



An Analysis of Socio-Economic Determinants Affecting Retirement Adjustment and Life Satisfaction Among Public Retirees in The Klang Valley

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ABSTRACT

Malaysia is projected to become an ageing nation by 2045. Given this unfavourable demographic trend, this ageing phenomenon poses a number of socio-economic challenges as longevity rises over time and lengthens the time spent in retirement. Using the Structural Equation Modelling (SEM), the objective of this study was to determine the socio-economic factors affecting the retirement adjustment and subsequently examine the impact of those factors on life satisfaction among public retirees during their retirement. Despite the common beliefs, retirement is associated with productive aging rather than being a burden on society and the country. This study employed secondary data from a survey of public retirees in Malaysia's largest urbanised region, the Klang Valley, which represented 23% of all public retirees in the country from October 2017 to February 2018. The results show that income, healthcare, and retirement readiness have significant impacts on retirement adjustment, which in turn partially mediates life satisfaction. The findings are expected to support the policymakers in developing a retirement framework that prioritises the needs of Malaysian retirees. Policymakers should consider marketing strategies that utilise the right communication tools, visuals, and consistent language to ensure that public retirees adjust effectively during the retirement phase and pursue a greater sense of life satisfaction.

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INTRODUCTION

According to Department of Statistics Malaysia (2016), it is estimated that about 14.5% of the Malaysian population will be above the age of 65 and the country is projected to become an ageing nation by 2045. Given this unfavourable demographic shift, the ageing phenomenon has been the subject of many perceptions and thoughts in the academic research arena. In economics, age groups play an important role in determining the economic essentials and productive capacity of a country as these are estimated to alter as its population ages (Wang, 2017). Retirement can be described as an ageing stage in which people progressively shift away from the core stream of active work and social work, ultimately being replaced by the younger generations (Buckley, 1974).

Therefore, retirement has become societally recognised as a normal phase in the life cycle, with its specific groups, medical facilities and anticipated societies (Savishinsky, 1995). Also, ageing is now more commonly acknowledged as a process affected by pre-retirement opportunities and limitations (Mutran et al., 1997). Despite the common beliefs, retirement is correlated with productive ageing rather than becoming a burden to society (Chadeau, 1992). This so-called new phase of life aims to make retirees productive by applying their knowledge and expertise in a socially connected community (Bridgman et al., 2012). The significant involvement of pensioners in productive activities shows positive results that contribute to the economic structure. Meanwhile, the government's health costs are reflected in an excellent and productive ageing population that has exceptional health. This suggests that far from being a burden on the economy, in reality, ageing populations are net contributors.

Thus, this study aims to analyse the socio-economic factors that affect the retirement adjustment of public retirees who lived in the urban area of Klang Valley, Malaysia from 2017 to 2018 and subsequently enables the pathway to examine the impacts on their life satisfaction. Being an urbanised region, the Klang Valley, which is home to 23% of all public retirees in the country, is relevant because its residents are more likely to face various difficulties than those who reside in more rural areas. More importantly, since Malaysia's population ages rapidly, thus there is an increasing need to understand how socio-economic factors affect retirement adjustment and life satisfaction in order to best serve the retirees who live in the Klang Valley.

Demographic indicators demonstrate that the population of Malaysia is ageing. For example, the overall dependency ratio in 2010 was 47.8 per hundred individuals in the working-age population (15-64). The dependency ratio is expected to increase from 47.8% in 2010 to 49.5% in 2040 (DOSM, 2016). The youth dependency ratio was 40.4 per 100 individuals in the working-age population in 2010, a fraction that will be 30.8 per 100 working-age people in 2035. This situation reflects the difficulties posed by the demographic transition in pension policy as Malaysia has a very large number of public servants, with a ratio of 1:19 people out of a total population of 31 million (JPA, 2017).

