



BACKGROUND PAPER

Subjective Well-Being of Older Persons in Malaysia

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Subjective Well-Being of Older Persons In Malaysia

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ABSTRACT

The rapid aging of Malaysia's population is a critical social phenomenon that warrants an in-depth investigation. Understanding the subjective well-being (SWB) of older persons is crucial for sound policymaking in aging societies. The existing literature emphasizes the importance of including noneconomic factors to understand one's well-being more holistically.

The current study uses data from the Malaysia Ageing and Retirement Survey to investigate their satisfaction with their lives using arrays of variables, including demographic, socioeconomic, living arrangements, social engagement, and health. The analysis reveals that the SWB increases with age, especially among male older persons. The results show that the level of SWB is different for different living arrangements: living alone or with a spouse, living with a child, and living with other family members as well as that the way various factors influence the SWB of older persons depends on their living arrangements. Specifically, the results suggest that older persons who are living independently experience higher SWB potentially because they have the capability to live without their younger generation family members.

The findings of this study underscore the importance of catering to older persons with different levels of independence in terms of economic and health status to ensure the most effective and efficient support for older persons in Malaysia.

Keywords: subjective, well-being, aging society, living arrangements

I INTRODUCTION

The rapid aging of Malaysia's population is a critical social phenomenon that warrants an in-depth investigation. According to the Department of Statistics Malaysia (DOSM), the proportion of older individuals, defined as those aged 65 and above, has increased from 5% in 2010 to 6.8% in 2020 (DOSM 2021). Within 3 years, this proportion has increased to 7.4% of its total population of 33.4 million in 2023 (DOSM 2023). Projections indicate that this figure will rise to more than 15% by 2050. As reported by DOSM, total fertility rate in 2022 reached its lowest in five decades with 1.6 children for every woman aged 15–49 years compared to 1.7 children in 2021. The fertility rate in 1970–2012 was above the replacement level of 2.1 children. Projections indicate that this figure will rise to more than 15% by 2050. This accelerated demographic shift, while indicating improvements in health care and living conditions, also presents new challenges for policymakers.

Worldwide, it is estimated that the population of individuals aged 65 years and above is projected to more than double in 2050 from 2021 (Vareinte, 2023). This elderly cohort, though diverse, is typically associated with heightened health needs and increased morbidity rates. Addressing the needs of this group may require considerable investments in specialized health and social services and efficient utilization of existing resources.

With the increasing emphasis on “beyond gross domestic product” strategies, there has been a significant evolution in policy development globally. Increasing evidence supports the use of self-reported subjective well-being (SWB) metrics as tools for tracking and evaluating population welfare. Well-being, a complex construct that includes elements such as happiness, life satisfaction, quality of life, and mental health, has been associated with positive outcomes such as good health and life expectancy (Chida and Steptoe 2008, Huppert 2009). The protective effect of SWB on physical and mental health is particularly relevant for older adults, given their increased vulnerability to illnesses. Incorporating well-being metrics for this group is a move towards more equitable policymaking because they often remain underrepresented in research and health-promotion initiatives, which makes them more prone to health disparities.

To enhance the mental well-being among the old population effectively, it is crucial also to understand its diverse, multidimensional determinants. Apart from economic considerations, various noneconomic factors, such as health conditions, employment situation, and social connections, have been identified also as important indicators of SWB. In addition, aging well-being research often underscores the paradox that older adults, despite the potentially lower objective quality of life, report higher SWB than younger age groups (Hansen and Slagsvold 2012).

Literature suggests that SWB of older persons depends largely on their living arrangements. Though coresidence of older parents and adult children has been the traditional forms of

intergenerational support for older persons in Asia, more evidence shows a declining trend in such living arrangements (Knodel et al. 2013) and growing preference among older persons to live independently without their children (Jung and Kim 2017). This change can be explained by increasing capability of older persons to be independent in terms of their health conditions and economic status, especially in countries with advancing economies.

Given this evidence, we hypothesize that older persons living independently in Malaysia are likely to have higher SWB than those living with children or other family members. Further, we investigate the differences in SWB of older persons across different living arrangements. It is reported that the influence of living arrangements depends on numerous factors. (Okabayashi et al. 2004, Silverstein and Bengtson 1994), which is one of the reasons why the findings with regard to the role of living arrangements in older persons' SWB are mixed. While some studies find that coresidence can enhance older persons' SWB (Kooshlar et al. 2012, Lim and Kua 2011, Silverstein et al. 2006), some studies report that it could result in lower SWB (Chan et al. 2011), and others find no significant effect of living arrangements in some countries (Ichimura et al. 2017, Jung and Kim 2017).

This paper will attempt to examine the influence of living arrangements on the SWB of older persons further by dividing the older persons according to their living arrangement: living alone or with a spouse only; living with their children (with or without a spouse); and living with others (except for children), which allows us to examine different effects of various factors by different living arrangements.

This study aims to delve into these dimensions within the context of Malaysia. By improving our understanding of the factors that are influencing well-being more holistically in this rapidly expanding demographic, we can better align policy initiatives with the resources and needs of this population group. This alignment is critical to ensuring the welfare and quality of life of Malaysia's elderly population in the future years.

II. POLICIES TO SUPPORT OLDER PERSONS IN MALAYSIA

In its efforts to improve the lives of citizens in old age, the government introduced two national policies namely National Policy for Older Persons 2011 (to replace the National Policy for the Elderly, 1995) and National Health Policy for Older Persons 2008 (Government of Malaysia 2011, Hamid and Yahya 2008). These policies focus on empowering individuals, families, and communities through the provision of elderly-friendly services and enabling environments. A National Advisory and Consultative Council for Older Persons was established in 2011 to oversee the implementation of these policies. Subsequently, the Physical Planning Guideline for the Elderly was introduced in 2018 as a guide in planning and designing suitable accommodation for older persons and care centers. In addition, the Private Aged Healthcare Facilities and Services Act was enacted in 2018 to safeguard the rights of older persons in receiving quality care.

