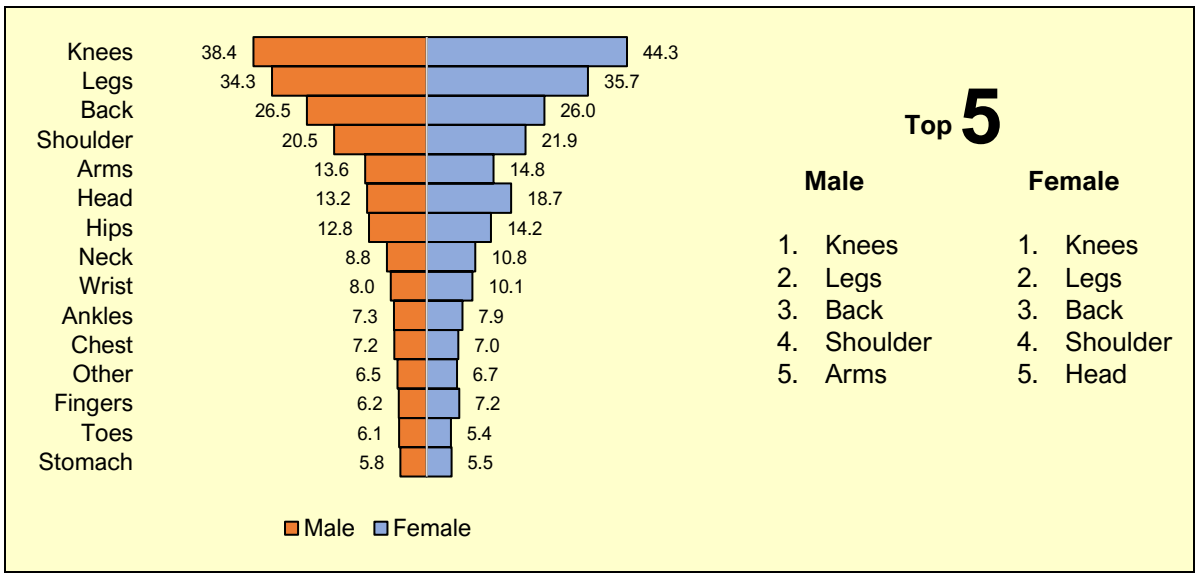

Figure 7.9: Types of Body Pain or Ache by Gender (%)

As can be observed in Figure 7.10, there is no urban or rural difference in the top five body pains experienced by the respondents. The proportion of respondents with knee and back pains is higher among rural than urban respondents, the opposite is true of the proportion of respondents with leg, shoulder and head pain.

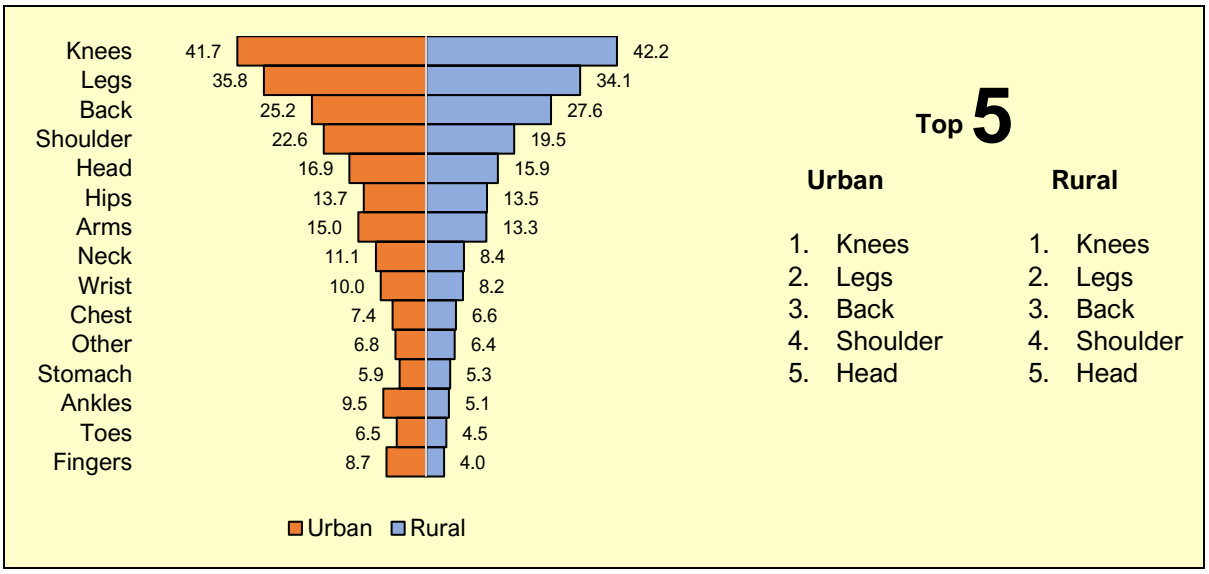

Figure 7.10: Types of Body Pain or Ache by Place of Residence (%)

7.3 Doctor-diagnosed Diseases

The prevalence of Non-Communicable Diseases (NCDs) such as hypertension, diabetes and high cholesterol is on the rise, particularly in the Asia Pacific region (Low et al., 2015). Recent NHMS 2018 findings show that 27.7% of the respondents aged 60 and above have been diagnosed by their doctors with diabetes, 51.1% hypertension and 41.8% high cholesterol (Sooryanarayana et al., 2020).

About 58% of respondents reported a doctor's diagnosis for diseases, with females account for 60% and males 55% (Figure 7.11). Among respondents aged 40-49, the proportion having doctor's diagnosed diseases is about 39% and increases sharply with age up to 70-79 (75%) and decreases to 72.1% among respondents aged 80 and above. Female respondents reported a higher proportion of having doctor's diagnosed diseases than male respondents across all age groups.

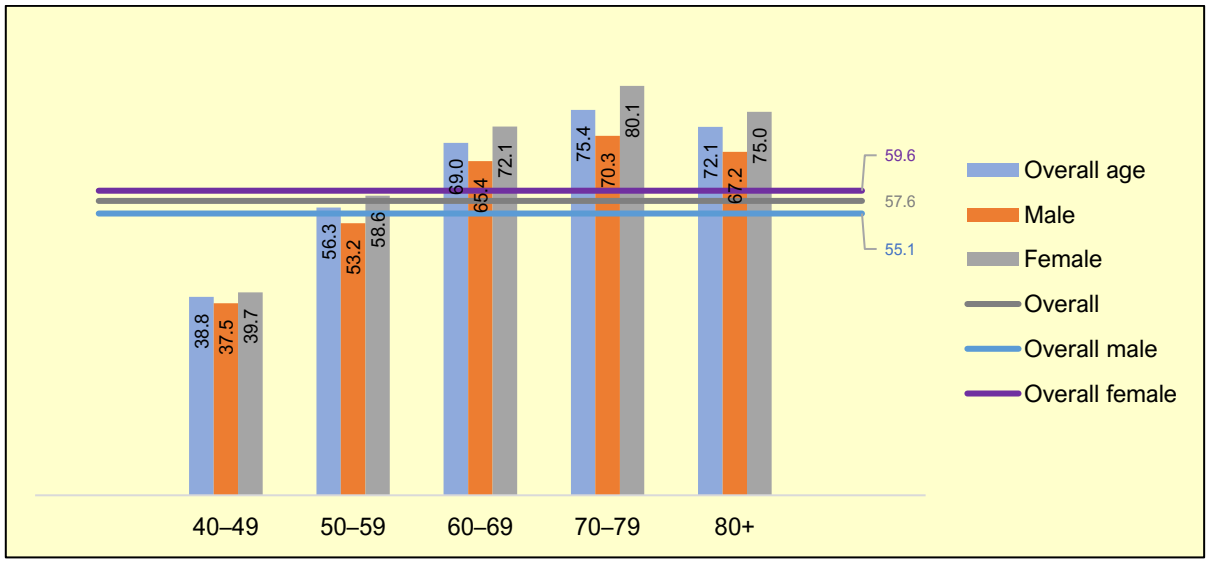

Figure 7.11: Prevalence of Diseases by Age, Gender and Place of Residence (%)

Prevalence of doctor's diagnosed diseases improves with education level (Figure 7.12). About 65% of respondents with no schooling reported having doctor diagnosed diseases compared to 54% of respondents with lower secondary education and 50% of those with at least a post-secondary education.

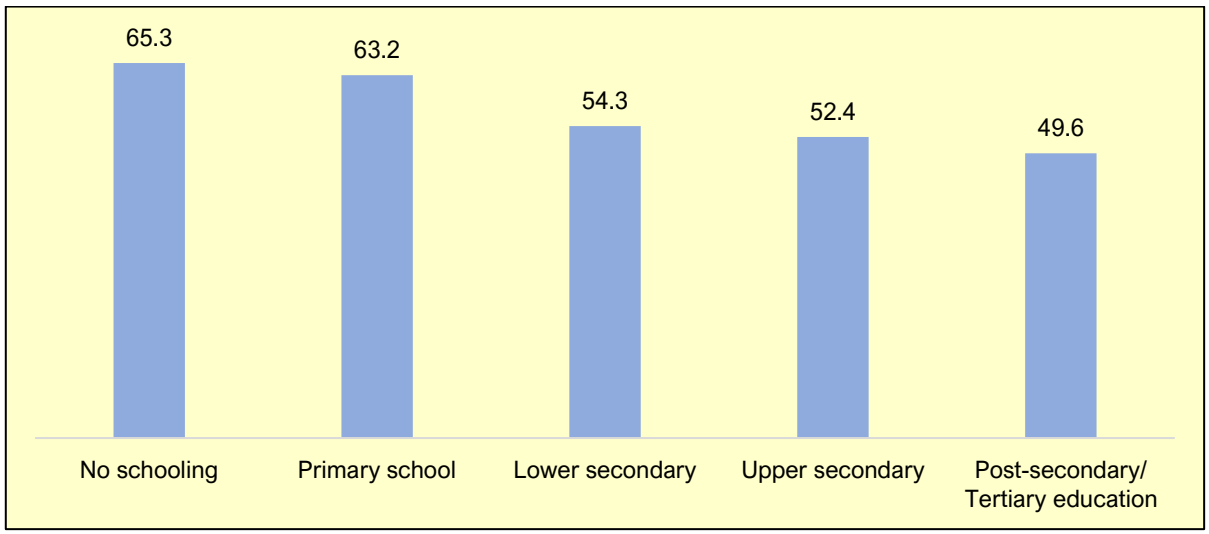

Figure 7.12: Prevalence of Diseases by Education Level (%)

The proportion of respondents having doctor's diagnosed diseases increases with deteriorating self-rated health (Figure 7.13). Among respondents in good health, 41% have at least one doctor's diagnosed diseases and that this proportion increases to 71% among respondents in fair health and 87% among those in poor health.

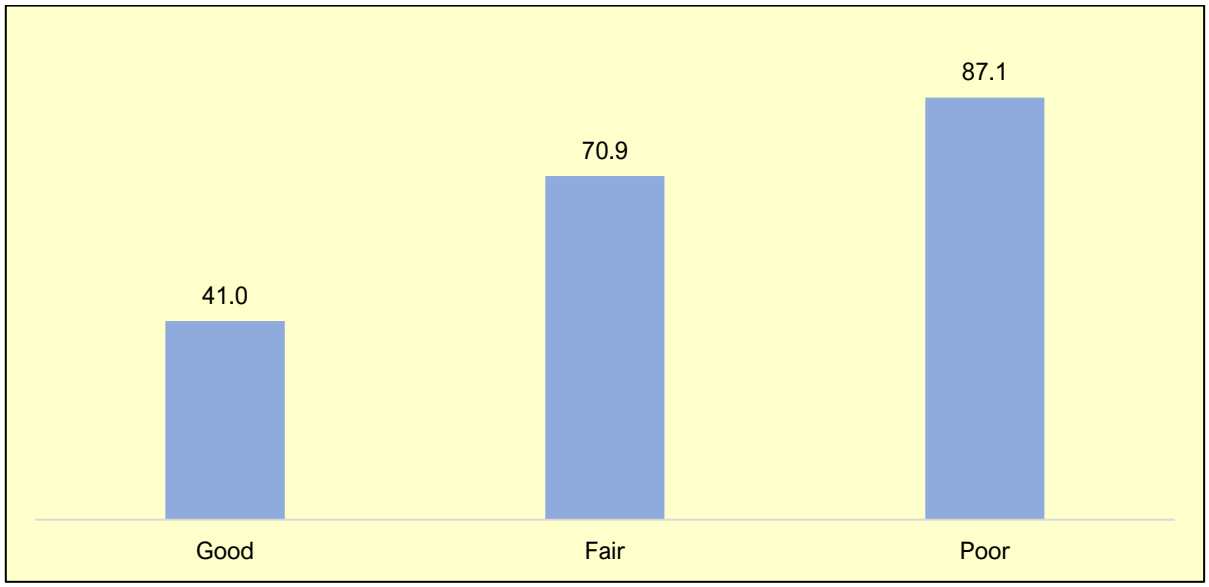

Figure 7.13: Prevalence of Diseases by Self-rated Health (%)

Among respondents who have been diagnosed with at least one disease, the top five diseases include hypertension (64%), high cholesterol (37%), diabetes (34%), heart diseases (10%) and asthma (8%) (Figure 7.14).

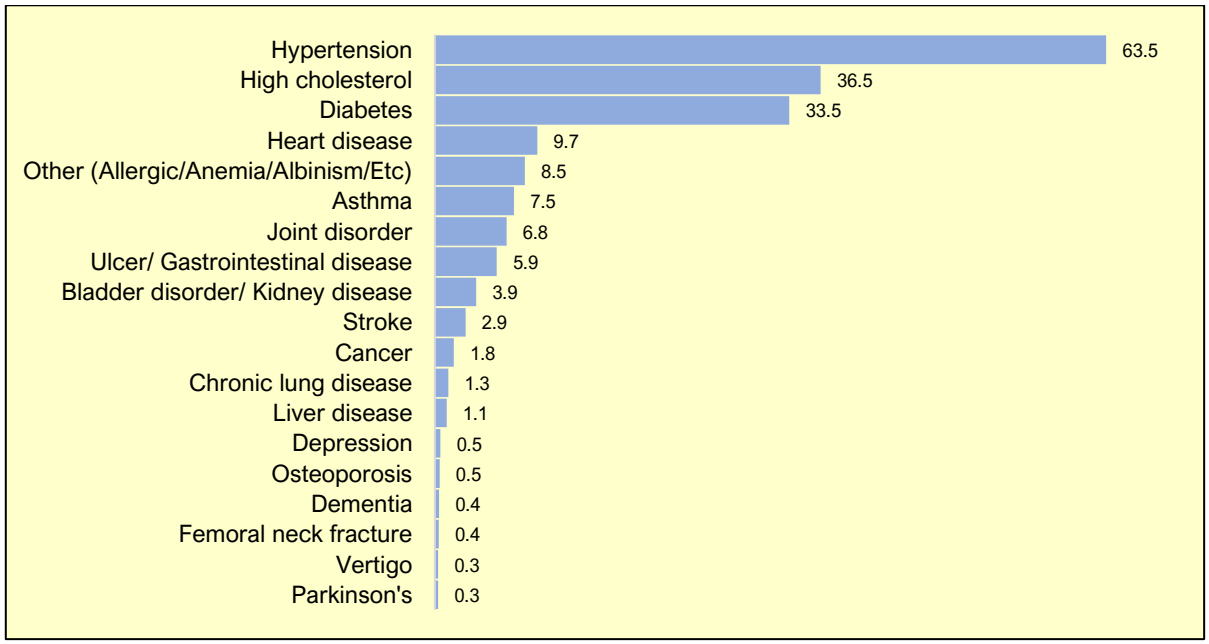

Figure 7.14: Types of Diseases (%)

Comparing diagnosed diseases between male and female respondents, it can be observed that the top three diseases are the same for both sexes (Figure 7.15). While the proportion of respondents diagnosed with hypertension and high cholesterol is higher among females (68% and 38%, respectively) than males (58% and 35%, respectively), the proportion of those diagnosed with diabetes is higher among male than female respondents (35% and 33%, respectively). Figure 7.15 also shows that male respondents reported a higher proportion having heart disease than female respondents (13% and 7%, respectively).

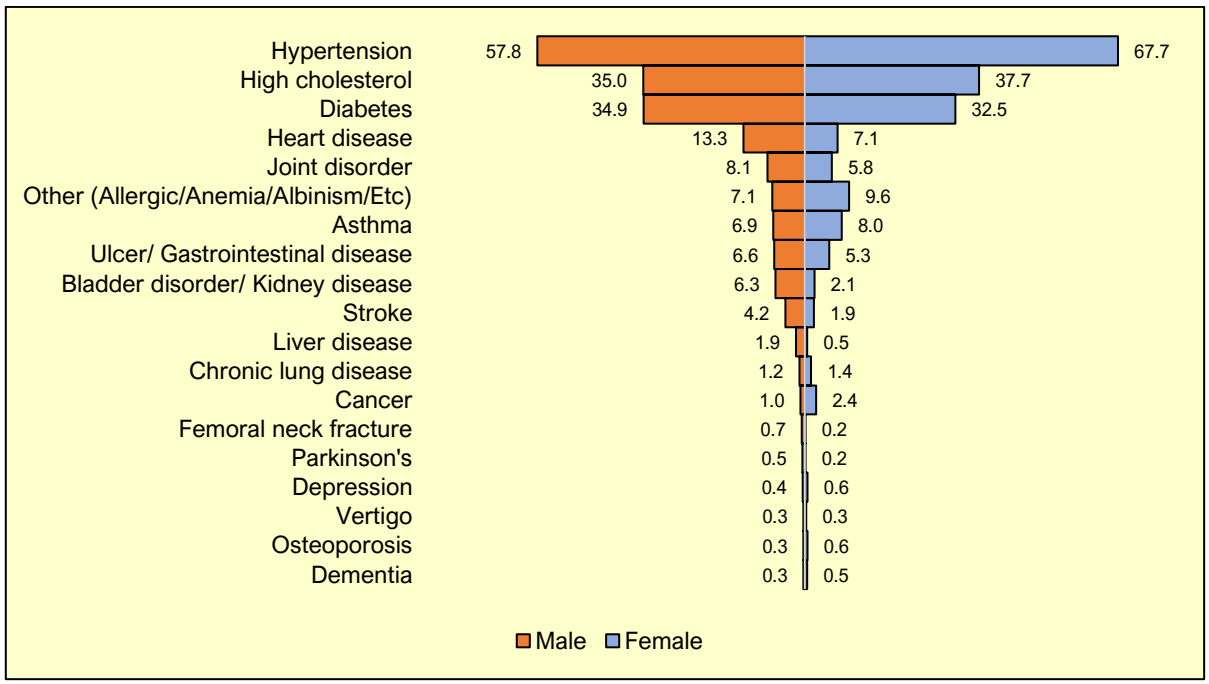

Figure 7.15: Types of Diseases by Gender (%)

Examining the prevalence of the top three diagnosed diseases across age, the proportion of respondents diagnosed with hypertension is highest followed by high cholesterol and diabetes in all age groups (Figure 7.16). About 47% of the respondents aged 40-49 reported a diagnosis of hypertension compared to 25% for high cholesterol and 24% for diabetes. Similarly, among respondents aged 60-69, about 70% were diagnosed with hypertension compared to 41% with high cholesterol and 39% with diabetes.

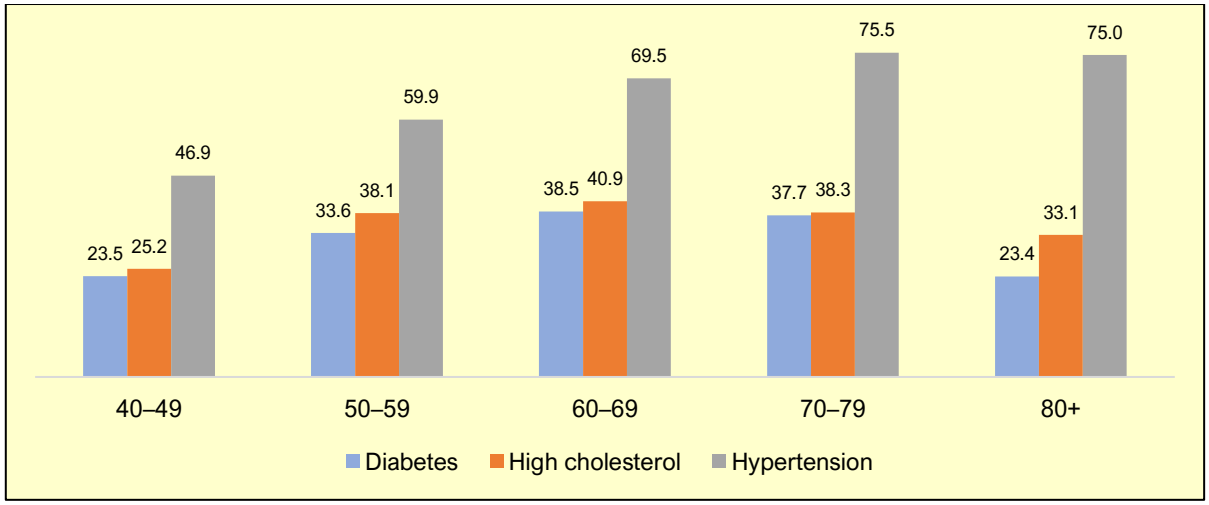

Figure 7.16: Prevalence of Top Three Diseases by Age (%)

Subsequent analyses examined the prevalence of diagnosed diabetes, high cholesterol and hypertension across ethnicity (Figure 7.17). The prevalence of diagnosed diabetes is highest among Indian respondents (56%) followed by Malay (36%) and Chinese (26%) while the prevalence of high cholesterol is highest among Chinese respondents (43%) followed by Indian (41%) and Other Bumiputera (39%). About 69% of Other Bumiputera and Non-Majority Group were diagnosed with hypertension followed by Chinese (65%).

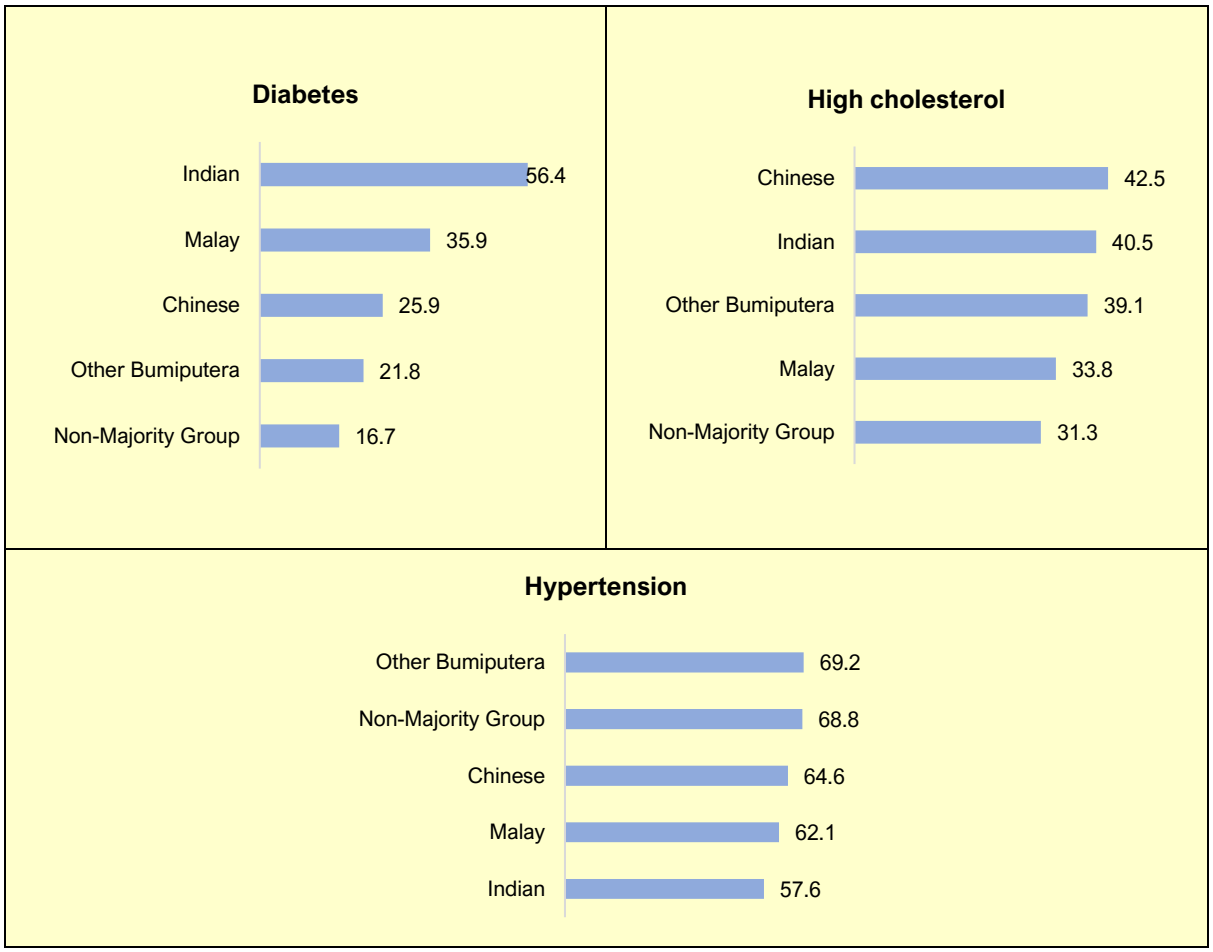

Figure 7.17: Prevalence of Diabetes, High Cholesterol and Hypertension by Ethnicity (%)

Among respondents with the top three diseases, 16% were diagnosed with all three (Figure 7.18). Approximately 19% of the respondents were diagnosed with high cholesterol and diabetes. 30% diabetes and hypertension and 34% with hypertension and high cholesterol.

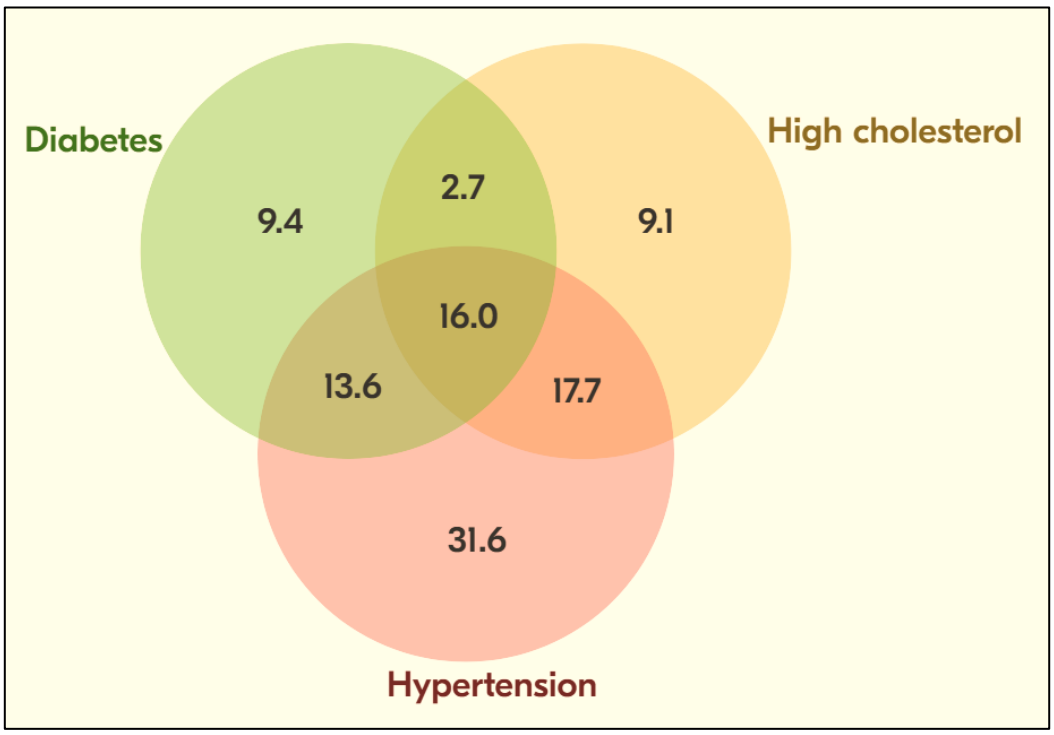

Figure 7.18: Prevalence of Diabetes, High Cholesterol and Hypertension (%)

Respondents who reported to have been diagnosed with diseases were asked whether they were currently receiving treatment or medication. Figure 7.19 shows the proportion of respondents currently receiving treatment for the top three diseases exceeds 90% with 96% for diabetes, 94% for hypertension and 91% for high cholesterol.

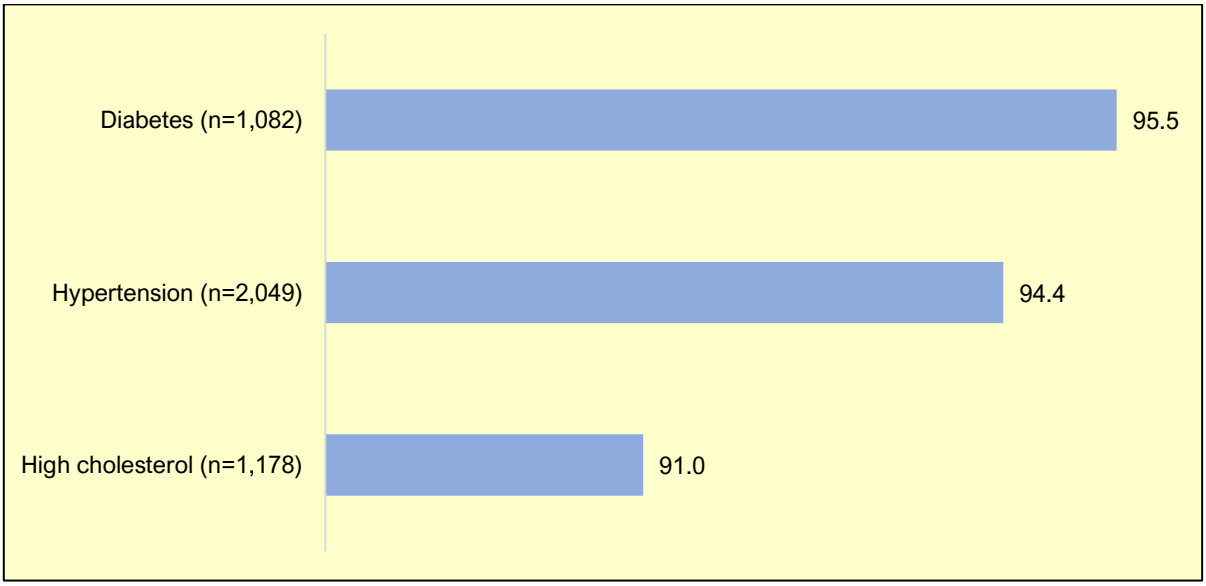

Figure 7.19: Respondent Who Were Currently on Treatment or Medication (%)

As indicated in Figure 7.20, diagnosed diseases that limit respondents' daily activities range from high cholesterol as reported by 22% of the respondents with Parkinson's disease (90%). However, it should be noted that the number of respondents suffering from Parkinson's disease is very small. The most notable disease that limit respondents' daily activities is stroke (76%) followed by chronic lung disease (66%), joint disorder (65%) and asthma (62%).

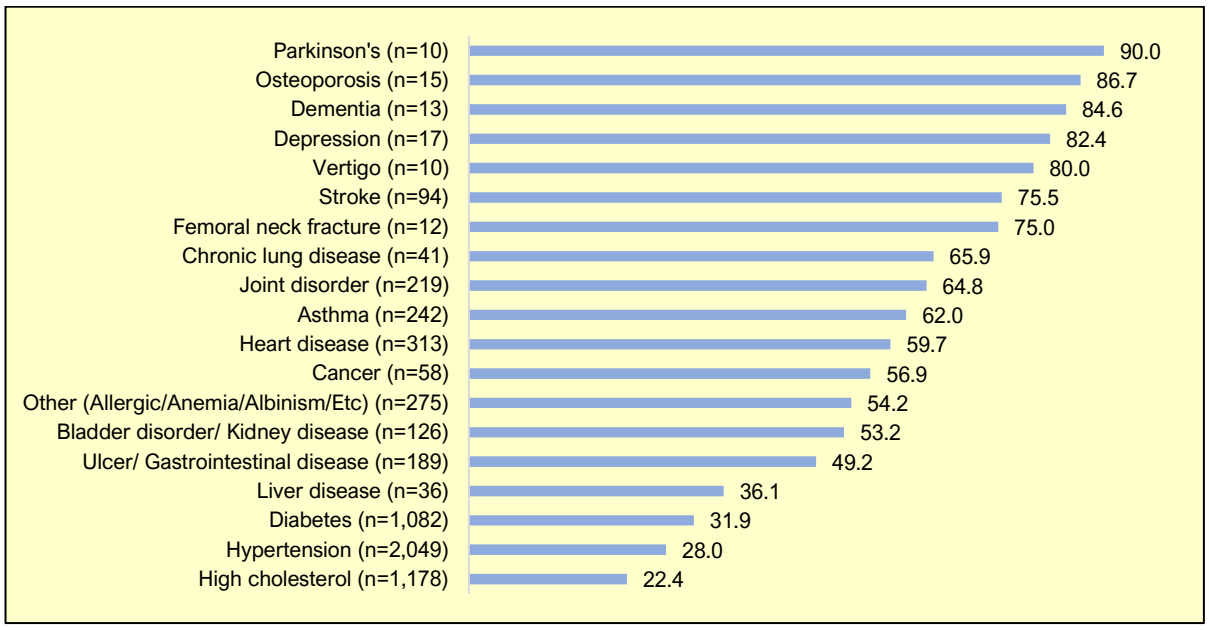

Figure 7.20: Diseases Limiting Daily Activities (%)

7.4 Multimorbidity

Further analysis examined the proportion of respondents by the number of diagnosed diseases indicating the prevalence of multimorbidity measured by having at least two diagnosed diseases. Overall, the prevalence of multimorbidity is about 30% with female respondents reporting a slightly higher proportion (31%) than male respondents (27%) (Figure 7.21). The prevalence of multimorbidity increases with age from 13% among respondents aged 40-49 to 47% among those aged 70-79 after which it decreases to 39%.

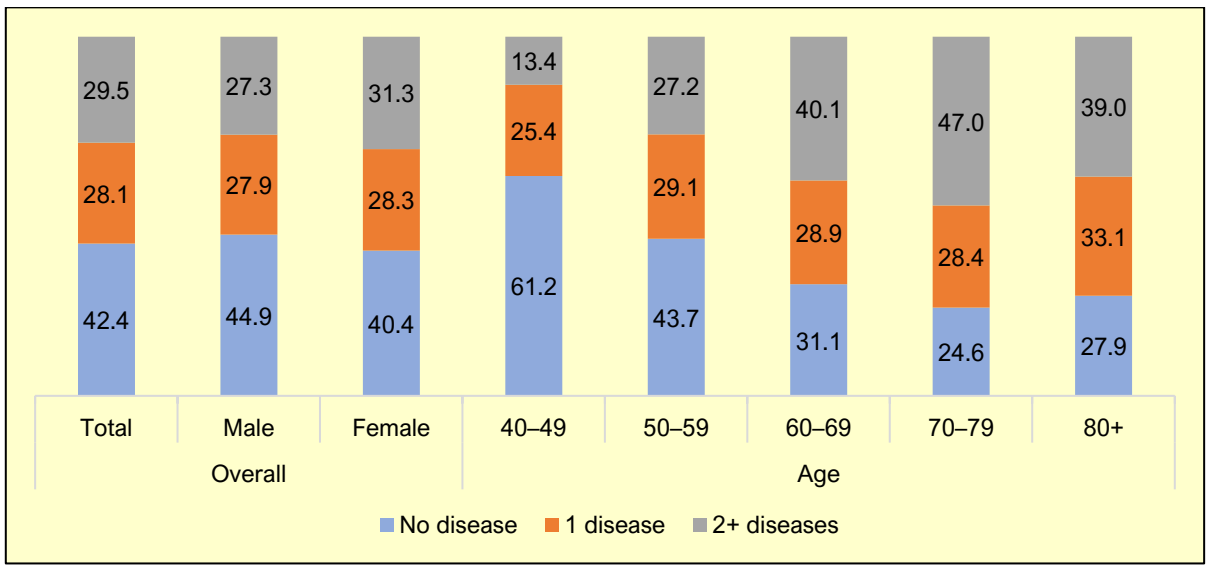

Figure 7.21: Prevalence of Multimorbidity by Gender and Age (%)

The proportion of respondents with at least two diagnosed diseases gradually decreases with an increasing level of education from 36% among respondents with no schooling to 28% among those with lower secondary education and 22% among respondents with at least a post-secondary education (Figure 7.22).

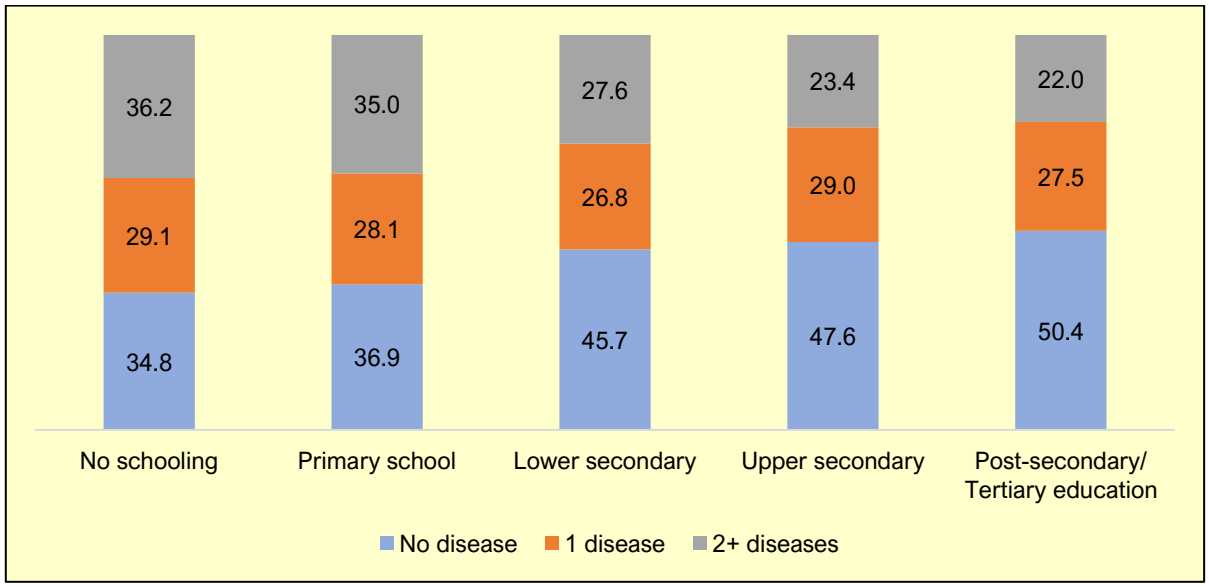

Figure 7.22: Prevalence of Multimorbidity by Education Level (%)

Across income, the prevalence of multimorbidity ranges from 24% among respondents with monthly income of at least RM5,000 to 33% among respondents with monthly income of greater than RM0 to less than RM1,000 (Figure 7.23). There is no clear pattern of the prevalence of multimorbidity across income level of the respondents with 30% of those with no income having at least two diagnosed diseases, lower than respondents with monthly income of RM3,000 to less than RM4,000 (31%).

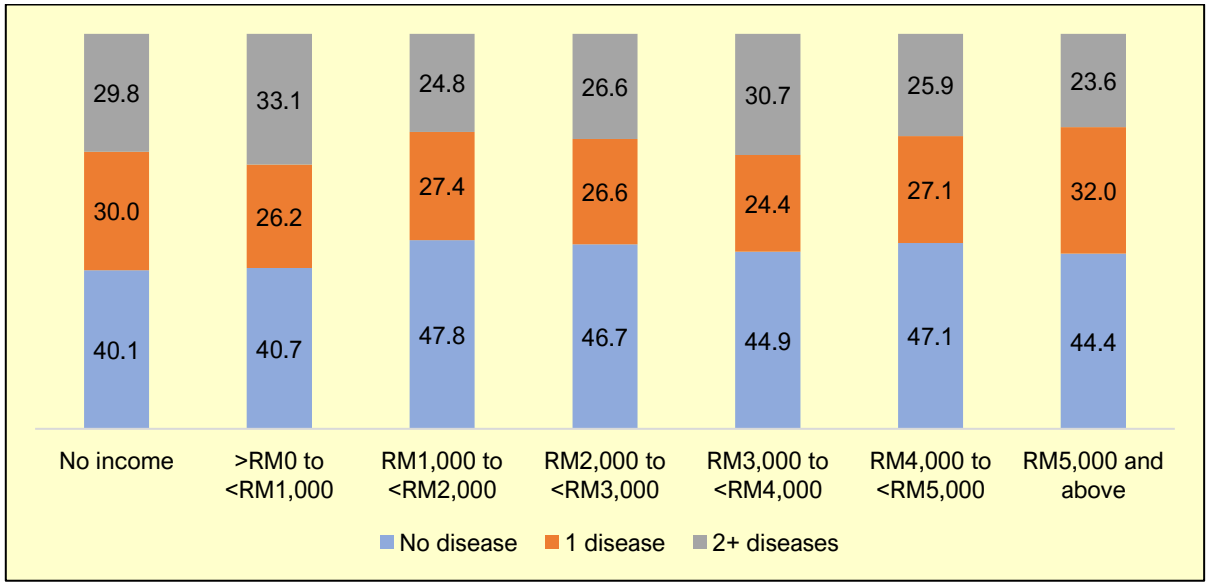

Figure 7.23: Prevalence of Multimorbidity by Income (%)

Examining prevalence of multimorbidity across ethnicity, Figure 7.24 shows that the proportion of respondents diagnosed with at least two diseases is highest among Indian respondents (45%) followed by Chinese (30%) and Malays (29%).

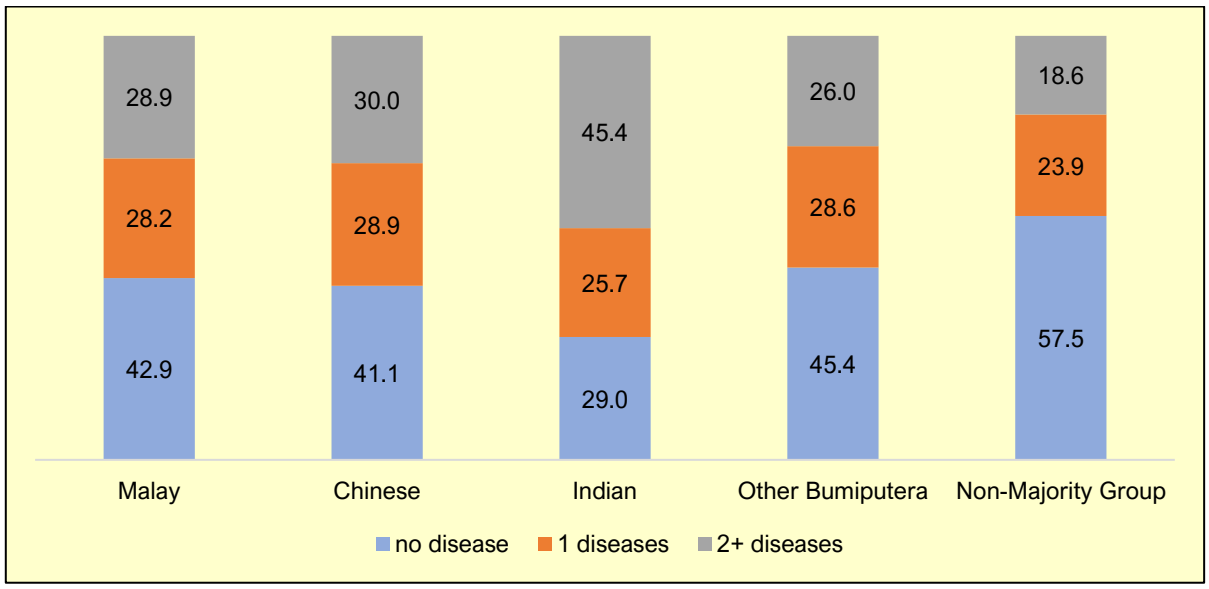

Figure 7.24: Prevalence of Multimorbidity by Ethnicity (%)

Prevalence of multimorbidity was further examined across self-rated health. About 16% of respondents who reported that they were in good health have at least two diagnosed diseases while this proportion increases to 38% and 59% among those in fair and poor self-rated health, respectively (Figure 7.25).

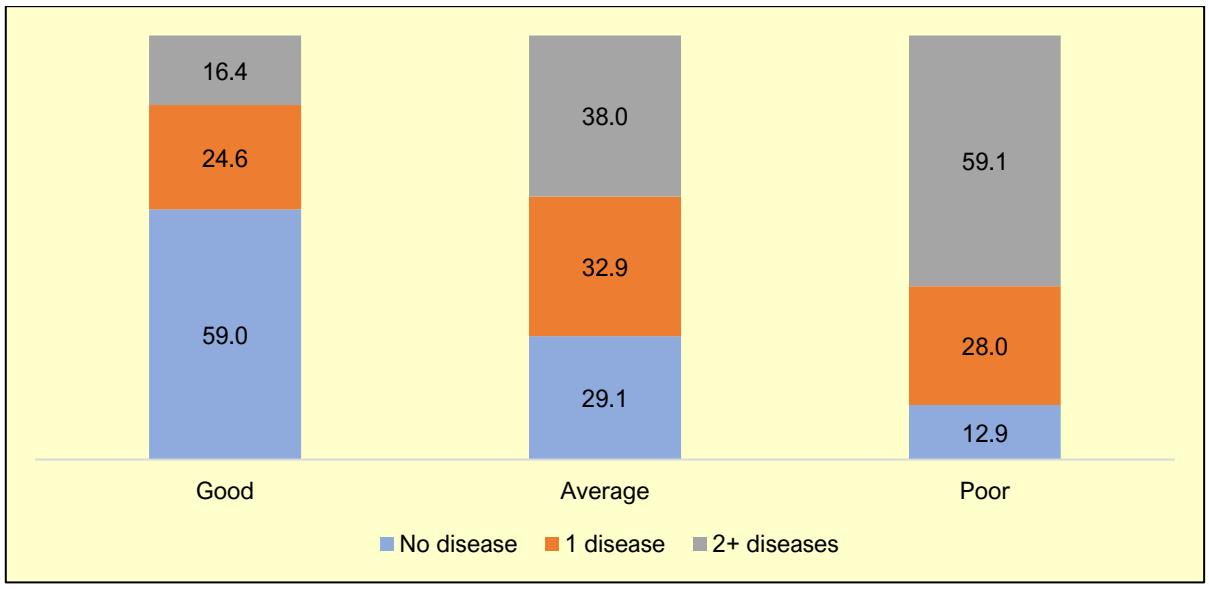

Figure 7.25: Prevalence of Multimorbidity by Self-rated Health (%)

7.5 Accidents and Falls

Accidents and falls are common among older persons and the risk of fall is positively associated with age (Li et al., 2022). The 2018 NHMS reported that 14% of respondents above age 60 had experienced falls, at least once over 12 months (Sooryanarayana et al., 2020).