Government expenditure on the emoluments of public servants increased by RM18 million from 2013 to 2018 (Ministry of Finance Report, 2018), implying that future government expenditure on public pensions will be higher. In 2017, public servants' pay totalled RM78.8 billion and the pensions of civil servants amounted to RM23.6 billion. The 775,000 public retirees in Malaysia (JPA, 2017) are expected to increase in number to 1.5 million by 2050, due to the increase in life expectancy from 75 to 85. Collectively, these payments have formed the biggest proportion of the government's operating expenditure. This scenario leads to questions about Malaysians' readiness to face the challenges of an ageing nation and life in retirement.

The Malaysian government makes constant efforts to improve the pension scheme to help pensioners cope with rising living costs. These include increasing the minimum monthly pension for those who had served at least 25 years from RM280 to RM720 in 2009 and then from RM720 to RM820 from January 2012. The minimum pension payment for the same group of public retirees was then increased to RM950 from 2016, and to RM1,000 in 2018, which would benefit over 50,000 retirees. Moreover, since 2013, the government has implemented an automatic annual increase of two per cent to the monthly pension. Since 2010, the government has also been giving special cash assistance annually to pensioners, amounting initially to RM500 and then to RM250 in recent years.

Living in a time of economic fluctuations and in urban areas like the Klang Valley has a major impact on how retirees live during their retirement, particularly in terms of their spending, saving, investments and risk management, as these aspects are vital for protecting their life satisfaction during retirement (McNeil and Hunter, 2014). Focusing on the reality for many individuals, a consciousness of retirement is still an elusive issue in Malaysian society, especially for those who retire under the Government Pension Scheme (Chee, 1997). The majority of public retirees show no urgency to save or control their expenses due to the monthly pension payment, which is calculated based on their last drawn salary (Ibrahim et al., 2012). Nevertheless, the current problem is whether the pension received today allows the retirees to live a "comfortable life".

The problem of the growing number of older people is strongly related to the health problems of older persons. Retirees' health has often been recognised as a significant adjustment that occurs in retirement (Donaldson et al., 2010; Pinguart and Schindler, 2007; Wang, 2007). Retirement contributes to shifts in attitudes and changes in physical health. Some retirees undergo great changes, including improvements in daily exercise and sleep patterns (Van den Bogaard et al., 2016). However, many have experienced negative changes, with health outcomes such as cardiovascular disease (Moon et al., 2012), sleep disorders such as insomnia (Marquié et al., 2012) and health problems such as an excessive consumption of alcohol and the use of drugs (Wang et al., 2014) like cigarettes and tobacco (Ayyagari, 2014).

As a result of modernisation, industrialisation and globalisation, the family institution in Malaysia is now undergoing rapid changes in its functions. For example, modernisation, which started some decades ago, has shown that all nations and cultures took the same path in the middle and second half of the 20th century (Tokranov et al., 2012). The changes in the family institution have certainly resulted in negative effects on the welfare of older people, forcing the family to adapt to these changes. Among the salient aspects of these changes are that the family size has become smaller and the number of families headed by single mothers has increased. The factors eventually have certain impacts on the welfare of older persons (Zainab and Ibrahim, 2014).

Modern society irritates many from ancient Asian cultures by restructuring the traditional family structure, especially where the fundamental value of care and support of the elderly is concerned (McNeil et al., 2014). Elderly people are often seen as a societal liability because of the significantly high living costs they incur. Employing maids is impossible, which raises the probability that the elderly will end up in an old folks' home (Ali, 2013). Also, the trend for later marriage and the age gaps among children are other factors that underline why the elderly are viewed as a burden to society (Ratanabanchuen, 2013).

The decline in physical health that usually accompanies old age, as well as the decrements in physical capabilities, are the major factors that eventually weaken older persons and prevent them from doing their physical activities. Furthermore, the economic resources that they have relied on also diminish. More importantly, their inability to work would affect their quality of life (Cox and Harrold, 1984). Quality of life is defined as the subjective aspects of well-being, which include poverty.