The Government of Malaysia's commitment to support and protect older persons, as documented in the 12th Malaysia Plan 2021–2025, (i) emphasized its efforts, which include laws to protect the rights of older persons and comprehensive long-term care framework, (ii) enhanced pension systems and retirement coverage, and (iii) strengthened social protection for older persons.¹ Currently, the government is formulating a “National Ageing Blueprint”, which will serve as a comprehensive road map for older persons with emphasis on economy, education, finance, health, and wellbeing.

III. LITERATURE ON SUBJECTIVE WELL-BEING

The progression of economic research has expanded to embrace a more holistic understanding of human development, including the concept of SWB. Studies support the use of self-reported measures to assess one's utility (Diener et al. 1999, Dolan et al. 2008). The perspective of SWB broadens the scope beyond traditional economic parameters, incorporating a comprehensive understanding of people's lived experiences, especially among the older population.

The economic focus on SWB is a response to the limitations of strictly economic indicators. In the pursuit of a comprehensive understanding of SWB, researchers have investigated factors that are influencing SWB beyond economic aspects, ranging from demographic and socioeconomic factors such as age, gender, religion, and education to other environment surroundings such as living arrangement and social interactions (Aida 2018, Bérenger and Verdier-Chouchane 2007, Cresswell-Smith et al. 2019, Kahneman and Krueger 2006, MacKerron 2011, Pinar 2019, Shah et al. 2021). In fact, Bérenger and Verdier-Chouchane (2007) used the quality-of-life index and showed a low correlation with gross domestic product per capita, supporting the idea that well-being is not solely reliant on income.

Accumulated literature has identified noneconomic factors that are associated with SWB. Health is one such factor that has been consistently found to have a strong association with SWB (Hansen and Slagsvold 2012, Rojas 2008, Yang 2018). While SWB influences health, the size of health effect on SWB is substantially larger (Dolan et al. 2008). Moreover, specific conditions, such as heart attack and stroke, were found to impact SWB significantly (Shields and Price 2005).

To understand the SWB among older persons, it is crucial to investigate the association between age and SWB. Many studies have confirmed U-shape between age and SWB, which suggests that SWB among older persons increases as they age (Blanchflower 2021, Cheng et al. 2017, Clark 2019). Further, some studies revealed that one's well-being initially declines, then increases around 50 years old (Galama et al. 2022, Wunder et al. 2013). On the other hand, Hansen and Slagsvold (2012) found that the stable SWB for older persons may be limited to specific dimensions of SWB reporting. Loss of health and partner could cause declining well-

¹ Government of Malaysia. 2021. Twelfth Malaysia Plan 2021–2025: A Prosperous, Inclusive, Sustainable Malaysia. Kuala Lumpur.

being in older age. In the study by González-Carrasco et al. (2017), gender differences were observed in the changes in SWB with age through adolescent years, which suggest the possibility of same gender effect among older age.

Some studies specifically investigated the SWB among older persons and identified factors that are important for older persons' well-being. Cresswell-Smith et al. (2019) noted the multifaceted nature of SWB in individuals aged 80 and above, recognizing the significant roles of physical health, social interactions, sense of purpose, self-acceptance, personal growth, and environmental factors. Such findings suggest that economic measures alone cannot capture the complexity of human well-being adequately, especially for the elderly.

Living arrangements was found to be a crucial factor that is associated with SWB of older persons. Teerawichitchainan, Pothisiri, and Long (2015) studied older persons in Myanmar, Viet Nam, and Thailand and found that coresidence with a child can improve the psychological well-being of parents. At the same time, the results suggested that the cultural preference for the gender of a coresident child matters in some contexts. For example, living with a married son was positively associated with the mental health of parents in Viet Nam, where Confucian norms are embedded and a patrilineal kinship system prevails. Coresidence with children was also found to influence the well-being of older persons in East Asian countries (Ichimura et al. 2017).

Social engagement is another factor that was found to play a significant role. A study conducted in Malaysia on older persons above 60 years old found that active social engagement is associated with higher happiness level (Shah et al., 2021). Another study used data from Japan in 2013, 2016, and 2019 identified social participation as an important factor in enhancing happiness among older persons (Ide et al. 2022). The same held true in the European context where older persons' SWB were associated with social aspects of their life, including having loose relationships with others and engagement in fruitful activities.

The abovementioned studies from rapidly expanding literature establish that the correlation between income and well-being, while significant, is not exclusive. Noneconomic factors like health status and social relationships are crucial predictors of SWB, with societal and cultural contexts impacting the reported levels of SWB. The review further indicates a changing perspective in the understanding of SWB over time, recognizing the need for approaches catering to children and older persons. Consequently, while income and economic status are significant, a more nuanced understanding of well-being emerges when these factors are considered in tandem with other aspects of life.

Building on these insights, the current study aims to contribute to the evolving understanding of SWB by examining a range of variables that may impact the well-being of Malaysia's older population. Given the multifaceted nature of SWB, the present study seeks to employ a comprehensive approach to exploring the determinants of well-being among the elderly in Malaysia. By considering a broad range of factors, such as economic status, health status,

employment status, social engagement as well as living arrangement, it aims to provide a more nuanced understanding of SWB in this demographic.

This study will employ regression analysis on the 2-wave panel dataset, thereby enabling the identification of relationships between these factors and their effects on SWB over time. By expanding the scope of analysis beyond traditional economic indicators and incorporating a diverse range of determinants, this study hopes to contribute to the growing body of literature on SWB and provide valuable insights for policymakers and stakeholders who are seeking to enhance the well-being of the elderly in an aging developing, middle-income country such as Malaysia.