MARS respondents were asked whether they were involved in any accident or fall that affected their physical health in the past 2-years. About 11% of the respondents reported that they did experience some types of accidents or falls (Figure 7.26).

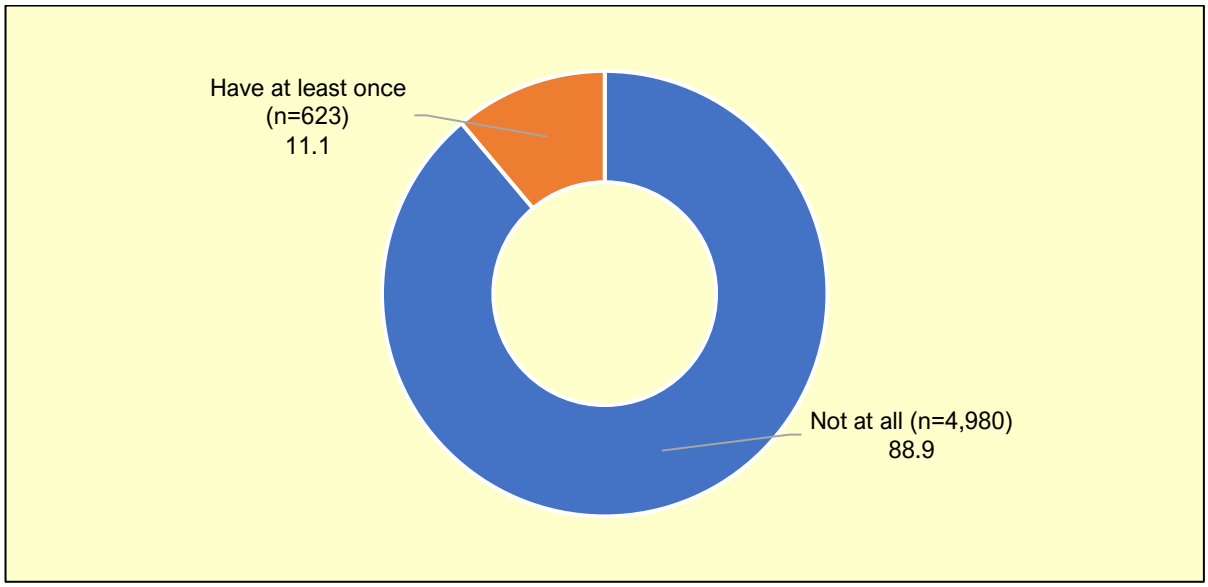

Figure 7.26: Respondents Who Experienced Accidents/Falls (%)

Among respondents with experience of accidents or falls, 59% of them reported falling down followed by automobile accidents (38%) with a small proportion of respondents (3%) were hit by a falling object (Figure 7.27).

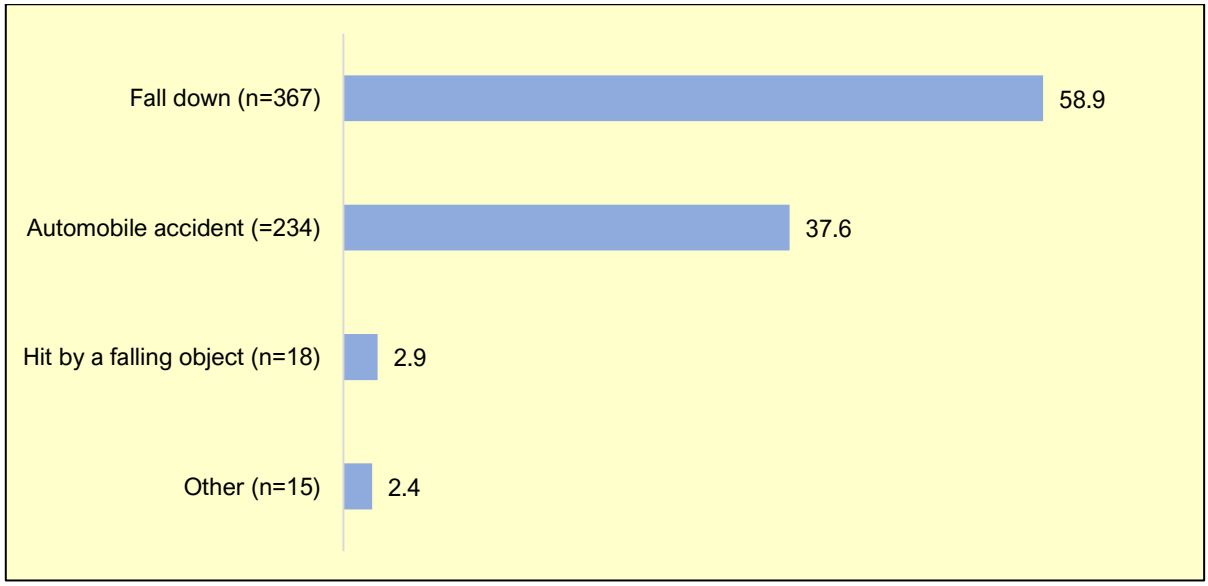

Figure 7.27: Types of Accidents (%)

Among respondents with experience of automobile accidents shown in Figure 7.28, 36% had a permanent effect on their health while more than half (58%) reported that the accidents had restricted their daily activities (Figure 7.29).

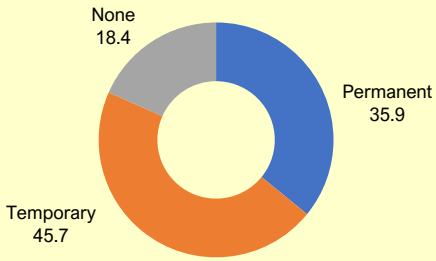

Figure 7.28: Automobile Accidents' Lasting Effect on Health (%)

Figure 7.29: Automobile Accidents Restrict Respondents' Daily Activities (%)

Prevalence of falls was examined across gender which shows that female respondents reported a much higher proportion (71%) than male respondents (44%) (Figure 7.30). The proportion of respondents with experience of falls decreases from 55% among those aged 40-49 to 54% among respondents aged 50-59 and increases from then on. About 60% of the respondents aged 60-69 experienced falls and that the proportion increases to 68% among those aged 70 and above. Among respondents who had experienced falls, 19% admitted having a permanent effect on their health (Figure 7.31) while 38% of the respondents reported that falls had restricted their daily activities (Figure 7.32). Respondents were also asked how many times they experienced falls. The majority (60%) experienced it only once while 19% experienced falls twice (Figure 7.33).

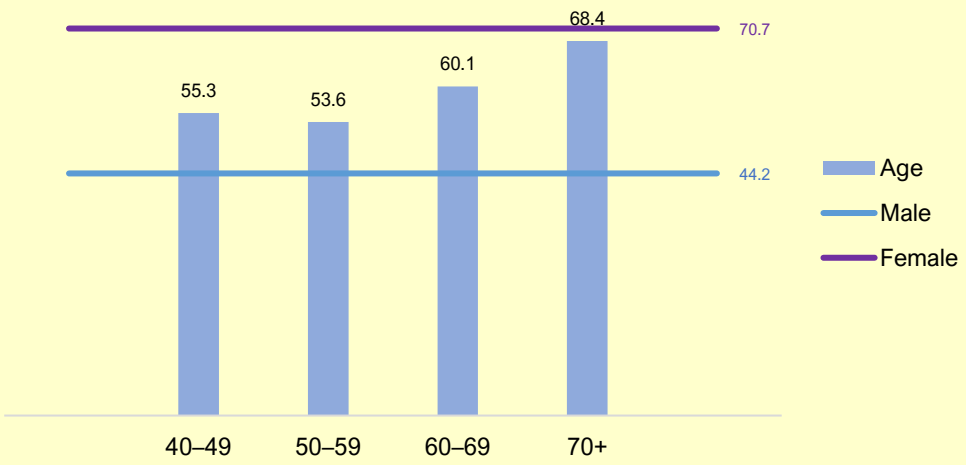

Figure 7.30: Prevalence of Falls by Gender and Age (%)

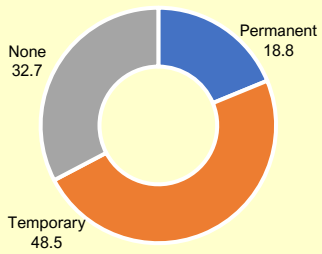

Figure 7.31: Falls' Lasting Effect on Health (%)

Figure 7.32: Falls Restrict Respondents' Daily Activities (%)

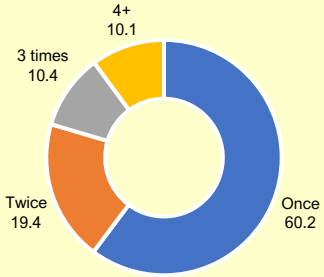

Figure 7.33: Frequency of Falls (%)

Respondents were asked whether they were worried about falling, 20% of them were very worried with female respondents reporting a higher proportion (23%) than male respondents (16.7%) (Figure 7.34). The proportion of respondents who were very worried about falling increases with age from 15% among respondents aged 40-49, 22% among those aged 60-69 and 41% among the 80+ year olds.

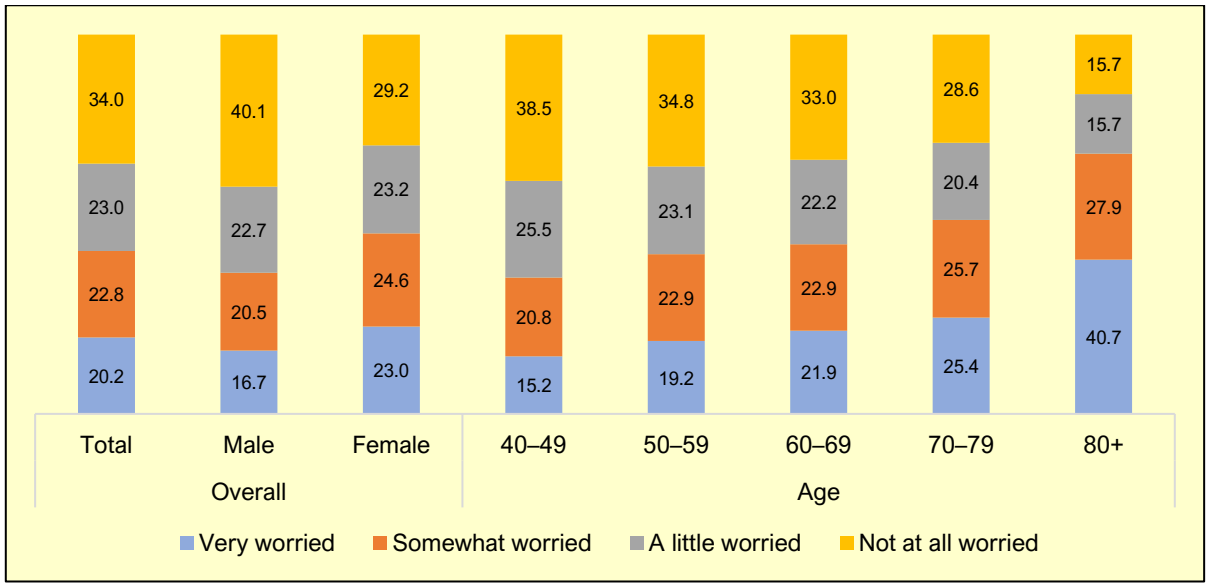

Figure 7.34: Respondents Worried About Falling by Gender and Age (%)

7.6 Tiredness and Incontinence

Respondents were asked how often they feel tired and 28% of them admitted they always feel tired, followed by 38% of them feeling tired sometimes (Figure 7.35). The proportion of respondents who always feel tired is higher among female than male respondents (31% and 25%, respectively). Figure 7.35 also shows that the proportion of respondents who always feel tired increases with advancing age especially among those aged 80+ (42%).

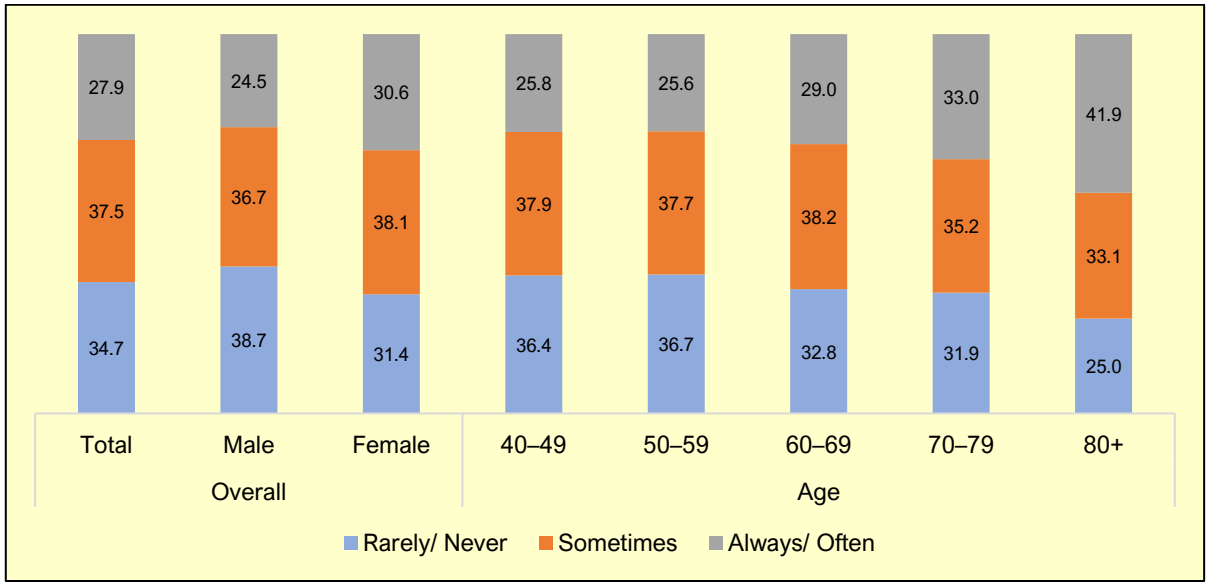

Figure 7.35: Respondents Experiencing Tiredness by Gender and Age (%)

About 9% of the female respondents and 8% of the male respondents suffer from some degree of incontinence (Figure 7.36). The proportion of respondents who experience incontinence increases from about 5% among those aged 40-49 to three times more among respondents aged 70-79 (16%) and at least four times more among those in the oldest age group (23%) (Figure 7.36).

Among respondents who admitted suffering from incontinence, Figure 7.37 shows about 31% experience it all the time while 15% of the respondents experience incontinence more than 15 days in a month. The data shows nearly 26% of the respondents who experience incontinence reported they had to use products for incontinence such as disposable adult diapers of which about 9% admitted having to always use them (Figure 7.38).

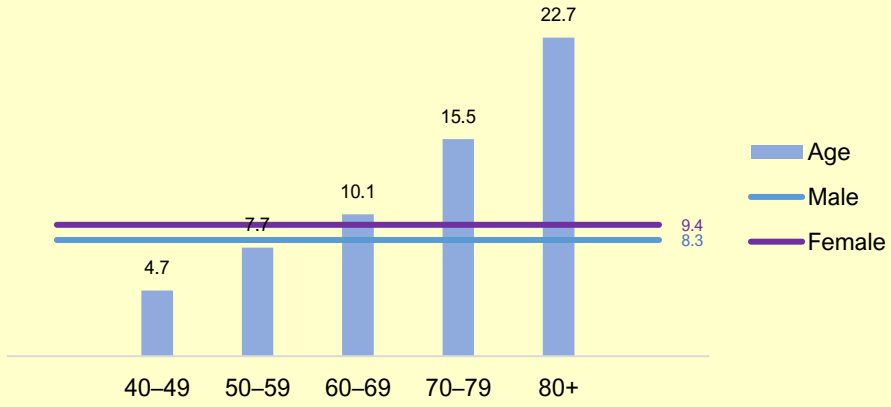

Figure 7.36: Respondents Experiencing Incontinence by Gender and Age (%)

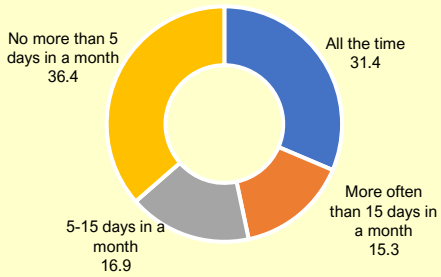

Figure 7.37: Frequency of Incontinence (%)

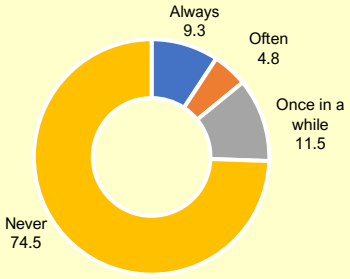

Figure 7.38: Frequency of Wearing Incontinence Products

7.7 Eyesight

Age-related changes in vision are common and can significantly impact the wellbeing of older adults (Brown & Barrett, 2011). Overall, 54% of MARS respondents reported that they usually wear eyeglasses or corrective lenses with female respondents reporting a slightly higher proportion than male respondents (55% and 53%, respectively). The highest proportion of respondents who wear eyeglasses are among those aged 60-69 years (62%) followed by respondents aged 70-79 and 50-59 (59%) indicating a declining trend with age (Figure 7.39).

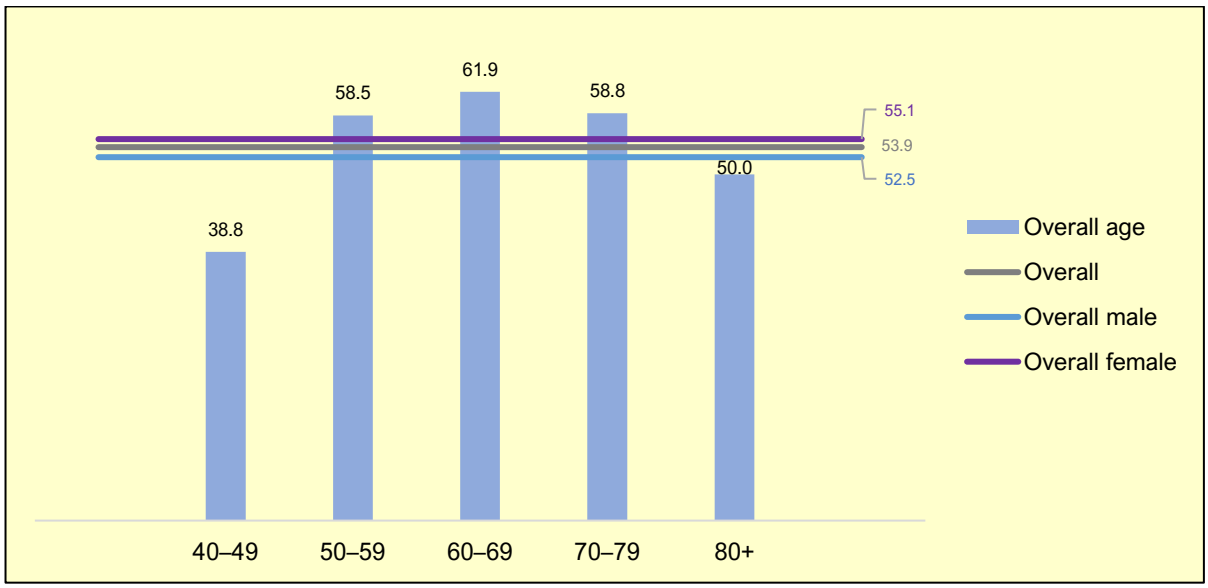

Figure 7.39: Respondents Who Wear Glasses by Gender and Age (%)

Among the respondents who usually wear eyeglasses, majority of them (overall 82%) reported they have good vision with glasses while 3% claimed their vision as poor. The proportion having good vision with eyeglasses is higher among male (83%) than female respondents (81%). The proportion of respondents who reported good vision with glasses gradually declines from 86% among those aged 40-49 to 79% among respondents aged 60-69 to 55% among those aged 80 and above (Figure 7.40).

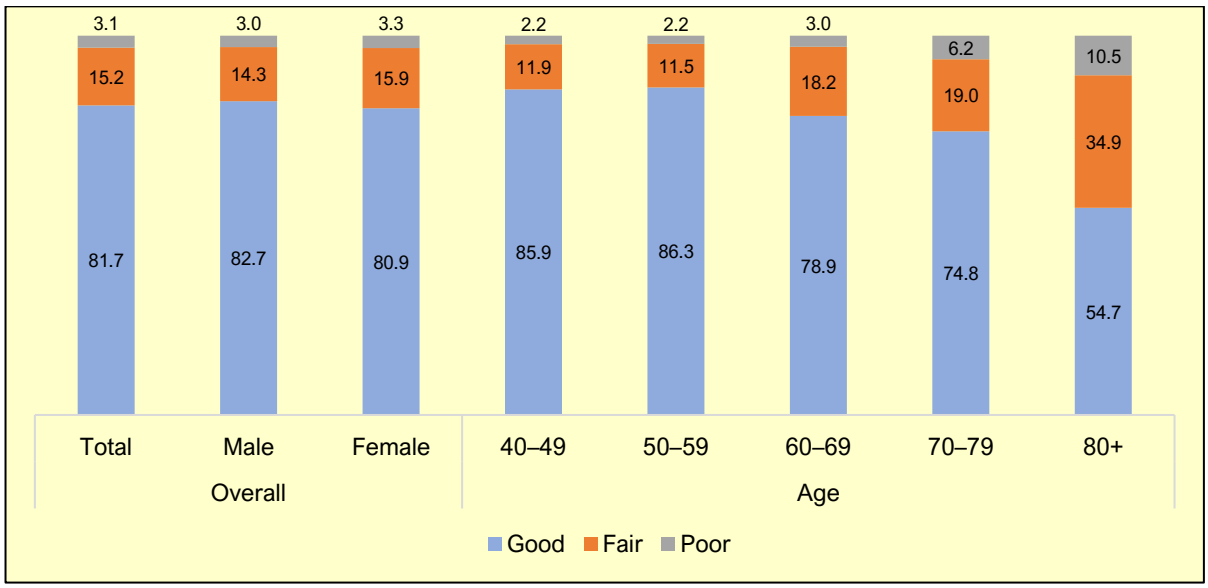

Figure 7.40: Respondents' Vision with glasses by Gender and Age (%)

Among the respondents who do not wear eyeglasses, 58% of them reported they have good vision while 12% reported they have poor vision. The proportion of respondents with good vision declines sharply from 69% among those aged 40-49 to 49% among respondents aged 60-69 and 30% among those aged 80 and above. Expectedly, the proportion of respondents with poor vision without glasses increases with increasing age (Figure 7.41).

Figure 7.41: Respondents' Vision without Glasses by Gender and Age (%)

Of the total respondents, Figure 7.42 shows only 8% ever had eye surgery of which 66% have had cataract surgery, followed by lens replacement surgery (24%) and other types of eye surgery (12%) which include laser-assisted eye treatment, glaucoma, blindness surgery, eye injury, and macular hole surgery (Figure 7.43).

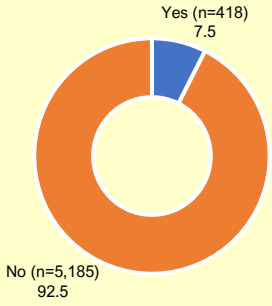

Figure 7.42: Respondents' Overall Experience with Eye Surgery (%)

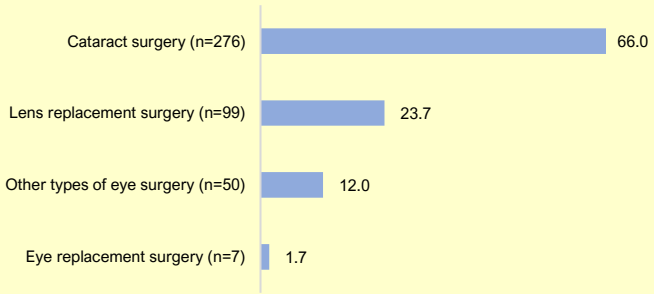

Figure 7.43: Types of Eye Surgery Performed on Respondents (%)

7.8 Hearing

Hearing impairment is among the most common health issues reported by older adults worldwide. Research indicates that older individuals with hearing difficulties are less likely to engage in social activities (Cheung & Zhang, 2023), which can increase their risk of loneliness and social isolation.

Overall, only 4% of the respondents reported that they usually wear hearing aids, 5% among male and 4% among female respondents. The proportion of respondents who wear hearing aids is lowest among those aged 40-49 (4%) and highest among respondents aged 80 and above (10%) (Figure 7.44).

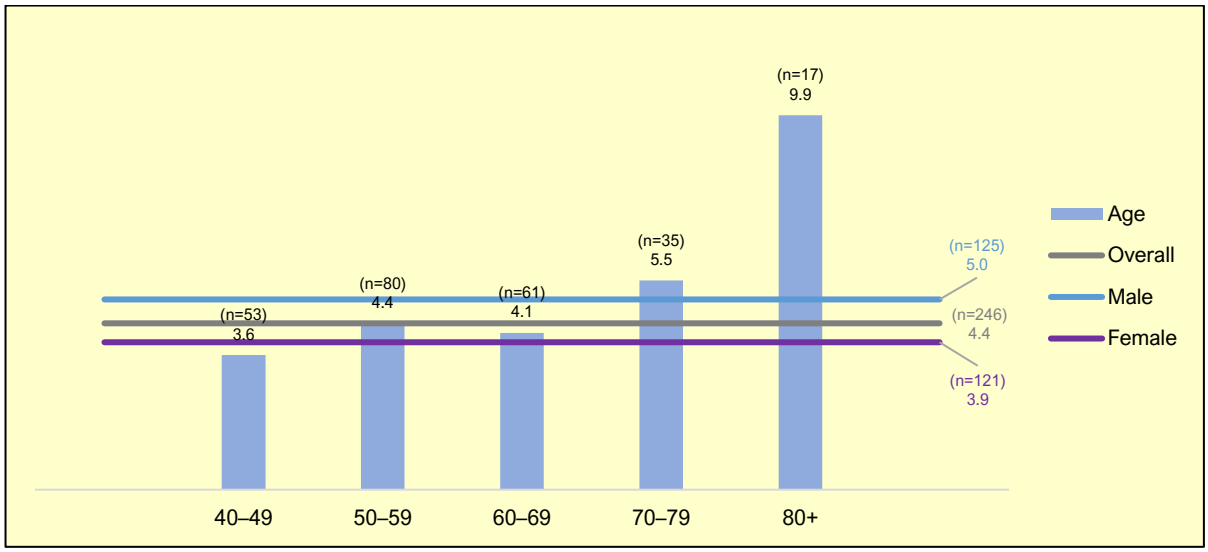

Figure 7.44: Respondents Wearing Hearing Aids by Gender and Age (%)

Among respondents who wear hearing aids, 81% reported their hearing as good (Figure 7.45). The proportion of respondents having good hearing with aids is slightly higher among female (83%) than male respondents (78%). The proportion of respondents having good hearing with aids decreases from 94% among those aged 40-49 to 77% among respondents aged 60-69 and 53% among those aged 80 and above. About 29% of the respondents aged 80 and above reported their hearing as poor despite wearing hearing aids (Figure 7.45).

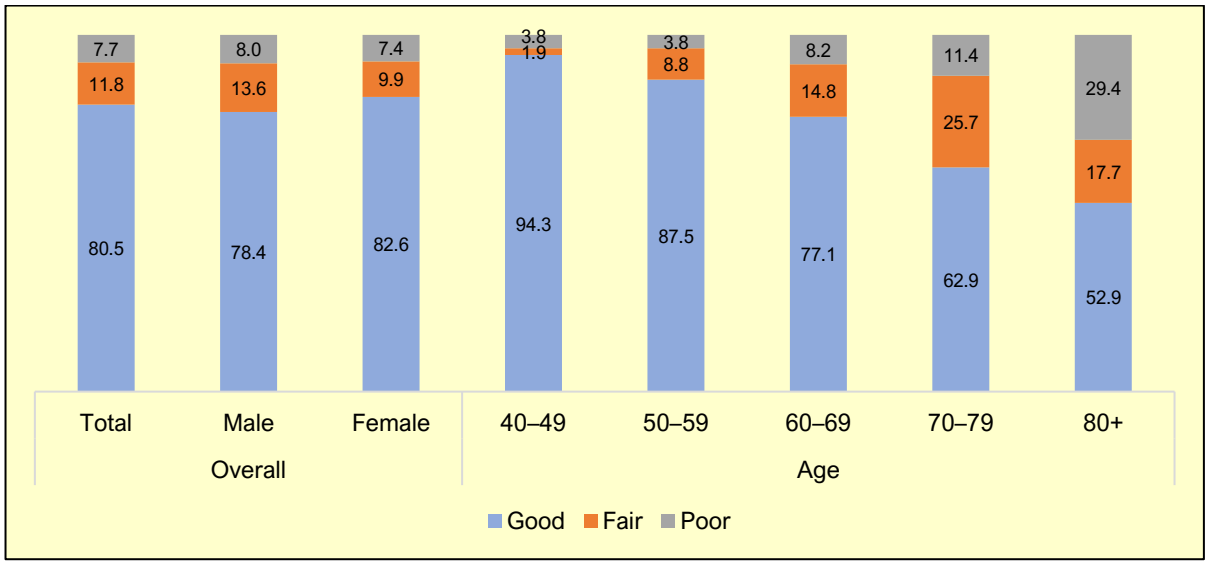

Figure 7.45: Hearing Ability Among Respondents with Hearing Aids (%)

Among respondents who do not wear hearing aids, 87% reported their hearing is good with no gender difference (Figure 7.46). The proportion of respondents without hearing aids having good hearing decreases from 95% among those aged 40-49 to 71% among respondents aged 70-79 and 55% for those aged 80 and above (Figure 7.46).

Figure 7.46: Hearing Ability Among Respondents without Hearing Aids (%)

Of the total sample, less than 1% of the respondents reported to have had ear surgery that includes membrane surgery, tympanoplasty or eardrum surgery, and other surgery (Figure 7.47).

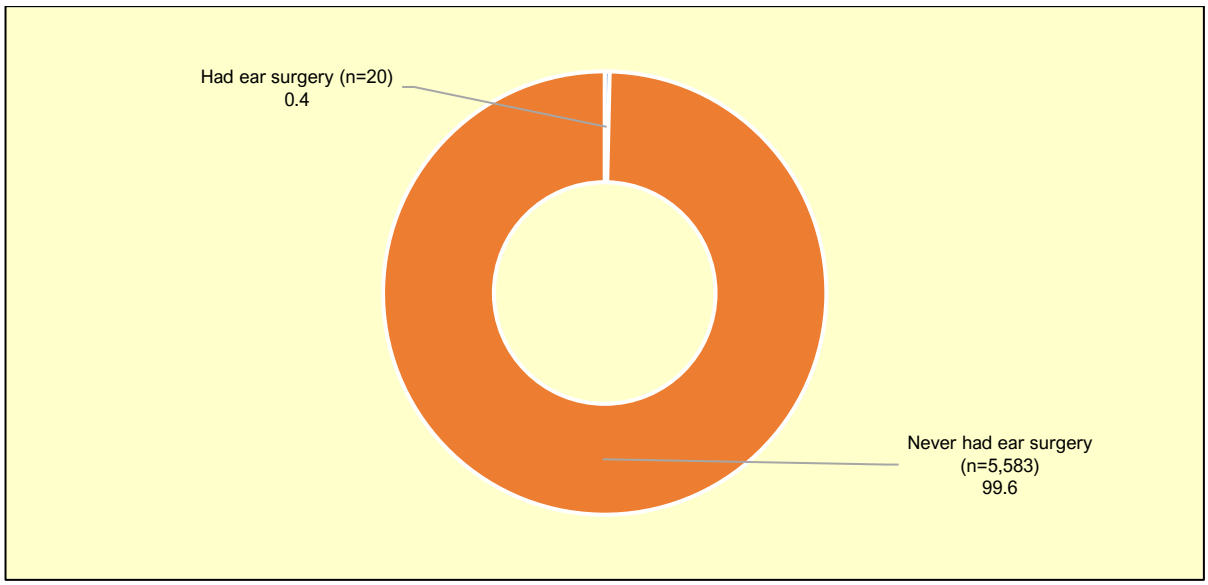

Figure 7.47: Respondents' Experience with Ear Surgery (%)

7.9 Oral health

One crucial and often neglected area of health is oral health. Poor oral health among older persons is reflected in high levels of dental caries or tooth decay, a high prevalence of periodontal or gum disease, tooth loss, dry mouth and oral pre-cancer or cancer. The experience of pain and problems with eating, chewing, smiling, and communicating due to missing, discoloured or damaged teeth have a major impact on functional ability and older persons' daily lives (World Health Orgnization, 2015).

MARS sample indicates that 34% of the respondents wear dentures, 42% among female and 25% among male respondents (Figure 7.48). Respondents aged 70-79 reported the highest proportion who wear dentures (53%), followed by those aged 80 and above (48%) and those aged 60-69 (45%).

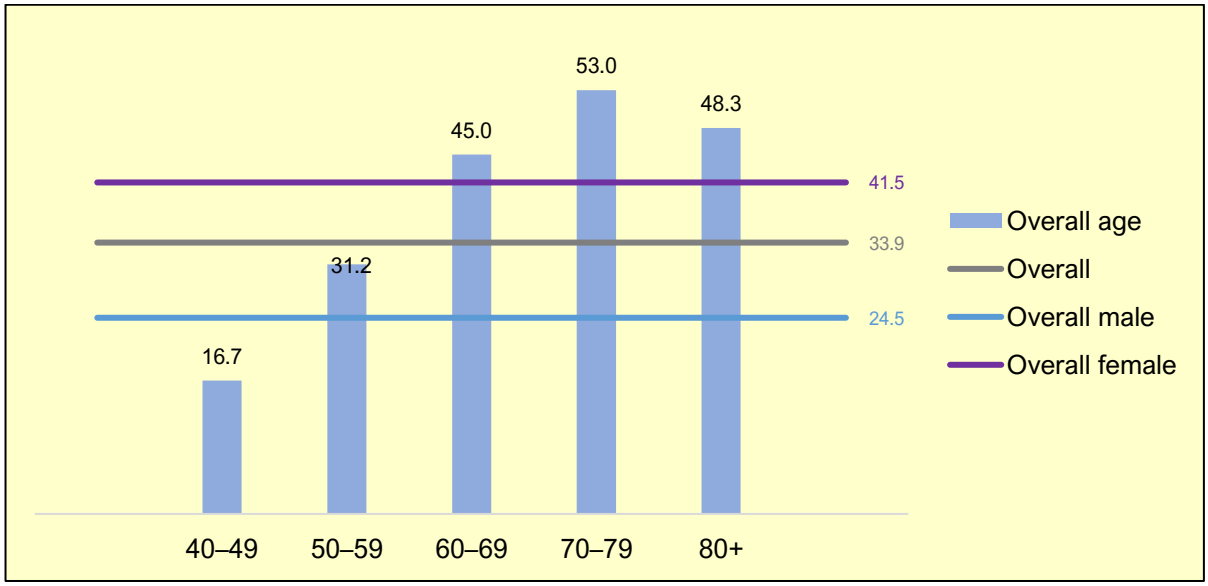

Figure 7.48: Respondents Wearing Dentures

Among respondents who wear dentures, 46% have dentures in both upper and lower teeth with slightly higher proportion of female (47%) than male respondents (44%). The proportion of respondents who wear dentures in both upper and lower teeth increases sharply with age from 21% among those aged 40-49 to 53% among respondents aged 60-69 and 82% among the oldest age group (Figure 7.49).

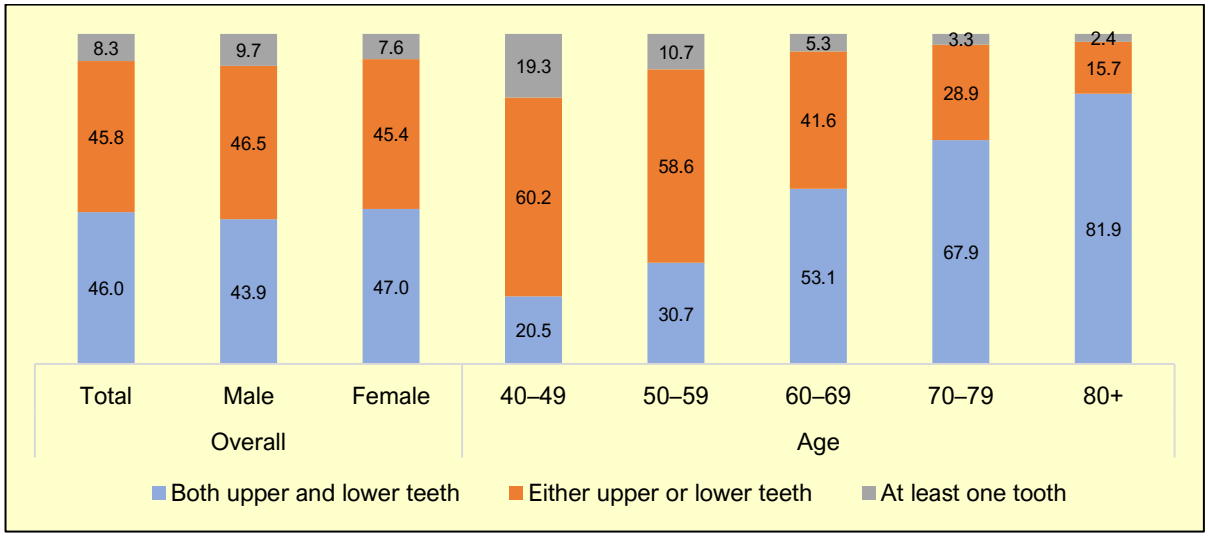

Figure 7.49: Types of Dentures by Gender and Age (%)

About 69% of the respondents who wear dentures reported that their chewing ability was good and there is no difference between male and female respondents. Good chewing ability of the respondents who wear dentures ranges from 75% among those aged 40-49 and gradually decreases with age to 63% among respondents aged 80 and above (Figure 7.50).

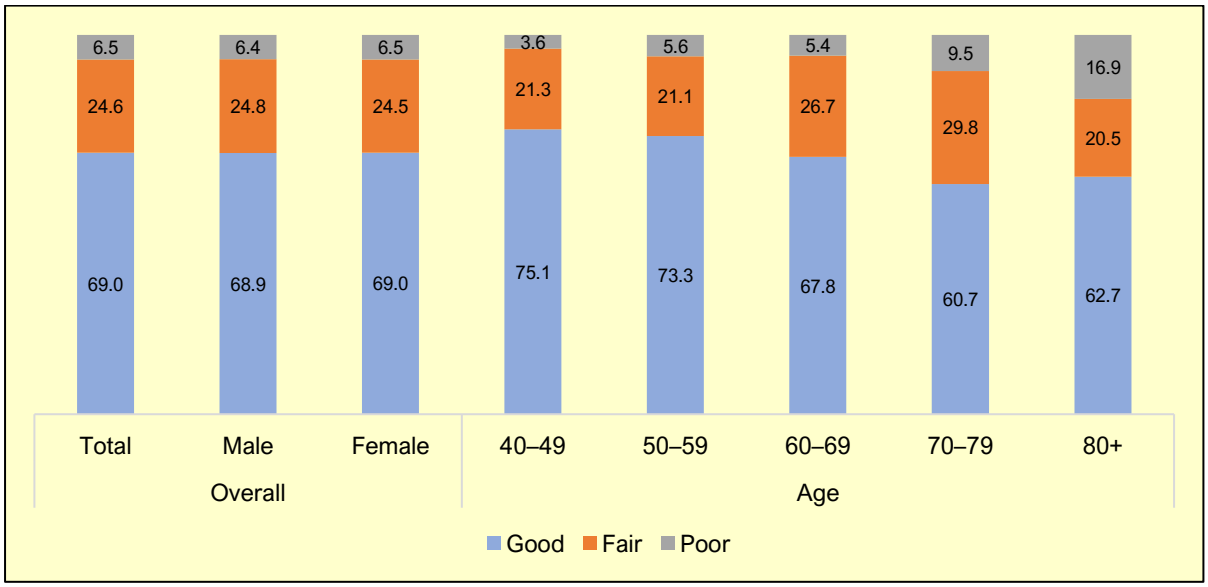

Figure 7.50: Respondents' Chewing Ability with Dentures (%)

Among respondents who do not wear any denture, Figure 7.51 shows that the proportion of respondents with good chewing ability is 74%, female 76% and male 71%. The proportion of respondents having good chewing ability declines quite sharply from 89% among respondents aged 40-49 to 63% among respondents aged 60-69 and to only 25% among those aged 80 and above.

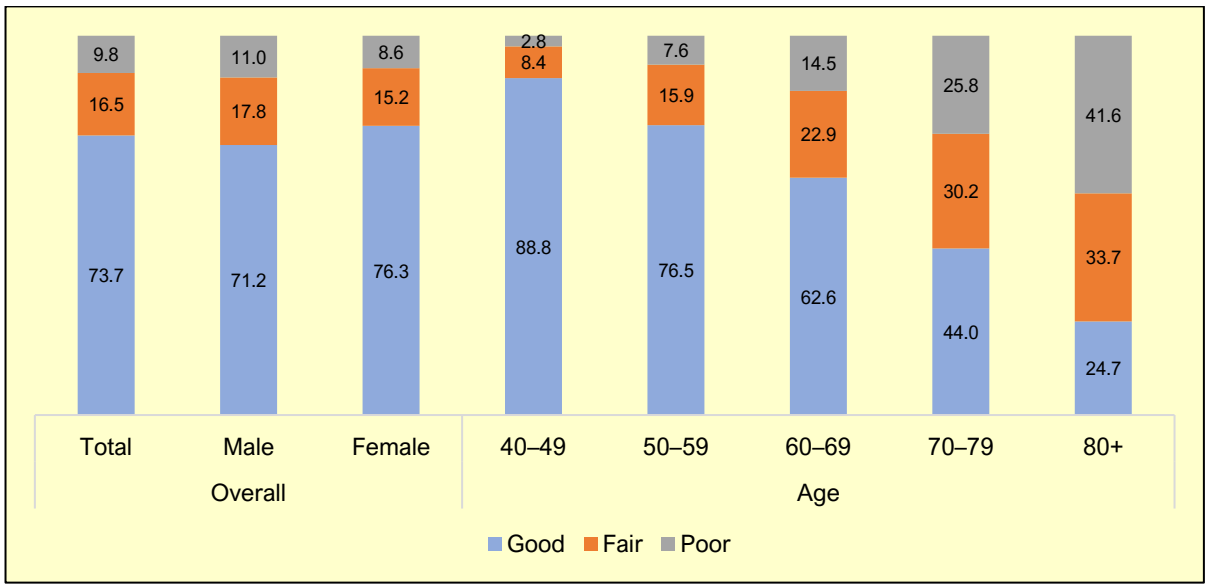

Figure 7.51: Respondents' Chewing Ability Without Dentures (%)

7.10 Sleeping Habit

An analysis of 252 studies (1988–2023) involving 995,544 individuals across 36 countries found poor sleep quality to be the primary issue studied, with obstructive sleep apnea being the most prevalent sleep problem among older adults (Canever et al., 2024).

In MARS, respondents were asked how often they have trouble falling asleep and 13% reported that they experienced it most of the time while about 30% experienced it sometimes (Figure 7.52). The proportion of respondents who often have trouble falling asleep is higher among female (14%) than male respondents (11%) and increases with age from 9% among respondents aged 40-49 to 16% among those aged 80 and above.

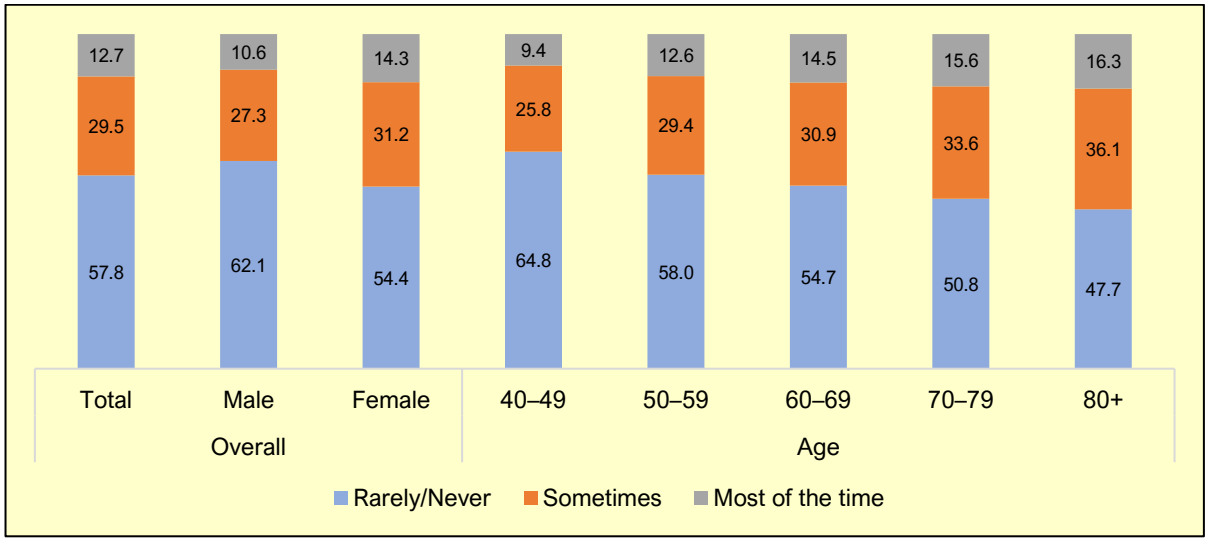

Figure 7.52: Respondents Who Had Problems Falling Asleep (%)

Figure 7.53 shows respondents reporting having trouble with waking up too early and not being able to fall asleep again most of the time account for 14% with female respondents 17% and male respondents 12%. This proportion is about 10% among respondents aged 40-49 and increases to 20% among those aged 80 and above.