Cross-country studies have found that poverty incidence among the elderly is high (Salgado de Snyder, 2007; Ylli, 2010; Srivastava and Mohanty, 2012; Jerliu et al., 2012; Maes, 2013). The United Nations (2010) also reported that 13.13 per cent of the global elderly aged 65 and above were poor. Major capital losses are linked to lower psychological well-being in the retirement stages. For an individual to forfeit their career illustrates a defeat since one fails to develop and maintain a good personal life (George, 1993). Therefore, retirees who found their careers to be essential or rewarding realms of life can view retirement as a loss. In support of this assumption, having greater essential work values was found to result in less satisfaction with retirement (van Solinge and Henkens, 2008).

In general, financial stability influences the living environment, food and nutrition consumption, and access to fitness and healthcare services of individuals (Link and Phelan, 1995), which may ultimately impact the standards of well-being outcomes. Retirement often results in changes to one's funds and resources; indeed, these often decrease due to income discontinuity. Therefore, elderly families are reliant on their social security benefits, defined benefits from pension plans and other kinds of shares and investments made during their working life (Poterba et al., 2011). The most important indicators for assessing economic well-being are financial assets and wages (Bender, 2012). But perhaps the question would be whether today's income helps retirees to retain a good quality of life. The economic and non-economic factors identified in this analysis as affecting retirement satisfaction would be critical in assessing how satisfied retired public employees were

during their life in retirement in terms of their economic status, psychology, social and religious activities, and health. The socio-economic factors affecting retirement life that this study intended to discover would be vital in confirming whether public retirees in Malaysia are satisfied with their life during retirement in terms of their economic status, psychology, social and religious activities, and health. This is a key indication that ongoing research on this field is crucial to help Malaysia face this problem in future.

LITERATURE REVIEW

Discussions on retirement have often been rooted in the same interpretation of the word "retirement." Several scholars have debated this issue, exploring how to define and evaluate the term, as well as how to differentiate the re-intake of the labour force (Maestas, 2009). In reality, someone who ends a job is said to be retired, which is the case for certain individuals (Sullivan and Ariss, 2018). Retirement can also be regarded as a condition that has no relation to employment, a career-long occupation or a cycle of slowly decreasing labour force activity (Maestas, 2009). Jackson (2009) contributed thoughts on retirement, including the concept that the retirement experience is evaluated by forms of well-being, joy, satisfaction, engagement, isolation, distress, discomfort or constraint which are unique to each individual. Although it is a cliché, retirement would have major impacts on life and experience, like death, regardless of when or under which conditions it happens.

Retirement adjustment is the subject focus of the resource-based dynamic model. It is a longitudinal process, during which retirees' levels of adjustment may fluctuate as a function of individual resources and changes in these resources (Wang et al., 2011). As such, this model can be used as a unified theoretical framework to study various outcomes of retirement (e.g., retirees' financial, physical, and psychological well-being), as well as the factors that drive those outcomes. In a review of different types of resources studied in previous retirement research, Wang (2007) suggested that this total capability may include one's physical resources (such as muscle strength; Jex et al., 2007), cognitive resources (such as processing speed and working memory; Wang & Chen, 2006), motivational resources (self-efficacy; Dendinger et al., 2005), financial resources (salary and pension; Damman et al., 2011), social resources (social network and social support; Kim & Feldman, 2000) and emotional resources (emotional stability and affectivity; Blekesaune and Skirbekk, 2012). It is expected that the ease of retirement adjustment is a direct result of an individual's access to these resources. On the one hand, when people have more resources to fulfil the needs they value in retirement, they will experience less difficulty in adjusting to retirement. On the other hand, decreases in retirees' resources will have adverse effects on retirement adjustment.