IV. DATA AND METHOD

A. Data

The current study uses the data from the Malaysia Ageing and Retirement Survey (MARS) collected by the Social Wellbeing Research Centre of Universiti Malaya with the objective to produce comprehensive micro-level data on various aspects of aging and retirement that are impacting the lives of middle-aged and older persons, which will provide useful input for policymaking and strategy formulation for healthy and active aging in Malaysia and towards strengthening social protection system in the country (Social Wellbeing Research Centre 2021).

The data consists of individuals 40 years and older who are residing in all the states of Malaysia. The selection of sample was done by the Department of Statistics Malaysia based on the 2010 Population and Housing Census. To ensure the widest coverage possible across the country, each state was first stratified by urban and rural Enumeration Blocks. A multistage sampling procedure was adopted beginning with the selection of enumeration blocks 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. Details of the selection process can be found in the Social Wellbeing Research Centre (2021).

Data collection for the first wave of MARS (MARS Wave 1) was conducted through face-to-face survey between August 2018 and May 2019 with 5,613 completed interviews. MARS Wave 2 built on MARS Wave 1, reinterviewing Wave 1 respondents, and additionally visiting about 1,000 new households. Data collection for Wave 2 took place from October 2020 to April 2022.² A total of 4,821 respondents participated in the survey, of which 75% consisted of panel respondents who were participating for the second time.

² Because of the coronavirus disease (COVID-19) pandemic and the subsequent movement control order, data collection was disrupted and had to be extended several times to ensure that all panels and new samples were attempted. A total of 4,821 respondents participated in the survey, of which 75% consisted of panel respondents who were participating for the second time (Asian Development Bank and Social Wellbeing Research Centre 2023).

The questionnaire covered information on important issues that are affecting the lives of middle-aged and older adults, including socioeconomic and demographic characteristics, family relationships and support, health and health care, economic security, and other social variables.

B. Methodology

We use life satisfaction as an indicator of SWB because it is used as a robust indicator for SWB in literature (Chindarkar et al. 2019, Rojas 2008, Yang, 2018). Respondents were asked to rate the frequency on a scale of five (1: never, 2: rarely, 3: sometimes, 4: often, 5: always) by responding to the question: “Generally, how often did you feel that you are satisfied with your life?” We use the responses to this question as an outcome variable in the analysis.

The two surveys for this study were conducted 2 years apart during which the coronavirus disease (COVID-19) pandemic took place. This immensely increases the difficulty of distinguishing the changes in life satisfaction because of the impact of COVID-19 from the changes due to other factors. Therefore, to understand the factors affecting the life satisfaction, MARS 1 and MARS 2 are pooled and the ordered logit model is applied. The total sample size is 10,392 combining 5,591 responses from MARS 1 and 4,801 from MARS 2.

As MARS 1 and 2 are only 2 years apart, we employ a pooled model and apply the ordered logit model. The sample size for the model is 10,392 with 4,364 older persons 60 years old and above and 6,028 younger persons between 40 and 59 years old. The analysis uses a wide range of variables that capture the multidimensional nature of well-being to control for confounding factors and address potential endogeneity arising from omitted variables and reverse causality.

As discussed in the previous section, SWB of older persons significantly depends on their living arrangements. Considering the nature of their daily life greatly differs by living arrangements, aggregating all the older persons could result in overlooking the factors that matter to their SWB. Therefore, we focus on the role of living arrangements by including a variable which takes a value of 1 if the older person lives alone or only with a spouse (independent old); 2 if one lives with a child and any other family members; 3 for all other older persons. The base category is the younger persons. For the variables that are expected to have differential effects for different living arrangements, we interact them with living arrangement variables.

We include a range of demographic and socioeconomic variables: age, age squared, household size dummy variables for highest education above secondary school, married, Malay, working now, and living in urban areas. To indicate the wealth status, we create a dummy variable that takes a value of 1 if one receives government assistance.³

³ Government assistance refers to financial assistance received from the Department of Welfare, state government, zakat, nongovernment organizations/nonprofit organization meant for the poor which includes senior citizens aid and disability aid.

For health conditions, we create two dummy variables. First is activities of daily living (ADL), which takes a value of 1 if one is not able to do all by oneself at least one of the following activities: bathing, dressing, transferring to bed and/or chair, toileting, and eating. Second is diagnosed illness, which takes a value of 1 if one is diagnosed with at least one of the illnesses among asthma, diabetes, heart diseases, high blood pressure, high cholesterol, and joint disorder; and if response to the illness limited one's daily activities.

Another factor that is found to affect one's SWB is engagement in social activities. To examine its effect, we use the questions in Table 1 to represent their engagement level in social activities. The respondents rated the frequencies of conducting these activities on a scale of five (1: never, 2: rarely, 3: sometimes, 4: often, 5: always) in MARS Wave 1, and on a scale of three (1: never/rarely, 2: sometimes, 3: often/always) in MARS Wave 2. To indicate that the respondents did conduct these activities, we created variables that take a value of one if the response is 4 or 5 for MARS 1 and f for MARS 2, after which the mean value was calculated across the four activities.

Table 1: Questions Regarding Social Activities

	Questions
1	How often do you attend meetings of nonreligious organisations (e.g., political party/ residence association/parents and teachers association)?
2	How often do you go out for social outing (e.g., eating out, meeting friend, going to cinemas, etc.)?
3	How often do you do activities with your grandchildren/nieces/nephews, etc.? (e.g., go to playground, go to shopping mall, watch TV, etc.)
4	How often do you do volunteer/charity work?
5	How often do you participate in religious activities, such as gathering, prayers, fasting, read holy books, attend services, etc?