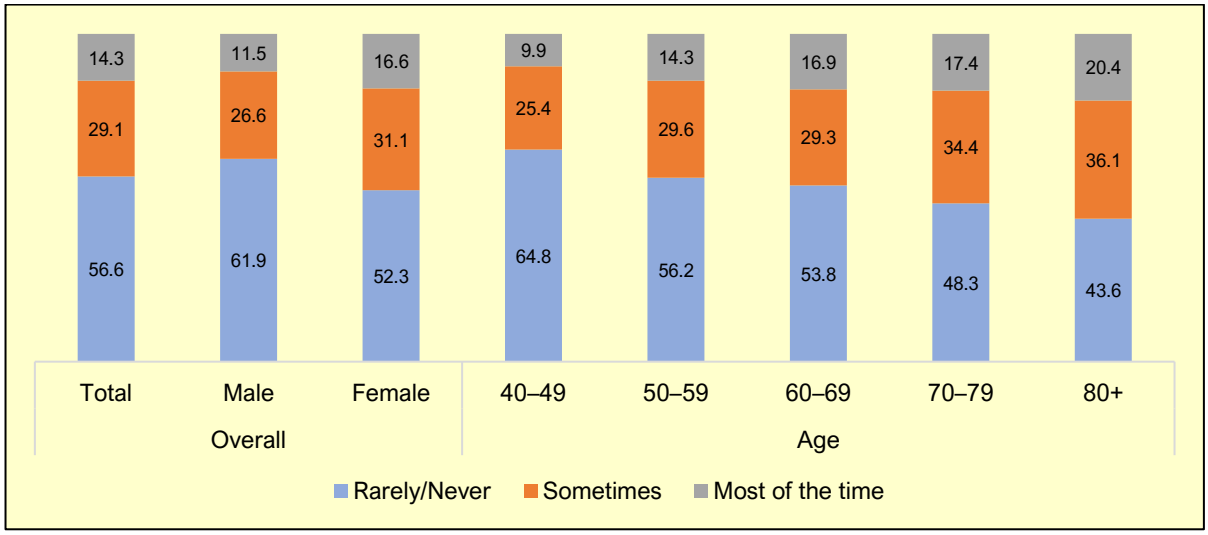

Figure 7.53: Respondents Who Had Problems with Waking Up too Early and Not Able to Fall Asleep Again (%)

Figure 7.54 shows that 59% of the respondents feel really rested when they wake up in the morning most of the time with male respondents reported a higher proportion than female respondents (62% and 56%, respectively. Across age, between 52%-61% of the respondents reported feeling really rested when they wake up in the morning most of the time with the highest proportion among respondents aged 40-49 (61%) and lowest among those in the oldest age group (52%).

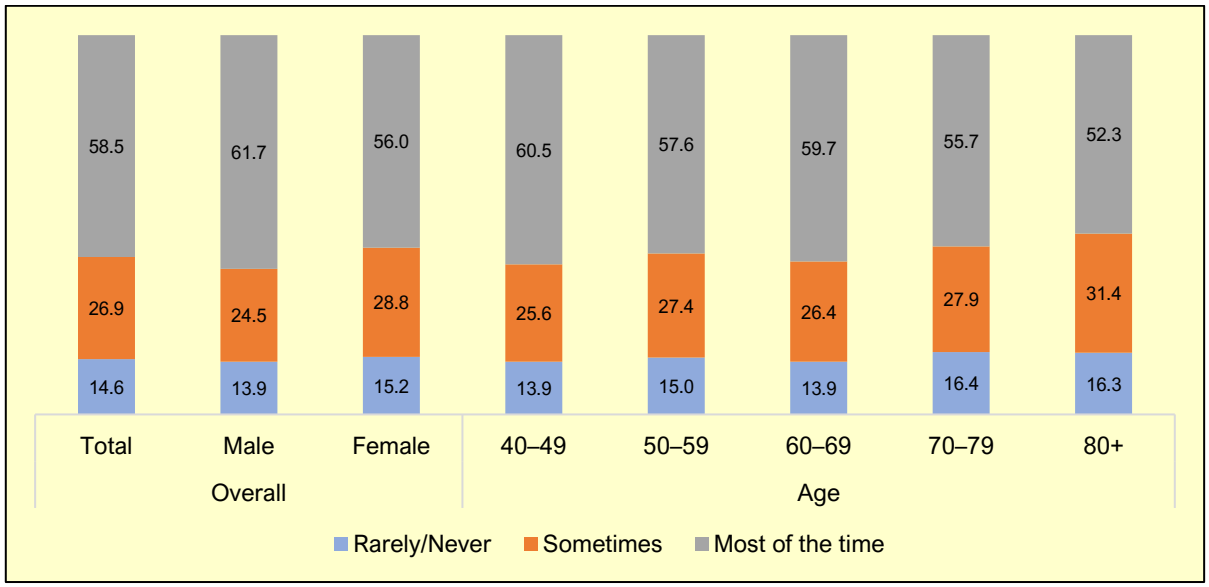

Figure 7.54: Respondents Who Felt Well Rested Upon Waking Up in the Morning (%)

7.11 Menopause

Menopause typically occurs in women in midlife where for some, the accompanying symptoms can disrupt their daily activities and sense of wellbeing.

Figure 7.55 shows that 33% of female respondents are still menstruating which means that 67% of them have reached menopause. Among female respondents aged 40-49, about 10% have reached menopause and increases sharply to 77% among those aged 50-59.

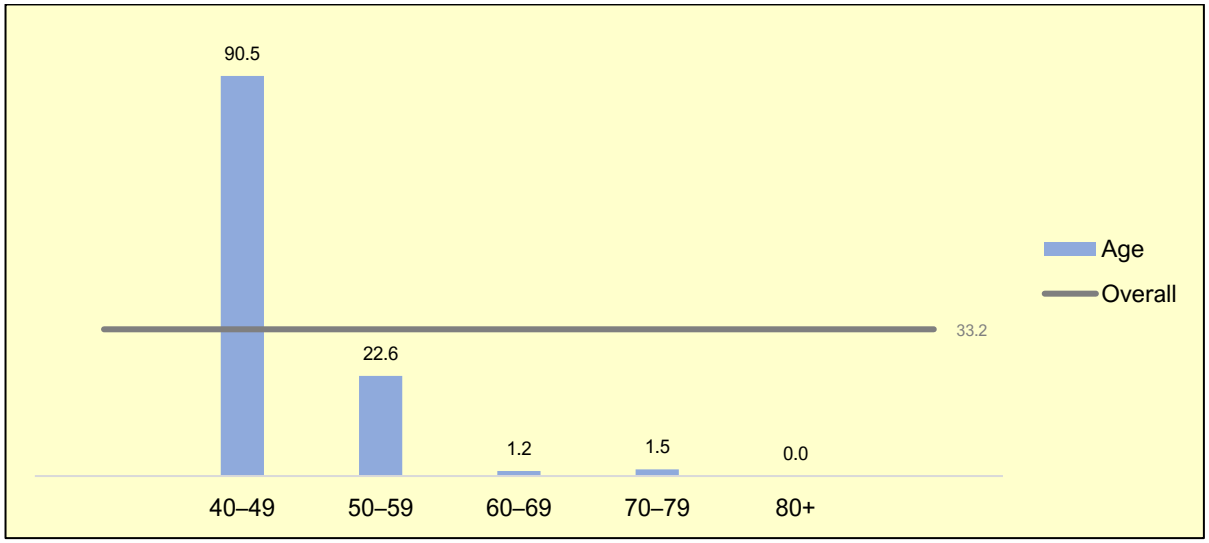

Figure 7.55: Respondents Who Were Still Menstruating (%)

Among female respondents who have reached menopause, 27% experienced some form of menopausal symptoms in the months leading to menopause (Figure 7.56).

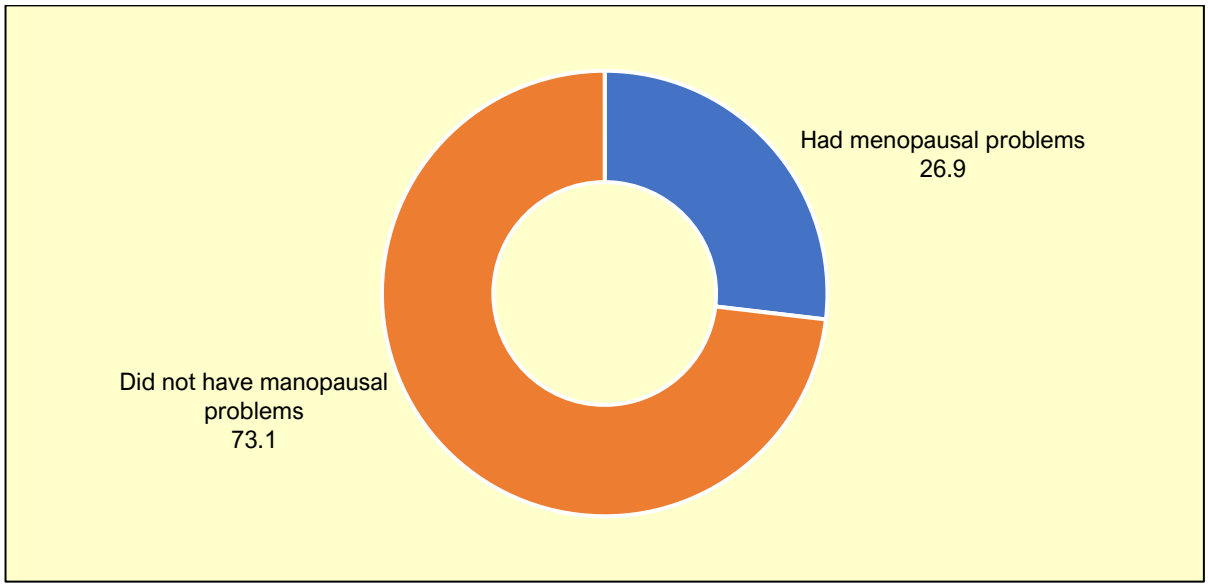

Figure 7.56: Respondents with Menopausal Problem (%)

Menopausal symptoms experienced by respondents include irregular periods (42%), mood changes (35%), night sweats (26%), hot flushes (23%), sleep problem (21%), and thinning hair and dry skin (13%), About 9% of the female respondents who have reached menopause reported experienced weight gain (Figure 7.57). The category 'Other' symptoms as experienced by about 13% of the respondents include nausea, numbness, miscarriage and irregular heartbeat.

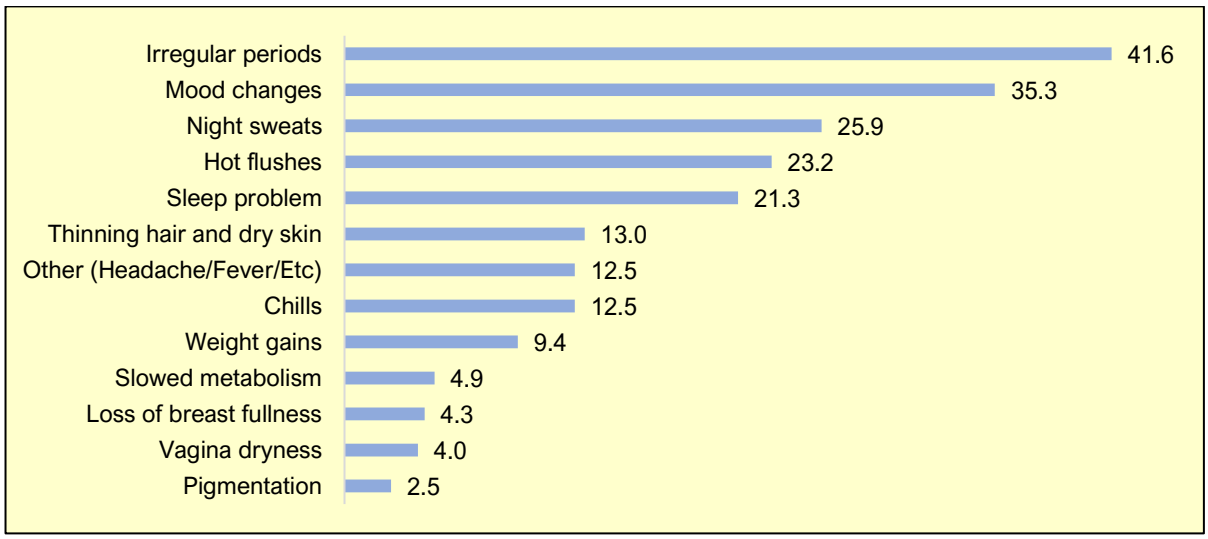

Figure 7.57: Menopausal Symptoms Experienced by Respondents (%)

7.12 Risk Factors

Smoking

The overall sample shows that 19% of the respondents are current smokers while 8% reported as ex-smokers (Figure 7.58). Among male respondents, 40% are current smokers and 16% ex-smokers while female respondents who are still smoking or had ever smoked account for only 1%. The proportion of current smokers decreases from about 24% among respondents aged 40-49 to 17% among those aged 60-69 and 10% among those aged 80 and above. The opposite is observed in the proportion of ex-smokers as age increases from 4% among respondents aged 40-49 to 13% among those in the oldest age.

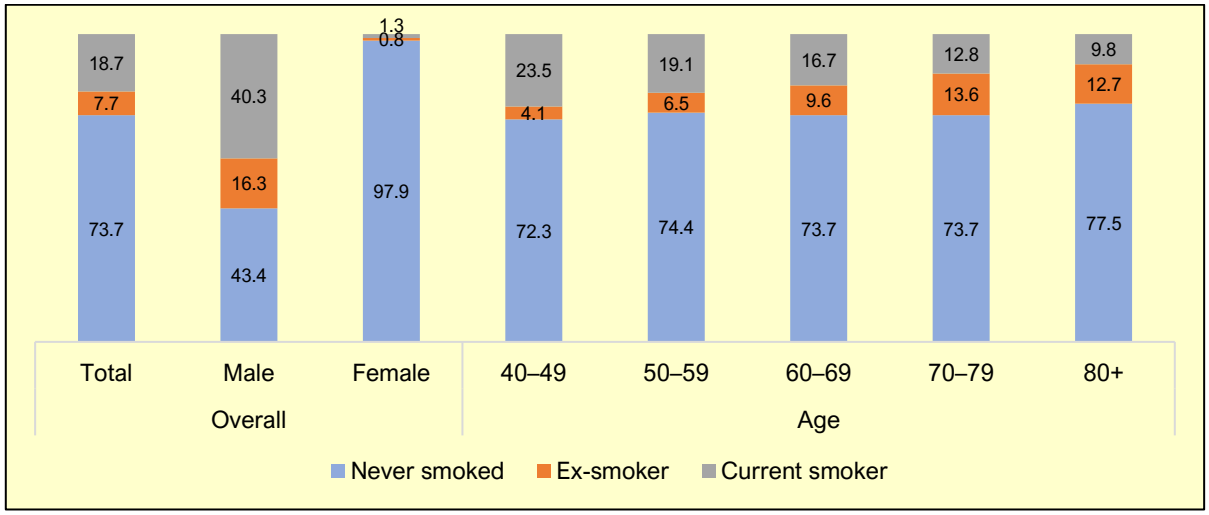

Figure 7.58: Respondents' Smoking Experience (%)

As shown in Figure 7.59, the highest proportion of current smokers is among respondents with lower secondary education (24%) followed by respondents with at least a post-secondary education (20%), primary and upper secondary education (18%). The proportion of ex-smokers is highest among respondents with at least a post-secondary education (10%) followed by those with primary and lower secondary education (8%).

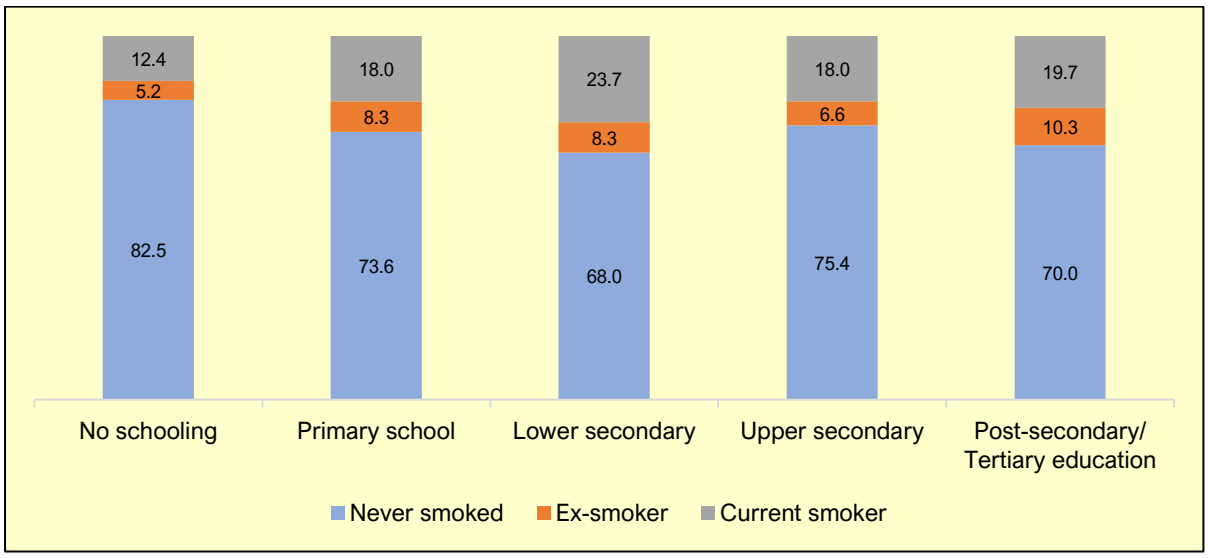

Figure 7.59: Respondents' Smoking Experience by Education Level (%)

The proportion of current smokers is lowest among respondents who reported having no monthly income (11%) and highest among those with monthly income of RM1000 to less than RM2000. The data shows that the proportion of current smokers among respondents with income of at least RM4,000 a month is 21% (Figure 7.60). The proportion of ex-smokers is also lowest among respondents with no monthly income (4%) while the proportion of ex-smokers among those with income ranges from 9% to 13%.

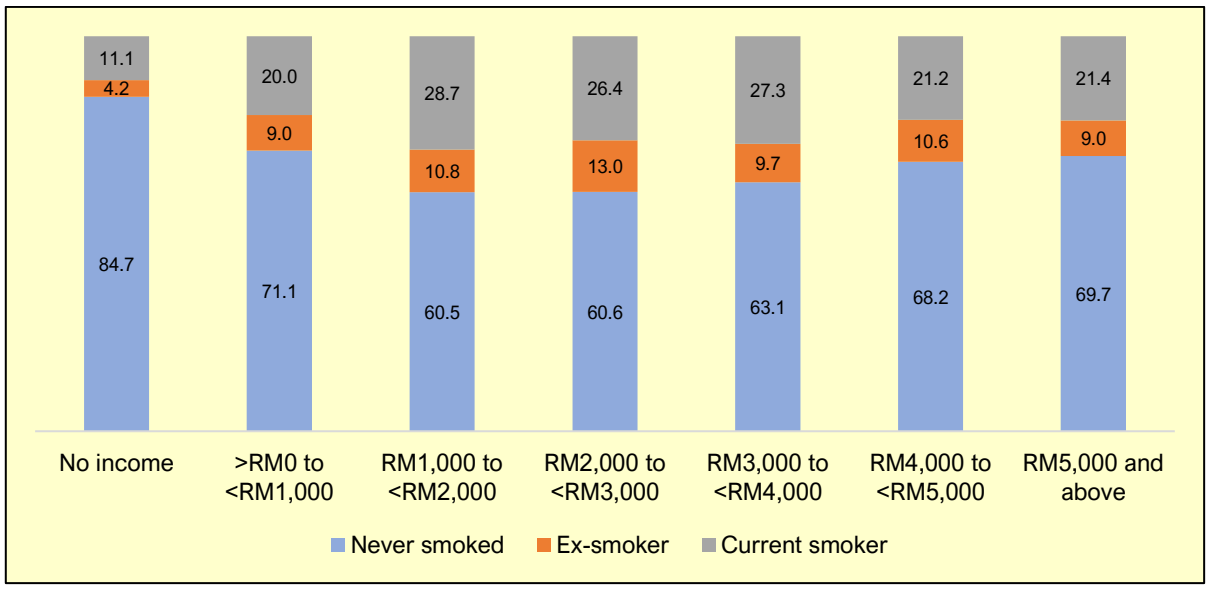

Figure 7.60: Respondents' Smoking Experience by Monthly Income (%)

Across ethnicity, Malay and Non-majority Group reported the highest proportion of current smokers at 20% followed by Other Bumiputera (19%), Indian (14%) and Chinese (14%) (Figure 7.61). The proportion of ex-smokers is also highest among Malay (9%) and lowest among Indian respondents (4%).

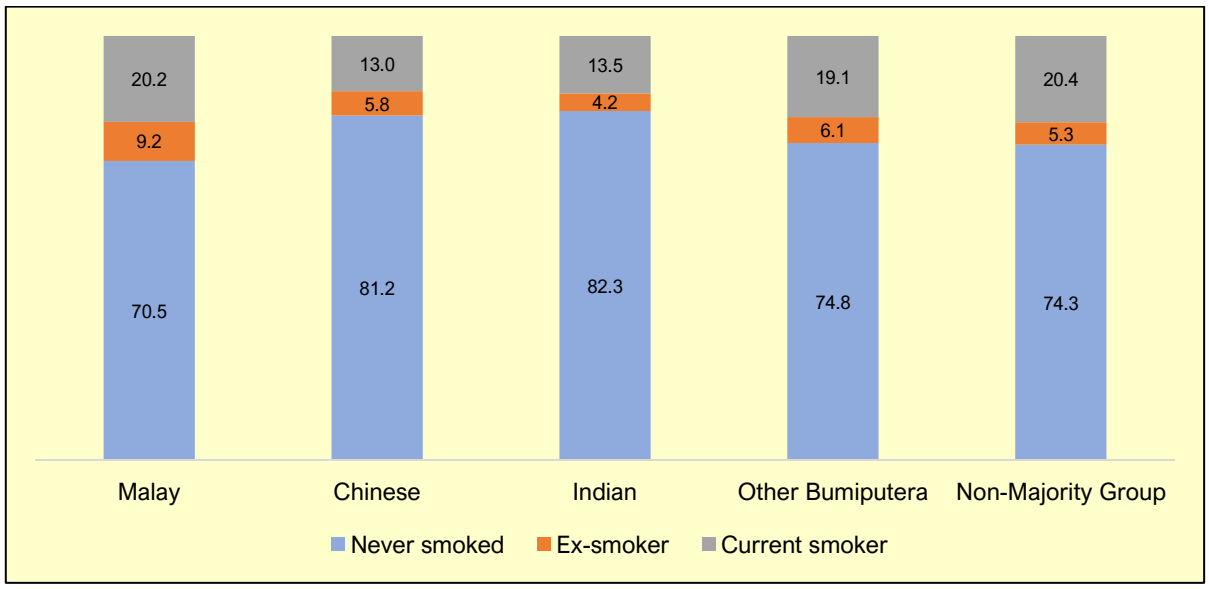

Figure 7.61: Respondents' Smoking Experience by Ethnicity (%)

About 33% of the working respondents are current smokers compared to about 10% of the respondents who are not working (Figure 7.62) However there is little difference in the proportion of ex-smokers among working and non-working respondents (8% and 7%, respectively).

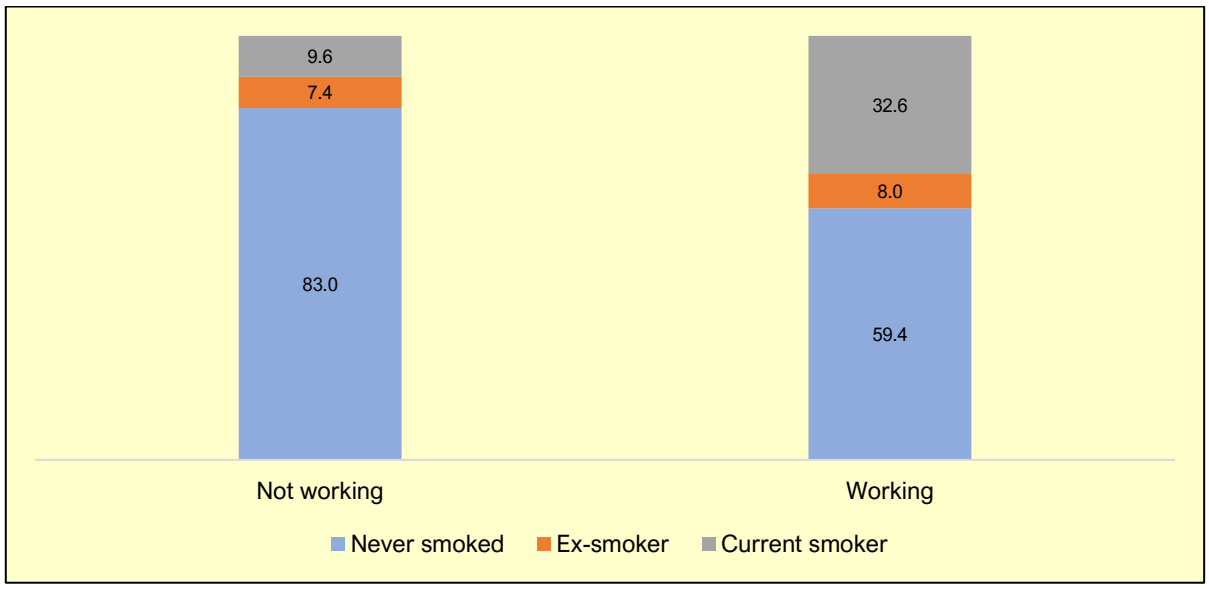

Figure 7.62: Respondent's Smoking Experience by Working Status (%)

Among respondents who had smoked, 42% started smoking between ages 15 to 19 with about 37% started smoking at age 20-29 years (Figure 7.63). While a small proportion of the respondents started smoking in their forties (1%), about 14% admitted they started smoking when they were younger than 15.

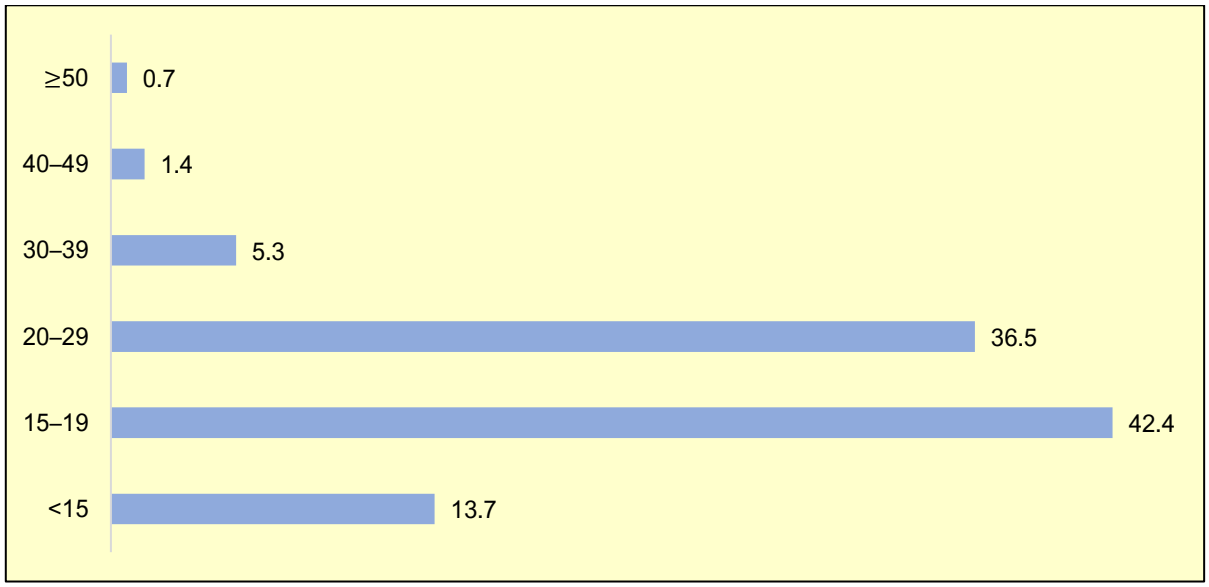

Figure 7.63: Ages at Which Respondents Who Had Ever Smoked Started Smoking (%)

Among current smokers, the total number of years they have been smoking indicates that 95% of them have been smoking for at least 20 years and nearly 40% have been smoking for at least 40 years. (Figure 7.64).

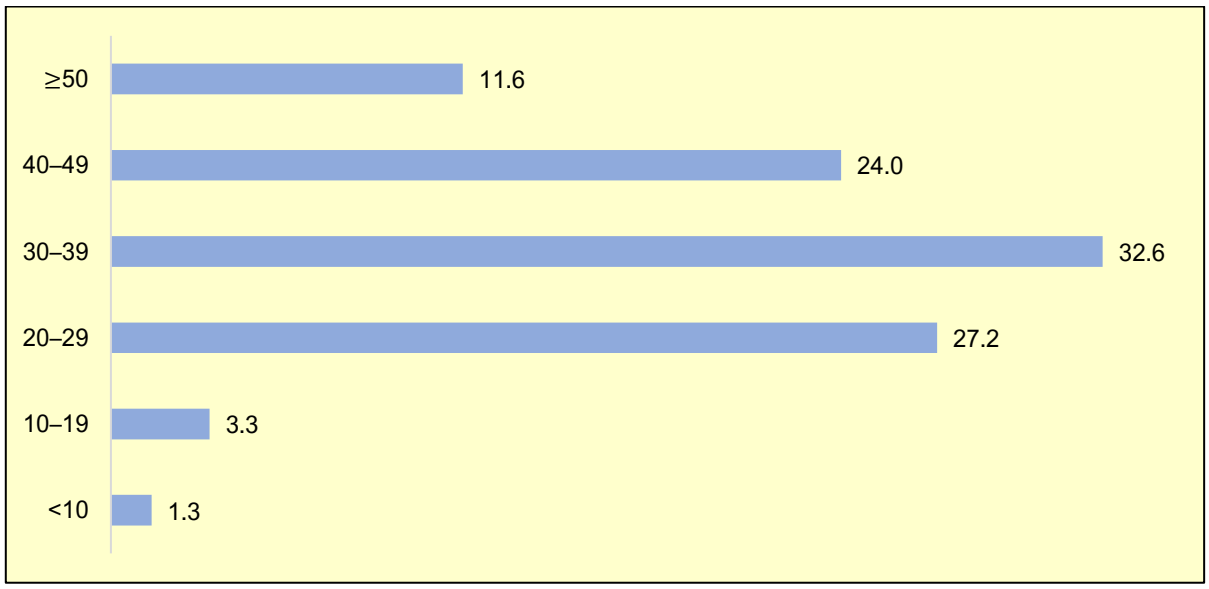

Figure 7.64: Number of Years Smoking (%)

About 90% of the respondents who had ever smoked reported that they smoked cigarettes and 15% smoked E-cigarettes/vape (Figure 7.65). About half of the respondents reported smoking at least 11 sticks/times in a day and 38% admitted smoking at least 20 sticks/times per day.

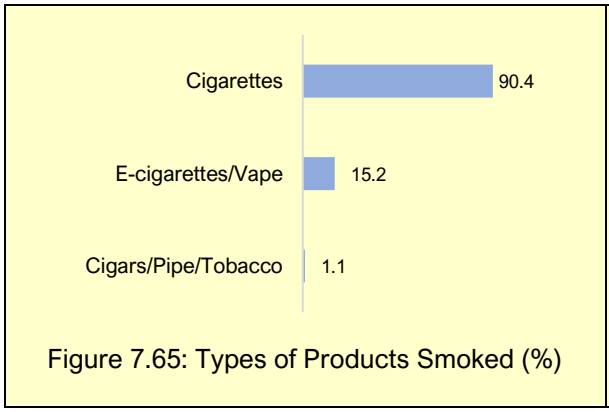

Figure 7.65: Types of Products Smoked (%)

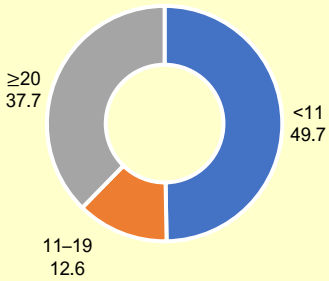

Figure 7.66: Smoking Frequency (Number of Sticks/Times Per Day) (%)

Drinking

Of the total respondents, approximately 9% admitted that they had consumed alcoholic beverages such as beer, wine, or toddy. The proportion of male respondents who had ever consumed alcohol (15%) is much higher than female respondents (4%) (Figure 7.67). Current drinkers account for about 6%, 10% of male and 2% of female respondents. The proportion of current drinkers decreases with age from around 7% among respondents aged 40-59 to 3% among those aged 70-79 and less than 1% among the oldest age group.

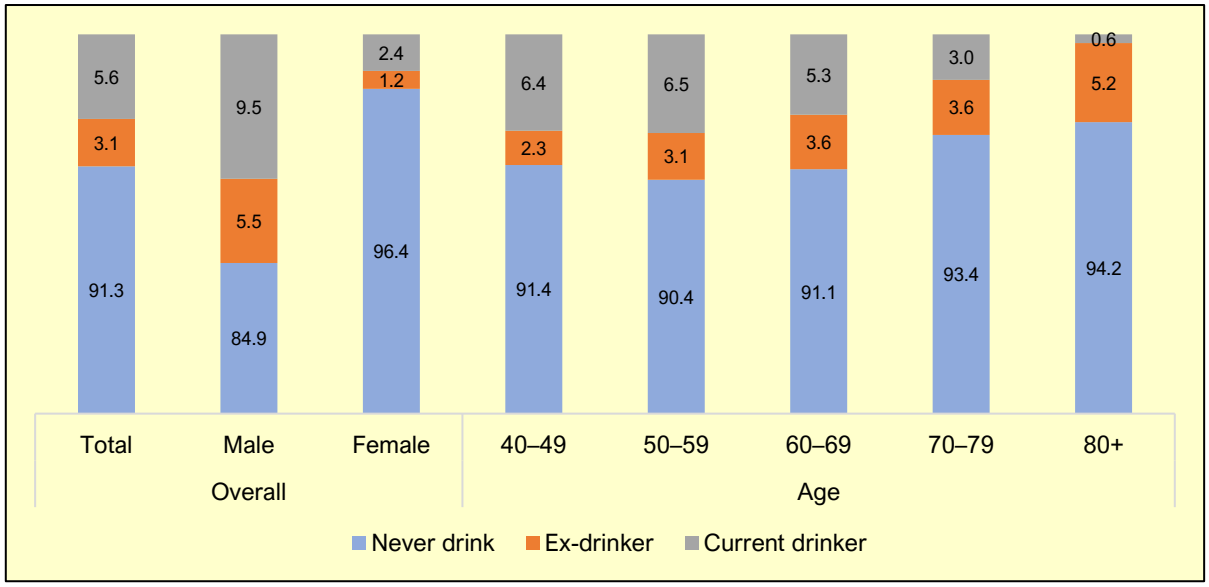

Figure 7.67: Respondents' Drinking Experience (%)

Across education, the proportion of respondents who are currently consuming alcoholic drink is highest among those with at least a secondary education (9%) and lowest among those with no schooling (3%) (Figure 7.68).

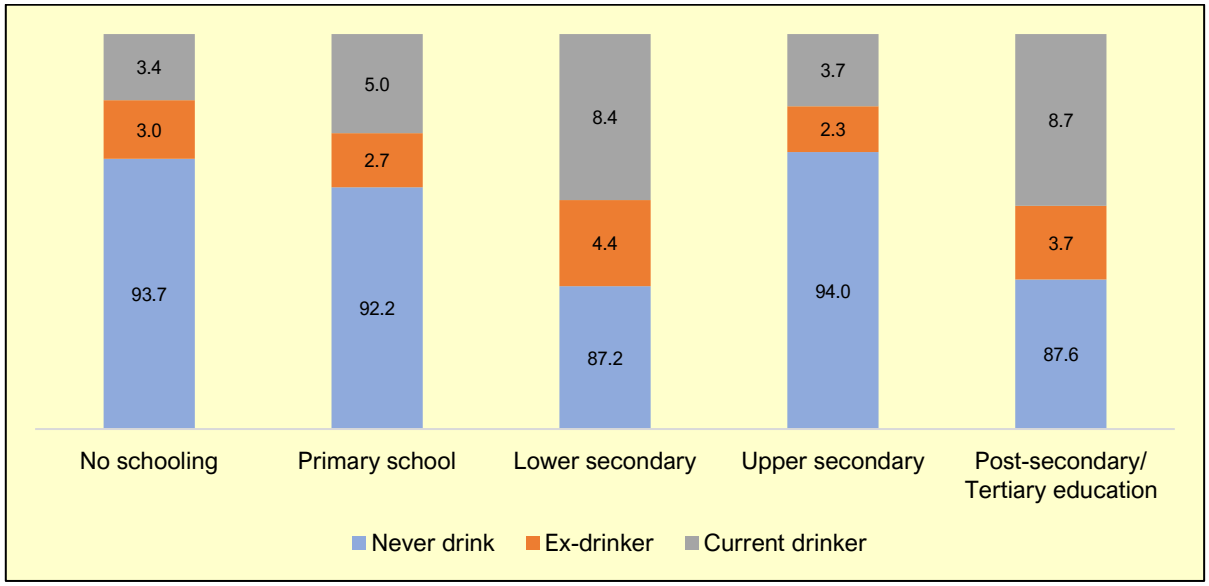

Figure 7.68: Respondents' Drinking Experience by Education (%)

The proportion of current drinkers is highest among respondents in the highest income category earning a minimum of RM5,000 per month (14%) and lowest among respondents with no income (Figure 7.69).

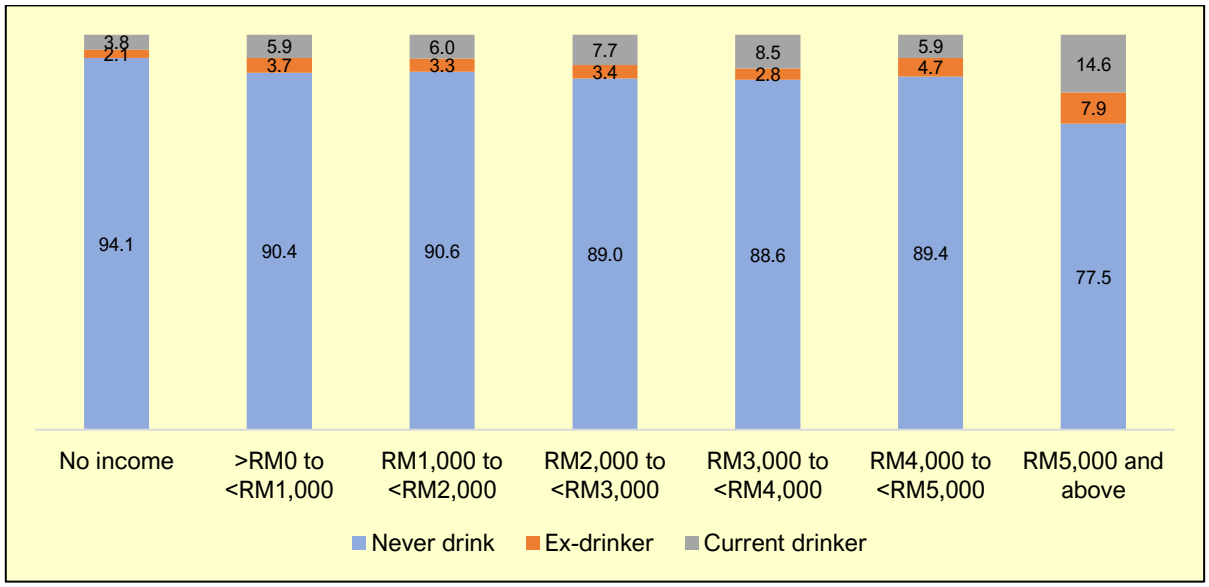

Figure 7.69: Respondents' Drinking Experience by Income (%)

Approximately 6% of Chinese and Indian respondents and 5% of Other Bumiputera reported they are current drinkers (Figure 7.70).

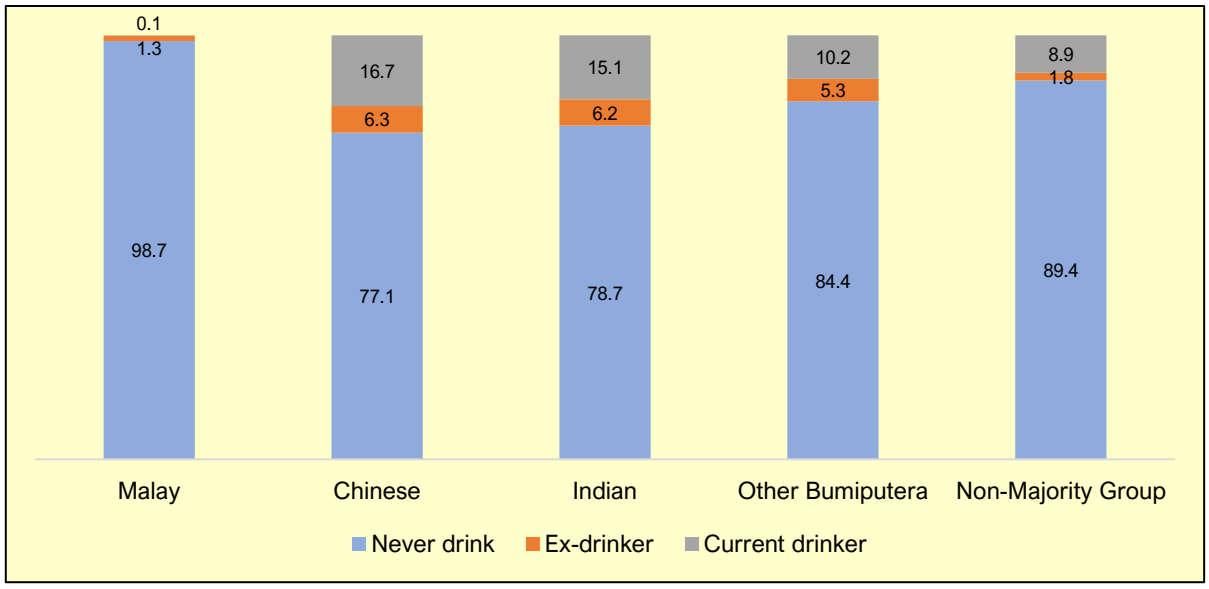

Figure 7.70: Respondents' Drinking Experience by Ethnicity (%)

The proportion of current drinkers is substantially higher among working respondents (9%) compared with only 4% among non-working respondents (Figure 7.71)

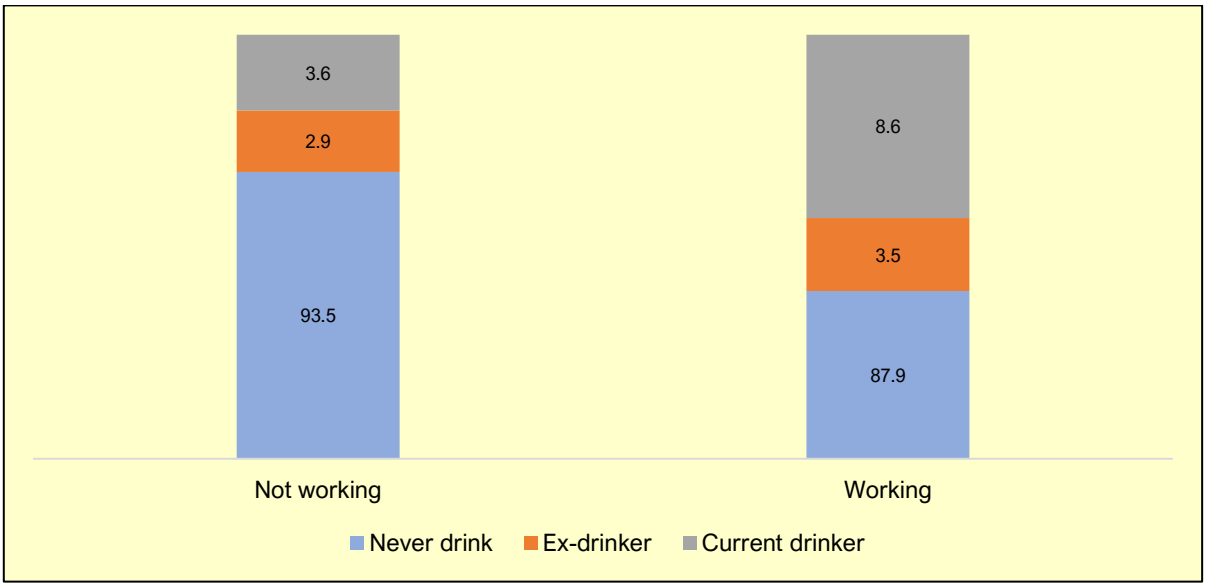

Figure 7.71: Respondents' Drinking Experience by Working Status (%)

Among the respondents who had consumed alcoholic drink, 42% started drinking in their twenties while 15% reported drinking in their thirties (Figure 7.72). The data shows that 21% of the respondents started drinking before age 20 of which 6% started before age 15 (Figure 7.72).