Based on a resource perspective of retirement adjustment, resource changes can be shown to affect well-being. In other words, when compared to the reference point (the beginning of the retirement adjustment), if a retiree's total resources do not change significantly due to their ability to successfully maintain their previous lifestyle and activities, he or she may not experience significant changes in well-being. If a retiree's total resources significantly decrease compared to the reference point (for instance, due to losing a major income source), he or she may experience negative changes in well-being. Furthermore, compared to the reference point, if an individual's retirement enables him or her to invest significantly more resources in fulfilling centrally valued needs (for instance, due to gaining cognitive resources that were previously occupied by a stressful job), he or she may experience a positive change in well-being. As such, this theoretical framework has the flexibility to accommodate a variety of longitudinal patterns for retirement adjustment, which significantly enriches the understanding of individual differences in the longitudinal process of retirement adjustment (Wang, 2007; Wang et al., 2013).

Moreover, using resource changes as the mechanism to explain variations in retirement adjustment, this theoretical framework can also be applied to consider the factors that may influence retirement adjustment quality (Carr and Kail, 2013; Kubicek et al., 2011; Wang et al., 2011). In particular, researchers may focus on examining antecedents that directly impact different types of resources. This theorising offers a large range of antecedents that could influence the various resources of retirees during the adjustment process, including variables from the macro level (societal norms and government policies), organisational level (organisational climate and human resource practices), job level (job conditions), household level (marital quality) and

individual level (health behaviours and psychological resilience). As such, adopting the resource-based dynamic perspective may lead to a more comprehensive and fruitful examination of different factors that influence retirement adjustment (Wang, 2017).

Preparation for retirement must start from the early days of working but studies have revealed several reasons why people do not prepare adequately for retirement. Fore (2003) discovered that employees are significantly lacking in financial knowledge, while Lusardi (2002) proposed that for the poorly informed group, it is hard to gain information because it is too costly. Meanwhile, Aaron (1999) found that some people are incompetent to solve the complex problems related to rational retirement and saving behaviour. Some may simply have an overly optimistic view of their lifestyle in retirement, resulting from denying the problem exists or overestimating the value of their future pension benefits (Elder and Rudolph, 2000). Most employees have reported that they have no time to attempt to assess how much money they will need in retirement or there are cases of being afraid of the answer (Yakoboski and Dickemper, 1997).

As a result, people unfortunately fail to come to terms with the realities of retirement and are thus destined to face difficulties during and even during retirement. Some measures are required for workers to prepare for retirement adjustment. Hershey et al. (2003) contemplated the measures to take for retirement adjustment, including gathering relevant information about retirement and advice, determining how much money will be needed in retirement and consulting retirement plans with the right group of people. Similarly, Clarke-Murphy and Gerrans (2001) considered the benefit of seminars, the collection and use of information, as well as the need for consultation with others when making decisions regarding financial planning. Lord (2002) also alluded to a number of studies associated with an individual's propensity to plan and prepare for their retirement.

Different levels of education reveal different ways of thinking. One proof of this is related to retirement vision, where the less-educated cohort are the most likely not to think about retirement (Lusardi, 2002); they are also less prepared for retirement (Warshawsky and Ameriks, 2000) and less likely to have basic financial knowledge (Lusardi, 2002). Similar evidence can be found in the trend for investment choices, whereby the level of education is a significant factor in the type of investments selected. Those with lower levels of education, which can be clustered into a group of those without degrees, tend to invest using cash. From the major proportion of their retirement savings, while the better-educated group are more likely to use growth assets (Waggle and Englis, 2000). Places with high illiteracy rates are thus confronted with improper planning at the early stages of retirement, a situation that could make retirees worse off for the rest of their retirement.

Researchers have deliberated the effects of employers providing financial education on personal savings (Bernheim and Garret, 1996; Bernheim et al., 2001), while some evidence supports the view that this has a significant impact on how individuals think and plan for retirement (Clark and d'Ambrosio, 2003). Furthermore, this can increase their retirement savings (Madrian and Shea, 2001). As Lusardi (2003) stated, financial literacy is more advantageous to financial planning, so improving financial education can be a primary avenue for improving retirement preparation (Sabri et al., 2021). Furthermore, it has been found that many workers are encouraged to increase their savings rate by having an improved understanding of their retirement income needs and the savings process required to achieve their revised retirement goals (Clark and d'Ambrosio, 2003).