Source(s): Authors.

Since the second wave of the survey was administered when the impact of the COVID-19 pandemic was still evident, the model includes variables that indicate the effect of COVID-19.⁴ The respondents were asked to rate the level of agreement on how COVID-19 impacted them on a scale of five, 1 being strongly agree and 5 being strongly disagree. We created a dummy variable that takes a value of 1 if the mean value of all the responses to the questions listed in Table 2 is smaller than 3.

Table 2: Variables to Indicate the Impact of COVID-19

Statements
I felt lonely during the MCO.
The MCO has strained my relationship with my family.
Not being able to physically meet my family members made me feel sad.

⁴ Movement control order was in place between 18 March 2020 and 31 March 2021 at different levels.

I felt anxious and stressed living in a confined space.
I felt sad for not being able to participate in social/religious activities.
I am worried about my health and the health of my family members.
The MCO caused reduction in my income from formal work.
The MCO reduced my income generated from my business.
I had to find new employment because of COVID-19.
I had to change work days/work hours.
I had difficulty in having access to food, medication and essential services (Hand sanitizer, mask, and glove).
The MCO increased my spending.
I am very much affected financially by this pandemic.
I kept myself updated with the current news and developments related to the pandemic.

COVID-19 = coronavirus disease, MCO = movement control order.

Source(s): Authors.

A dummy for MARS 2 is included to control for the two waves.

Summary statistics of independent and dependent variables included in the analysis are reported in Table 3.

Since this is a sample of respondents aged 40 and over, the demographics cannot be compared with the entire population, which adopts different grouping categories that results in underrepresentation or overrepresentation in many of the variables. For example, Malay in this sample constitutes 60%, while the population in 2021 consists of 62% Bumiputra which includes Malay (DOSM 2021). Female makes up 56% of the sample, slightly higher than 49% of the population, while urban respondents represent 63% of the sample compared with 78% of the population. This could be because of higher refusal among urban than rural respondents.

Table 3: Summary Statistics of Independent and Dependent Variables

	Mean	Standard Deviation	Minimum	Maximum
Life satisfaction	3.87	1.04	1	5
Age	57.79	10.52	40	96
Female	0.56	0.50	0	1
Highest education above secondary	0.35	0.48	0	1
Married	0.78	0.42	0	1
Malay	0.60	0.49	0	1
Working now	0.40	0.49	0	1
Household size	4.62	2.45	1	21
Urban	0.63	0.48	0	1

Receive government assistance	0.07	0.25	0	1
Living arrangement				
Young	0.58	0.49	0	1
Independent old	0.10	0.30	0	1
Extended old with child	0.24	0.43	0	1
Extended old with others	0.08	0.27	0	1
Activity: with family	0.44	0.50	0	1
Activity: volunteer	0.22	0.41	0	1
Activity: meeting	0.16	0.37	0	1
Activity: social gathering	0.27	0.45	0	1
Activity: religious	0.52	0.50	0	1
Diagnosed illness	0.26	0.44	0	1
Activities of daily living	0.02	0.14	0	1
Coronavirus disease (COVID-19) impact	0.10	0.30	0	1

Source(s): Authors.

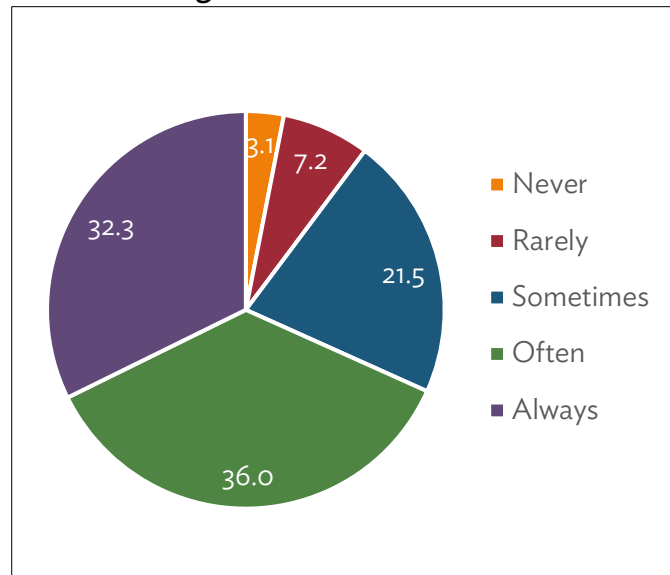
V. RESULTS

A. Descriptive Analysis

Life satisfaction, the outcome variable, was rated on a scale of 5. Figure 1 shows that more than 68% of the respondents feel satisfied with their lives either always or often. It is only 3.1% who never feels satisfied with their life.

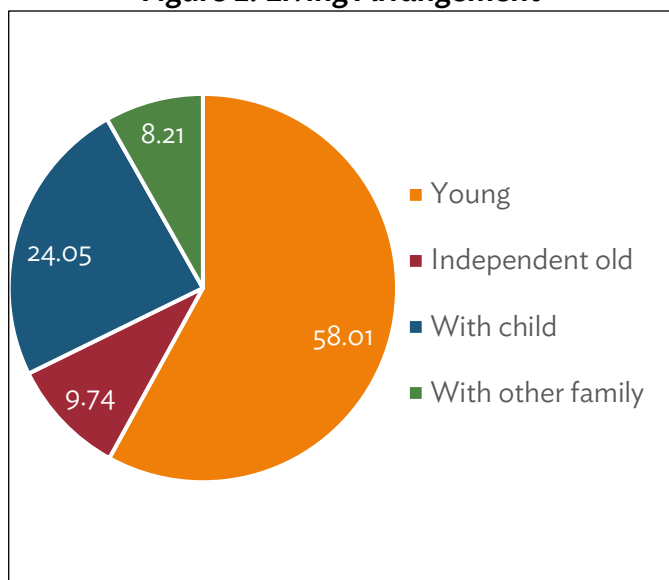
Among the older persons, 23.2% are living alone or with spouse only, and 57.3% are living with at least one child (Figure 2).