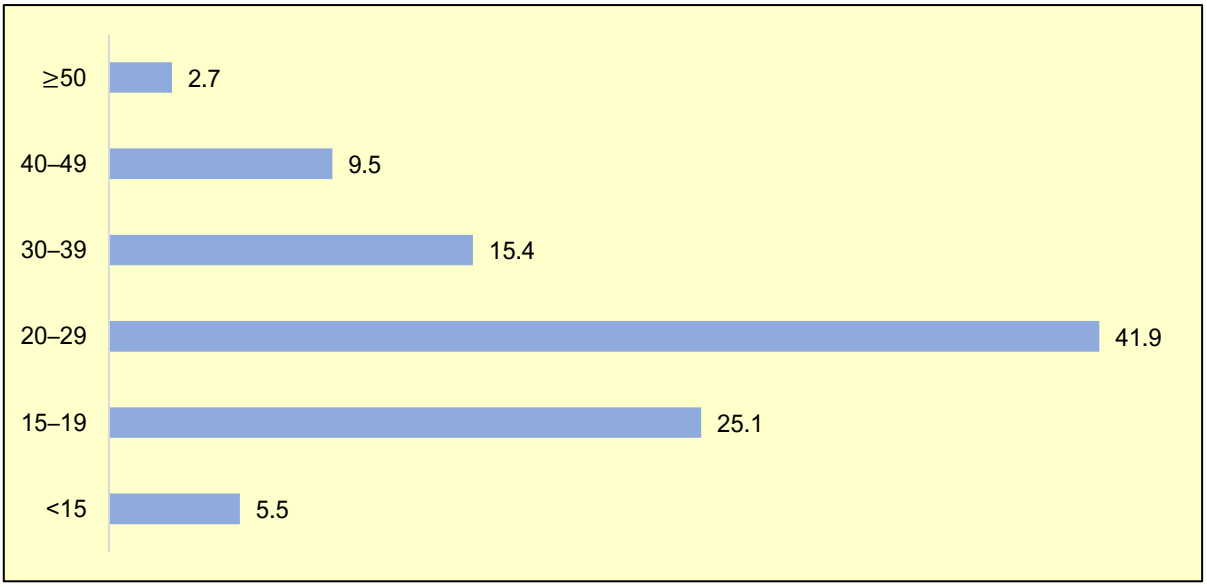

Figure 7.72: Age at Which Respondents Started Drinking (%)

Among the respondents who are currently consuming alcoholic drinks, nearly 52% of them have been drinking for at least 30 years with 18% for at least 40 years (Figure 7.73).

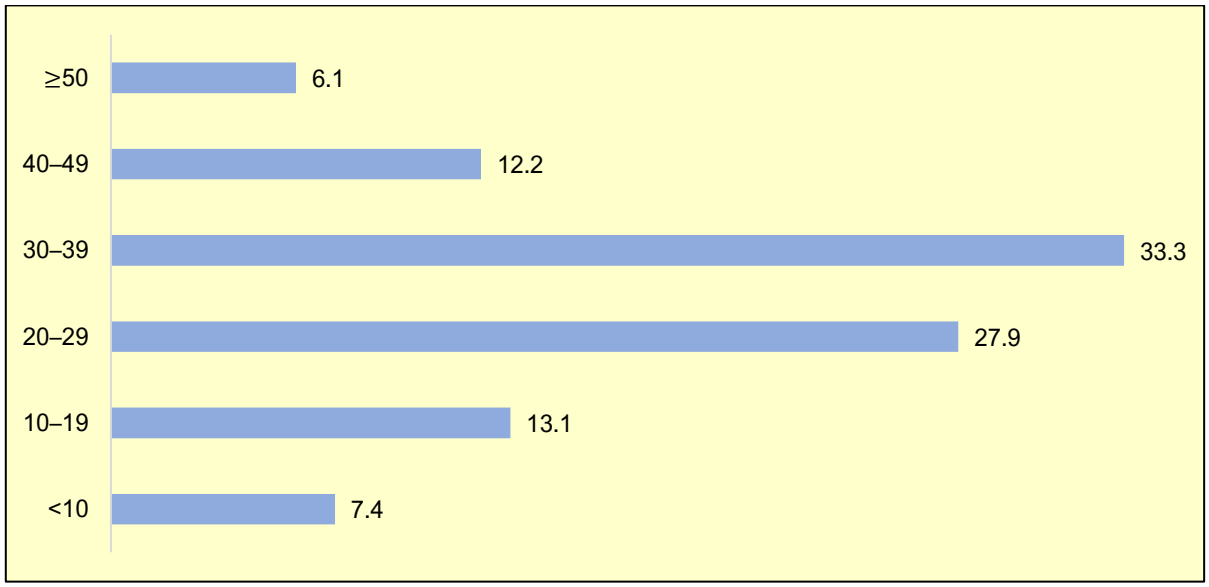

Figure 7.73: Number of Years of Alcohol Consumption (%)

On the question of drinking frequency in the past one month, the data indicates that 39% of the respondents consume alcoholic drinks once a month while about 40% consume alcohol at least twice a month (Figure 7.74).

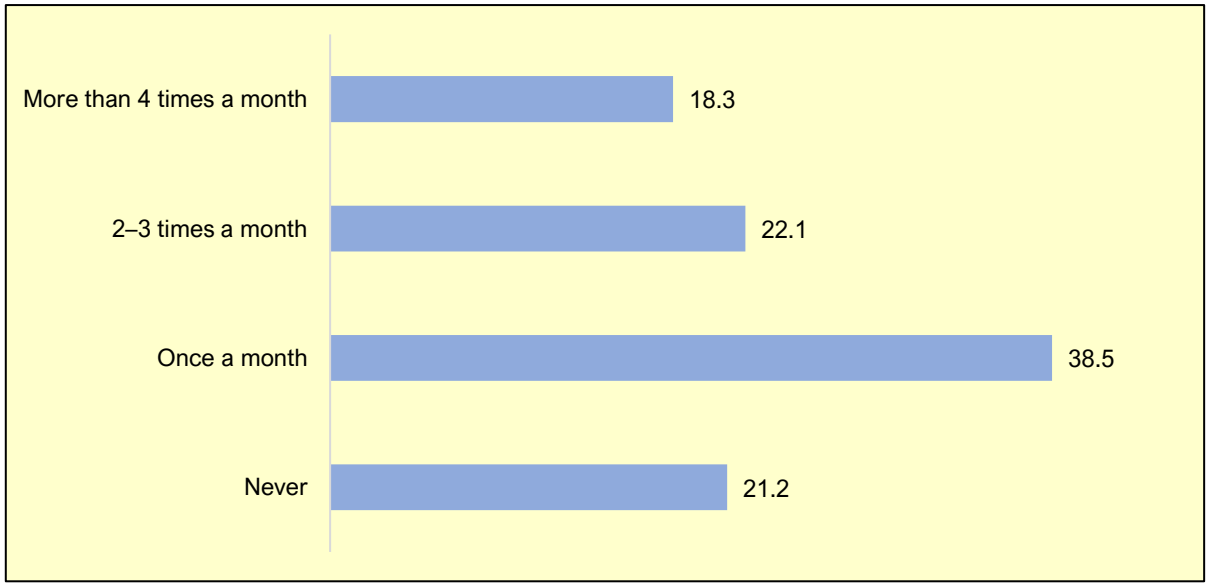

Figure 7.74: Frequency of Alcohol Consumption in the Past Month (%)

On a typical day, when respondents were drinking, among current and ex-drinkers, more than half reported that they only consumed 1 to 2 glasses/cans per day (approximately 0.6 oz per intake). About 23% of the respondents admitted having 3 to 4 glasses/cans in one day (Figure 7.75).

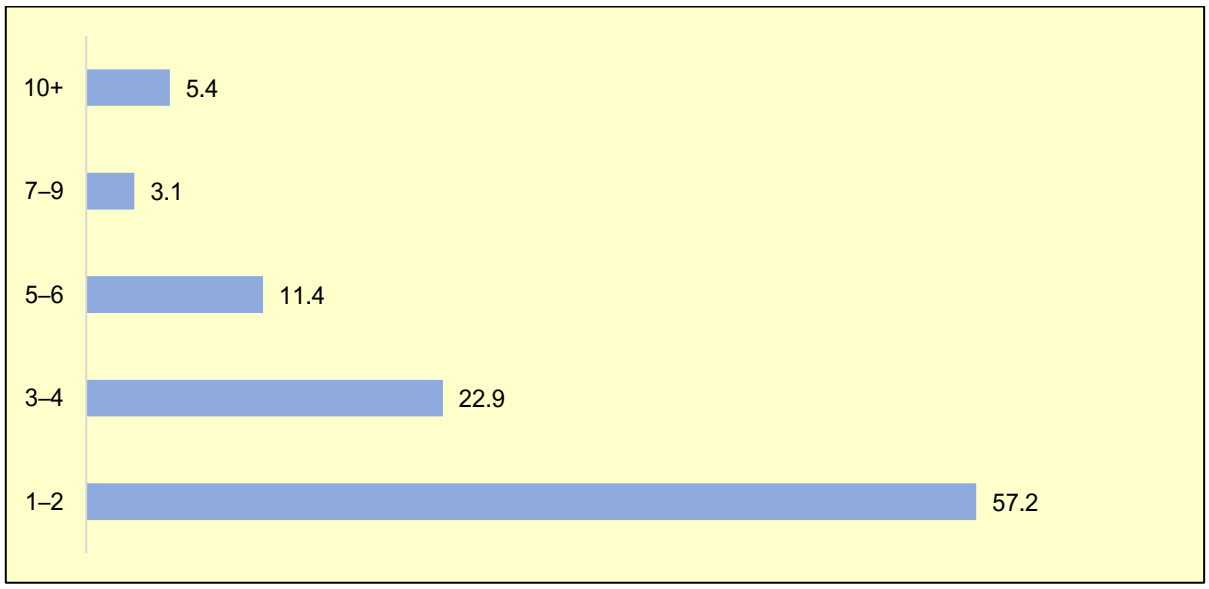

Figure 7.75: Number of Glasses/Cans of Alcohol Consumed (%)

7.13 Grip Strength

Physical measurement was administered during face-to-face interview with the respondents. Measurements taken include grip strength, blood pressure, height, weight, waist circumference and hip circumference.

Generally, people will experience loss of handgrip strength as they age. Handgrip strength is measured because of its association with functional ability, premature mortality, disability and other health complications among older persons (Moy et al., 2015; Nurul Shahida et al., 2015). In many epidemiological studies, reduced muscle strength was found to be associated with increased risk of mortality (Bohannon, 2015; Ekstrand et al., 2016).

Respondents were asked about their dominant hand and 91% reported they are right-handed. (Figure 7.76).

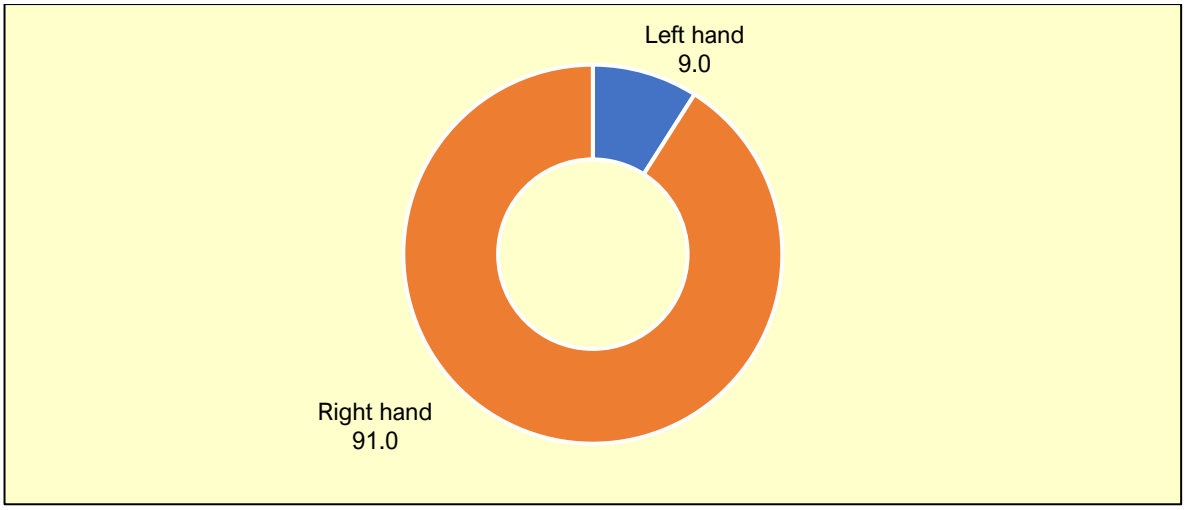

Figure 7.76: Respondents' Dominant Hand (%)

Grip strength was measured for both dominant and non-dominant hands using a hand dynamometer. On average, the dominant hand grip strength is slightly higher than that of the non-dominant for both male and female (Table 7.1). For male respondents the mean grip strength of the dominant hand is 27.9 kg compared to 26.3 kg of the non-dominant hand. Similarly for female the grip strength of the dominant hand is higher than non-dominant hand (17.8 kg and 16.5 kg, respectively). The mean grip strength for both dominant and non-dominant hands is higher for male than female respondents by a margin of 10 points each hand.

Table 7.1: Mean of Handgrip Strength by Gender (kg)

Gender	Mean grip strength ± SD	
	Dominant	Non-dominant
Male	27.9±10.3	26.3±9.9
Female	17.8±6.7	16.5±6.5

Mean grip strength decreases with age for both male and female respondents (Figure 7.77). The grip strength of the dominant hand of male respondents decreases from 32.4 kg at age 40-49 to 17.7 kg at age 80 and above while for non-dominant hand the reduction is from 30.3 kg at 40-49 to 17.3 kg at age 80 and above. Similar trend is observed in the grip strength of both dominant and non-dominant hands among female respondents. The mean grip strength of the dominant hand of female respondents decreases from 20.7 kg among those aged 40-49 to 10.8 kg among age 80 and above while for non-dominant hand the decrease is from 19.2 kg to 9.5 kg, respectively.

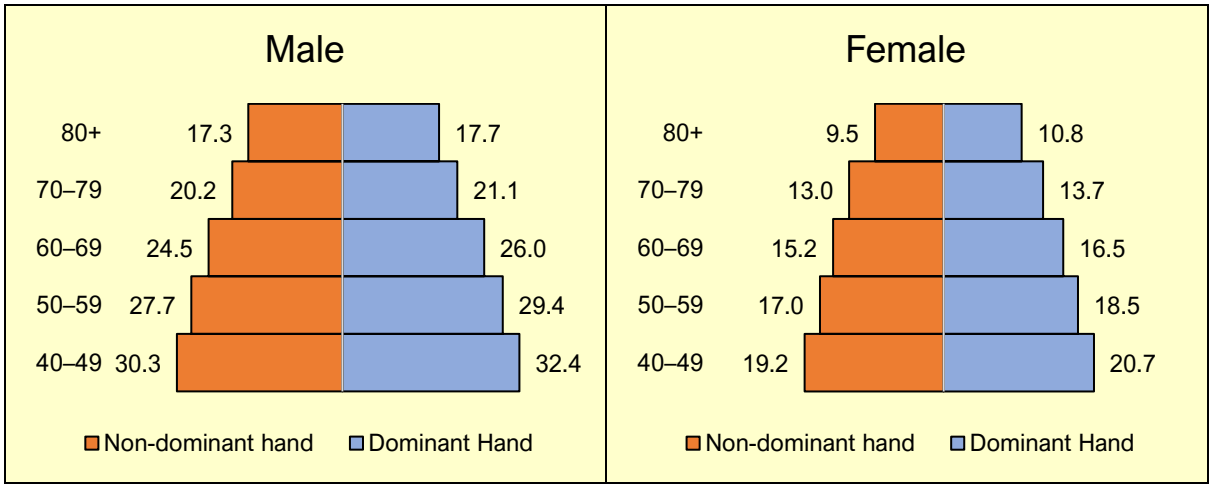

Figure 7.77: Mean of Handgrip Strength by Gender and Age (kg)

7.14 Blood Pressure

Hypertension is associated with many age-related illnesses, such as coronary heart disease, peripheral vascular disease, stroke, cognitive impairment as well as renal and visual impairment (Dregan et al., 2016). It has been shown that prevalence of hypertension increases with age and that monitoring hypertension epidemiology is pivotal in combatting the burden of hypertension (Murphy et al., 2016). Blood pressure was measured for MARS respondents using a digital blood pressure monitor. The measured reading was then classified as optimal, normal, at-risk, and hypertensive (Ministry of Health Malaysia, 2018) (Table 7.2).

Table 7.2: Classification of Clinic Blood Pressure Values in Adults

Classification	Systolic (mmHg)	Diastolic (mmHg)
Optimal	<120	<80
Normal	120-129	80-84
At risk	130-139	85-89
Hypertension	≥140	≥90

Source: Ministry of Health Malaysia (2018)

Overall, about 42% of the respondents had their blood pressure classified under the category of hypertension, 44% among male and 40% among female respondents (Figure 7.78). The proportion of respondents who were at risk of hypertension account for 22% with little difference between male and female. Across age, the proportion of respondents with hypertension is highest among those aged 70-79 (51%) followed by respondents aged 60-69 (50%) and, 80 and above (48%). Respondents who are at risk of hypertension exceeds 20% across all age groups except for the oldest age (17%).

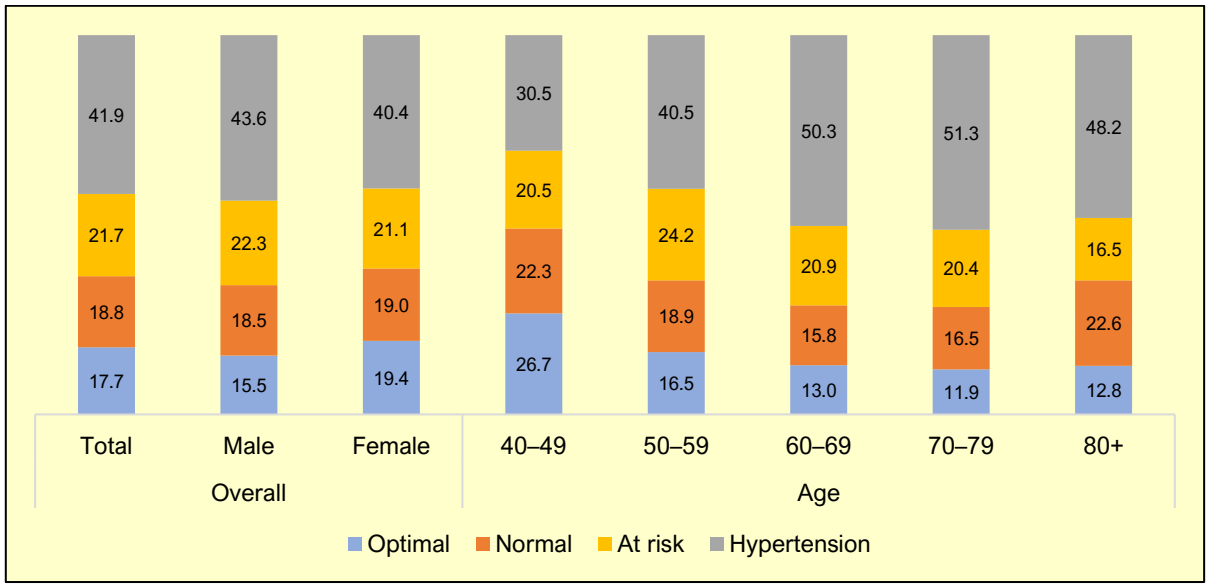

Figure 7.78: Field-Measured Blood Pressure by Gender and Age (%)

Across ethnicity, the proportion of respondents classified as hypertensive is highest among Non-Majority Group (45%) followed by Malay (44%) and Other Bumiputera (42%) (Figure 7.79). The Non-Majority Group also reported the highest proportion of respondents at risk of hypertension (30%) followed by Other Bumiputera (25%), Chinese (21%) and Indian (21%).

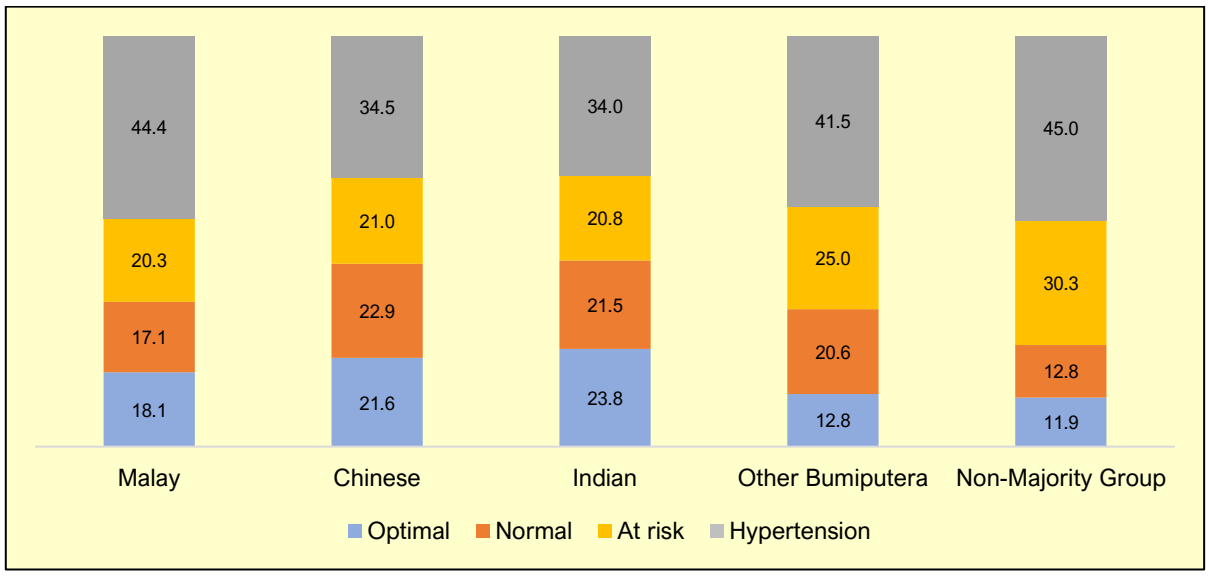

Figure 7.79: Field-Measured Blood Pressure by Ethnicity (%)

7.15 Body Mass Index (BMI)

Obesity has always been considered a major public health problem, and it has been associated with various adverse health outcomes such as coronary heart disease, diabetes, and dementia (Garfield et al., 2016; Hobbs et al., 2019). Early recognition and prevention of increasing body weight will aid in population-based prevention against obesity. In this study, the body mass index (BMI) was measured using the formula:

$$BMI = \frac{Weight\ (kg)}{Height^2\ (m)}$$

Based on the Malaysia Clinical Practice Guidelines on Management of Obesity (2nd edition) (Ministry of Health Malaysia, 2023), respondents can be grouped into four categories namely underweight (BMI<18.5), normal weight (BMI 18.5-22.9), pre-obese (BMI 23.0-27.4) and obese (BMI ≥27.5).

Overall, similar proportions are observed for respondents who are obese and overweight or pre-obese (38%) (Figure 7.80). The proportion of respondents who are obese is higher among female than male respondents (43% and 32%, respectively) while the opposite is true of the proportion of respondents who are pre-obese (male 41%, female 36%). The proportion of respondents who are obese decreases with age from 42% among those age 40-59 to 35% among 60-69 and 23% among 80 and above. The proportion of pre-obese is highest among respondents aged 70-79 (41%) followed by age 60-69 (40%) and 50-59 (38%).

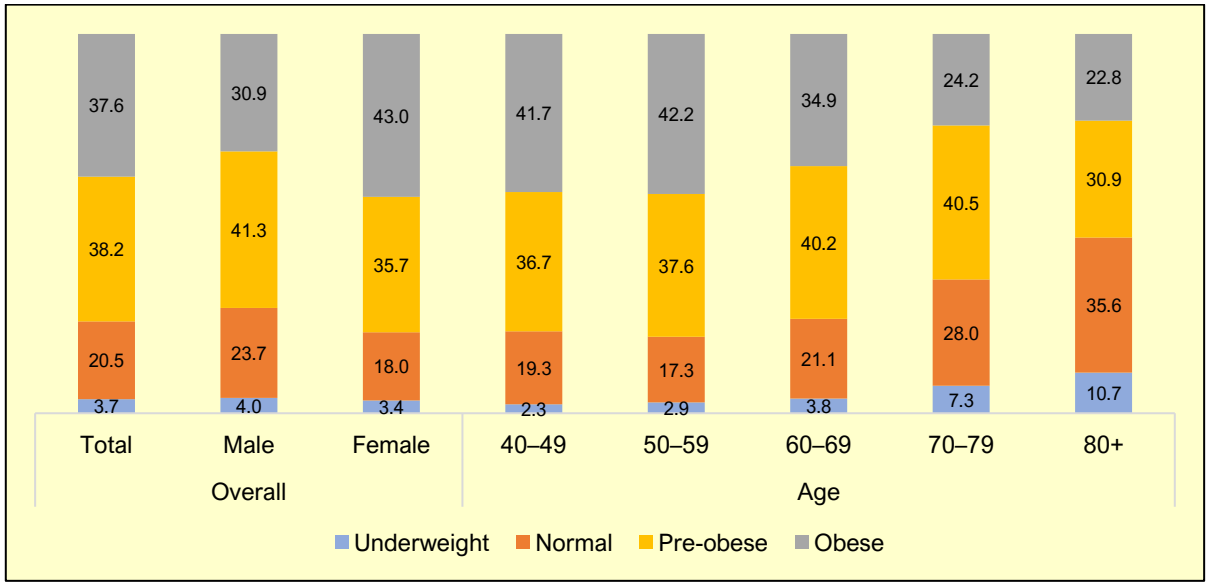

Figure 7.80: Field-Measured BMI by Gender and Age (%)

Indian respondents reported the highest proportion who are obese (45%) followed by Malay (42%) while the lowest proportion is observed among Chinese (22%). Respondents who are pre-obese is highest among Chinese (45%) followed by Other Bumiputera (41%) and Non-Majority Group (40%) (Figure 7.81).

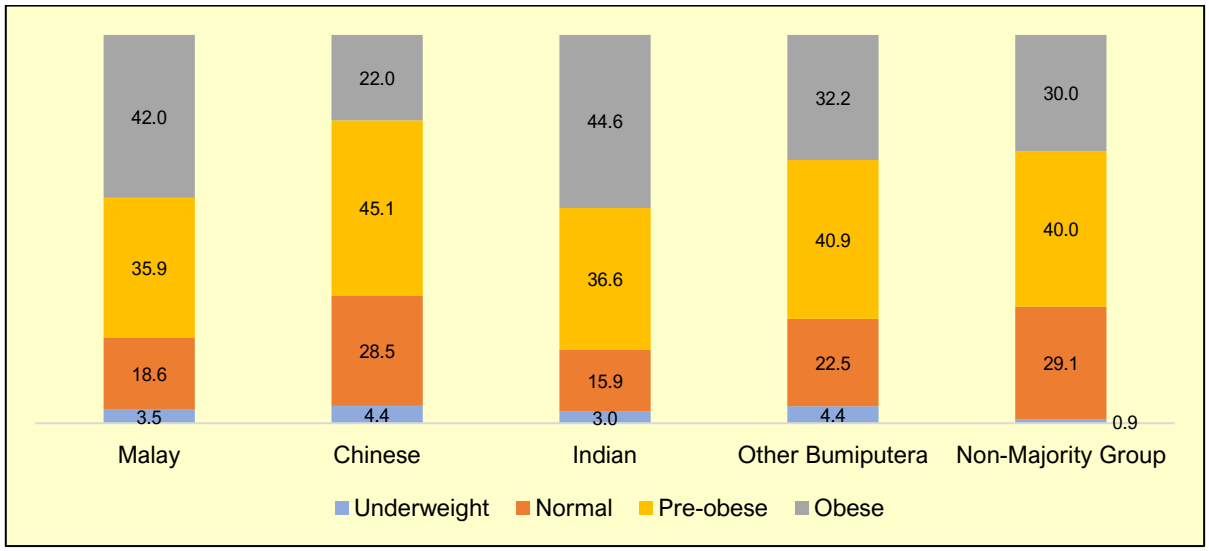

Figure 7.81: Field-Measured BMI by Ethnicity (%)

7.16 Abdominal Obesity

Recognizing that obesity is an emerging public health threat in older population in developing countries including Malaysia, MARS also measures abdominal obesity using the waist circumference. Abdominal obesity is one of the risk factors of frailty and pre-frailty among older adults (Badrasawi et al., 2017), an independent risk factor for all-cause mortality and is associated with metabolic syndrome and cardiovascular disease (Badrasawi et al., 2017; Kivimaki et al., 2017). It is also found that abdominal obesity is superior to BMI (Ahmad et al., 2016). The cut-off points for waist circumference are 90 cm for males and 80 cm for females. Individuals exceeding these measurements are classified as having abdominal obesity.

MARS data shows that 71% of the sample respondents are abdominal obese, 82% of female and 56% of male respondents (Figure 7.82). The proportion of respondents who are abdominal obese is highest among those aged 50 to 69 (73%) followed by respondents aged 40-49 (70%).

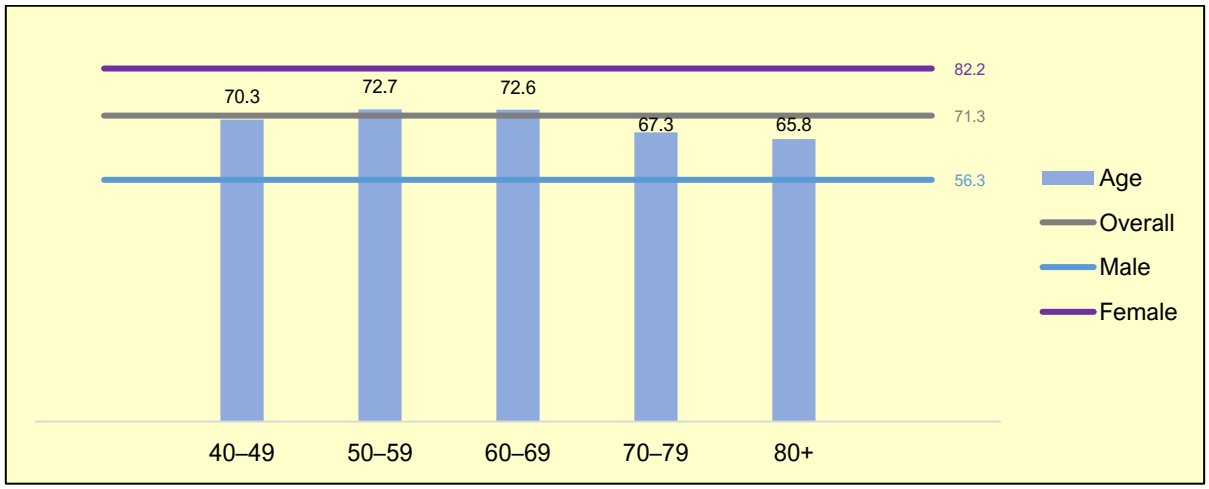

Figure 7.82: Prevalence of Abdominal Obesity by Gender and Age (%)

Across ethnicity, prevalence of abdominal obesity is highest among Indian respondents (85%) followed by Malay (72%) while lowest among Chinese (65%) (Figure 7.83).

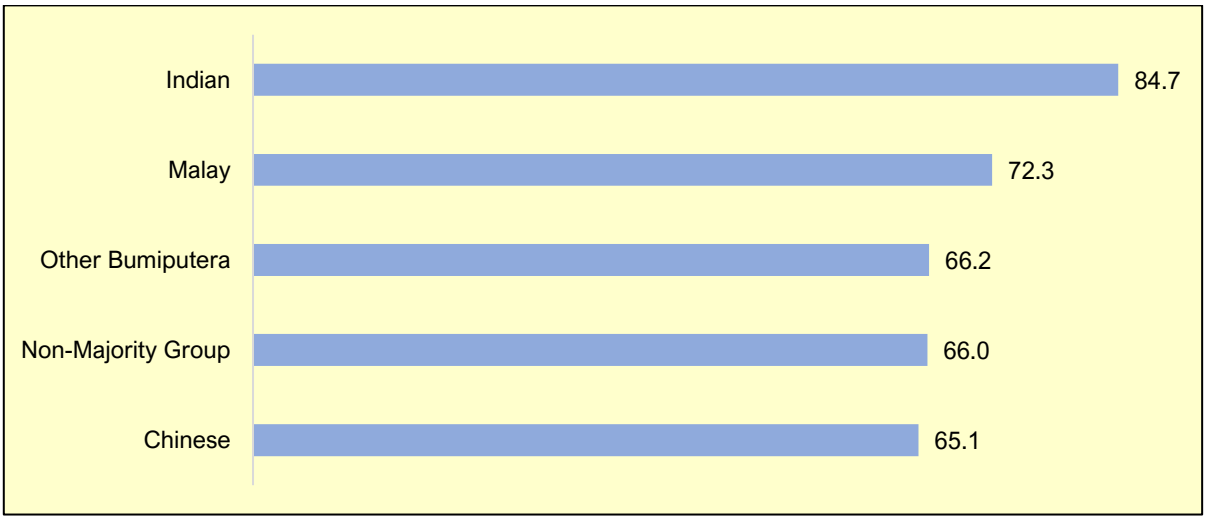

Figure 7.83: Prevalence of Abdominal Obesity by Ethnicity (%)

8 HEALTHCARE UTILISATION

Information on healthcare utilisation is important in the development of healthcare policies and planning for prevention, early diagnosis and management of health conditions. This in turn will help decrease in healthcare cost, facilitate sustainability as well as reduce disability and death from medical conditions. Previous studies have demonstrated that various determinants which include gender, age, social status, type of illness, access to services and perceived quality of the service influence an individual's healthcare seeking behaviour with discrepancies across diverse populations (Lim et al., 2019; Oberoi et al., 2016).

8.1 Medical Check-up

In Malaysia, nearly 75% of the older adults registered with primary healthcare facilities, attended health screenings and various health interventions (Yunus, 2017). MARS data shows 74% of the respondents did medical check-up in the past 12 months, female 76% and male 72% (Figure 8.1). The proportion of respondents who went for medical examination increases from 65% among those aged 40-49 to 80% among those aged 60-69 and 85% among those aged 70-79. The proportion drops slightly to 84% in oldest age group.

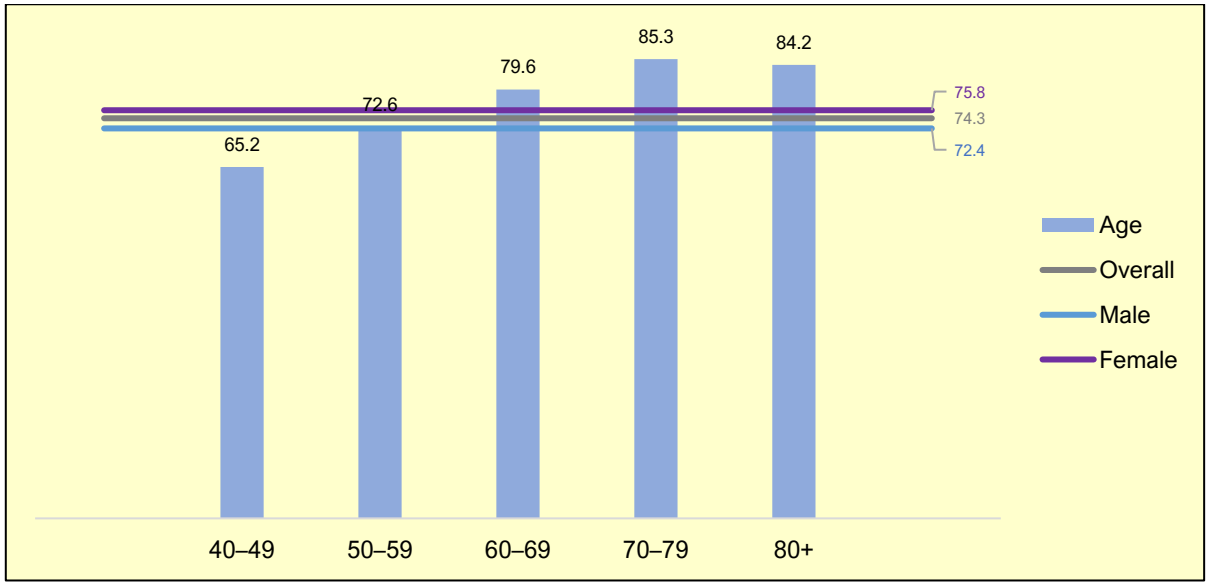

Figure 8.1: Respondents Who Had Medical Check-up in the Past 12 Months (%)

Among respondents who went for medical check-up, about 98% did general health screening, 28% cholesterol test and 78 pap smear examination (Figure 8.2). Respondents who did mammogram and prostate screening account for 4% and 3%, respectively.

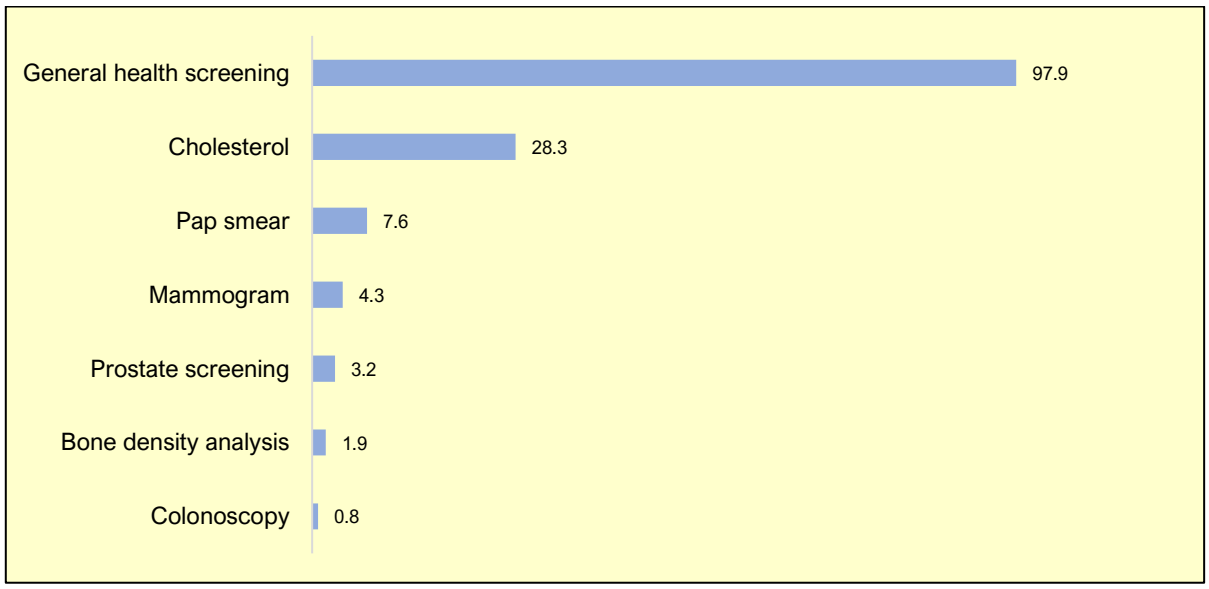

Figure 8.2: Types of Medical Check-up (%)

The reasons cited by respondents who did not go for any medical check-up are, 66% did not see a need to go, 11% reported their previous check-up was fine, 8% reported they were too busy while 6% were afraid of the results (Figure 8.3). A small proportion of respondents admitted they wanted to but had difficulty travelling (2%) or could not afford to go for medical check-up (2%).

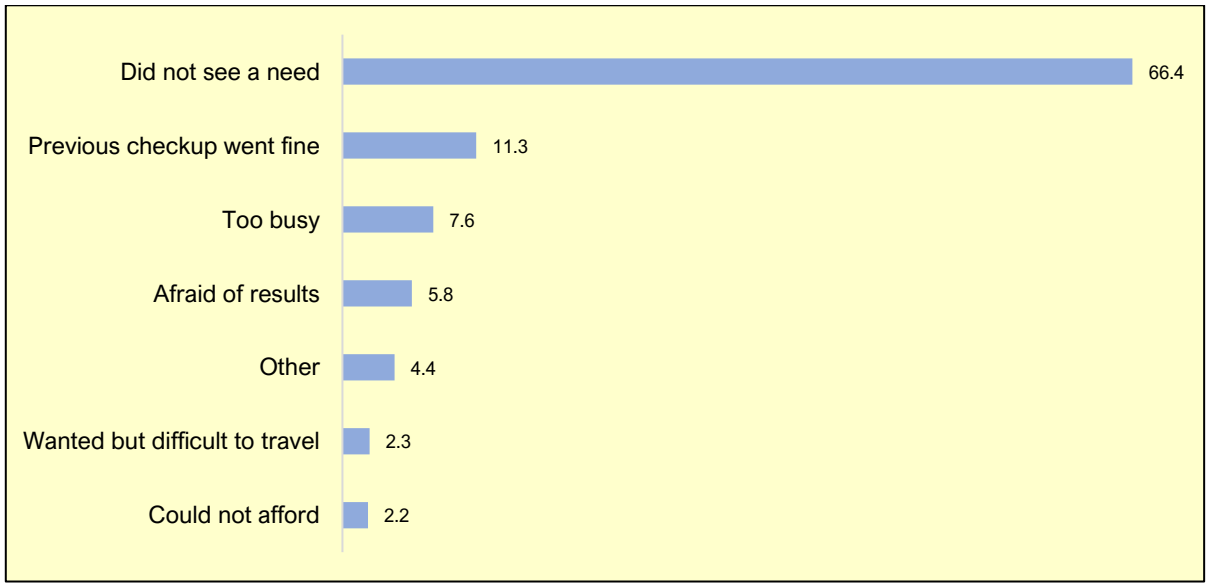

Figure 8.3: Reasons for Not Having Medical Check-up (%)

There are differences in the proportion of urban and rural respondents with respect to the reasons given for not having medical check-up in the past one year (Figure 8.4). The proportion of respondents who did not go for any medical check-up because they did not see a need is slightly higher among urban (67%) than rural respondents (66%). Similarly, the proportion of respondents who reported they were too busy to go for medical check-up is higher among urban (9%) than rural respondents (5%). However, those who wanted to go for medical check-up but had difficulty travelling is substantially higher among rural than urban respondents (14% and 3%, respectively).

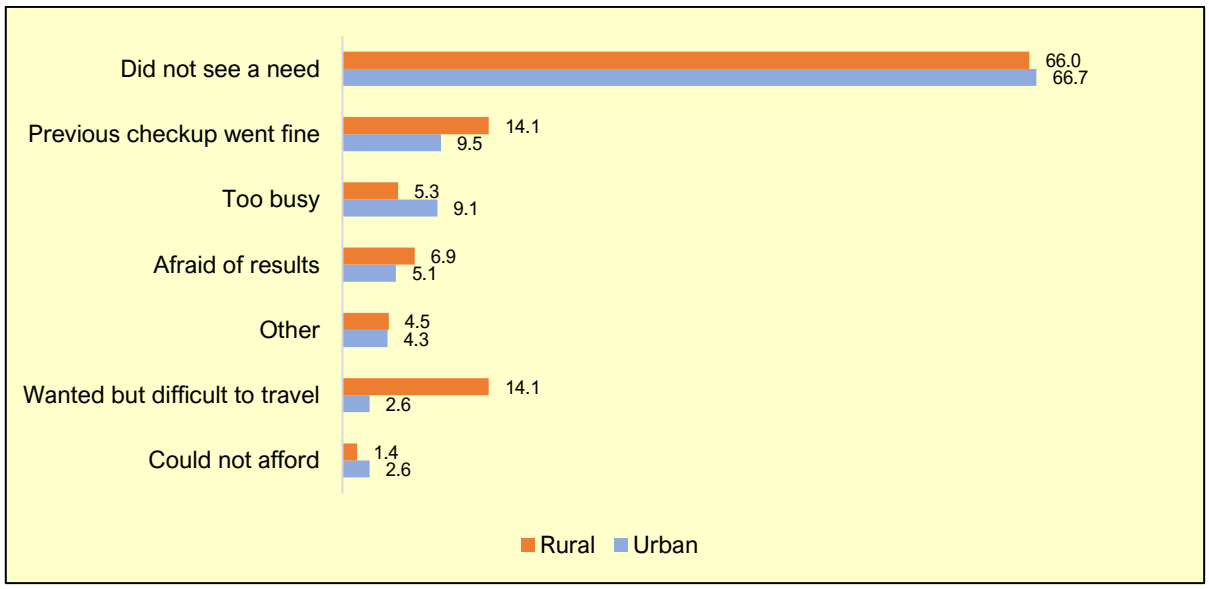

Figure 8.4: Reasons for Not Having Medical Check-up by Place of Residence (%)

8.2 Outpatient Treatment

Nearly all of the respondents visited a doctor for outpatient treatment in the past 12 months (Figure 8.5).

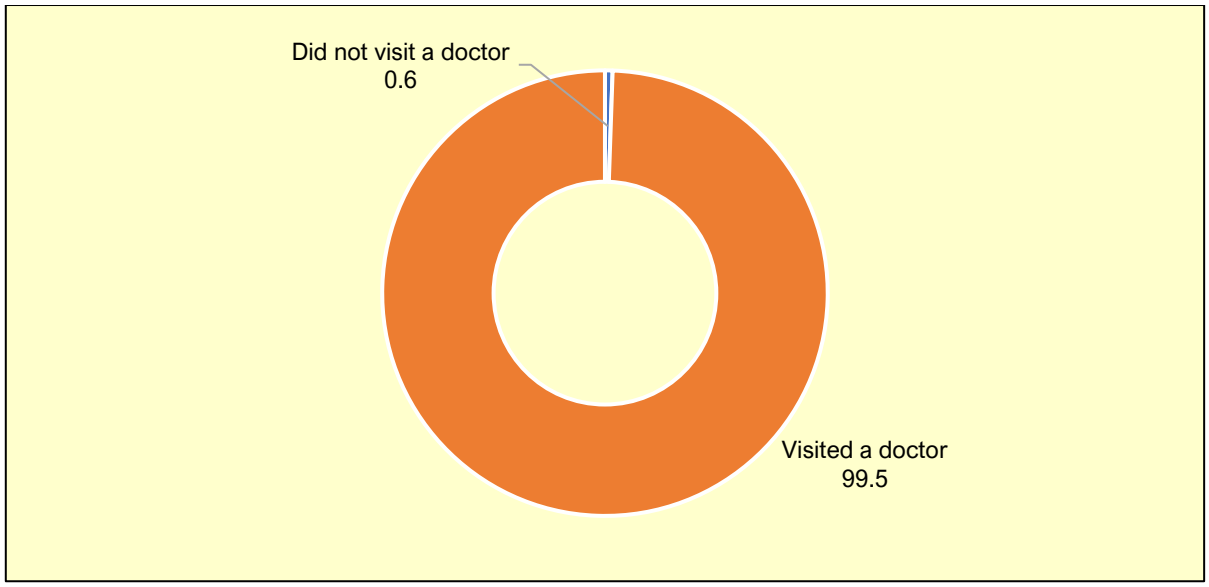

Figure 8.5: Respondents' Doctor Visits (%)

Approximately 80% of the respondents who received outpatient treatment utilised government health facilities while 25% did so at private health facilities (Figure 8.6).