METHODOLOGY

Sampling, procedures, and measure

This study is based on secondary data from a survey. The data were obtained through a cross-sectional survey of 1000 randomly chosen public retirees in the Klang Valley region. The research questions were addressed with 73.7% responses through face-to-face interviews and in-depth interviews conducted with the assistance of enumerators. The questionnaires include parts that are designed to gather information about retirement readiness, attitudes towards retirement, retirement adjustment, health care, psychology and spirituality, level of life satisfaction as well as income, expenses, assets, and activities of daily living among public retirees. There are eleven sections in total on the questionnaires, but only nine were used in this study.

In addition to being diversified in terms of its economic, occupational, and personal characteristics, Klang Valley is the metropolitan area that serves as the centre of industry and commerce for Malaysia. More importantly, this study aids policy makers in addressing the impact of productive ageing in urban area. Thus, the data provided is pertinent to the study on the socio-economic determinants affecting retirement adjustment, and life satisfaction and the economic contribution of public retirees based on their productive activities in the Klang Valley.

For this study, seven theoretical constructs from the resource-based dynamic model were utilised to search for details about the retirees' adjustment during their retirement and any perceived changes in life satisfaction. Retirement Readiness (RR), Attitudes towards Retirement (AR), Healthcare (HC), Psychology and Spirituality (PS), Retirement Adjustment (RA) and Life Satisfaction (LS) were the latent constructs of this study. All the items in the latent constructs were measured using an interval scale ranging from "1-strongly disagree" to "5-strongly agree". Besides, three measures of the formative construct were used, namely Income, Expenses and Assets.

The first part of the questionnaire addressed the retirees' socio-demographic profile, including their age, gender, educational level, occupation during retirement and length of retirement employment. Next, the respondents were asked about their retirement readiness in key segments - relationships with people (family and friends), health and finances - on a scale of 1 to 5, with 1 being "not prepared at all" and 5 being "fully prepared". The attitude towards retirement construct assess the individuals' opinions about their retirement on a five-point scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree").

Next, for the the retirement adjustment. A five-point scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"), was used to gauge the respondents' level of agreement. Respondents were also questioned about their faith and beliefs for the psychological and spiritual sections. All of items used a scale ranging from 1 ("strongly disagree") to 5 ("strongly agree"). In terms of healthcare, based on the given statements, the respondents were subsequently asked to rate on a five-point scale, ranging from 1 ("never") to 5 ("always"). For the economics section, the respondents were requested to answer open-ended questions covering sources of income, total household income, and monthly estimated expenditure, types of assets, outstanding loans and insurance. Finally, based on the statements provided, the respondents were asked to rank their degree of satisfaction on a five-point scale, ranging from 1 ("very unsatisfied") to 5 ("very satisfied").

The study adopted the two-step approach of modelling and analysing the structural model, namely Confirmatory Factor Analysis (CFA) and Structural Equation Modelling (SEM). Thus, before modelling the structural model and executing Structural Equation Modelling (SEM), the study needed to validate all measurement models of the latent constructs for Unidimensionality, Validity and Reliability (Kashif et al., 2016; Bakar et al., 2016; Hoque & Awang, 2016; Awang et al., 2015; Awang, 2015; 2014; 2012; 2011). The whole validation procedure is known as Confirmatory Factor Analysis (CFA).

Once the CFA report has been completed and all the values meet the required thresholds for validity and reliability, the researcher can conclude that the measurement models for all the latent constructs involved in the model have been validated (Awang, 2012; 2014; 2015). Then, these constructs were assembled into the structural model in order to execute Structural Equation Modelling (SEM) as shown in Figure 1.