Figure 1: Life Satisfaction



Source: MARS (2019, 2022).

Figure 2: Living Arrangement

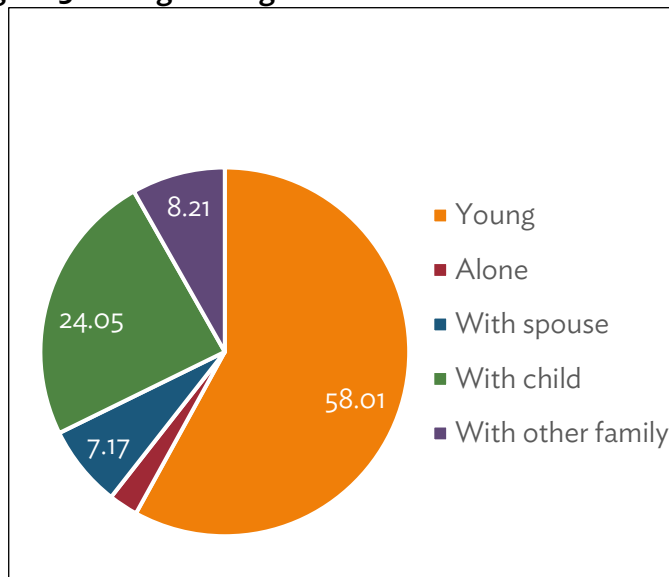


Source: MARS (2019, 2022).

Although the main analysis combines the old living alone and the old living only with spouse because of their small size, we show the breakdown in Figures 3–5 to better understand the profile of independent old.

Figure 3 shows that 2.57% are living alone, while 7.17% live only with spouse.

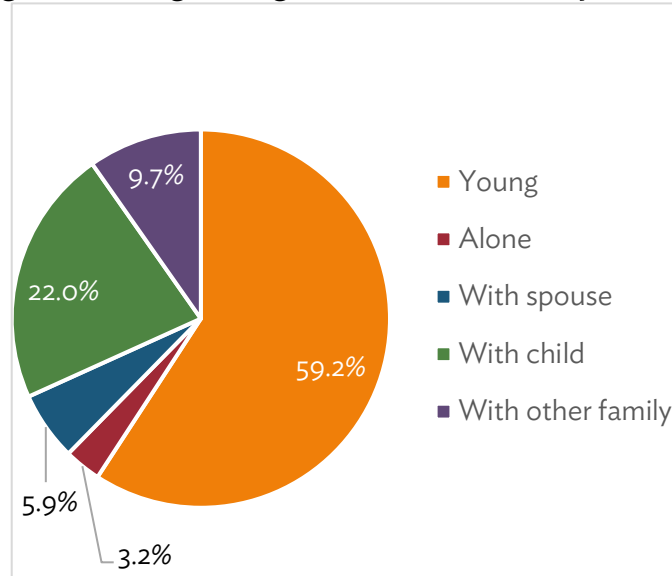
Figure 3: Living Arrangement With Further Breakdown



Source: MARS (2019, 2022).

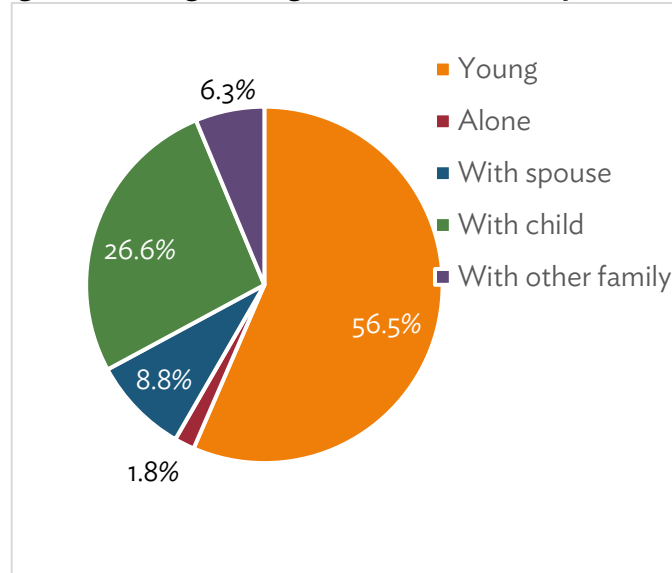
We further separate the respondents by gender because it is observed generally that more females live alone because of their longer life expectancy. Figures 4 and 5 confirm this, showing only 1.8% males live alone.

Figure 4: Living Arrangement of Female Respondents



Source: MARS (2019, 2022).

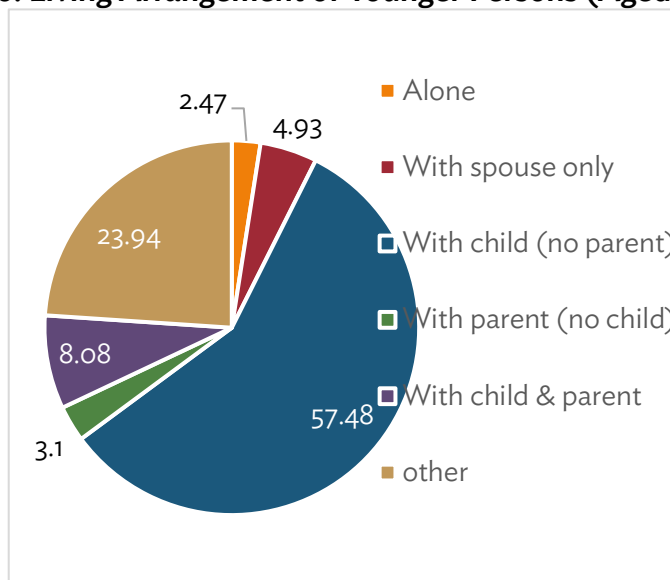
Figure 5: Living Arrangement of Male Respondents



Source: MARS (2019, 2022).