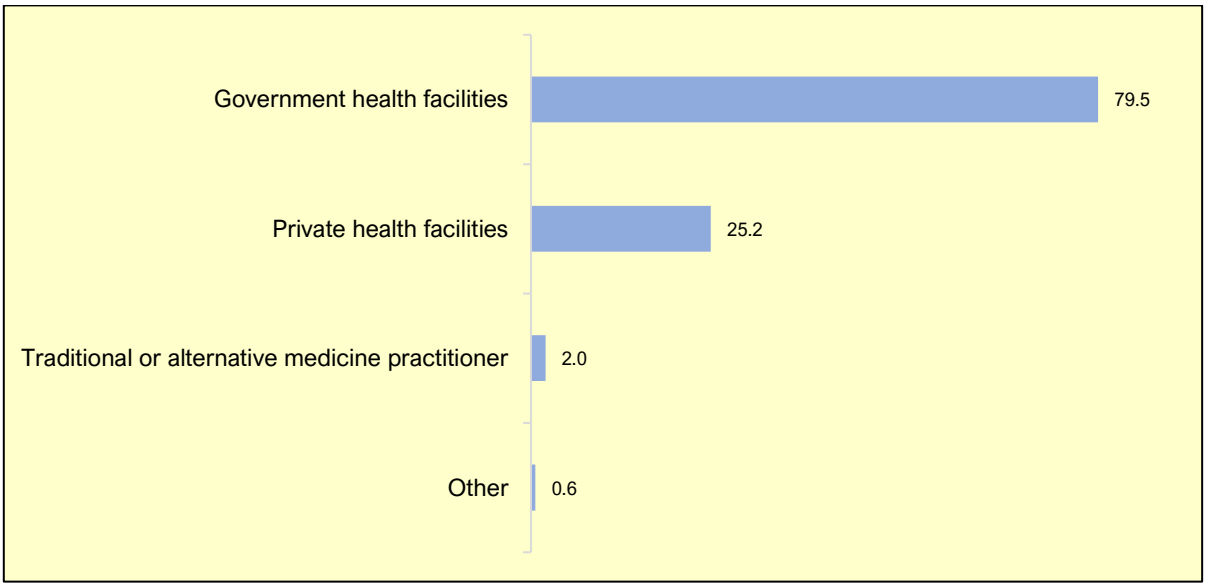

Figure 8.6: Outpatient Healthcare Providers (%)

Respondents who utilised government health facilities are higher among rural (85%) than urban respondents (76%) (Figure 8.7) while the opposite is true for users of private health facilities (urban 29%, rural 19%).

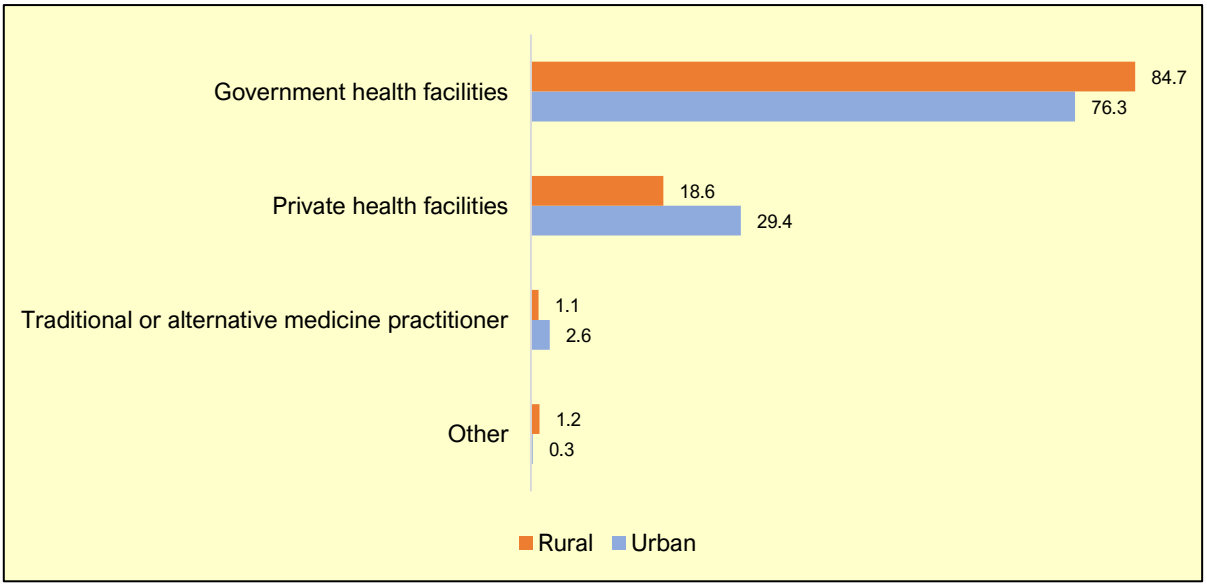

Figure 8.7: Outpatient Healthcare Providers by Place of Residence (%)

The proportion of respondents who utilised government facilities for outpatient healthcare services gradually decreases with increasing level of education (Figure 8.8). Among respondents with no schooling, 89% utilised government health facilities and the proportion reduces to 80% among those with lower secondary education and 59% among respondents with at least a post-secondary education. On the other hand, the proportion of private healthcare users increases with level of education from 14% among respondents with no schooling to 25% among those with lower secondary education and 48% among those with at least a post-secondary education (Figure 8.8).

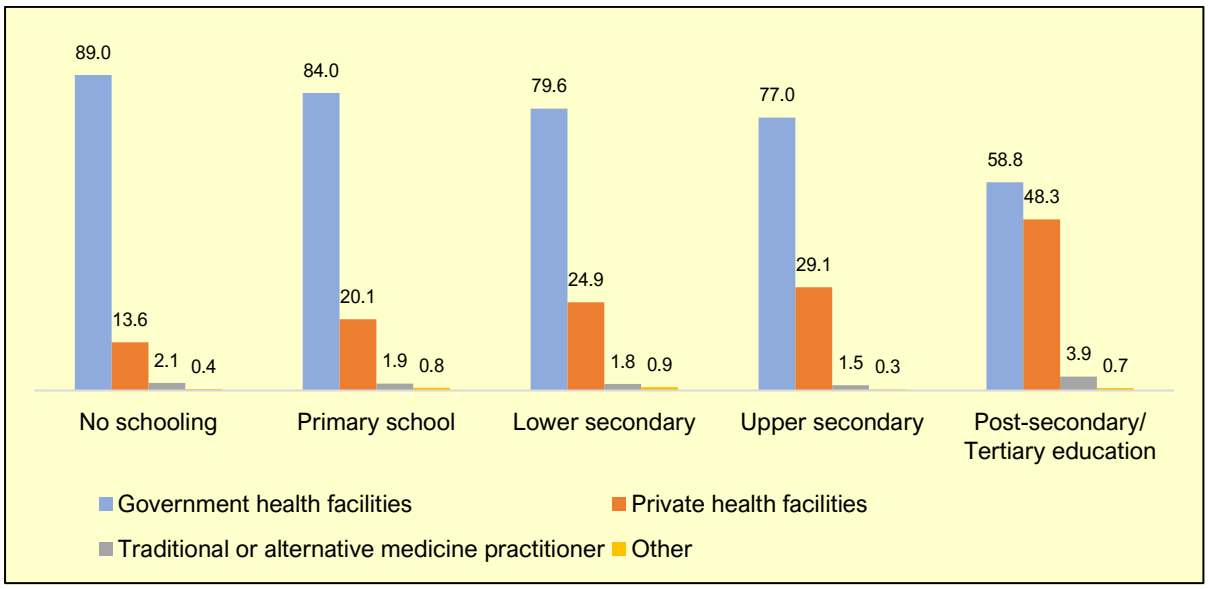

Figure 8.8: Outpatient Healthcare Providers by Education Level (%)

As shown in Figure 8.9, except for respondents with no schooling where the proportion of government facilities users decreases with monthly income from 88% among respondents with income less than RM1,000 to 75% among respondents with monthly income of RM2,000 to less than RM3,000 and 41% among those with income of at least RM5,000 per month.

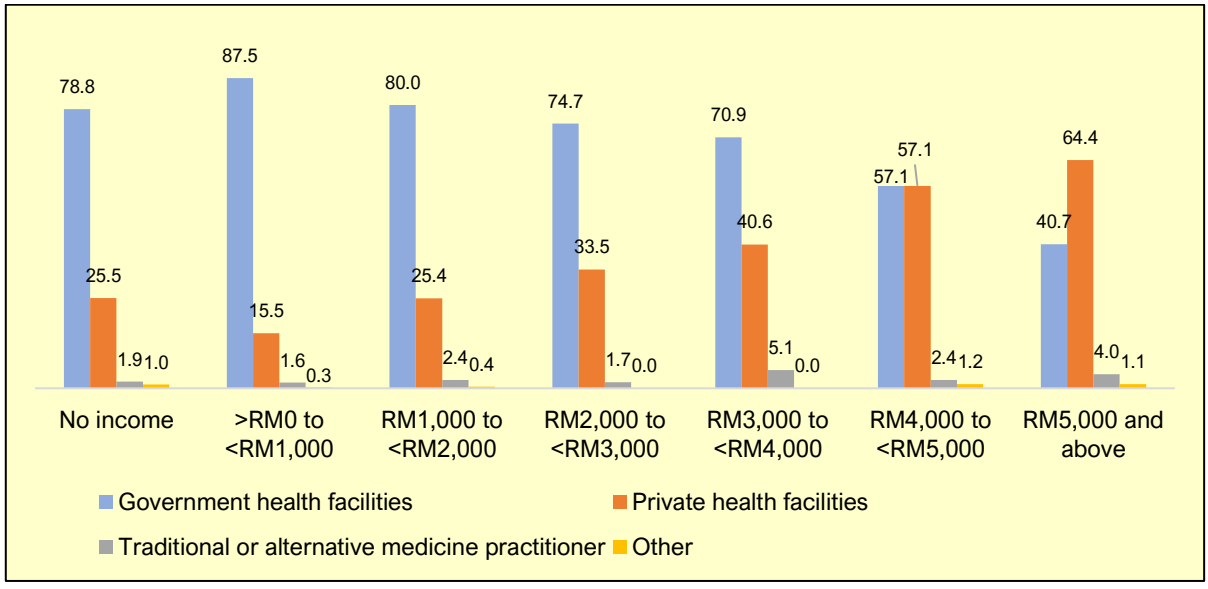

Figure 8.9: Outpatient Healthcare Providers by Monthly Income (%)

Across ethnicity, the proportion of respondents who utilised government healthcare facilities for outpatient treatment is highest among Other Bumiputera (90%) followed by Indian (82%), Malay (79%) and lowest among Chinese (64%) (Figure 8.10). Chinese respondents reported the highest proportion of private healthcare facilities users for outpatient treatment (42%) followed by Malay and Indian respondents (26% each).

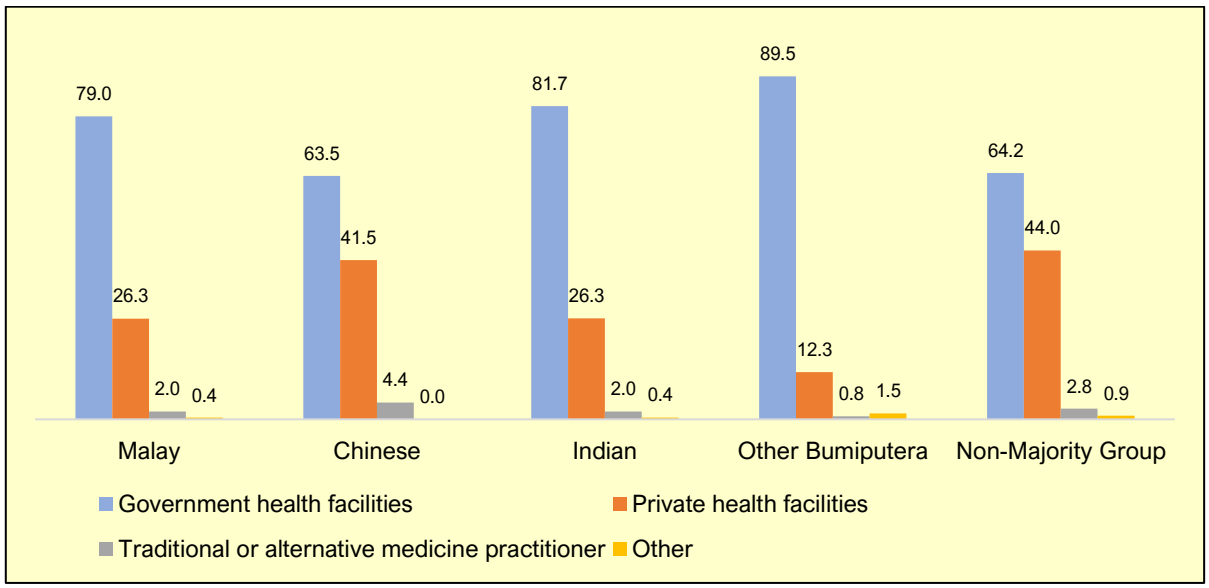

Figure 8.10: Outpatient Healthcare Providers by Ethnicity (%)

Respondents were asked about accompanying person for their outpatient medical treatment. The accompanying person is considered essential for the health network and social support and the accompanying persons consist mainly of immediate relatives (Andrades et al., 2013).

MARS data indicates that about 41% of respondents reported that their spouses accompanied them during medical treatment while 35% had no accompanying person. This includes responses with multiple visits and having multiple persons accompanying them. A small proportion reported they were accompanied by daughters/daughters-in-law and sons/sons-in-law for their outpatient treatment (16% and 15%, respectively) (Figure 8.11).

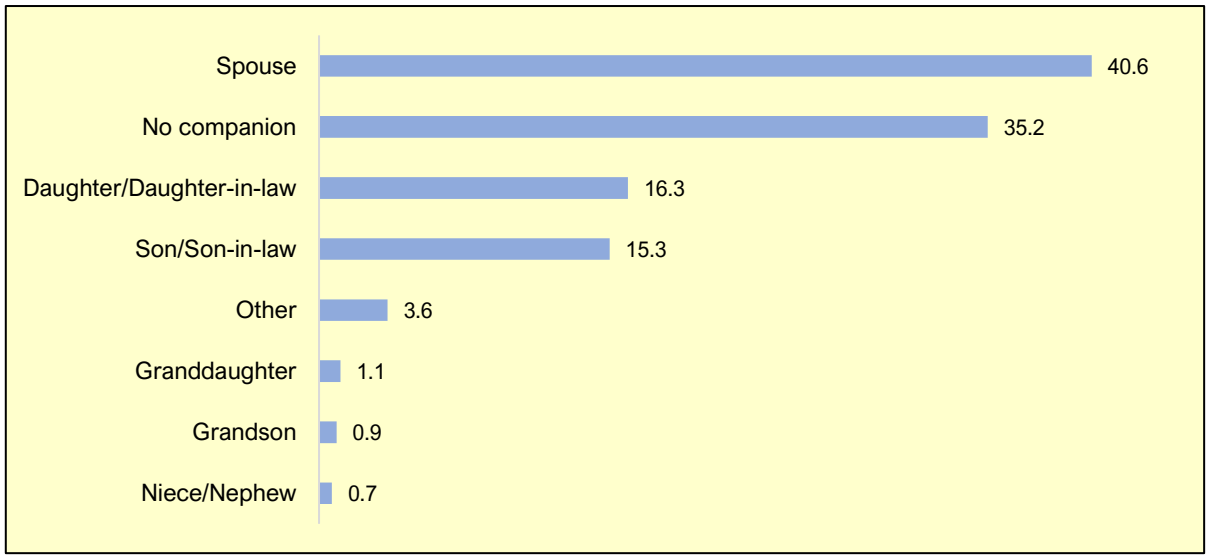

Figure 8.11: Accompanying Person during Respondents' Outpatient Treatment (%)

8.3 Hospitalisation

Hospitalisation is an important healthcare service, especially among older adults. Repeated and prolonged hospitalisation is negatively associated with older patients' health condition (Nunes et al., 2017). Older adults have higher overall hospital admission and longer length of stay compared to younger adults (Yunus et al., 2017).

Among MARS respondents, 11% reported being hospitalised in the past 12 months, with 10% of females and 12% of males. As expected, the hospitalisation rate increased with age, rising from 8% among those aged 40–49 to 12% among those aged 60–69, and reaching 18% in the oldest age group (80+) (Figure 8.12). The proportion of respondents who were hospitalised shows only a small difference between urban and rural areas, with a slightly higher rate among urban respondents (11%) compared to rural respondents (10%).

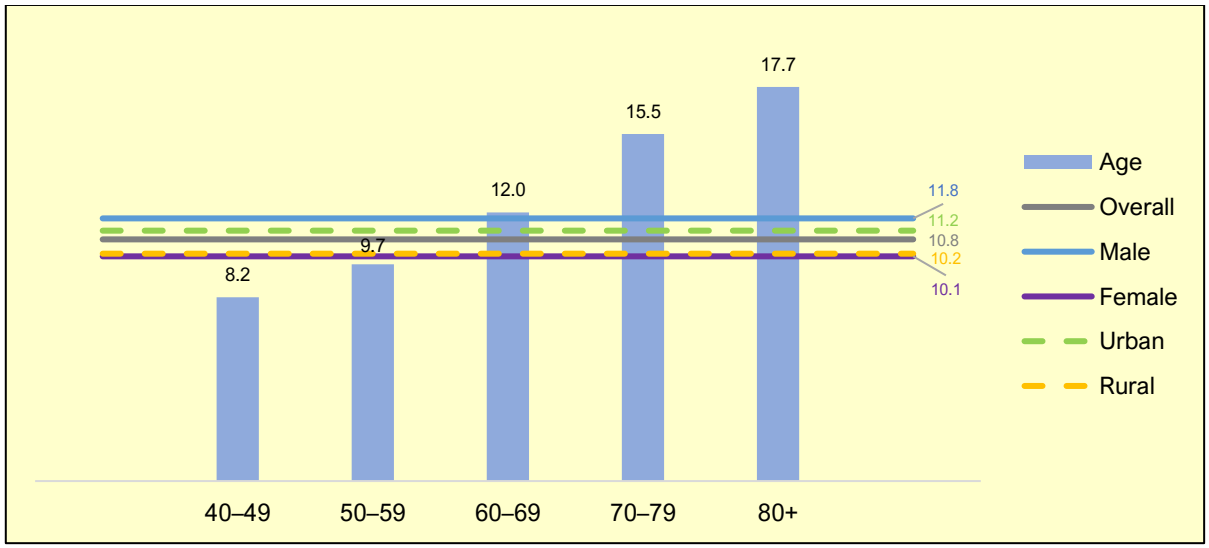

Figure 8.12: Respondents' Hospitalisation by Age, Gender and Place of Residence

Among respondents with hospitalisation experience, majority reported they were hospitalised only once in the past one year (70%) and slightly more than a quarter (26%) were hospitalised two to four times (Figure 8.13).

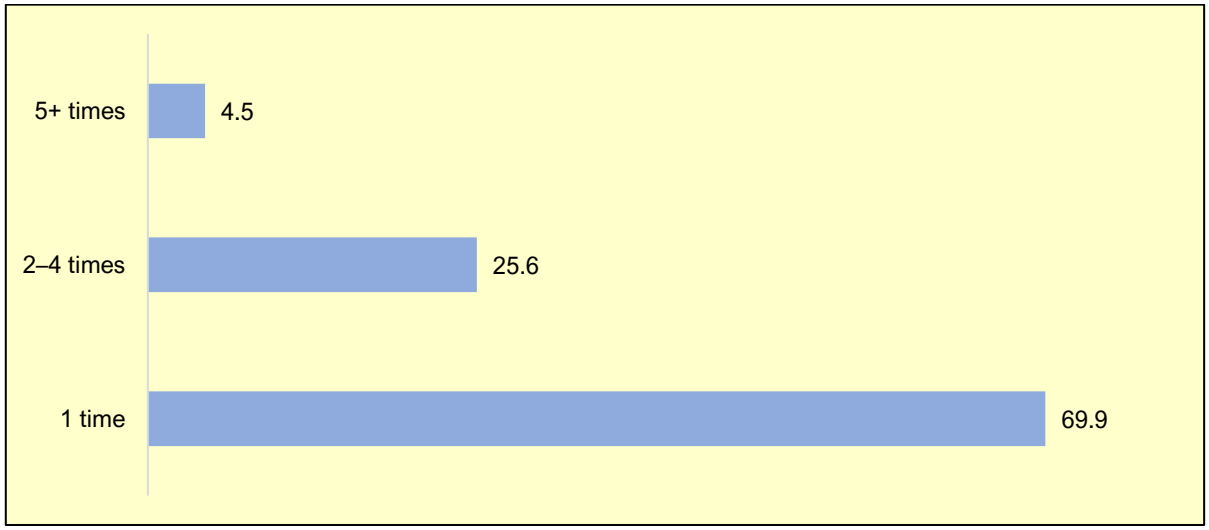

Figure 8.13: Frequency of Hospitalisation in the Past 12 Months (%)

Respondents were asked the reasons for their hospitalisation as shown in Figure 8.14. About 13% of the respondents were hospitalised because of heart diseases, ulcer or gastrointestinal disorders (9%), high blood pressure/hypertension (8%), diabetes (7%) and asthma (7%).

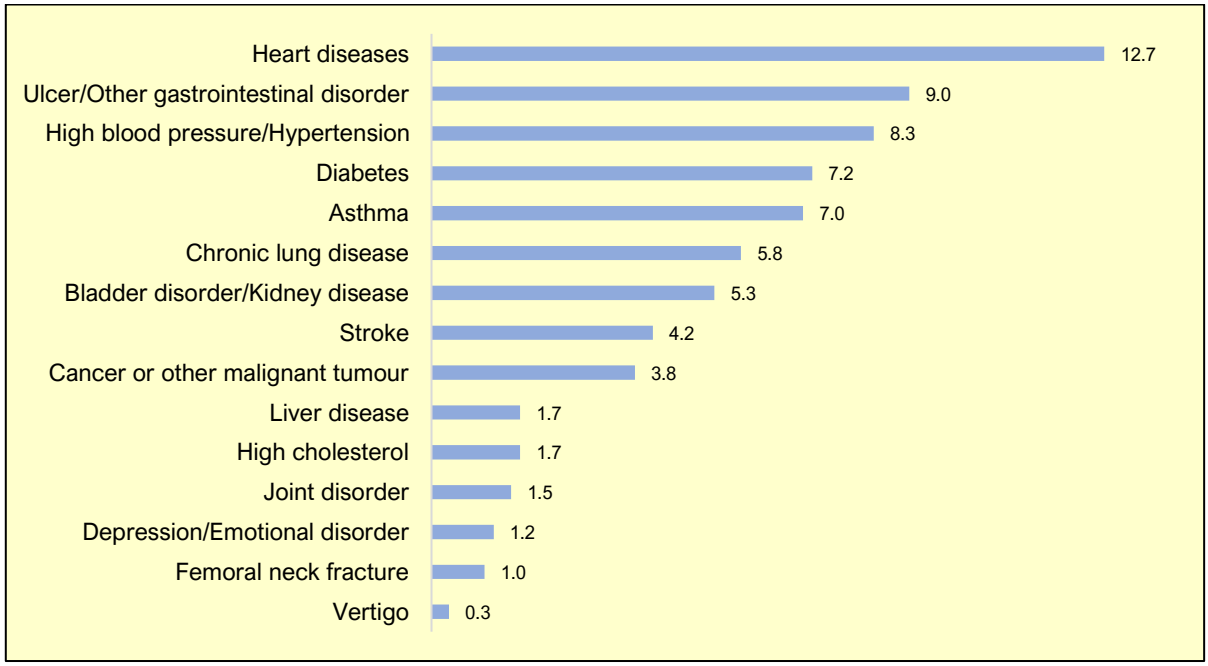

Figure 8.14: Reasons for Hospitalisation (%)

Respondents were asked who would usually accompany them during their hospitalisation and 44% reported their spouses followed by daughter or daughter in-law (23%) and son or son in-law (14%) (Figure 8.15). About 12% of the respondents reported no one accompanied them during their hospital stay.

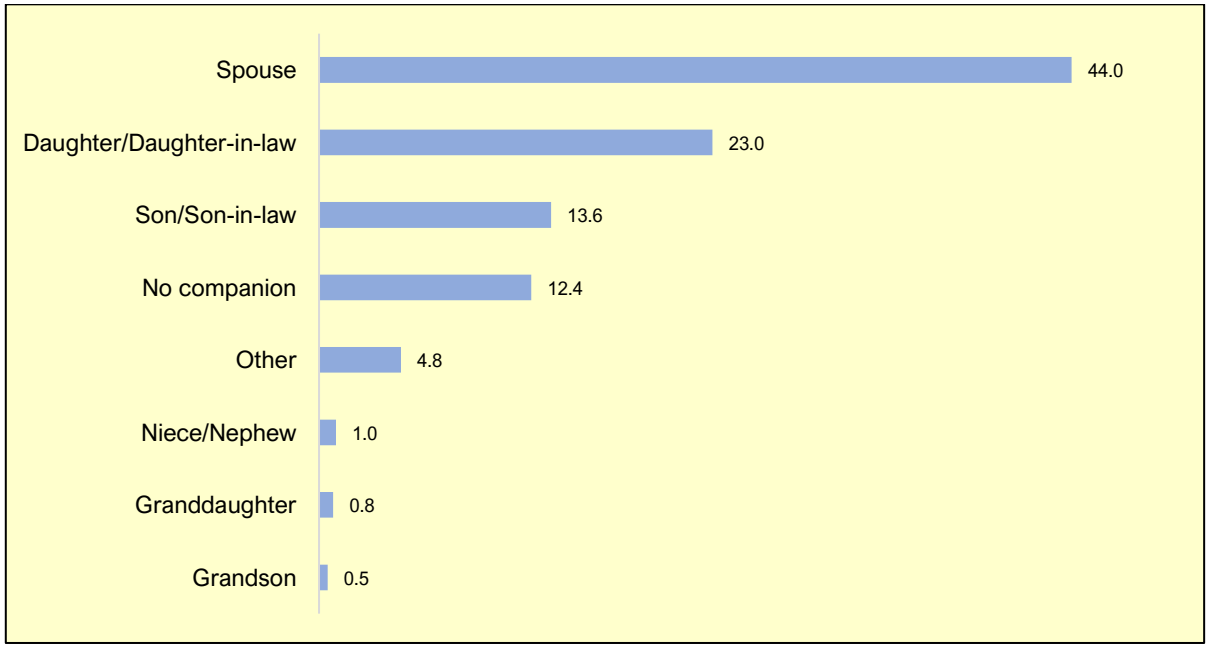

Figure 8.15: Accompanying Person During Hospitalisation (%)

8.4 Private Health Insurance

Healthcare in Malaysia is provided by both the public and private services. Through the expansion of the network of public health facilities comprising of public clinics and hospitals, the public health system (PHS) can be considered successful in its purpose of serving the people (Ahmad, 2019). While Malaysians are enjoying universal healthcare, there has been an increasing trend in the establishment of private healthcare facilities. In view of this, MARS collects information on private health insurance.

Overall, only a small percentage (16%) of respondents has private health insurance, higher among male (19%) than female respondents (13%) (
Figure 8.16). The proportion of respondents with private health insurance is substantially higher among urban than rural respondents (19% and 10%, respectively).
Figure 8.16 also shows that the proportion of respondents having private insurance sharply declines from 24% among those aged 40-49 to 10% among respondents aged 60-69 and 1% among the oldest respondents.

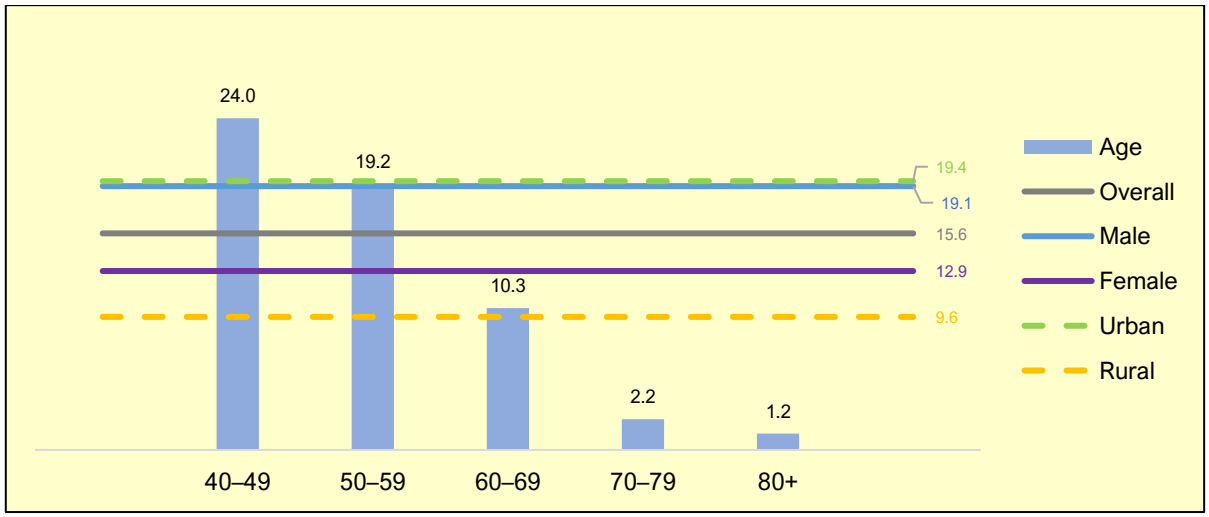

Figure 8.16: Respondents with Private Health Insurance by Age, Gender and Place of Residence (%)
Among respondents with private health insurance about 62% paid for their own health insurance while employer and spouse account for 16% and 13%, respectively in Figure 8.17.

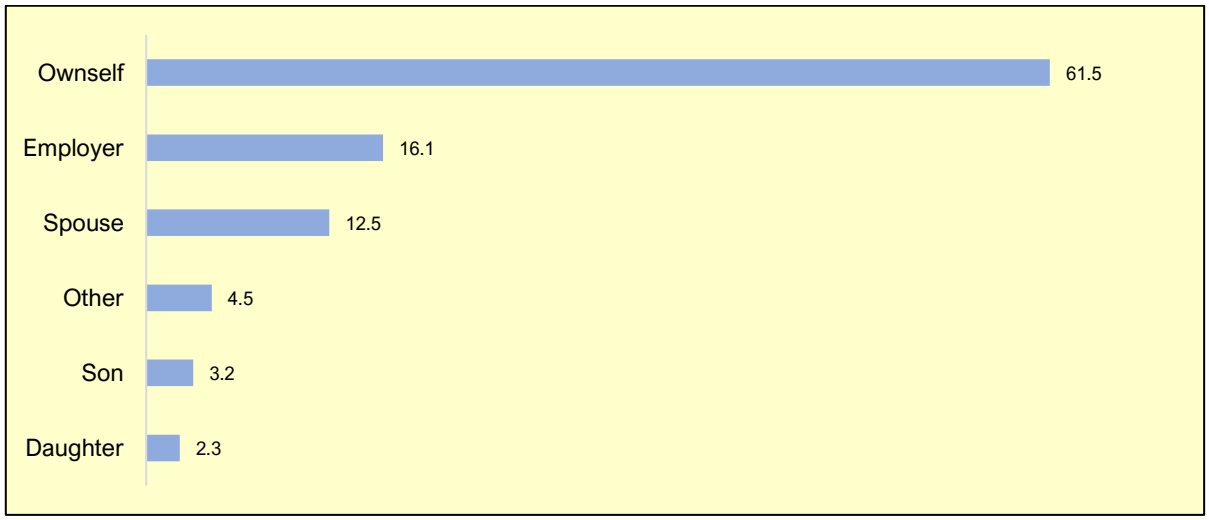

Figure 8.17: Who Pays for Health Insurance (%)

9 PHYSICAL FUNCTIONING AND COGNITION

Physical activity is defined as any form of bodily movement produced by skeletal muscles, with the subdomains occupational, sports, conditioning, household and other activities (Caspersen et al., 1985). Physical activity has significant health benefits for older adults where inactivity is a key risk factor for morbidity and disability (Bray et al., 2016; Daskalopoulou et al., 2017; Kaur et al., 2015; McPhee et al., 2016).

Physical functioning is a crucial determinant of basic ability and in MARS, three measures of physical activities were taken from the respondents namely, Activities of Daily Living (ADLs), Instrumental Activities of Daily Living (IADLs) and Nagi Functional Limitations Index. The MARS questionnaire also includes items related to cognitive functioning, which were adapted from the Health and Retirement Survey (HRS) (Crimmins et al., 2011). Scientific literature highlights that cognitive changes occur as individuals age, though these changes vary across different cognitive functions and domains. These variations are influenced by factors such as lifetime experiences, lifestyle choices, health status, socioeconomic conditions, and genetic predispositions (Blazer et al., 2015).

9.1 Activities of Daily Living (ADLs)

Activities of Daily Living (ADLs), often referred to as physical or basic ADLs, encompass fundamental skills necessary to manage essential physical needs. These activities include personal hygiene and grooming, dressing, toileting and continence, as well as transferring and ambulating. Overall, among all activities of daily living (ADLs) which include climbing stairs, grooming, getting in and out of bed, mobility in the house and bathing, the highest proportion of respondents requiring help is climbing stairs (7%) followed by grooming (2%) and getting in and out of bed (2%) (Table 9.1). The proportion of respondents needing help for ADL increases with age, more so among those aged 70 and above. Respondents who need help to climb stairs range from 2% among respondents aged 40-49 to 37% among those aged 80 and above. The oldest age group reported that they require help with walking around the house (15%) and getting in and out of bed (13%). The proportion of respondents who needed assistance is higher among female than male respondents for all activities of ADL except grooming and dressing (Table 9.1).

Table 9.1: Respondents Needing Help with ADLs by Gender and Age (%)

	Overall			Age				
	Total	**Male**	**Female**	**40–49**	**50–59**	**60–69**	**70–79**	**80+**
Climbing stairs	7.3	5.3	9.0	1.5	4.8	8.3	18.5	36.8
Grooming	2.1	2.9	1.4	1.2	1.6	2.4	2.4	11.1
In and out of bed	2.0	1.5	2.4	0.1	1.2	2.3	5.2	12.9
Walking	1.6	1.2	1.9	0.1	0.9	1.6	3.8	14.6
Bathing	1.5	1.3	1.7	0.3	1.0	1.7	3.0	11.1
Toileting	1.3	1.2	1.4	0.2	0.5	1.4	3.5	10.5
Dressing	1.3	1.4	1.2	0.1	0.9	1.4	2.5	9.4
Eating	0.8	0.8	0.8	0.1	0.2	1.0	1.7	8.2
Mouth care	0.6	0.5	0.7	0.0	0.4	0.8	1.3	5.3

9.2 Instrumental Activities of Daily Living (IADLs)

Instrumental Activities of Daily Living (IADLs) are normal daily tasks which comprise of meal preparation, banking and financial transactions, and shopping. The data shows that for the total sample, the highest proportion of respondents needing help is driving (33%), followed by visiting friends and/or family (21%) and shopping (19%). The proportion of respondents needing help with all the domains of IADL increase substantially with age. Across gender, female respondents reported a higher proportion needing help with their mobility than male respondents. About 50% of female need help with driving compared to 12% of male respondents. Similarly, the proportion of respondents needing help in visiting friends/family (31% female vs 9% male) and shopping (25% female vs 11% male). Activities around the house show higher proportion of males needing help compared to females. These include doing laundry, housework and cooking. It is also observed that the proportion of respondents needing help with use of telephone is substantially higher among female (18%) than male (11%) (Table 9.2).

Table 9.2: Respondents Needing Help with IADLs by Gender and Age (%)

	Overall			Age				
	Total	**Male**	**Female**	**40–49**	**50–59**	**60–69**	**70–79**	**80+**
Driving	33.0	12.0	49.7	20.0	26.4	39.8	54.3	79.5
Visiting friends/family	21.4	9.4	31.0	9.6	15.7	26.0	42.7	69.0
Shopping	19.1	11.2	25.3	8.7	14.3	23.0	36.4	63.2
Using public transportation	16.6	8.3	23.2	5.5	10.8	20.0	38.3	66.7
Using phone	14.8	10.8	18.0	2.7	9.7	20.6	34.3	52.6
Cooking	14.5	21.9	8.7	8.4	11.6	14.9	26.1	53.2
Doing laundry	13.1	19.6	8.0	7.6	9.7	13.9	24.1	51.5
Doing housework	12.9	14.3	11.9	7.3	9.3	13.0	25.5	54.4
Managing medications	5.1	5.0	5.1	1.4	2.9	5.0	11.9	35.7

9.3 Participation in Sports/Physical Activities

Overall, 69% of respondents rarely/never perform vigorous activities such as running, swimming, cycling, aerobics, tennis or digging with a hoe or shovel. Only a small proportion reported they always (every day or more than once a week) perform vigorous activities (9%) (Figure 9.1). Males are more active compared to females (14% and 6%, respectively). With regards to participation in moderate physical activities which include gardening, cleaning car, walking at a moderate pace or dancing, 21% of the respondents reported they always participate while 39% rarely/never perform these activities. Participation in moderately vigorous activities is higher among male than female with 25% of male and 18% of female respondents reported they always participate. About half of the respondents (51%) always perform light physical activities which include Tai Chi, vacuuming or home cleaning. About 66% of female respondents reported that they always perform light activities compared to 32% of male respondents (Figure 9.1).

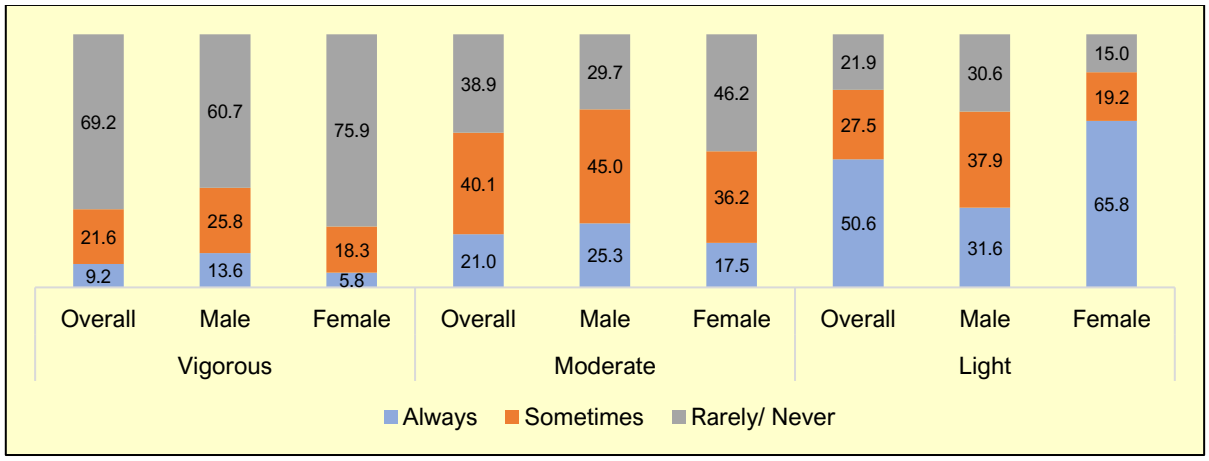

Figure 9.1: Respondents Participation in Vigorous, Moderate and Light Activities by Gender (%)

In terms of performing daily activities based on the NAGI Index[3] (physical functions), respondents have most difficulty in squatting/kneeling (30%) compared to getting up from chair (27%), sitting for 2 hours (22%) and walking 100m (19%). The proportion of respondents having difficulty in these basic physical functions increases with age. A big difference is observed among those aged 70 and above especially in walking several steps up the stairs and squatting/kneeling (

Table 9.3).

Table 9.3: Respondents Experiencing Difficulty in Performing Basic Physical Activities by Gender and Age (%)

	Overall			Age				
	Total	**Male**	**Female**	**40–49**	**50–59**	**60–69**	**70–79**	**80+**
Squatting/Kneeling	30.4	25.0	34.7	17.3	27.4	36.5	47.9	59.1
Walking several steps up the stairs	27.4	19.4	33.7	12.9	21.7	34.1	50.0	73.7
Getting up from chair	26.9	21.3	31.3	17.9	23.7	30.4	39.6	60.8
Sitting for 2 hours	21.6	17.6	24.7	15.1	19.6	23.9	30.7	45.6
Taking one step up the stairs	21.5	15.1	26.5	9.5	16.7	26.0	40.5	67.3
Walking 100 meters	18.9	16.3	21.0	10.0	16.0	22.0	30.9	57.9
Lifting 5 kg or more	17.1	11.4	21.6	6.3	11.7	21.0	36.2	63.7
Pushing/Pulling object	16.0	12.1	19.1	6.6	10.6	19.4	34.0	60.2
Raising arms	8.7	7.5	9.6	4.5	5.9	11.1	15.7	28.1
Picking up small object	7.7	6.6	8.6	3.0	5.2	9.5	16.1	29.8

9.4 Self-reported Memory

Self-reported memory status indicates that 55% of the sample respondents have good memory and 35% rated their memory as fair (Figure 9.2), Respondents with good memory is slightly higher among male than female respondents (56% and 54%, respectively). The proportion of respondents with good self-rated memory declines with age from 67% among those aged 40-49 to 48% among 60-69 and 31% among the oldest age group.

Figure 9.2: Self-rated Memory by Gender and Age (%)

[3] The NAGI Index comprises a series of indicators designed to evaluate functional limitations and disability.

Self-reported memory improves with increasing level of education (Figure 9.3). The proportion of respondents having good memory is lowest among those with no schooling (39%), increases to 58% among respondents with lower secondary education and 73% among those with at least a post-secondary education.

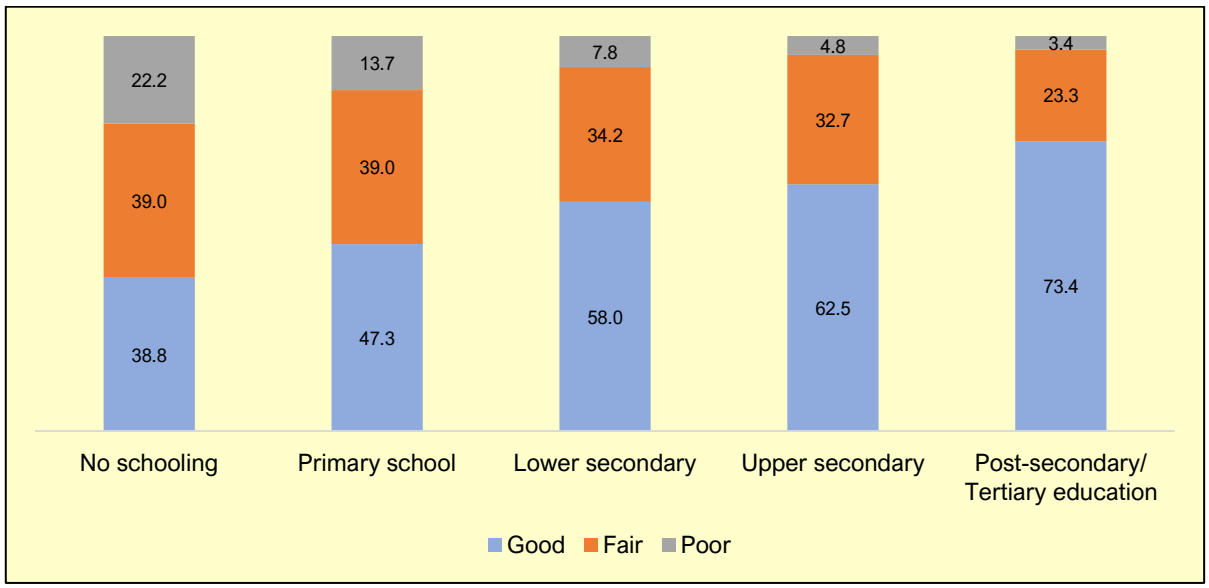

Figure 9.3: Self-rated Memory by Education Level (%)

Across ethnicity, the proportion of respondents with good self-reported memory is highest among Malay (58%) followed by Non-Majority Group (57%) and Other Bumiputera (55%) (Figure 9.4).

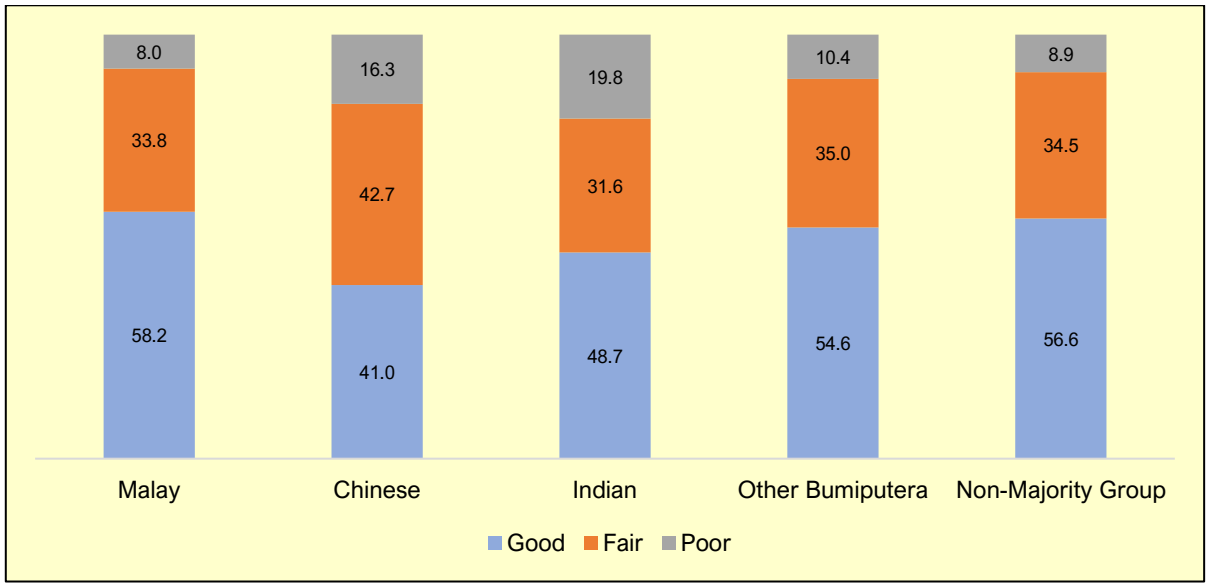

Figure 9.4: Self-rated Memory by Ethnicity (%)

Examining self-reported memory by self-reported health indicates that the proportion of respondents having good memory declines with deteriorating health (Figure 9.5). Among respondents in good health, 71% reported their memory as good compared to about 40% among those in fair health and 32% among respondents in poor health.

Figure 9.5: Self-rated Memory by Self-rated Health (%)

The proportion of respondents having good self-reported memory decreases with increasing number of diagnosed diseases (Figure 9.6) from 63% among those with no diagnosed disease to 54% among respondents with one diagnosed disease and 43% among those with two or more diagnosed diseases.

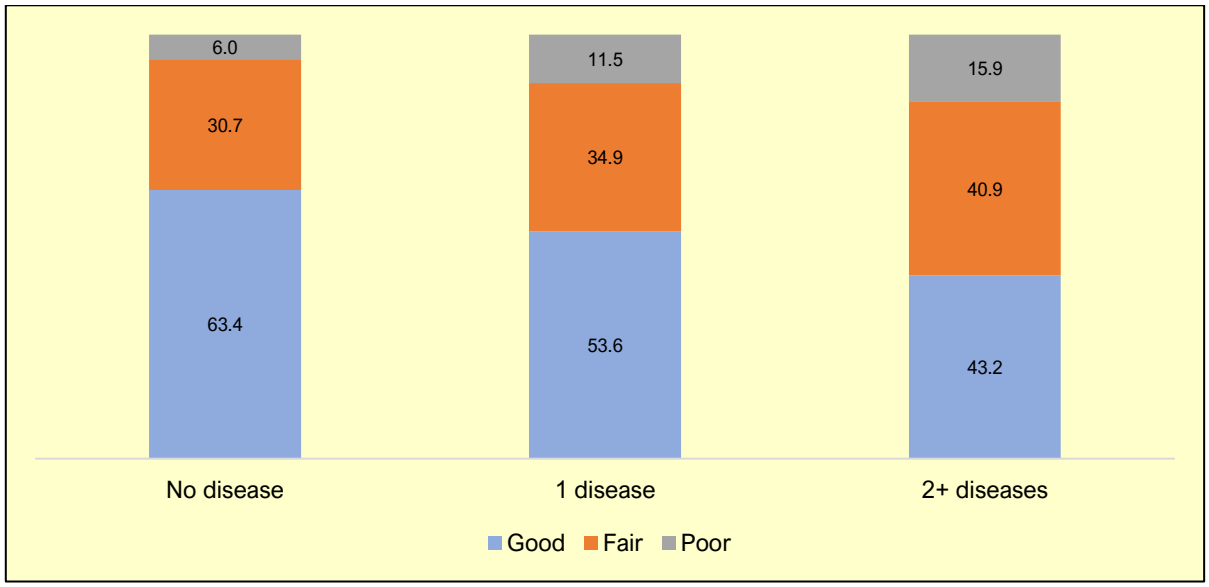

Figure 9.6: Self-rated Memory by Prevalence of Multimorbidity (%)

When asked about their memory compared to two years ago, majority of the respondents reported the same memory status (75%) while 21% admitted that their memory is worse now than before (Figure 9.7).

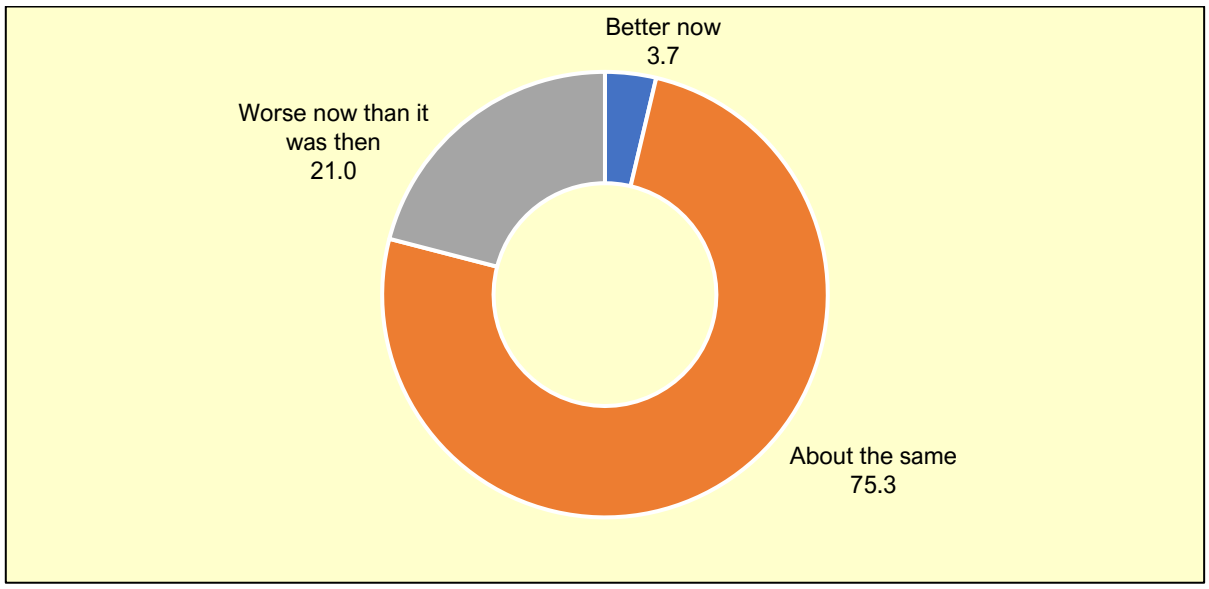

Figure 9.7: Self-rated Memory Compared with 2 Years Ago (%)

9.5 Counting backwards

Respondents were asked to count backwards starting from number 20 and the result shown in Figure 9.8 suggests that overall, the proportion of respondents with correct answer is 91%, male 95% and female 88%. The proportion of respondents who counted backwards correctly decreases with age from 97% among those aged 40-49 to about 60% among respondents aged 80 and above.

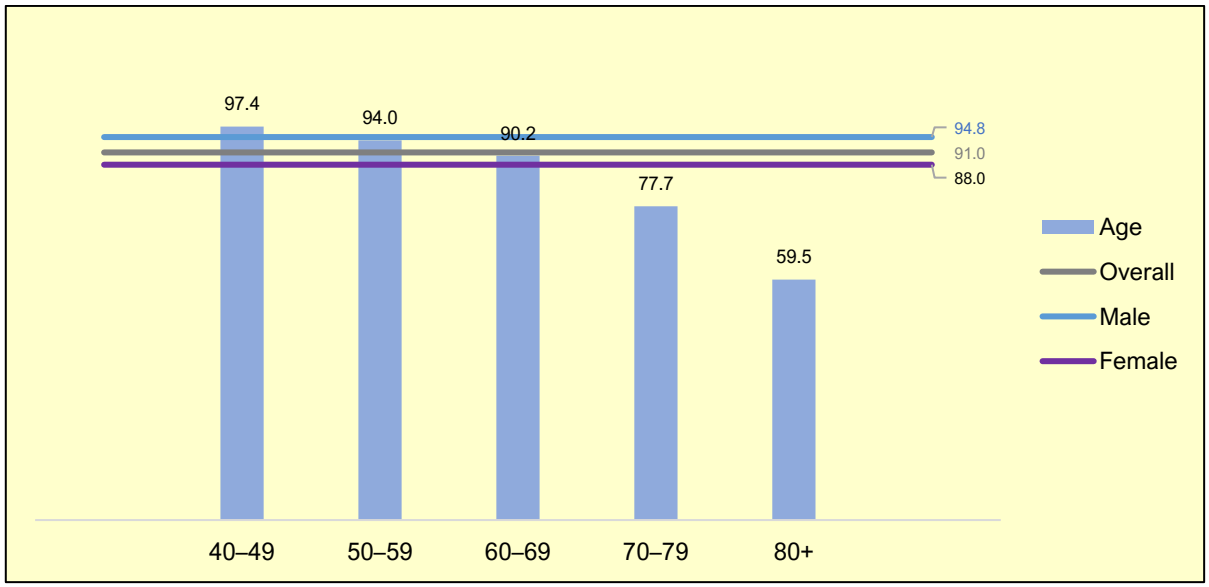

Figure 9.8: Respondents Counting Backward Correctly by Gender and Age (%)

The proportion of respondents who counted backwards correctly increases with education level (Figure 9.9) from 61% among those with no schooling to 97% among respondents with lower secondary and 99% among those with at least a post-secondary education.

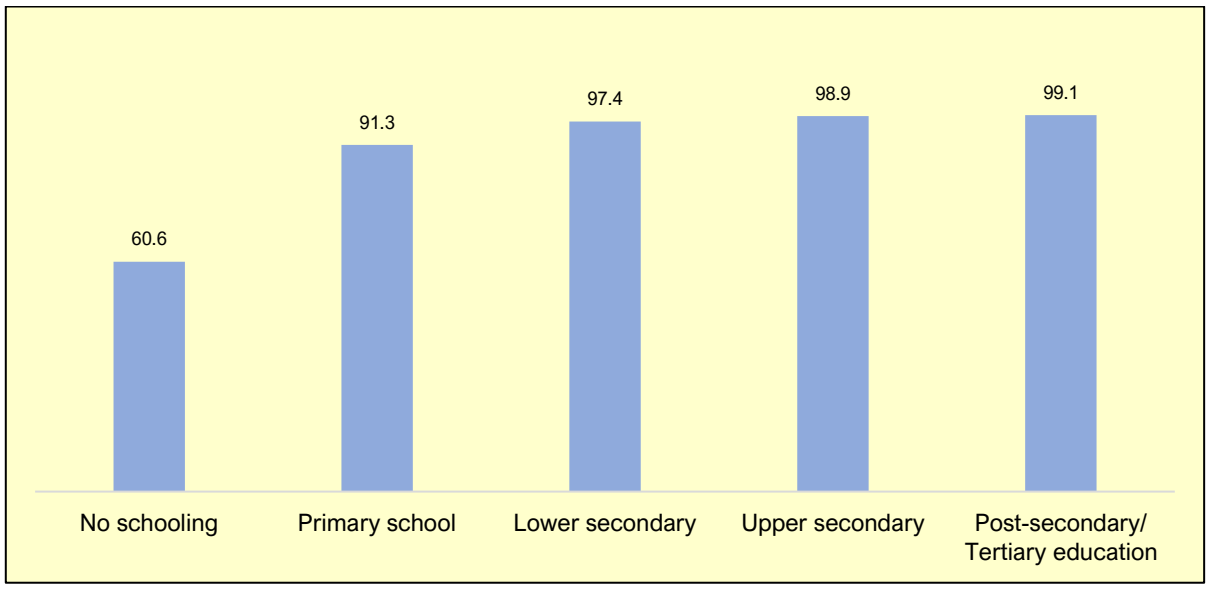

Figure 9.9: Respondents Counting Backward Correctly by Education Level (%)

Figure 9.10 shows that the proportion of respondents who counted backward correctly decreases from 94% among those in good self-rated health to 78% among respondents in poor health.

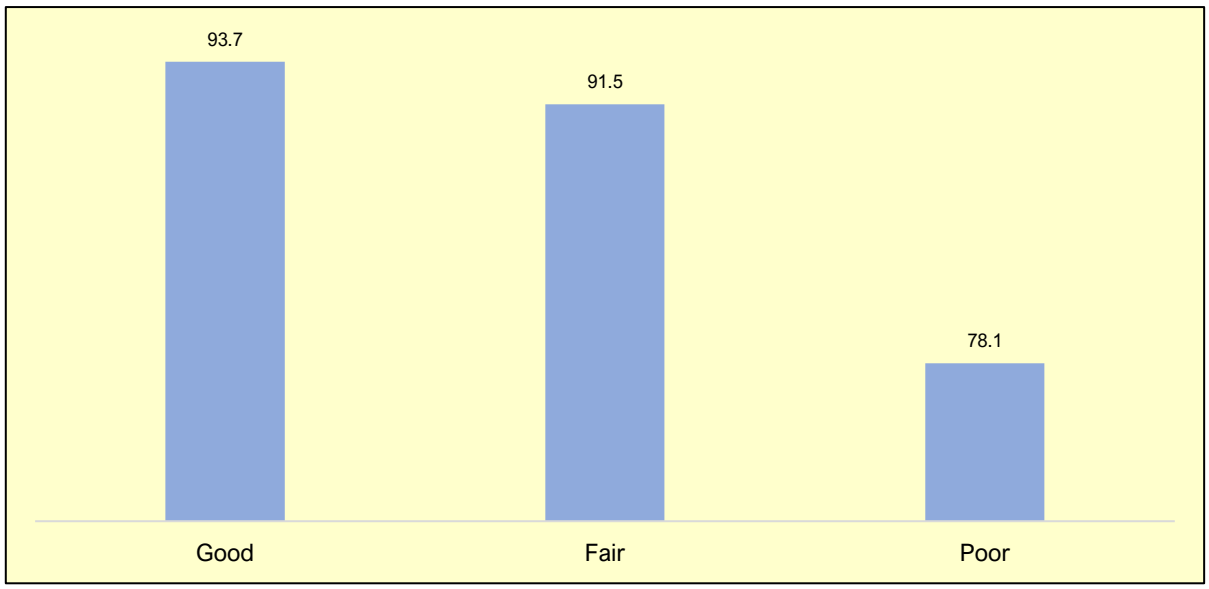

Figure 9.10: Respondents Counting Backward Correctly by Self-rated Health (%)

About 93% of the respondents with no diagnosed disease counted backward correctly and that this proportion reduces to 91% among respondents with one diagnosed disease and 88% for those having at least two diagnosed diseases (Figure 9.11).

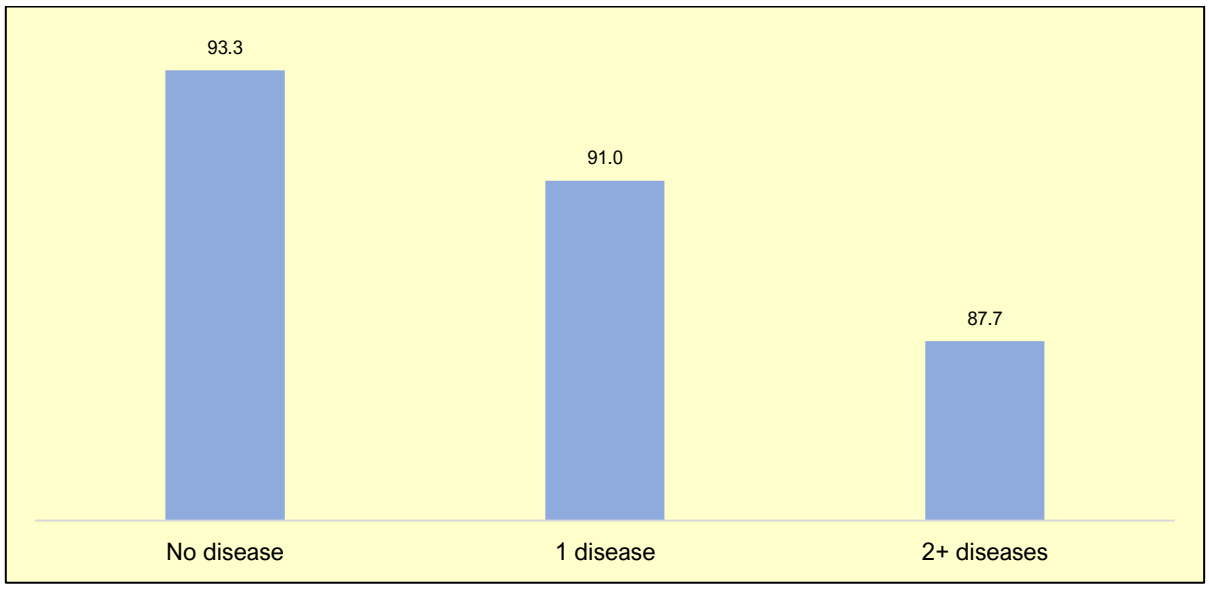

Figure 9.11: Respondents Counting Backward Correctly by Prevalence of Multimorbidity (%)

9.6 Serial 7 Test (Subtraction)

Serial 7 test in MARS consists of three subtractions where Subtraction 1 is “one hundred minus seven”, Subtraction 2 is “seven from the first answer”, and Subtraction 3 is “seven from the second answer”. Overall, about 81% of the respondents answered correctly for Subtraction 1, but only 48% and 39% answered correctly for Subtraction 2 and Subtraction 3, respectively (Figure 9.12). Among male respondents about 88% answered correctly for Subtraction 1, 54% for Subtraction 2 and 44% for Subtraction 3 while the proportion of correct answers among female respondents is substantially lower with 76% correct for Subtraction 1, 44% for Subtraction 2 and 35% for Subtraction 3.

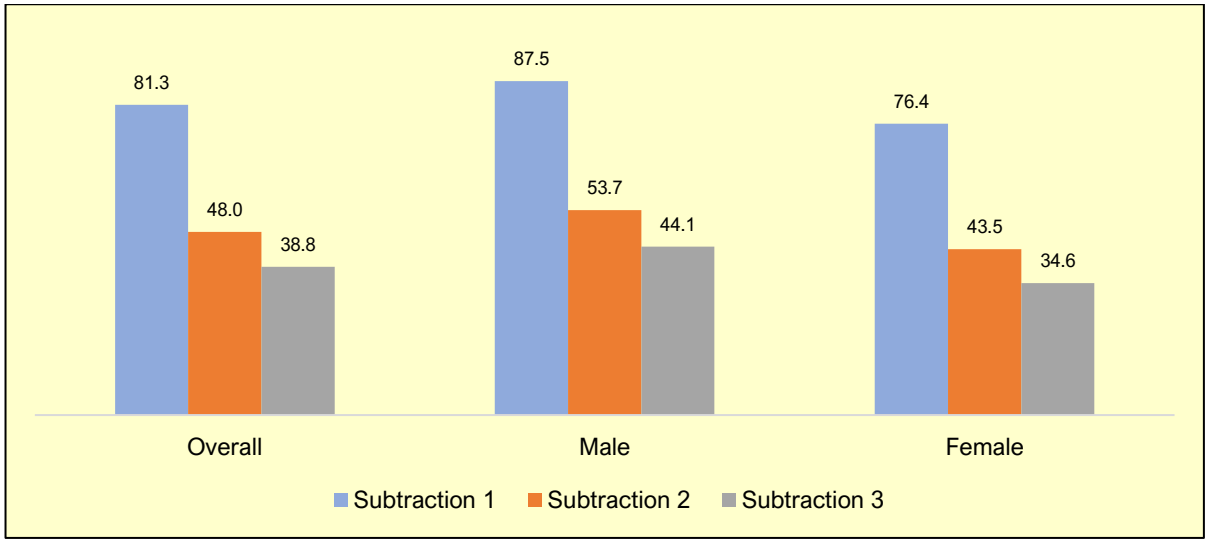

Figure 9.12: Respondents with Correct Answers in Serial 7 Subtraction Test by Gender (%)

For all three subtractions, the proportion of respondents who answer correctly decreases with age (Figure 9.13). For Subtraction 1, the proportion of respondents with correct answers drops from about 90% among those aged 40-49 to 67% among respondents aged 70-79 and 45% for those aged 80 and above. Similarly, the proportion of respondents who answered correctly for Subtraction 2 decreases from 57% among those aged 40-49 to 19% among the oldest age group while for Subtraction 3, the proportion of correct answers decreases from 49% among respondents aged 40-49 to just 13% among those aged 80 and above.

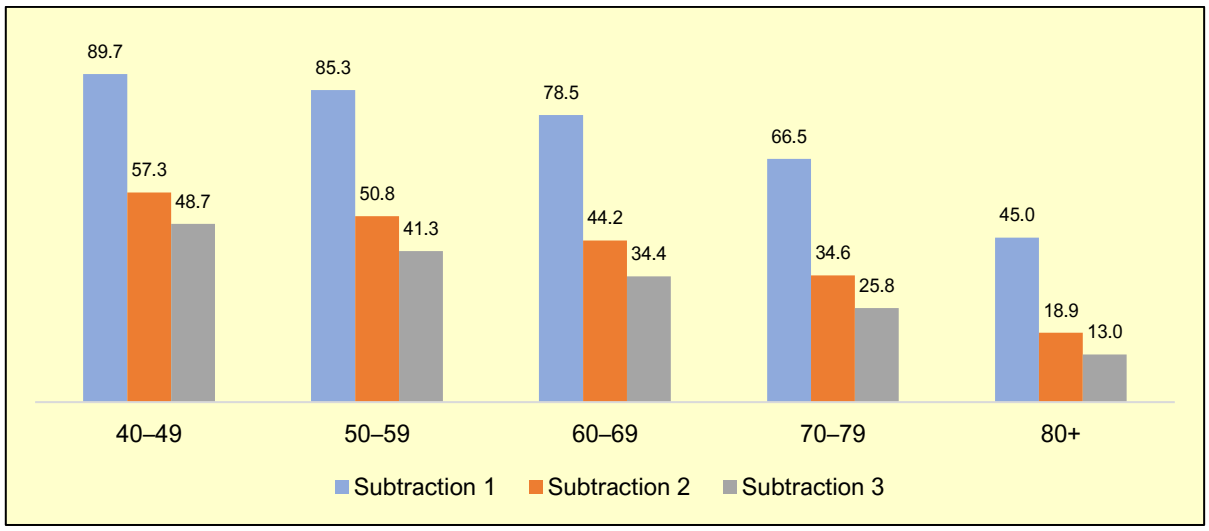

Figure 9.13: Respondents with Correct Answers in Serial 7 Subtraction Test by Age (%)

The proportion of respondents with correct answers increases with education level for all three subtractions (Figure 9.14). For Subtraction 1, the increase is from 41% among respondents with no schooling to 88% among those with lower secondary and 97% among respondents with at least a post-secondary education. Similarly, for Subtraction 2, the proportion who answered correctly increases from 19% among no schooling respondents to 72% for those with at least a post-secondary education while for Subtraction 3, the increase is from 13% to 63%.

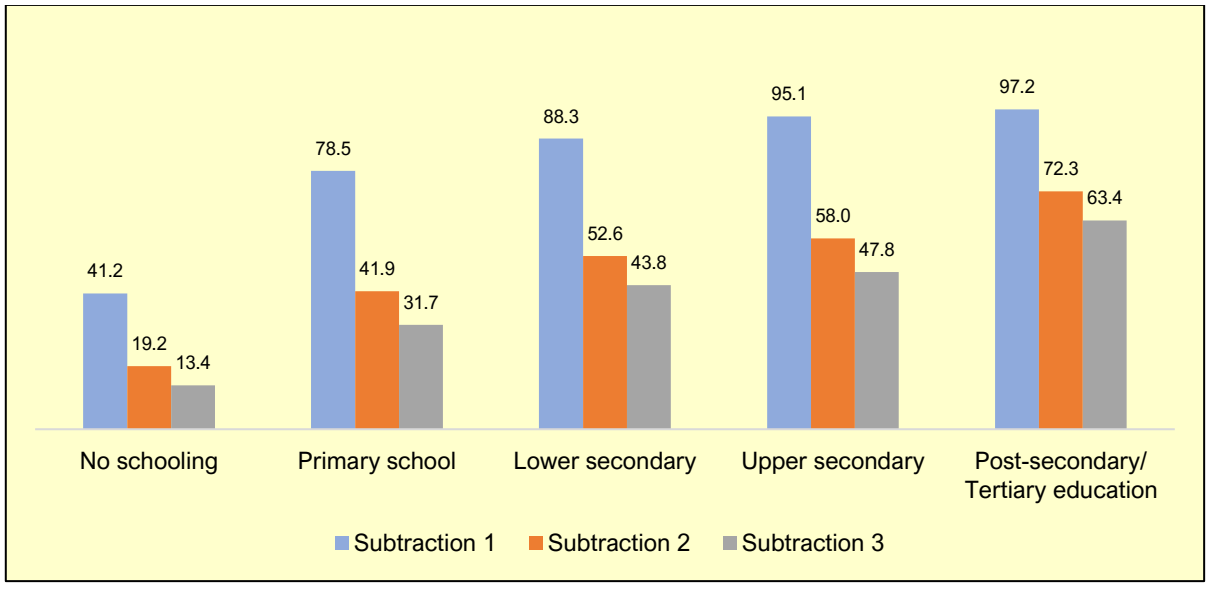

Figure 9.14: Respondents with Correct Answers in Serial 7 Subtraction Test by Education Level (%)

Figure 9.15 shows the Venn Diagram for the respondents with correct subtraction. 38% of the respondents answered correctly for all three subtractions. About 10.0% respondents have answered correctly for both Subtraction 1 and 2 only, and 1% answered correctly for both Subtraction 1 and 3 only. Less than 1% of the respondents have answered correctly for both Subtraction 2 and 3 only.

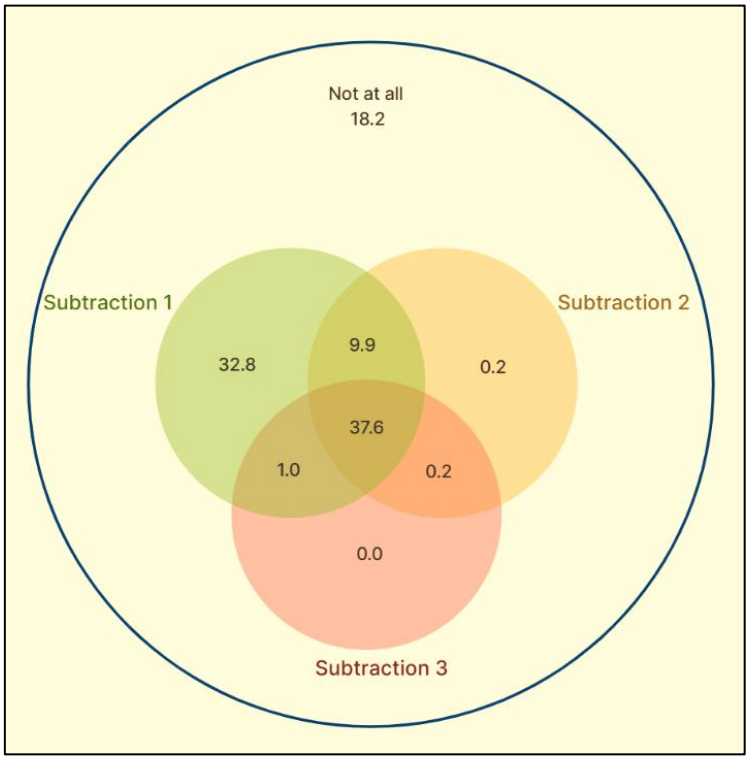

Figure 9.15: Overall Distribution of Serial 7 Subtraction Test (%)

Figure 9.16 shows that overall, the proportion of respondents with correct answers for all three subtractions is 38%, 42% among male and 34% among female respondents. The proportion of respondents with correct answers to all three subtractions declines quite sharply with age from 47% among those aged 40-49 to 34% among respondents aged 60-69 and 12% among those aged 80 and above.

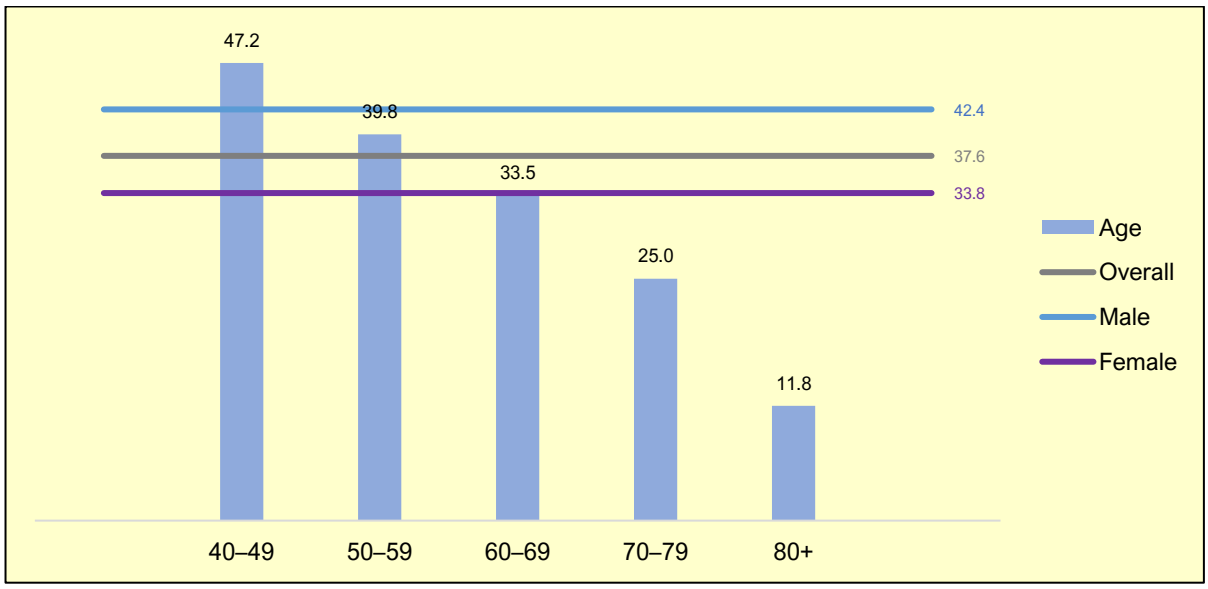

Figure 9.16: Respondents with Correct Answers in All Three Subtractions by Gender and Age (%)

The proportion of respondents with all three correct answers increases with education level from 13% among non-schooling respondents to 42% among those with lower secondary education and 62% among respondents with at least a post-secondary education (Figure 9.17).

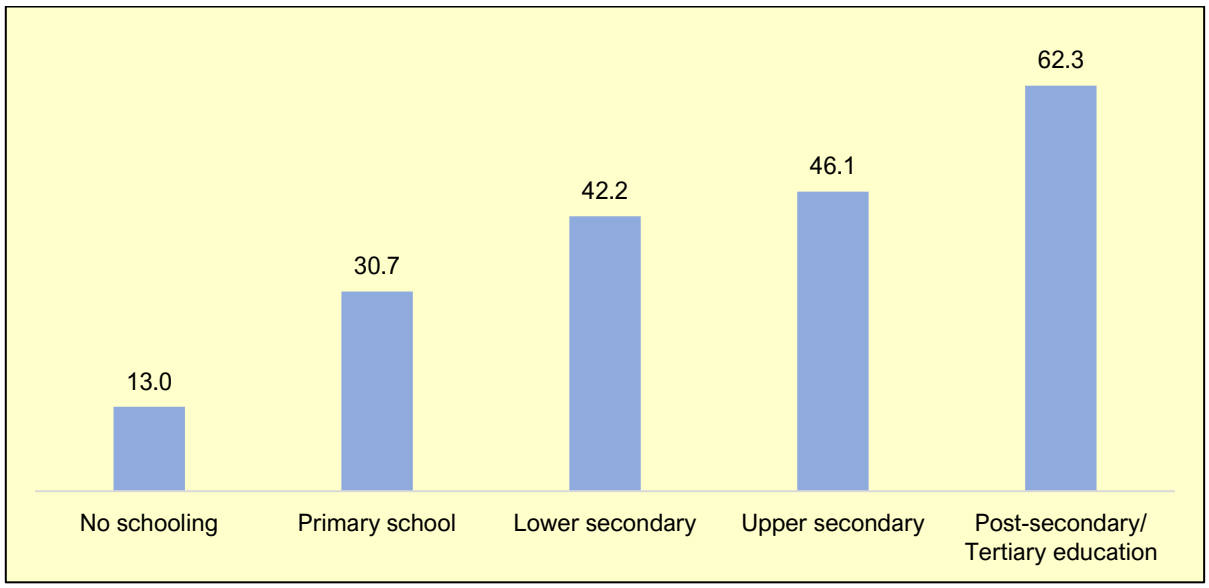

Figure 9.17: Respondents with Correct Answers in All Three Subtractions by Education Level (%)

Comparing the proportion of respondents answering all three subtractions correctly across ethnicity (Figure 9.18), the highest proportion is among Chinese (57%) followed by Non-Majority Group (46%) and Indian respondents (36%).

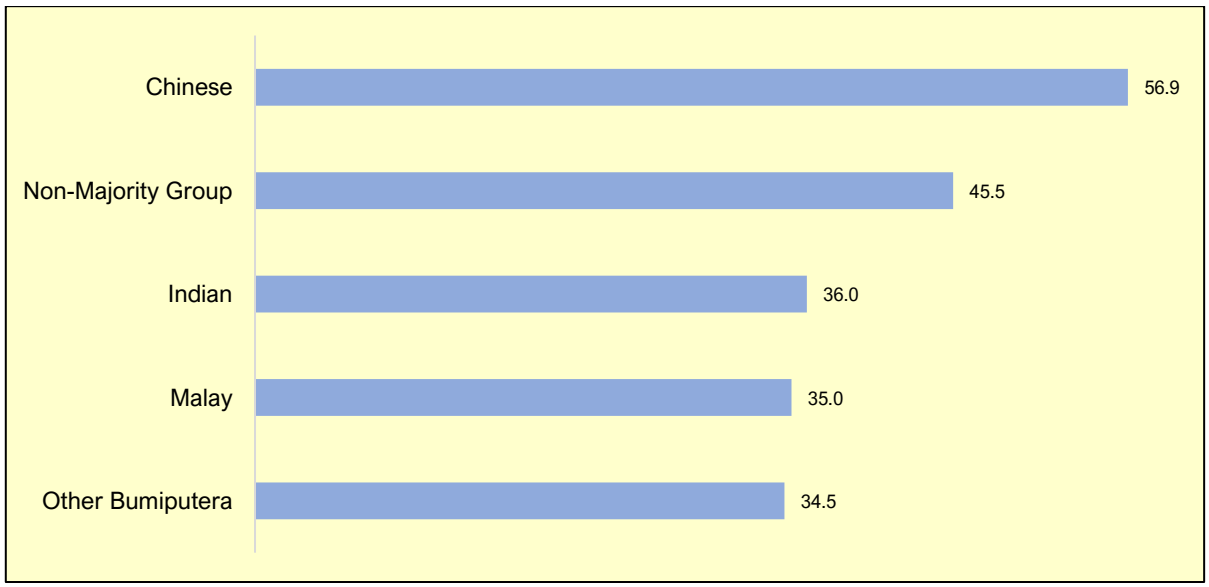

Figure 9.18: Respondents with Correct Answers in All Three Subtractions by Ethnicity (%)

9.7 Word, Name and Orientation Tests

The respondents were asked questions on general knowledge which include current year, current date and current month, first and current prime minister, day of the week, thorny fruit with strong smell and paper cutting tools. As shown in Figure 9.19 more than 90% of the respondents answered correctly for each question except for the question on current date (82%) and first prime minister (67%).

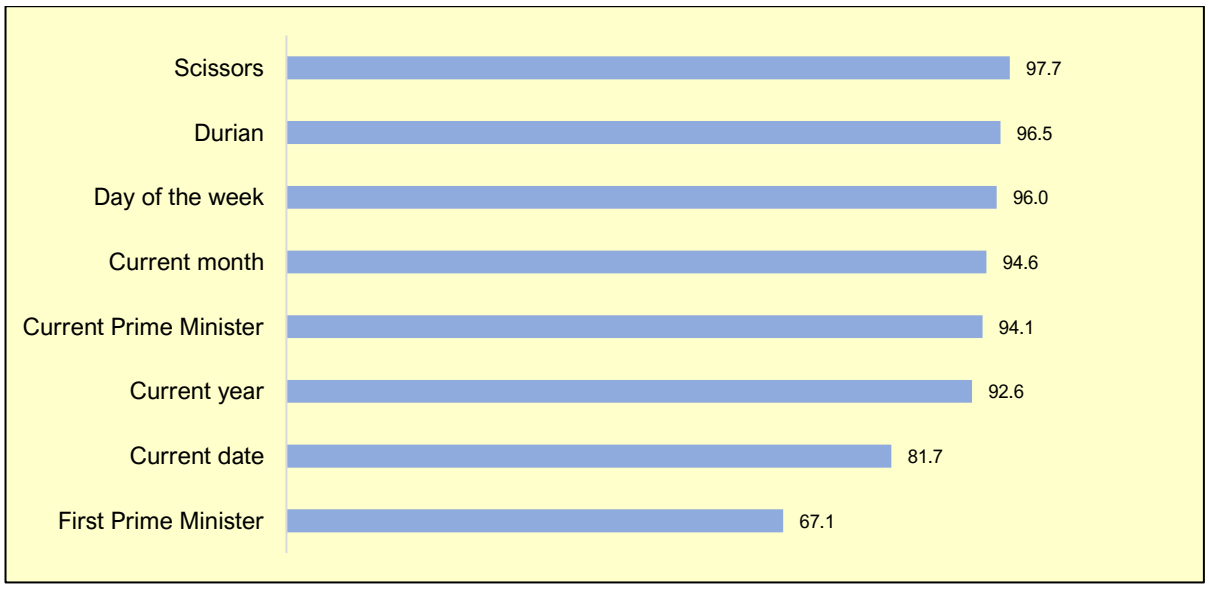

Figure 9.19: Respondents with Correct Answers on General Knowledge (%)

General knowledge based on gender shows that the proportion of male respodents with correct answers to all the questions is higher than female respondents. For example, about 96% of male respondents answered correctly on the current month compared to 93% of female respondents. Similarly, 76% of male respondents answered correctly the name of the First Prime Minister of Malaysia compared to 60% of the female respondents (Table 9.4). Across age, the proportion of correct answers declines gradually with age except for the name of the First Prime Minister where the highest proportion is among respondens aged 60-69 (70%) followed by those aged 40-49 (68%).

Table 9.4: Respondents with Correct Answers on General Knowledge by Gender and Age (%)

	Overall		Age				
	Male	**Female**	**40–49**	**50–59**	**60–69**	**70–79**	**80+**
Scissors	97.9	97.6	99.6	98.5	98.0	92.8	89.9
Durian	97.5	95.7	98.8	97.4	96.6	90.1	88.7
Current Prime Minister	96.9	91.8	97.8	96.5	93.5	84.9	73.2
Day of the week	96.2	95.7	98.8	97.5	95.6	90.6	76.8
Current month	96.1	93.4	98.4	96.9	95.0	84.7	69.0
Current year	95.9	90.0	98.4	96.5	91.6	78.9	59.5
Current date	83.1	80.7	89.7	85.0	80.5	66.5	43.5
First Prime Minister	76.1	60.0	68.3	67.3	69.6	63.0	48.8

General knowledge across education level indicates that the proportion of correct answers for each of the questions is lowest among respondents with no schooling and highest among those with at least a post-secondary education (Table 9.5). For example, the proportion of respondents who answered the name of current Prime Minister correctly is 77% among non-schooling respondents, 93% among respondents with primary education and 100% among those with at least a post-secondary education.

Table 9.5: Respondents with Correct Answers on General Knowledge by Education Level (%)

	No schooling	Primary school	Lower secondary	Upper secondary	Post-secondary/ Tertiary education
Scissors	91.4	97.6	99.0	99.6	99.6
Durian	88.9	95.7	98.3	99.2	99.1
Day of the week	88.8	94.6	97.6	99.0	98.9
Current month	79.9	93.7	98.2	99.2	98.6
Current Prime Minister	77.3	93.2	97.2	99.5	100.0
Current year	68.8	92.6	97.6	99.0	99.3
Current date	58.9	79.4	86.8	89.4	90.6
First Prime Minister	27.9	58.0	73.3	84.7	93.3

9.8 Immediate Word Recall

For immediate word recall, the enumerators read out loud to respondents a list of 10 words randomly selected by the system and asked the respondents to immediately recall those 10 words. Figure 9.20 shows the mean number of words respondents could recall is 4.6 with no difference between male and female respondents. The mean number of words immediately recalled by respondents decreases from 5.3 words among those aged 40-49 to 3.4 words among respondents aged 70-79 and 2.3 words among those in the oldest age group.

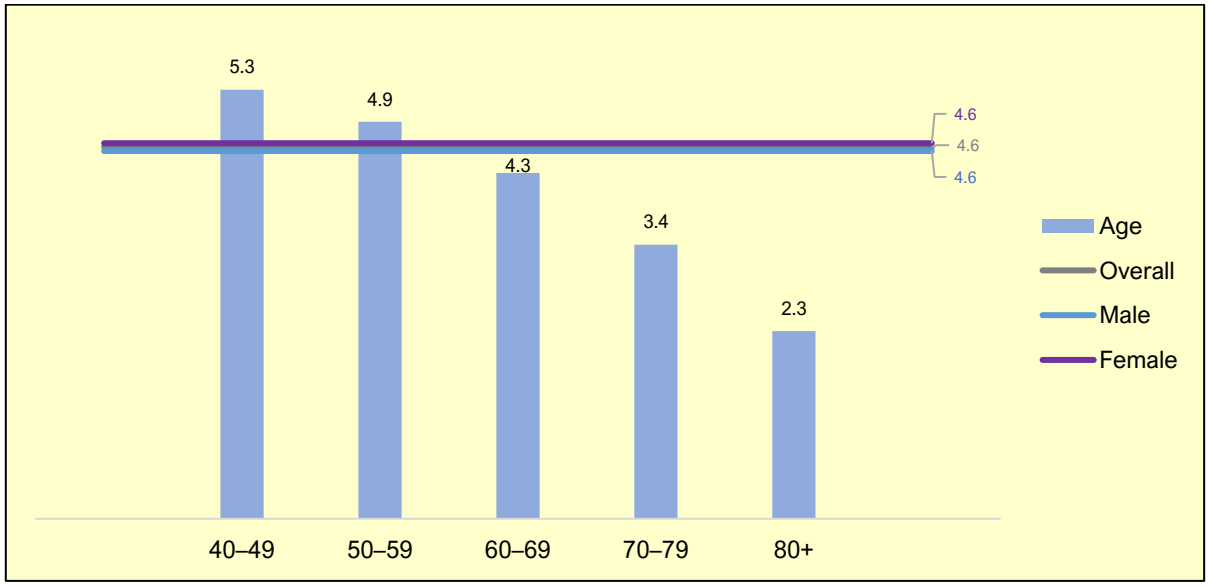

Figure 9.20: Average Number of Immediate Word Recalled by Gender and Age

The mean number of words immediately recalled by respondents gradually increases from about three words among respondents with no schooling to about five words among those with lower secondary education and six words among respondents with at least a post-secondary education (Figure 9.21).

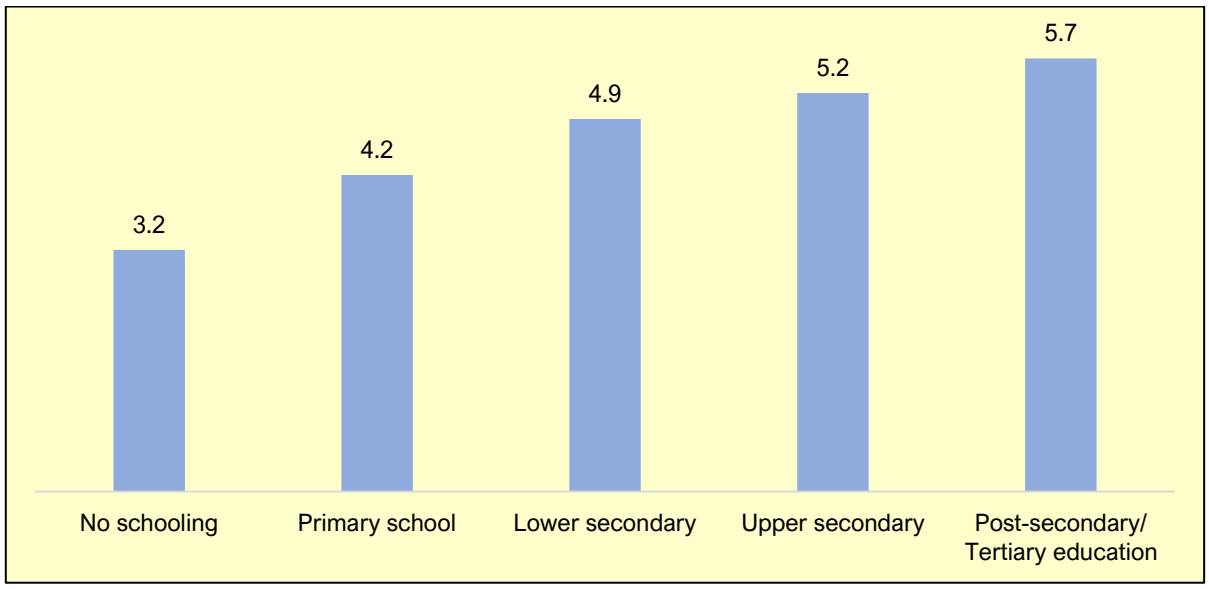

Figure 9.21: Average Number of Immediate Word Recalled by Education Level

9.9 Delayed Word Recall

For delayed word recall, respondents were asked to recall the words that were read out to them after about five minutes, and the result is shown in Figure 9.22. The mean number of words that respondents were able to recall after a few minutes is 3.7 words with no difference between male and female respondents. The mean number of delayed word recall decreases gradually with age from 4.5 words among respondents aged 40-49 to 2.5 words among those aged 70-79 and 1.6 among the oldest age group.