The living arrangement of older persons are expected to be largely different from that of younger persons. Though the focus of this study is SWB of older persons and its relations with living arrangement, we provide the descriptive data of the living arrangement of younger persons. Figure 6 reveals that majority of the younger persons live with their children, but not with their parents while only about 11% of them live with their parents.

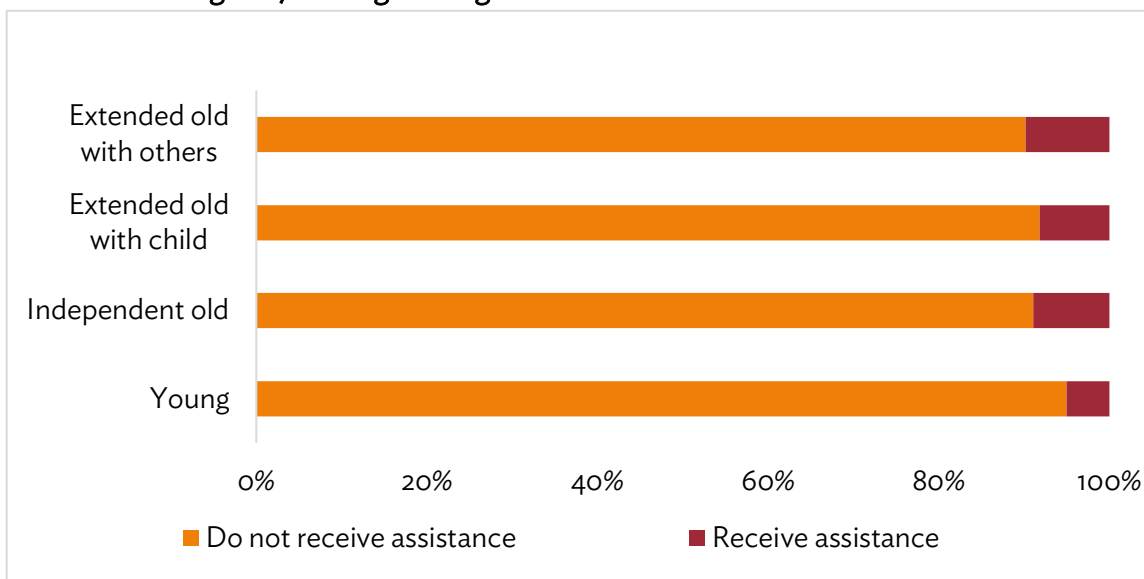
Figure 6: Living Arrangement of Younger Persons (Aged 40-59)



Source: MARS (2019, 2022).

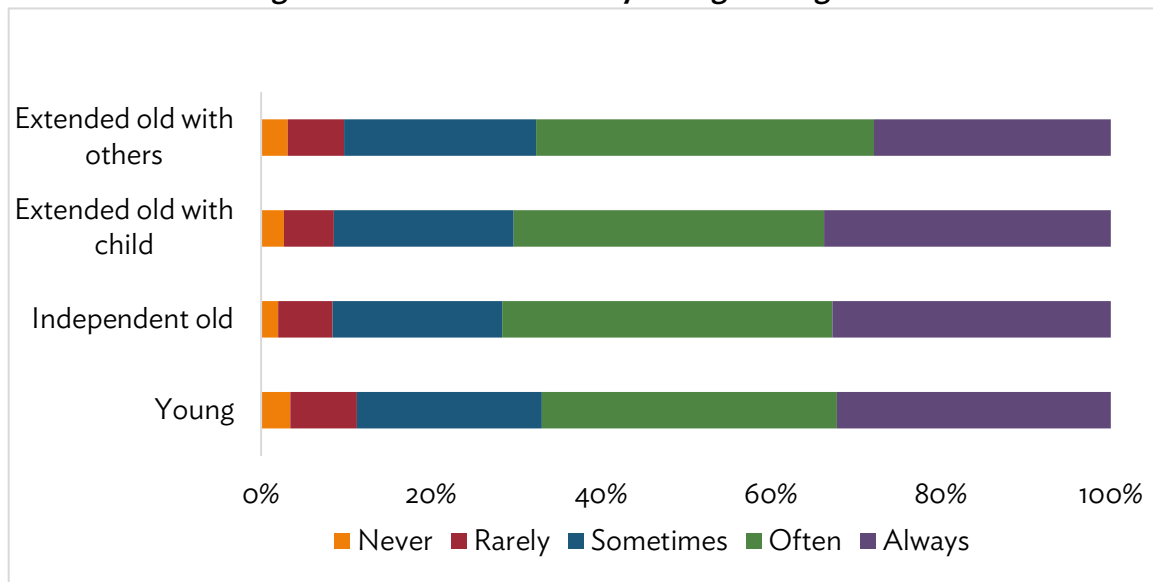
To understand the economic situation for different living arrangements, we cross-tabulate the two variables. Figure 7 shows that the percentage of those who receive assistance is highest among extended old with others, followed by independent old and extended old with child.

Figure 7: Living Arrangement and Government Assistance



Satisfaction level by living arrangement in Figure 8 indicates that the satisfaction level is slightly higher among independent old and extended old with child.

Figure 8: Life Satisfaction by Living Arrangement



B. Ordered Logit Model

The results of the ordered logit model applied to pooled data are reported in Table 4. The first column reports the analysis using all samples, the second column the analysis using female respondents, and the third column the analysis using male respondents.