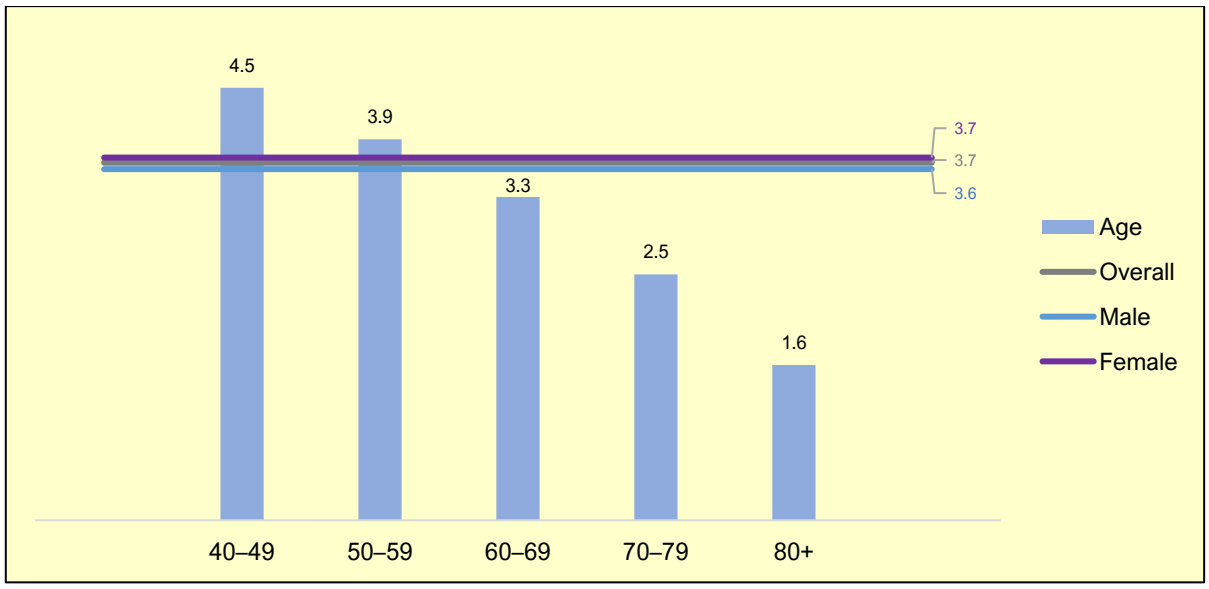

Figure 9.22: Average Number of Delayed Word Recalled by Gender and Age

The mean number of delayed words recalled increases with education level from about two words among respondents with no schooling to four words with lower secondary and about five words among those with at least a post-secondary education (Figure 9.23).

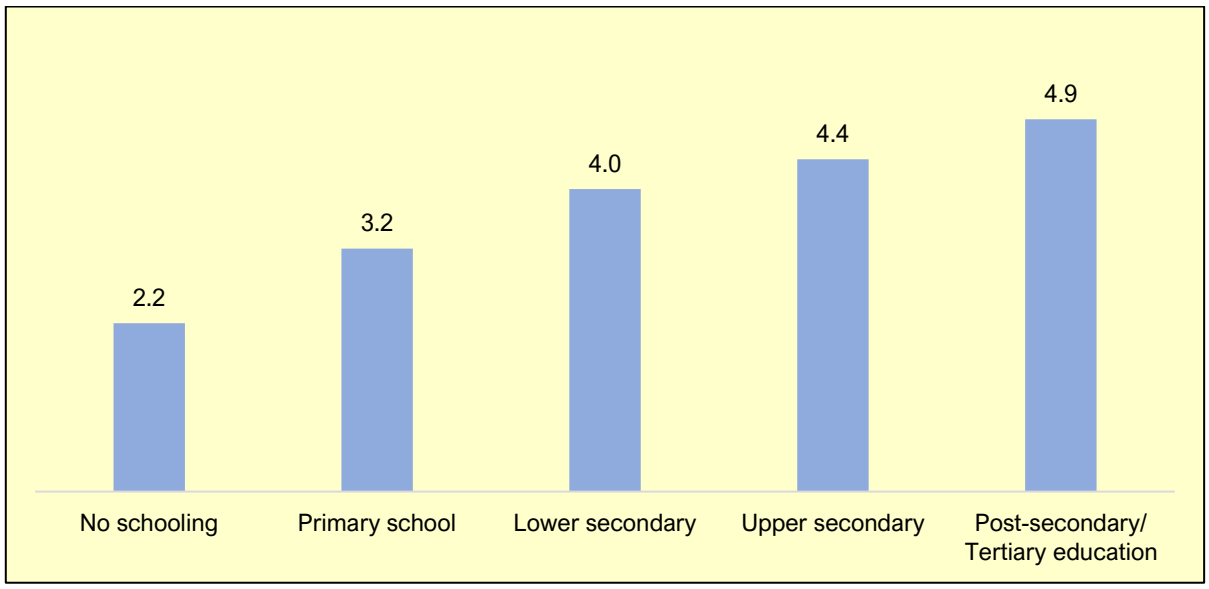

Figure 9.23: Average Number of Delayed Word Recalled by Education Level

9.10 Animal Naming

The respondents were asked to name as many animals as they could in one minute. Respondents named an average of 15.6 animals, with minimal differences between males and females. (Figure 9.24). The mean number of animals respondents could name decreases with age from about 18 among those aged 40-49 to about 15 among those aged 60-69 and 10 among the oldest respondents.

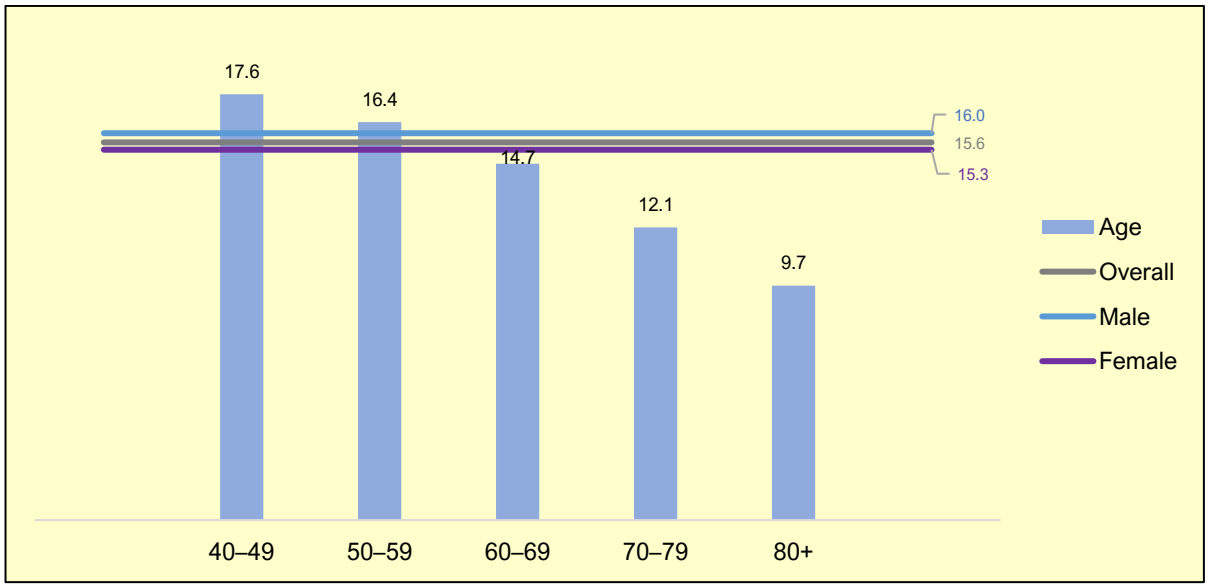

Figure 9.24: Average Number of Animal Named by Gender and Age

Across education level, the mean number of animals respondents were able to name increases from about 11 animals among respondents with no schooling to about 18 among those with upper secondary and 20 among respondents with at least a post-secondary education (Figure 9.25).

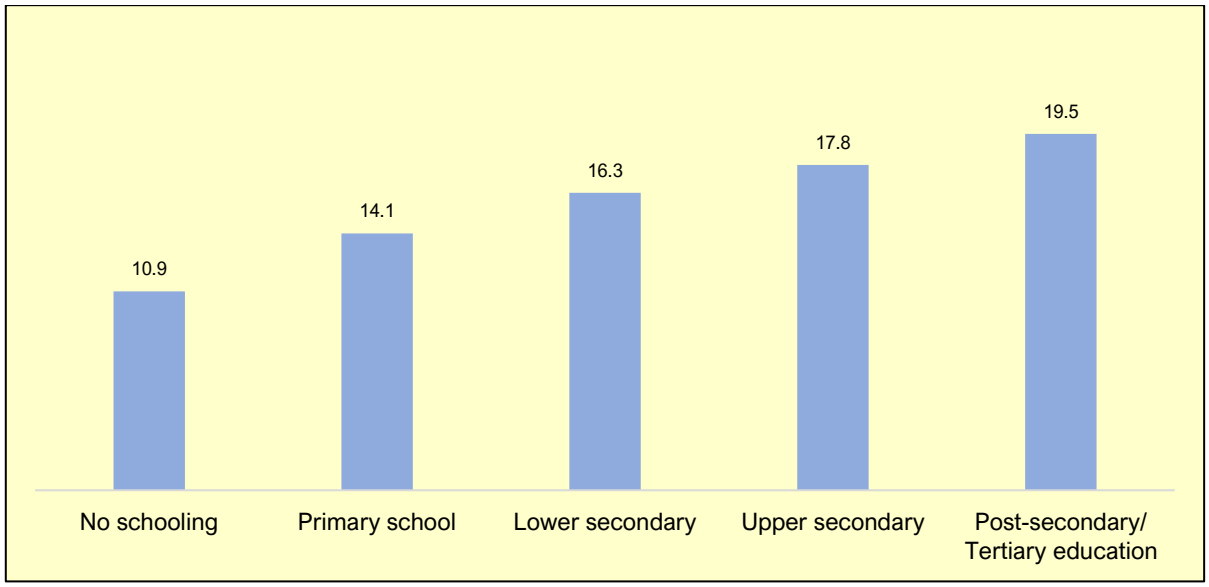

Figure 9.25: Average Number of Animal Named by Education Level

9.11 Measurement of Cognition

A harmonised cognitive score ranging from 0 to 100 was developed based on the following five tasks: (1) Counting backwards; (2) Serial 7 test; (3) Word, name and orientation tests; (4) Immediate word recall; (5) Delayed word recall. A higher score reflects better cognitive ability. The average score for the overall sample is 56.6, with minimal differences between male and female respondents. However, the score shows a gradual decline with increasing age (Figure 9.26).

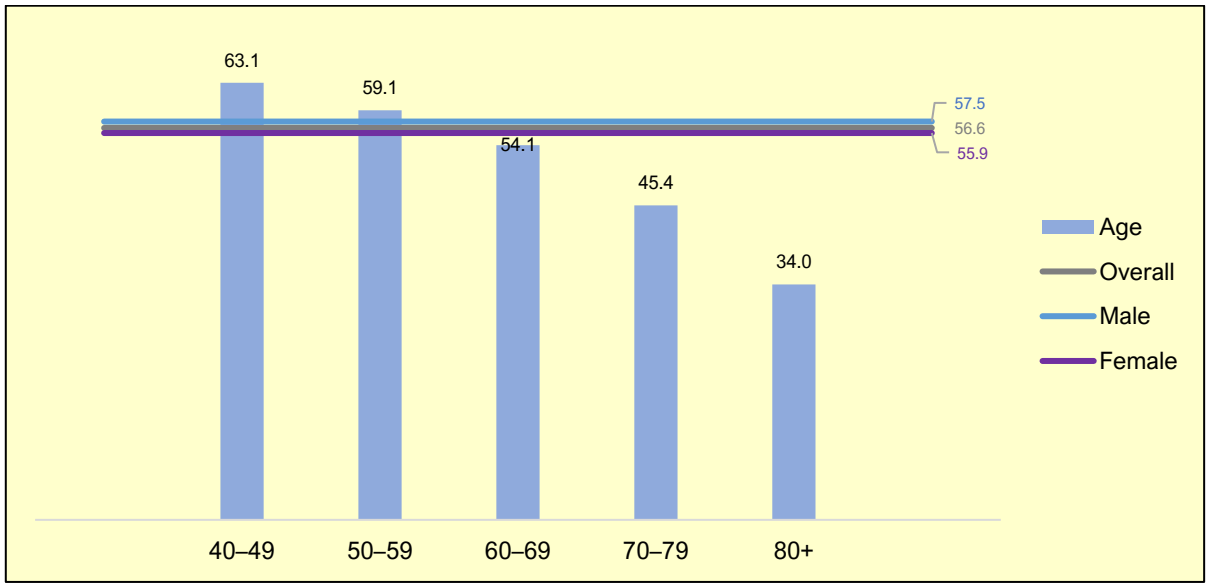

Figure 9.26: Cognitive Functioning Mean Score by Gender and Age

The bar graph shows the average cognitive score by level of education (Figure 9.27). Cognitive scores increase steadily with higher levels of education. Respondents with no formal education have the lowest average score (47.2), while those with tertiary education have the highest (67.5). This trend suggests a positive association between educational attainment and cognitive performance.

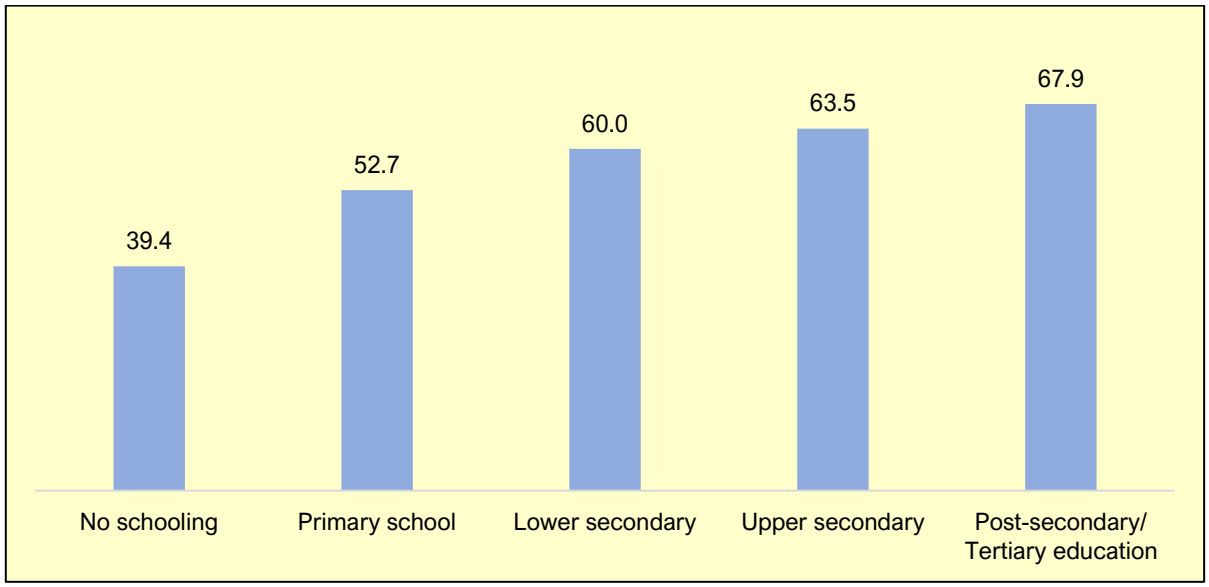

Figure 9.27: Cognitive Functioning Mean Score by Education Level

10 PSYCHOSOCIAL WELLBEING

Studies on successful ageing have highlighted its broad and multidimensional nature with psychosocial factors being one of the important components (Paúl et al., 2012; Stenner et al., 2011). A systematic review of laypersons' perspective of successful ageing found that psychosocial aspects were the most frequently mentioned factors, more specifically being engagement and self-awareness (Cosco et al., 2013).

Psychological factors that help older adults cope with age-related declines and maintain a positive outlook on life are crucial for active ageing (Paúl et al., 2012). Additionally, older individuals often prioritize social engagement over physical health when defining successful ageing (Golden et al., 2009). Furthermore, cultural differences significantly shape how older adults live and think, yet research on ageing is predominantly centered on Western populations (Cosco et al., 2013).

The psychosocial component of MARS collected information related to the respondent's personal thought, attitude and behaviour as well as interactions with their social environment that includes family, peers and the surrounding community. This section also includes questions on social and religious activities that respondents may participate in.

10.1 Outlook on life

Respondents were asked to respond to 18 statements related to their feelings to indicate how often they experienced those feelings in the last 6 months. The response to each statement was given a score based on a scale of 1 to 5 where 1=Never, 2=Rarely, 3=Sometimes, 4=Often and 5=Always. The 18 statements presented can be classified as: (1) Positive outlook consisting of 8 statements and, (2) Negative outlook consisting of 10 statements.

As shown in Figure 10.1, more than 70% of the respondents often or always feel in tune with the people around them (79%), there are people respondents feel close to (79%), that people understand them (73%), respondents feel they are part of group (73%), there are people they can turn to (73%) and that there are people respondents can talk to (73%), These positive statements are indicative of how respondents feel about their relationships with people. The other two statements are about the respondents' inner feelings shows that 69% of them often or always feel good or happy while 67% often or always feel satisfied or fulfilled with their lives (Figure 10.1).

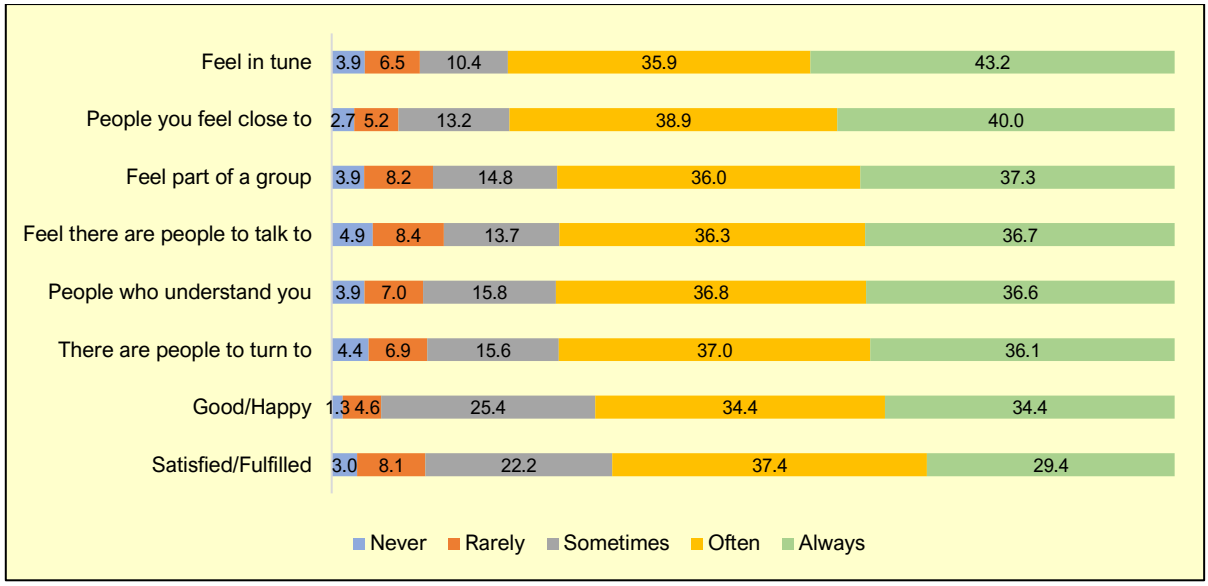

Figure 10.1: Distributions of Positive Outlook Statements in the Last 6 Months (%)

There are 10 statements related to negative outlook on life as shown in Figure 10.2. The proportion of respondents who often/always experienced negative feelings ranges from feeling isolated (4%) to lack of companionship (10%), loneliness (11%), anxiety/stress (13%) and thinking about death (37%).

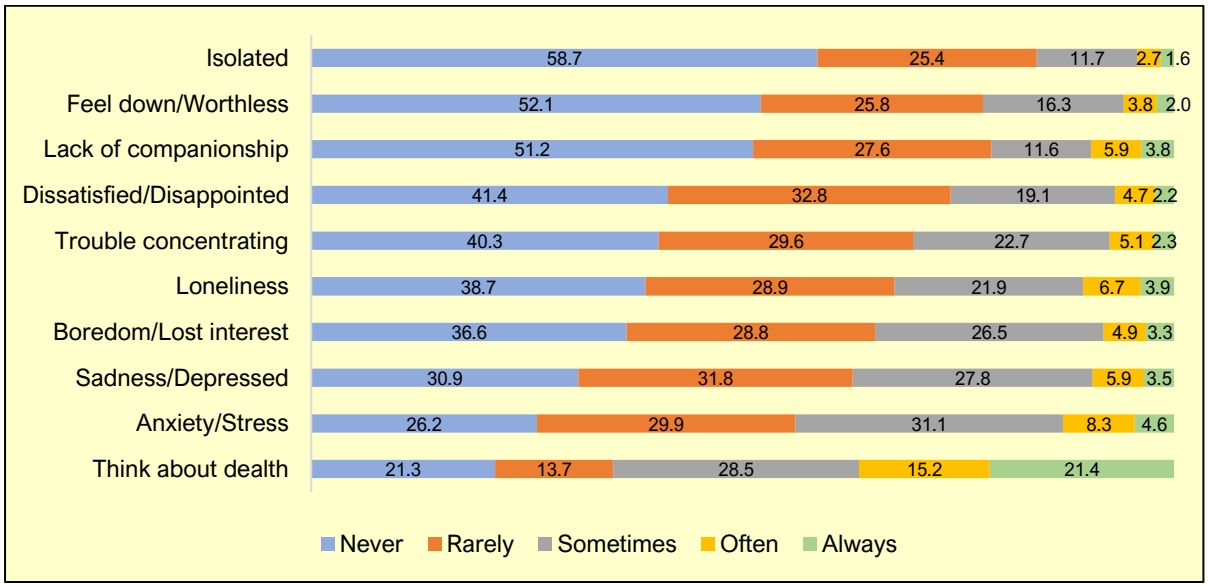

Figure 10.2: Distributions of Negative Outlook Statements in the Last 6 Months (%)

Psychosocial wellbeing score was computed by taking the summation of both the eight positive statements and 10 negative statements with five possible responses. The responses for the negative statements were reverse coded and the total score for each respondent was normalised to 100 using the min-max normalisation method. As shown in Figure 10.3, the mean psychosocial wellbeing score for the overall sample is 72.5, male having slightly higher mean (73.6) than female respondents (71.7). Mean psychosocial wellbeing decreases gradually with age from 73.4 for respondents aged 40-49 to 70.8 for those aged 70-79 and 65.0 for respondents aged 80 and above.

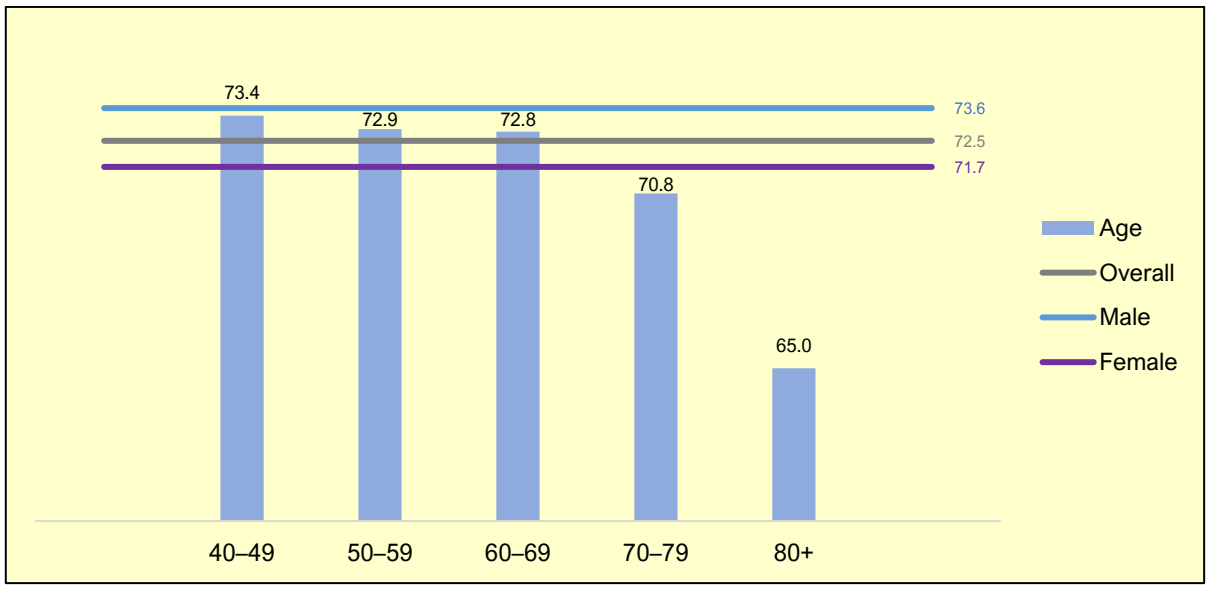

Figure 10.3: Psychosocial Wellbeing Mean Score by Gender and Age

It is observed from Figure 10.4 that the mean score increases gradually with education level from 67.7 for respondents with no schooling to 73.5 for those with lower secondary education and 76.5 for respondents with at least a post-secondary education.

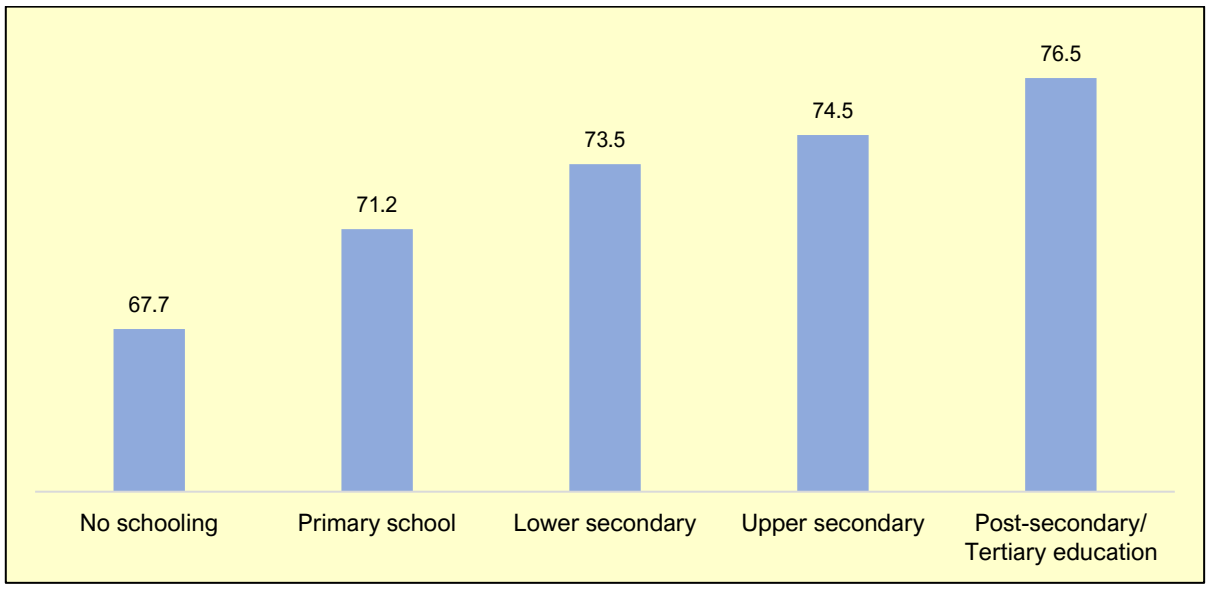

Figure 10.4: Psychosocial Wellbeing Mean Score by Education Level

Examining psychosocial wellbeing by self-rated health indicates the mean score is highest for respondents in good health (75.3) compared with those in fair health (71.6) and respondents who rated their health as poor (63.8) (Figure 10.5).

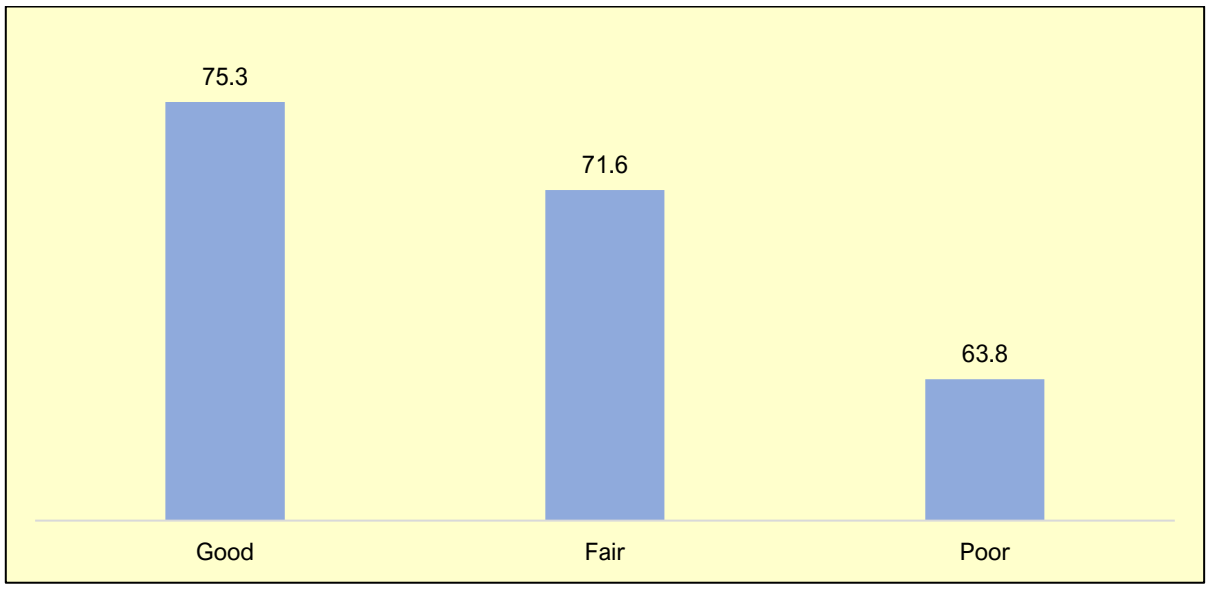

Figure 10.5: Psychosocial Wellbeing Mean Score by Self-rated health

Respondents who are currently working have a higher mean psychosocial wellbeing score than those who are not working (75.0 and 71.0, respectively).

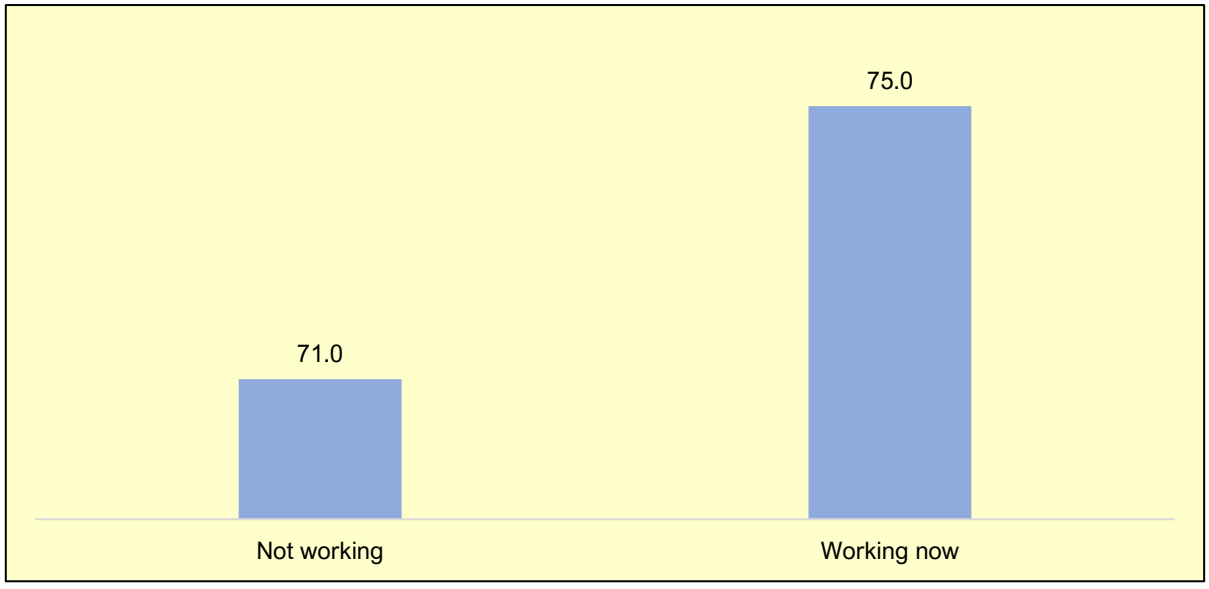

Figure 10.6: Psychosocial Wellbeing Mean Score by Working Status

10.2 Perceived Constraints on Personal Control

Four statements that measure perceived constraints on personal control with the respondents' level of agreement are shown in Figure 10.7. About 28% agree/strongly agree that what happens in their life is often beyond their control while 15% agree/strongly agree that they often feel helpless in dealing with the problems of life. Slightly, more than 10% of the respondents agree/strongly agree that there is no way they can solve the problems they faced (13%) and that other people determine most of what they can and cannot do (11%) (Figure 10.7).

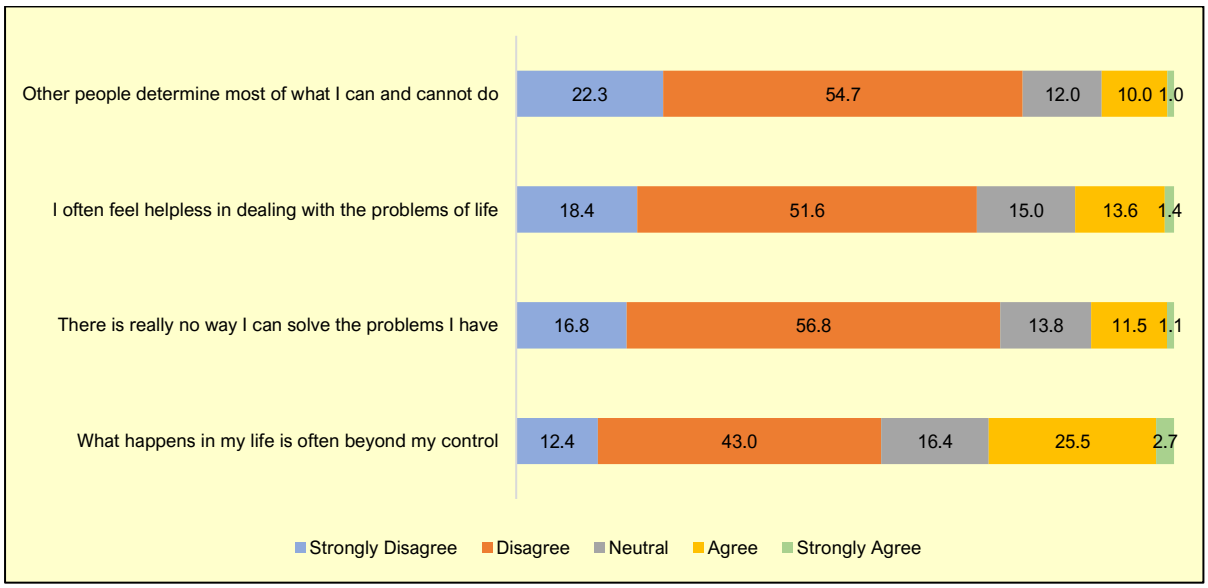

Figure 10.7: Perceived Constraints on Personal Control (%)

The total score for the four statements with five possible responses were then computed and normalised to generate the perceived constraints on personal control score with overall mean 32.9, female 34.0 and male respondents 31.6 (Figure 10.8). The mean score increases with age from 30.9 for respondents aged 40-49 to 32.9 for those aged 60-69 and 41.3 for respondents aged 80 and above.

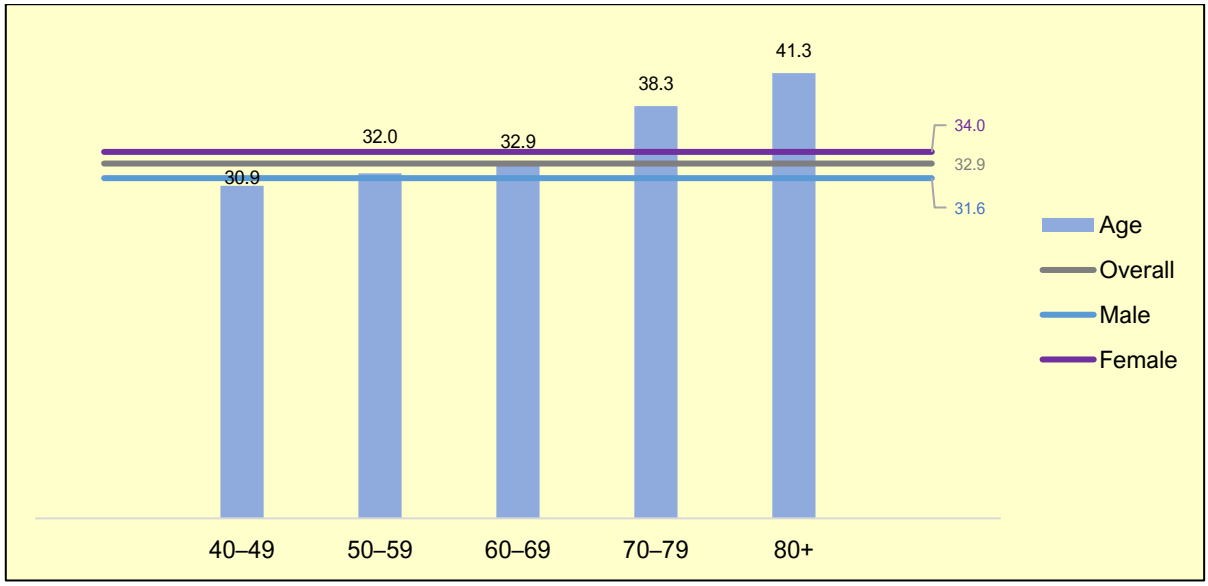

Figure 10.8: Perceived Constraints on Personal Control Mean Score by Gender and Age

The mean score for perceived constraints on personal control gradually decreases with level of education from 37.4 for non-schooling respondents to 32.5 for those with a lower secondary education and 26.5 for respondents with at least a post-secondary education (Figure 10.9).

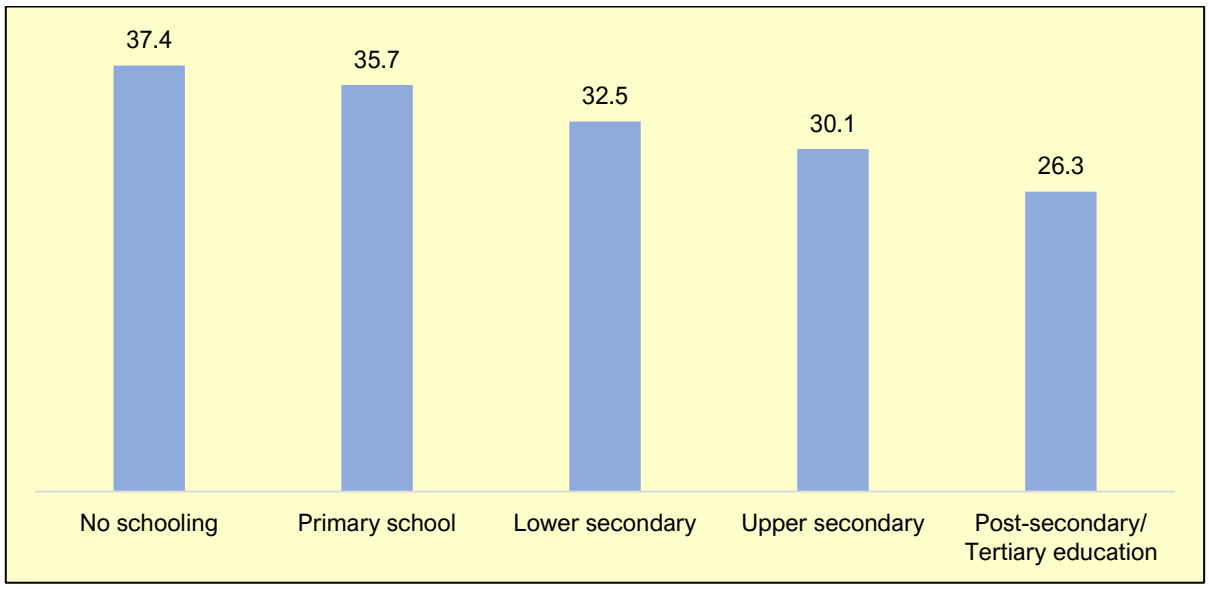

Figure 10.9: Perceived Constraints on Personal Control Mean Score by Education Level

The mean score for perceived constraints on personal control increases with deteriorating self-rated health (Figure 10.10). Respondents in good health have a mean score of 30.5 which increases to 33.6 for those in fair health and 41.4 for respondents in poor self-rated health.

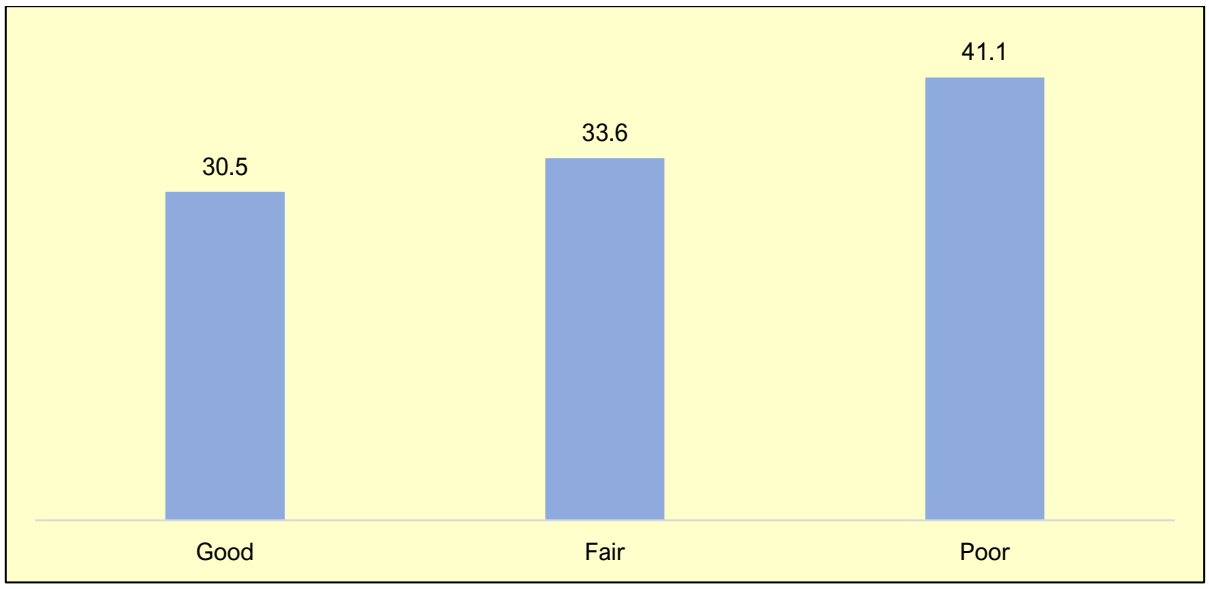

Figure 10.10: Perceived Constraints on Personal Control Mean Score by Self-rated Health

10.3 Perceived Mastery

Five statements related to perceived mastery with five possible responses were included (Figure 10.11). The results indicate that 83% of the respondents agreed/strongly agreed that when they really want to do something, they usually find a way to succeed at it. About 78% agreed/strongly agreed that whether they can get what they want is in their own hands while 75% agreed/strongly agreed that they can do the things they want to do. Respondents who agreed/strongly agreed that what happens to them in the future mostly depends on them comprise 72% while 69% agreed/strongly agreed that they can do just about anything they really set their mind to (Figure 10.11).

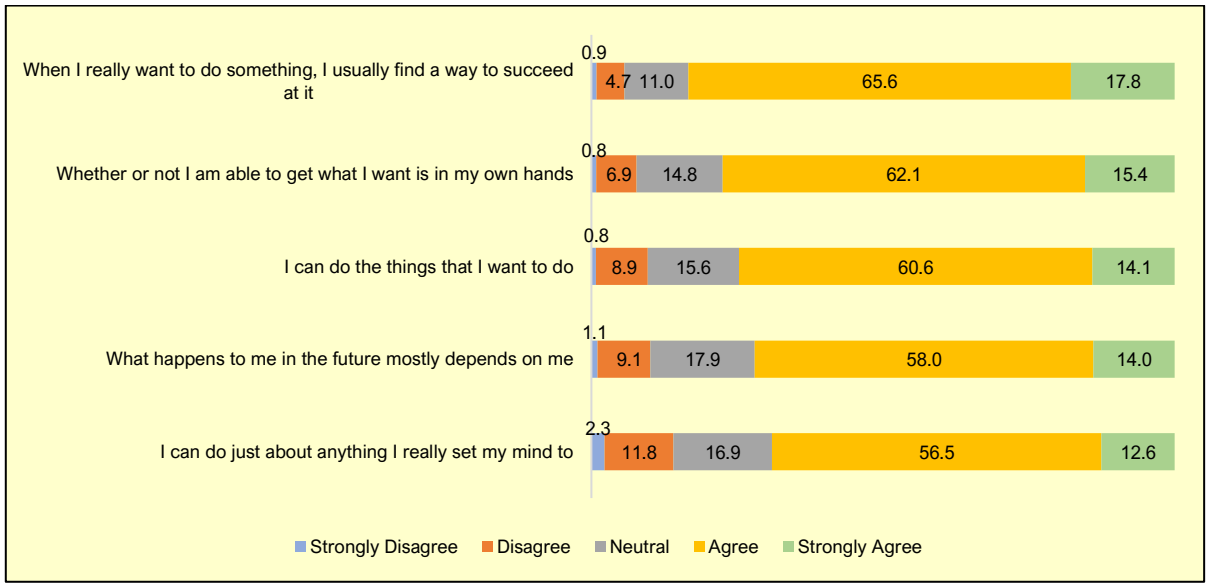

Figure 10.11: Respondents' Perceived Mastery (%)

Perceived mastery score was computed based on the five statements with five possible responses. The normalised score shown in Figure 10.12 has an overall mean of 69.9 with a higher mean for male (71.3) than for female respondents (68.8). The mean perceived mastery score decreases with age from 70.8 for respondents aged 40-49 to 68.2 for those aged 70-79 and 60.2 for respondents aged 80 and above.