First, age is positively associated with SWB, which suggests that the older they are, the more they are satisfied with their life. However, the association is only observed for male respondents. Female dummy is also positively associated with SWB. This means that, while the overall SWB may be higher among females than males, it does not increase with age for females. For males, it is observed that their SWB increases as they age after 40 years old.

As for living arrangements, compared to the young persons, only independent old are found to have higher life satisfaction. This was true, particularly for male respondents. Independent old live without their children or other family members likely because they can be independent and do not need to be coresident with them. This can be considered as a contributing factor for their higher SWB. This confirms our hypothesis that the SBW of older persons living alone or with a spouse is higher than other older persons in Malaysia as such independent old are the ones with sufficient economic and health status.

Employment status is important for SWB of the young and extended old without children. The old living with other members than the child may still financially support their extended families, resulting in positive association between being employed and SWB. For independent old and extended old with child, working does not increase SWB, but rather it could have a negative influence on SWB given the negative sign of coefficients. Receiving government assistance, an indicator of poverty has the largest negative association with SWB for independent old and

extended old with child. This suggests that living with extended family could mitigate the negative effect of being poor on their SWB.

Household size and living in urban areas do not have a significant association with SWB possibly because of the inclusion of living arrangements and state dummies.

Experiencing the negative impact of COVID-19 is negatively associated with SWB among young and independent old as well as male extended old without a child. It is plausible that COVID-19 had a negative impact on SWB of older persons, especially female, who do not live with their children because they were not able to meet under the social mobility restrictions. It can be conjectured that those living alone among female, the negative impact of COVID-19 on their SWB was significant while the impact on independent males, most of whom live with their spouses, was marginal.

Among the five types of social activities, activities with family members, volunteer, social outings, and religious activities, show a significant and positive association with SWB, especially for young and extended old with children. For SWB of independent old, engaging in social outings and religious activities lead to higher SWB. In particular, SWB of male older persons living with their child can be enhanced through participating in volunteer, meetings, and religious activities. This might reflect the importance of having some social recognition or positions outside the family for heads of households figures. For independent female older persons, it is suggested that volunteer and religious activities are associated with higher SWB. In Malaysia, religious activities for female are important occasions for socialization. Considering among independent old, more females are living alone compared to men, it is intuitive that those activities that provide females to socialize with their peers and neighbors are essential to their SWB. This corroborate the findings by Shah et al (2021) that active social engagement is significantly associated with better happiness among older Malaysians.

As expected, health status has a negative association with SWB. For diagnosed illness, its negative association is most evident for young followed by extended old with child. This is plausible, given those are the ones who need to earn to support their families. Additionally, these illnesses affect young's SWB much more than that of older persons because it is more common to be diagnosed with these illnesses when they are older. On the other hand, not being able to manage ADL negatively affects SWB of independent old and extended old without child among female in particular because more independent female live alone compared to independent male. Such older persons are likely to struggle because they may not have support from their child or their spouses with daily activities, resulting in lower life satisfaction.

Table 4: Results of Ordered Logit Analysis

	All	Female	Male
Age	0.015*** (0.005)	0.005 (0.007)	0.024*** (0.005)
Female	0.194*** (0.070)		
Living arrangement (base category: young)			
Independent old	0.288** (0.120)	0.215 (0.217)	0.452* (0.235)
Extended old with child	-0.000 (0.152)	0.015 (0.259)	0.010 (0.183)
Extended old without child	0.023 (0.240)	0.196 (0.248)	-0.220 (0.322)
Education (secondary and above)	0.246*** (0.075)	0.135 (0.105)	0.323*** (0.086)
Married	0.201*** (0.071)	0.158** (0.077)	0.226** (0.100)
Malay	0.248*** (0.087)	0.284*** (0.088)	0.229* (0.125)
Working now # living arrangement			
#Young	0.156* (0.085)	0.241** (0.115)	0.161 (0.121)
#Independent old	-0.106 (0.249)	-0.245 (0.498)	-0.079 (0.288)
#Extended old with child	0.135 (0.125)	-0.124 (0.446)	0.219 (0.192)
#Extended old without child	0.359** (0.148)	0.497* (0.267)	0.380** (0.194)
Receive government assistance # living arrangement			
#Young	-0.356 (0.224)	-0.606** (0.240)	-0.064 (0.303)
#Independent old	-0.745** (0.345)	-0.584* (0.346)	-0.729 (0.617)
#Extended old with child	-0.326* (0.189)	-0.312 (0.281)	-0.289 (0.253)
#Extended old without child	-0.118 (0.195)	-0.035 (0.286)	-0.417* (0.231)
Household size	0.003 (0.015)	-0.000 (0.017)	0.002 (0.017)
Urban	-0.113 (0.112)	-0.067 (0.138)	-0.168 (0.117)
Coronavirus disease (COVID-19) impact # living arrangement			
#Young	-0.348***	-0.531***	-0.173

	(0.086)	(0.191)	(0.166)
#Independent old	-0.544***	-1.169***	-0.294
	(0.196)	(0.268)	(0.320)
#Extended old with child	-0.250	-0.190	-0.281
	(0.244)	(0.231)	(0.327)
#Extended old without child	0.631	-0.444	1.689***
	(0.409)	(0.550)	(0.616)
Activity: With family # living arrangement			
#Young	0.464***	0.465***	0.440***
	(0.072)	(0.093)	(0.100)
#Independent old	0.096	0.031	0.263
	(0.170)	(0.212)	(0.227)
#Extended old with child	0.468***	0.589***	0.400*
	(0.181)	(0.203)	(0.217)
#Extended old without child	0.421**	0.402**	0.433
	(0.164)	(0.202)	(0.266)
Activity: Volunteer # living arrangement			
#Young	0.262***	0.209**	0.343***
	(0.066)	(0.091)	(0.127)
#Independent old	0.424	0.681**	0.205
	(0.342)	(0.333)	(0.462)
#Extended old with child	0.184**	-0.006	0.246**
	(0.092)	(0.213)	(0.106)
#Extended old without child	0.289	-0.130	0.780**
	(0.227)	(0.310)	(0.337)
Activity: Meeting # living arrangement			
#Young	-0.064	-0.203*	0.082
	(0.058)	(0.113)	(0.135)
#Independent old	-0.122	0.137	-0.392
	(0.229)	(0.294)	(0.305)
#Extended old with child	0.049	-0.501	0.286**
	(0.155)	(0.370)	(0.122)
#Extended old without child	-0.031	-0.084	0.052
	(0.336)	(0.543)	(0.323)
Activity: Social outing # living arrangement			
#Young	0.201**	0.089	0.314*
	(0.100)	(0.078)	(0.170)
#Independent old	0.240**	0.247*	0.169
	(0.114)	(0.138)	(0.225)
#Extended old with child	0.297**	0.680***	0.050
	(0.134)	(0.226)	(0.141)
#Extended old without child	0.131	0.225	0.164
	(0.283)	(0.382)	(0.358)
Activity: Religious # living arrangement			

#Young	0.394*** (0.070)	0.445*** (0.101)	0.382*** (0.114)
#Independent old	0.408** (0.184)	0.411** (0.192)	0.348 (0.339)
#Extended old with child	0.319*** (0.104)	0.276 (0.202)	0.370*** (0.141)
#Extended old without child	0.226 (0.224)	0.242 (0.254)	0.217 (0.290)
Diagnosed illness # living arrangement			
#Young	-0.603*** (0.100)	-0.490*** (0.107)	-0.769*** (0.108)
#Independent old	-0.304** (0.126)	-0.031 (0.148)	-0.595** (0.254)
#Extended old with child	-0.376*** (0.078)	-0.378*** (0.122)	-0.381*** (0.122)
#Extended old without child	-0.199 (0.219)	-0.160 (0.277)	-0.283 (0.315)
Activities of daily living # living arrangement			
#Young	-0.149 (0.421)	-0.398 (0.541)	0.112 (0.560)
#Independent old	-1.380*** (0.467)	-1.627** (0.642)	-1.193 (0.914)
#Extended old with child	-0.100 (0.219)	0.012 (0.289)	-0.201 (0.247)
# Extended old without child	-0.985** (0.402)	-1.331*** (0.393)	-0.287 (0.436)
Malaysia Ageing and Retirement Survey II	0.404*** (0.152)	0.405*** (0.153)	0.386** (0.154)
State dummies	Yes	yes	yes
Observations	8,398	4,575	3,823

() = robust standard errors, *** = $p < 0.01$, ** = $p < 0.05$, * = $p < 0.1$.

VI. DISCUSSION

The current study aimed to understand the factors that influence the SWB of older persons in Malaysia by accounting for multidimensional aspects of SWB. We used the dataset of surveys that were conducted between August 2018 and May 2019 and between October 2020 to April 2022. Since we expected that COVID-19 pandemic affected SWB of respondents, we included the variable indicating the impact of the impact of COVID-19.

Using life satisfaction as an indicator for SWB, the current study identified factors that are associated with SWB of older persons in Malaysia. The results confirmed that the SWB increases as they age for those more than 40 years old, among male older persons in particular.

Having a high level of education, being married, and being Malay were also found to have a significant and positive association with SWB.

This study focused on different living arrangements of older persons as their daily lives largely depend on whom they live with. First, the results suggested that older persons living alone or only with a spouse have higher SWB among males. This could be because such older persons are independent and do not need to rely on their children to sustain their daily lives, which could contribute to their higher life satisfaction. However, the impact of the COVID-19 pandemic on the SWB was most evident among independent old possibly because they do not have support and the social mobility restriction prevented them from seeing their family members who do not live with them.

Engagement in social activities was found to play a significant role in SWB of older as well as younger persons in Malaysia, especially for older persons living with their child. For independent old, engaging in social outings and religious activities led to higher SWB. In Malaysia, the Ministry of Women, Family, and Community Development had established senior citizens activity centers that provide opportunities for older persons to continue to engage in daily activities in its effort to promote healthy and active aging. As of November 2023, there are 161 such centers throughout the country that offer religious and recreational activities, therapy, and rehabilitation; and talks on health and relevant topics that are made possible through collaboration between the ministry, other government agencies, and local nongovernment organizations. Such effort is expected to promote social engagement of older persons and, in turn, lead to their enhanced SWB.

Health status was also strongly associated with SWB. For illness, the negative association was observed for the young and older persons living with a child, while having difficulties with ADL was negatively associated with independent old and extended old without a child. This stems from the different nature of health status that requires different types of support, resulting in differential effect on SWB.

These findings highlight the importance of understanding the surroundings of older persons which differ, to a great extent, by living arrangements so that supports can be catered to different needs of the older persons. Based on the findings of this study, enhancing the SWB of older persons living alone or only with a spouse can be realized through financial support, providing ample opportunities and easy access to social outings as well as providing support for those having difficulties with ADL. For the older persons living with children, support can be focused on extending support for those with diagnosed illness, as well as ensuring they can participate in social activities such as volunteering, social outings, and religious meetings.

Additionally, though a female's SWB may be higher than that of a male, male is likely to feel more satisfied as they age. SWB of females can be negatively affected, particularly when they have poor economic status and health status. Support provision to improve that status could lead to improvement of SWB of female older persons.

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¹ The Asian Development Bank officially recognizes this member as “Viet Nam”.