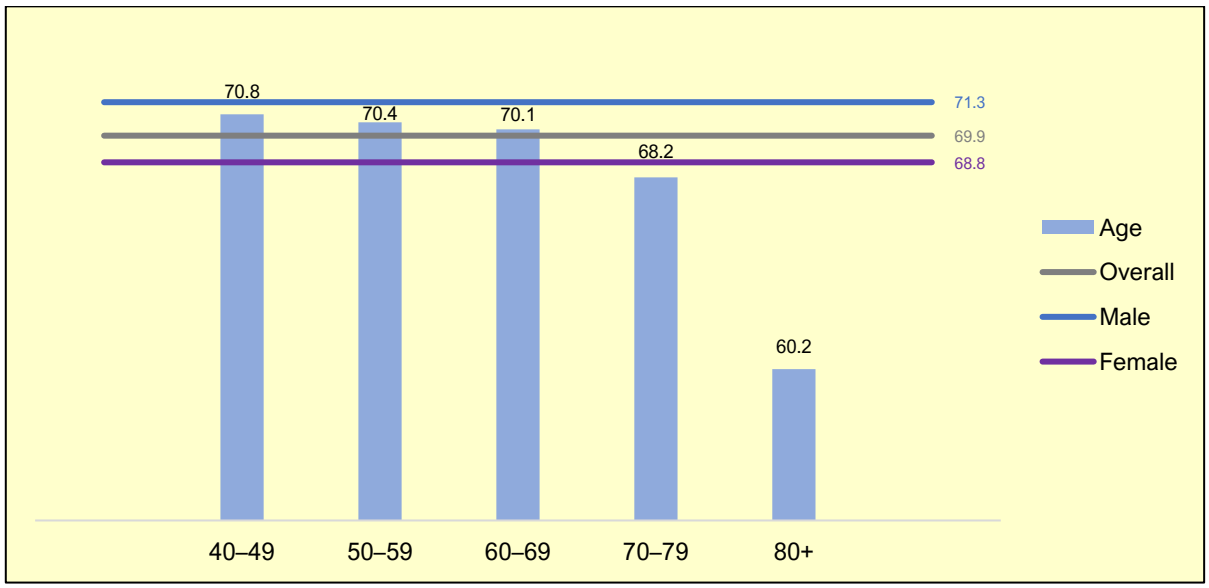

Figure 10.12: Perceived Mastery Mean Score by Gender and Age

Perceived mastery mean score increases with education level from 66.1 for non-schooling respondents to 70.6 for those with a lower secondary education and 71.6 for respondents with at least a post-secondary education (Figure 10.13).

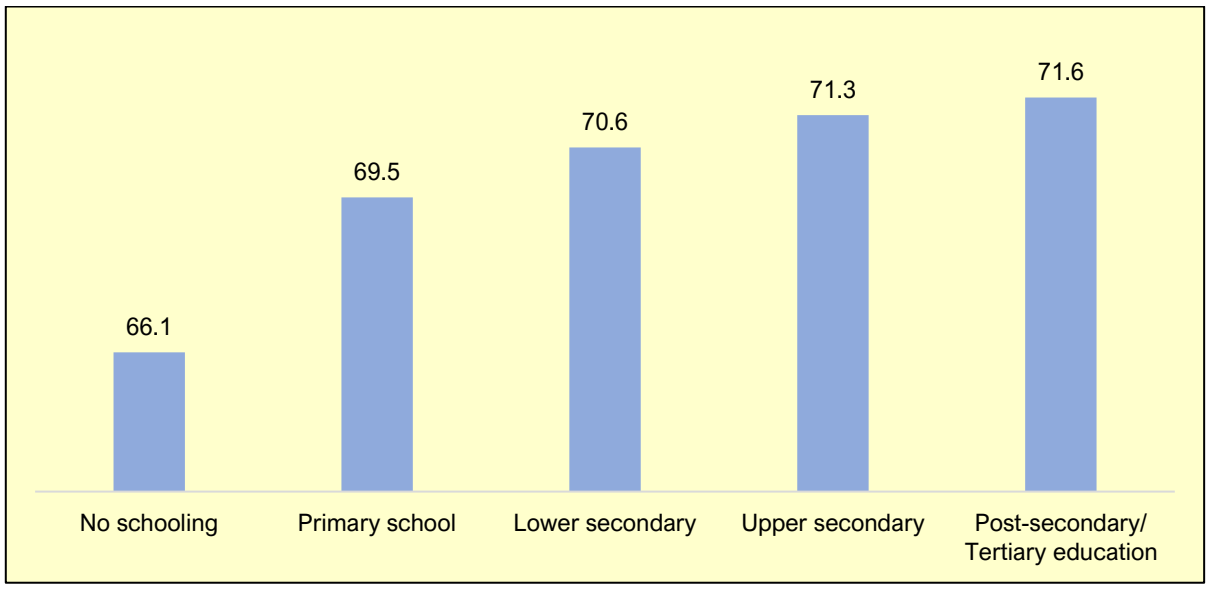

Figure 10.13: Perceived Mastery Mean Score by Education Level

The mean score for perceived mastery gradually decreases with deteriorating self-rated health from 71.2 for respondents in good health to 69.7 for those in fair health and 64.7 for respondents in poor health (Figure 10.14).

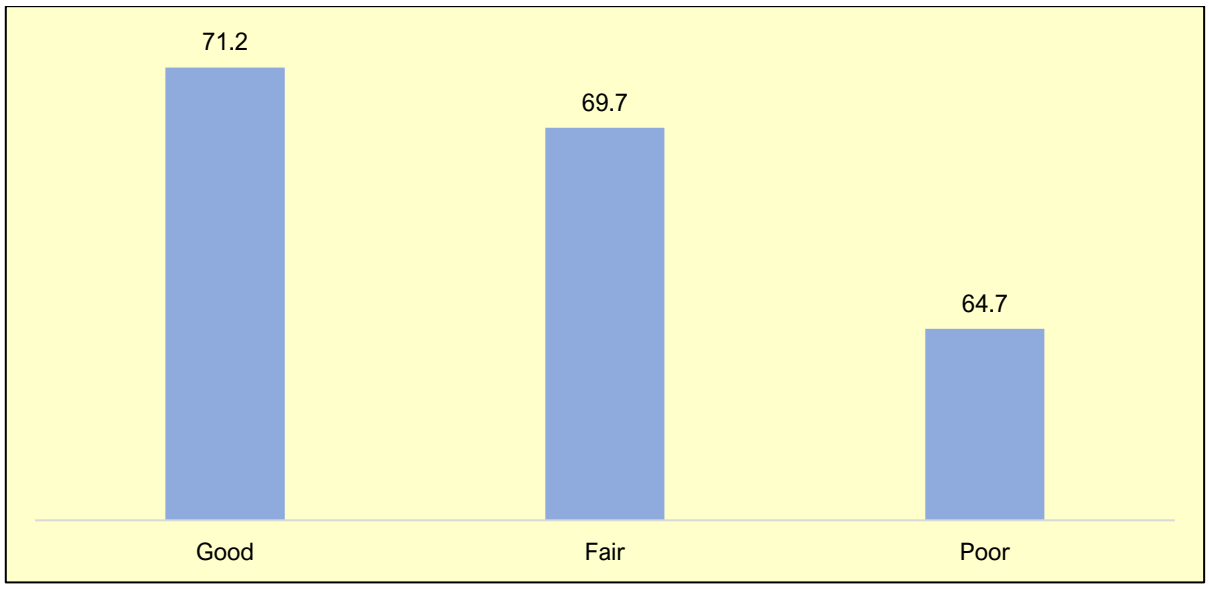

Figure 10.14: Perceived Mastery Mean Score by Self-rated Health

10.4 Personal Capacity

Four statements were incorporated in the questionnaire with three levels of agreement to measure respondents' personal capacity. The statements include (1) I can still contribute to society, (2) I am financially independent, (3) I should be the one to determine when I want to retire, and (4) I will continue working as long as my mental and physical capability permit.

Overall, 78% of the respondents agreed that they can still contribute to society, the proportion is substantially higher among male (84%) than female respondents (74%) (Figure 10.15). The proportion of respondents who claimed they can still contribute to society decreases with age from 87% among respondents aged 40-49 to 55% among those aged 70 and above.

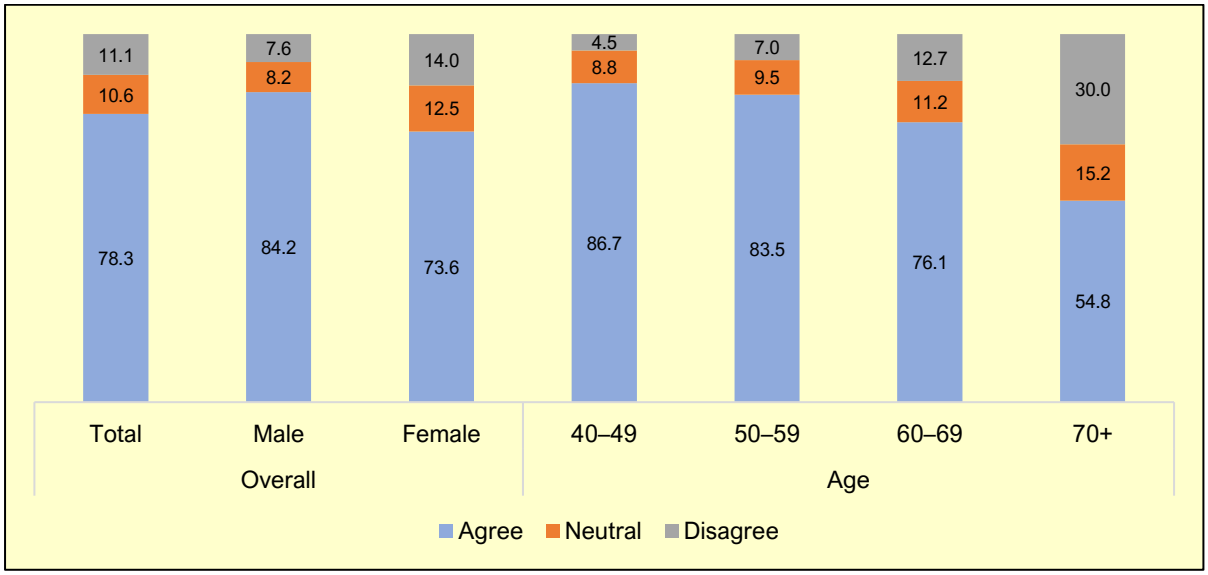

Figure 10.15: Respondents Able to Contribute to Society by Gender and Age (%)

On financial independence, about 71% agree that they are financially independent, substantially higher among male (82%) than female respondents (62%) (Figure 10.16). The proportion of respondents who are financially independent decreases with age from 78% among respondents aged 40-49 to 55% among those aged 70 and above.

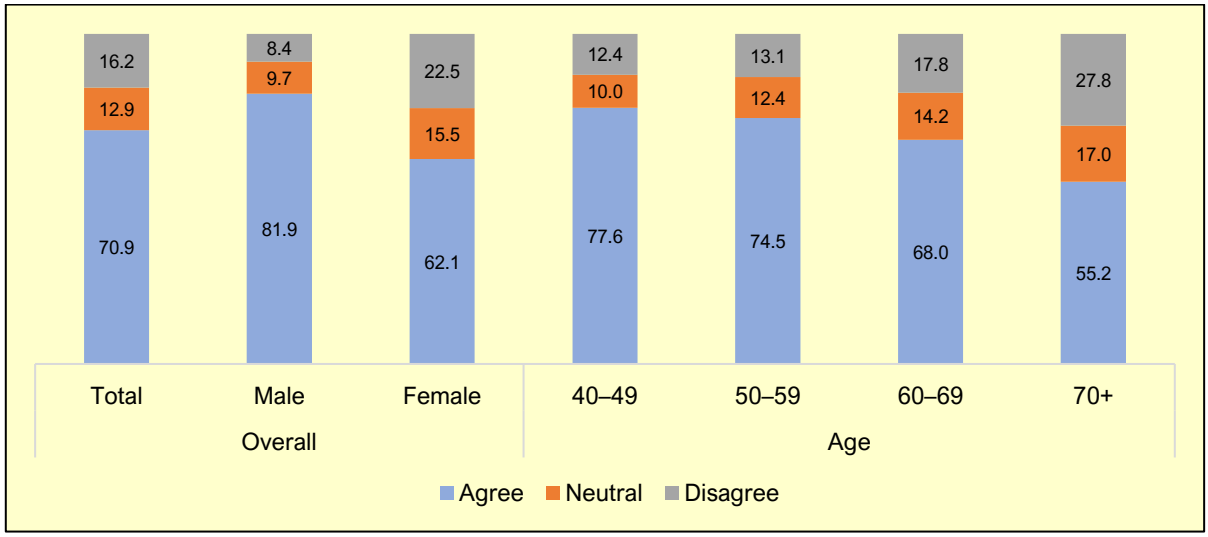

Figure 10.16: Respondents' Financial Independence by Gender and Age (%)

About 75% of the respondents agreed that they should be the one to determine when they want to retire, higher among male (82%) than female respondents (69%) (Figure 10.17). The proportion of respondents who agreed that they should be the one to decide when to retire decreases with age from 80% among those aged 40-49 to 74% among respondents aged 60-69 and 62% among those aged 70 and above.

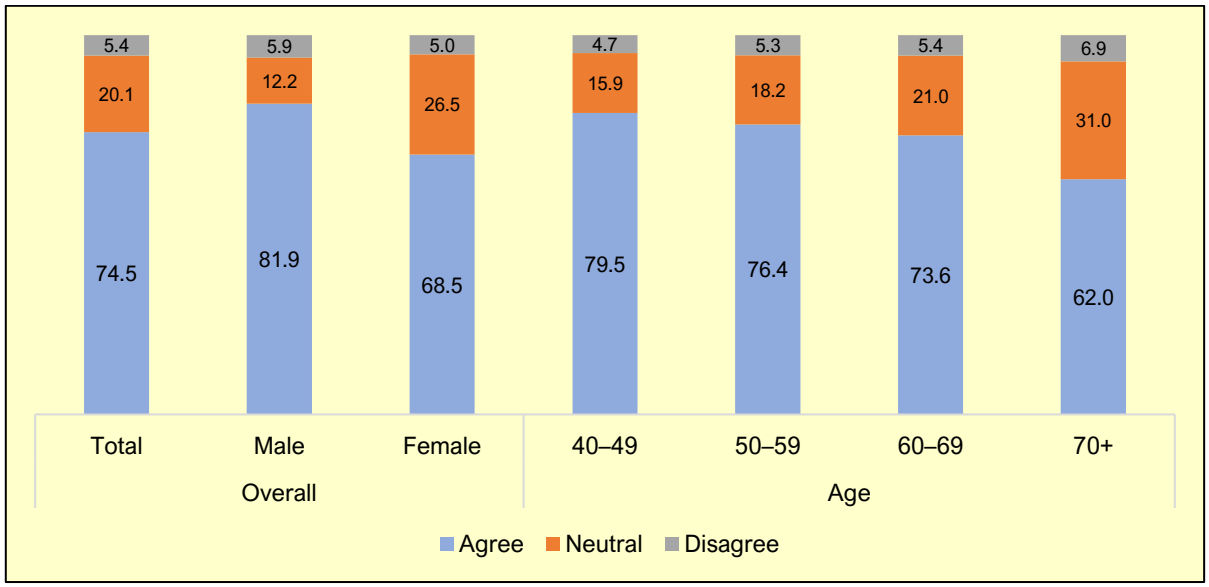

Figure 10.17: Respondents Who Feel They Should be the One to Determine When They Want to Retire by Gender and Age (%)

Overall, a high proportion of the respondents expressed a desire to work if their mental and physical abilities permitted (Figure 10.18). This sentiment is slightly higher among male respondent (87%) than female respondents (78%0). The proportion of respondents who agreed to continue working if mental and physical abilities permit decreases with age. This is evident from the 88% agreement among respondents aged 40-49, which fell to 66% among those aged 70 and above.

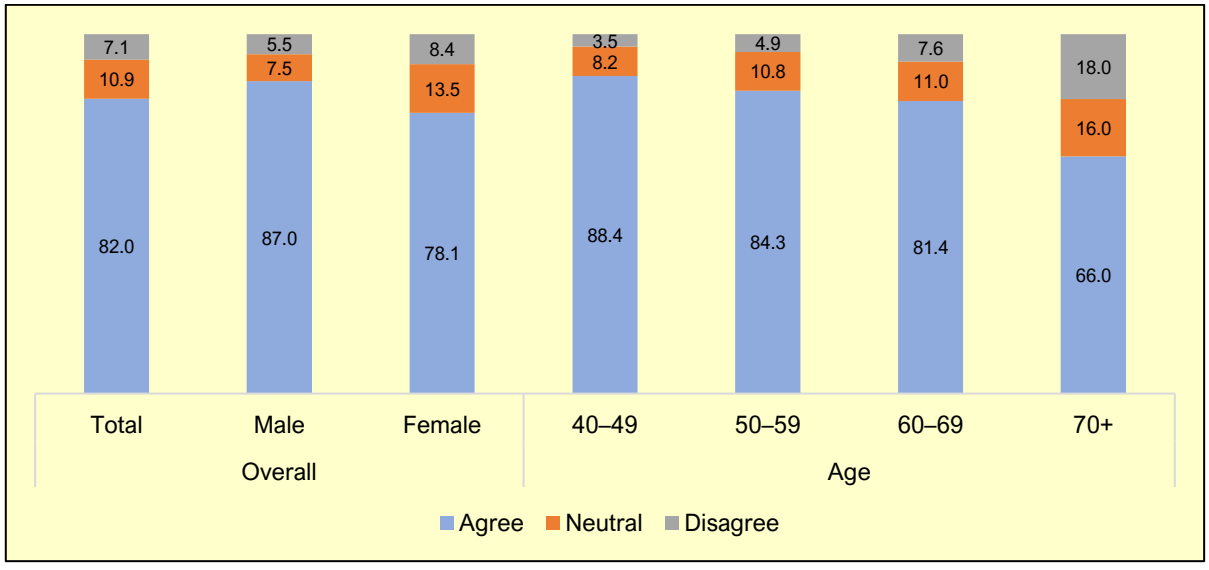

Figure 10.18: Respondents Continuing to Work if Mental and Physical Abilities Allow by Gender and Age (%)

10.5 Perspectives on Ageing

Respondents were asked to indicate how much they agree or disagree with the statements on preparedness to look after their health, how long they would like to live and need for long term care. About 85% agreed that they are prepared to take care of their health with little difference between male and female respondents (female 85%, male 84%). The proportion of respondents who are prepared to look after their health is highest among those aged 40-49 (88%) and lowest among respondents aged 70 and above (Figure 10.19).

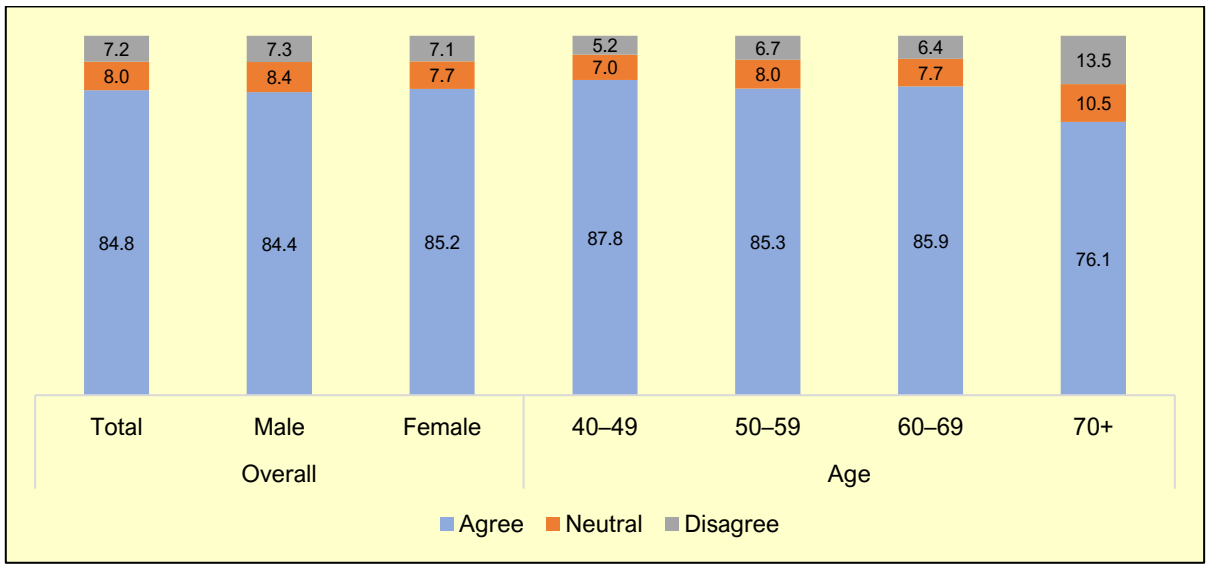

Figure 10.19: Respondents Who Prepared to Care for Own Health by Gender and Age (%)

Respondents who would like to live beyond age 80 account for 66% of the total respondents, male slightly higher (68%) than female respondents (64%). The proportion of respondents who would like to live beyond 80 is highest among those aged 40-49 and decreases to about 64% among respondents aged 60 and above (Figure 10.20).

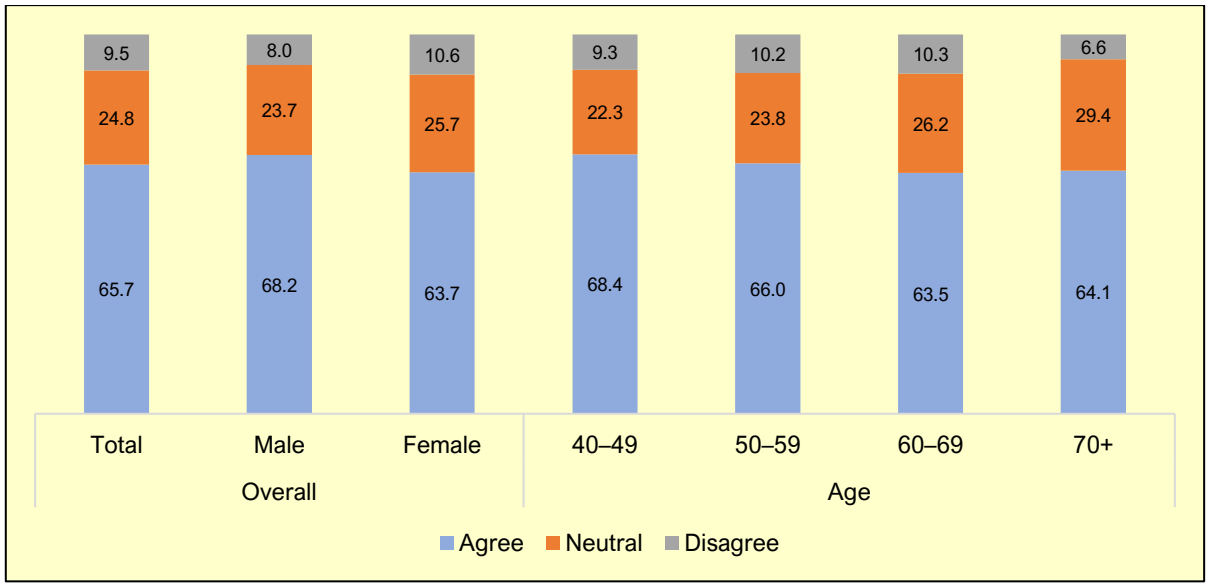

Figure 10.20: Respondents Who Would Like to Live Beyond Age 80 Years by Gender and Age (%)

On the need for long-term care in old age, about 44% of the respondents agreed that they do not need it, higher proportion among male respondents (46%) than female respondents (42%). Respondents who do not need long-term care in old age account for about 40-41% among those aged 40-59 to 49% among respondents aged 70 and above (Figure 10.21).

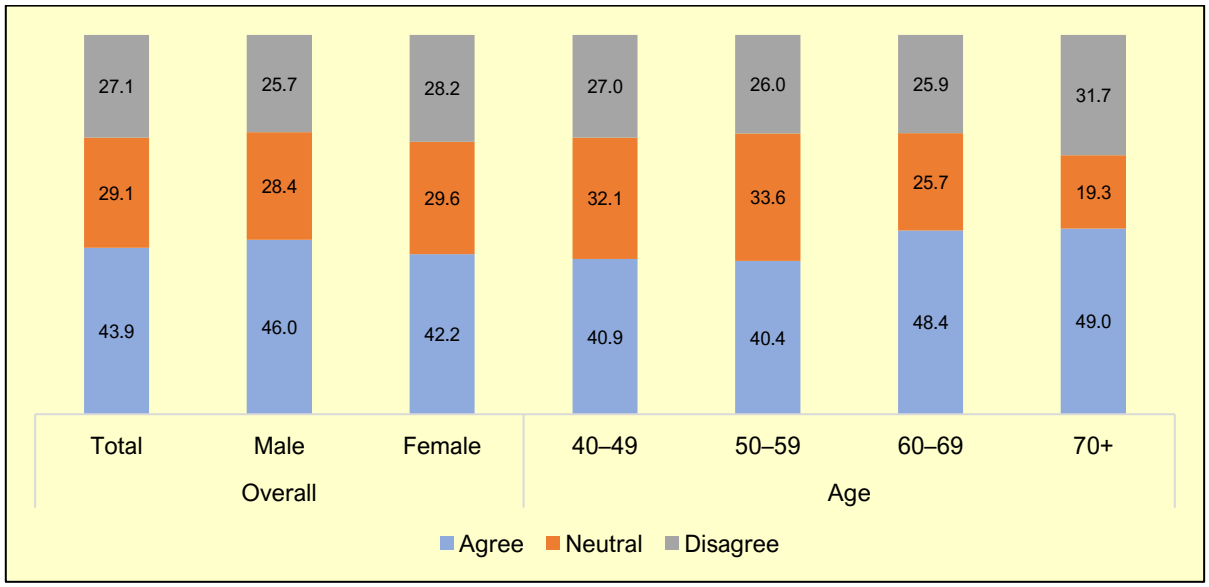

Figure 10.21: Respondents Who Do Not Need Long-Term Care in Old Age by Gender and Age (%)

Over 90% of the respondents reported they have a loving family, approximately 88% are leading a meaningful life and 81% of them reported having friends who care for them (Figure 10.22).

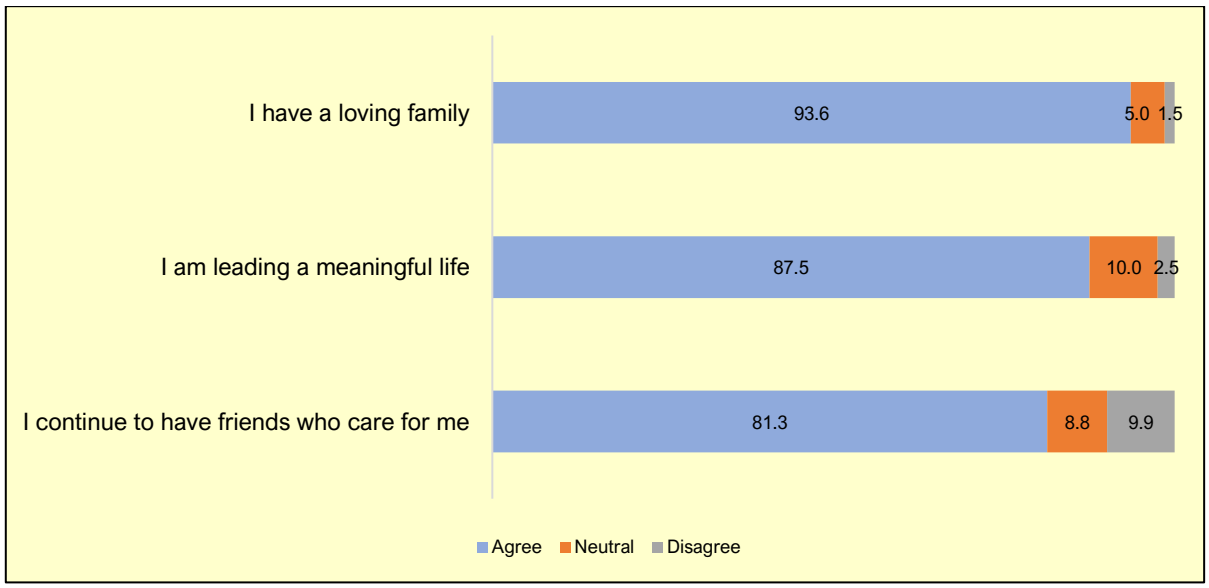

Figure 10.22: Respondents' Family, Friends and Life Purpose (%)

When asked about their preparedness to live in assisted living facilities such as nursing homes and retirement village, three quarters of the respondents (75%) are not prepared to, with no gender difference (Figure 10.23). The proportion of respondents who are not prepared to age in assisted living increases from about 74% among those aged 40-59 to about 78% among the oldest age group.

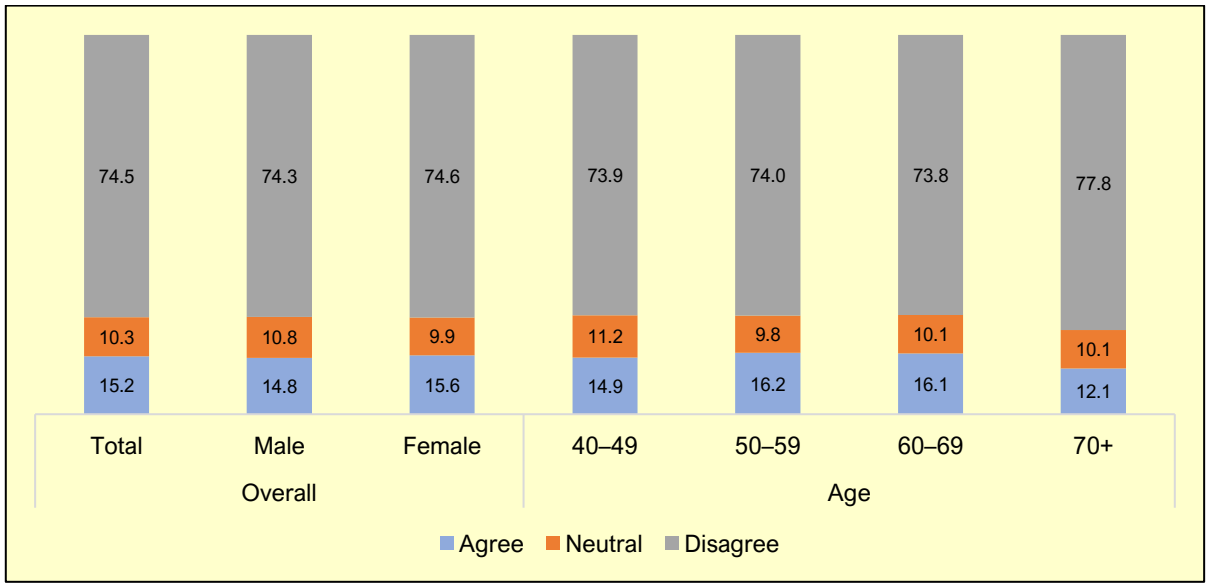

Figure 10.23: Respondents Prepared to Live in an Assisted Living Facility by Gender and Age (%)

Respondents were asked whether they are prepared to live alone and about 40% agreed with very little difference between male and female respondents (Figure 10.24). Across age, 36% of the respondents aged 40-49 are prepared to live alone and approximately 41% of those aged 60 and above.

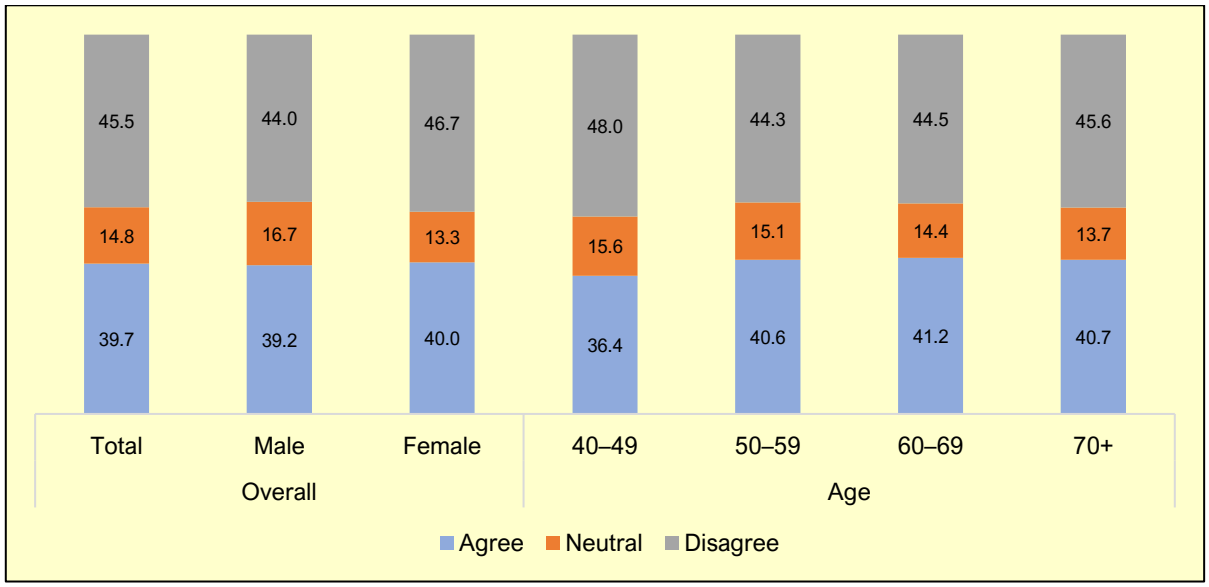

Figure 10.24: Respondents Who Prepared to Live Alone (%)

With regard to responsibility for looking after aged parents and grandchildren. 80% or 8 out of 10 respondents agreed that the government should make it mandatory for adult children to support their parents while slightly more than half (52%) agreed that taking care of grandchildren is part of their responsibility (Figure 10.25).

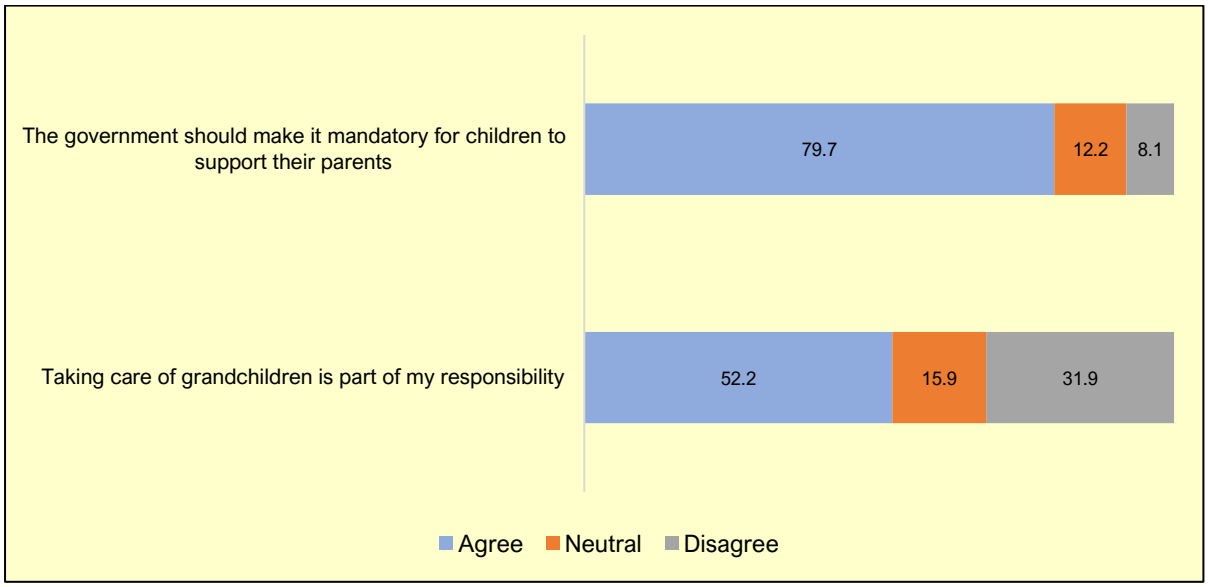

Figure 10.25: Responsibility of Caring for Parents and Grandchildren (%)

10.6 Home-based Activities

Respondents were given a list of 16 activities and were asked to indicate how often they participate in each activity in the last six months. For purposes of analysis, the activities were grouped into two namely, activities within the home environment and social activities outside of their homes.

For activities within their home environment, Figure 10.26 shows that the top three activities that respondents Often/Always participate in are watching television (66%), followed by activities with family/children (47%) and activities related to gardening/pets/hobbies (40%).

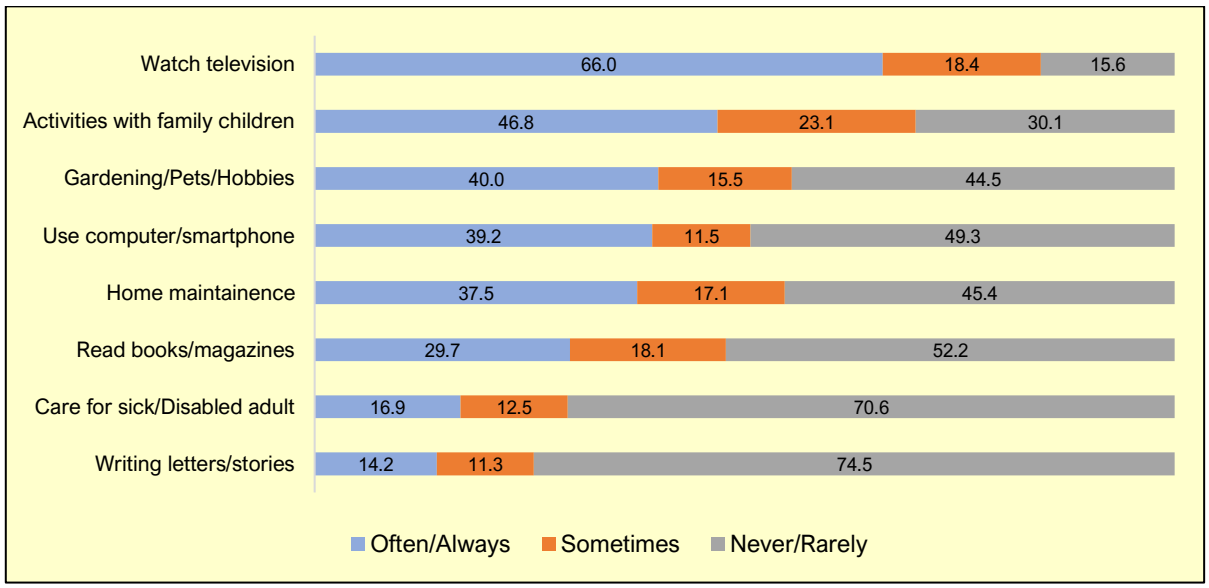

Figure 10.26: Participation in Home-based Activities in the Last 6 Months (%)

For social activities, Figure 10.27 shows that the top three activities respondents Often/Always participate in include social outings (30%) followed by walking/jogging/going to gym (28%) and participating in volunteer/charity work (24%).

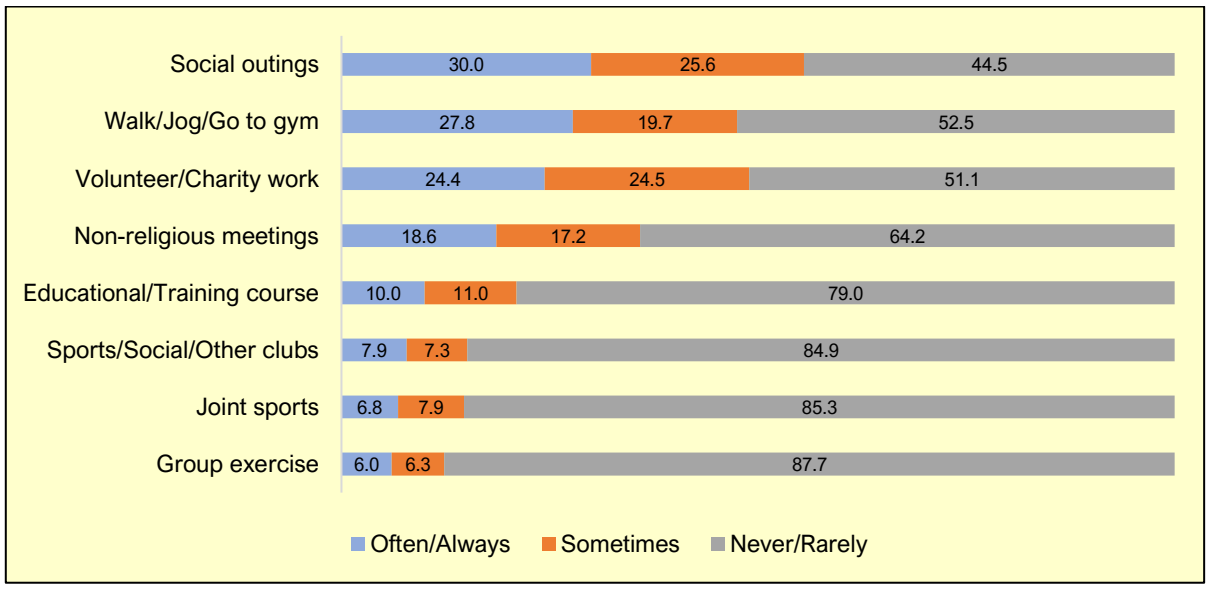

Figure 10.27: Participation in Community-based Activities in the Last 6 Months (%)

10.7 Religious Activities

With respect to participation in religious activities, approximately 68% of the respondents reported they always perform daily prayers, 48% practice primary basic doctrines on holy days and 34% reported that they always read religious/holy books (Figure 10.28). The proportion of respondents who always attend religious classes account for approximately 30% while 28% reported they always donate to religious organisations.

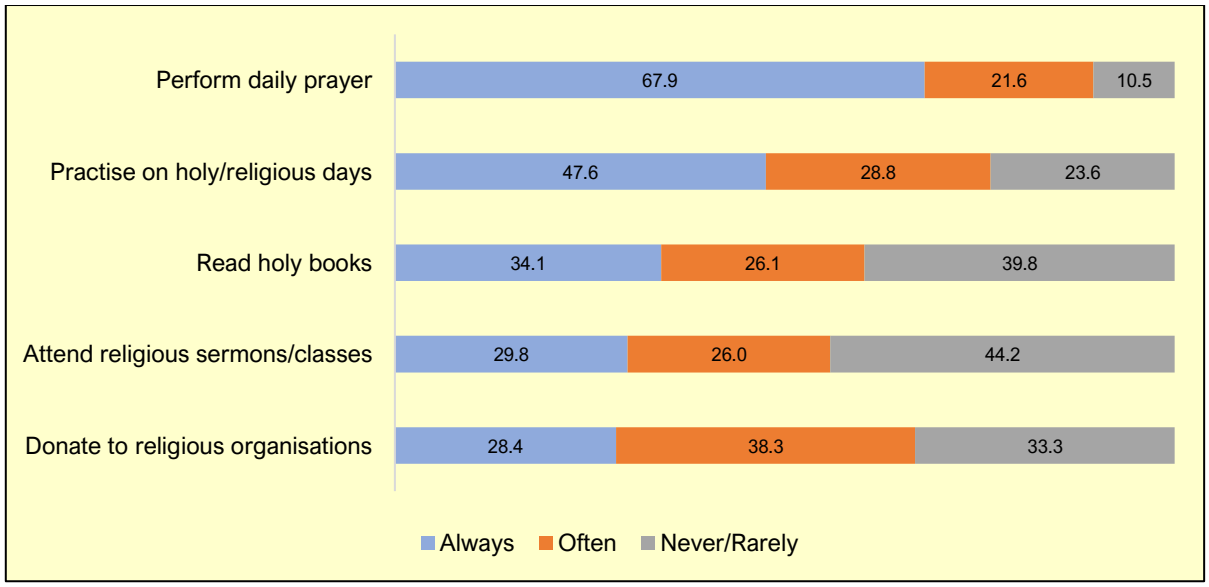

Figure 10.28: Participation in Religious Activities (%)

11 CONCLUSION

Malaysia Ageing and Retirement Survey (MARS) has generated a rich baseline dataset containing comprehensive information on respondents aged 40 and above. The survey captured details regarding respondents' background and household characteristics, immediate family members including living children, parents and parents-in-law as well as intergenerational support and transfers between them. MARS incorporated questions on health, healthcare utilisation, cognition, employment, retirement, income, savings, assets, participation in social and religious activities and their opinions and perceptions about life. Additionally, physical measurements such as height, weight, waist and hip circumference, as well as grip strength were taken using appropriate tools during the field survey.

It is hoped that MARS data will provide insights into and understanding of the situation of Malaysia's mid-aged and older persons, facilitating formulation and implementation of policies to support and protect the growing older population. MARS is designed to be longitudinal, allowing for a deeper understanding of life histories and experiences of the respondents at different stages of their adult lives over time. Given that ageing is a continuous process, the rich potential of MARS data will become a pivotal source of invaluable inputs for promoting research and development opportunities and enhancing policymaking for healthy and active ageing in Malaysia.

MARS data will be harmonised with leading international research data to enable adoption of best practices and comparability of findings across participating countries worldwide.

One can do so little, together we can do so much.
Let us ALL make a difference in people's lives.

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