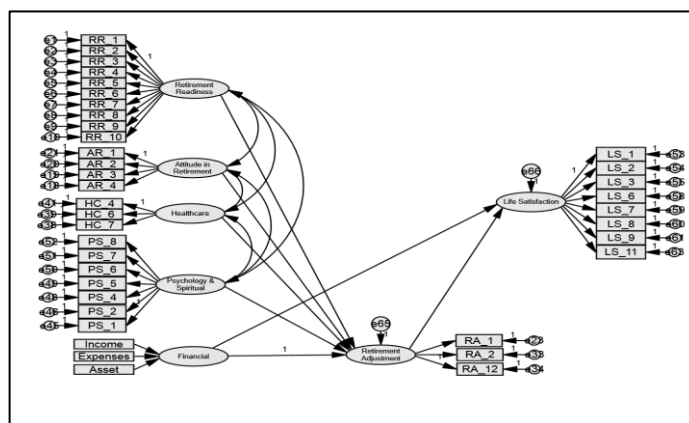


Figure 1 Hypothesized Structural Equation Modeling for Retirement Adjustment and Life Satisfaction (Initial Model)

FINDINGS

The study shows that the coefficient of determination or R-Square (R^2) for the model is 0.63 (Refer Figure 2) implying that the model which comprises four exogenous significant constructs namely Income, Health Care, Retirement Readiness and Retirement Adjustment manage to estimate 63% of the retirees' intention in having good life satisfaction during retirement life. This study inferred that readiness before entering the retirement life in terms of financial, mental and physical help the retirees' to adjust well during the retirement phase. Retirees' that adjusted well during their retirement life was expected to have greater life satisfaction.

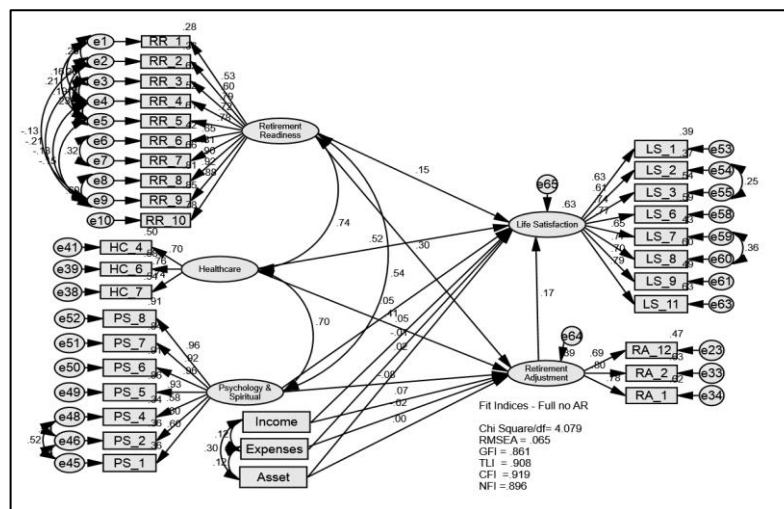


Figure 2 The Structural model

Demographic profiles of the respondents

A total of 737 government retirees from the Klang Valley participated in this study, with males constituted marginally more than half the respondents; 56.6% were male retirees and 43.4% were female retirees. In terms of race, 89.5% of respondents were Malay, followed by 7.2% who were Indians, 3.3% who were Chinese and 0.1% who were others. The majority of respondents (90.9%) were married; a minor proportion (9.1%) were widowed, 9.1% were divorced or separated, while only 0.3% reported that they had never married.

Next, the respondents were also divided into age groups. The first category included those aged 50-59 years old, which accounted for only 16.8% of the total number of respondents. Meanwhile, 63.6% of the respondents were in group two, with ages ranging from 60-69. Only 17.5% were in the third group, which included respondents aged 70-79 years old and the final group, which included respondents aged 80 and over, contained only 2%. In regard to education, all of them had been to school. At least 12.3% and 54.1% were primary school and secondary school leavers, respectively, while 33.6% of the respondents continued to higher education. The majority of the respondents, 57.1%, indicated that they were living with at least 1 to 3 persons in the house, 31.8% lived with 4-6 persons and 9.1% lived with 7-13 persons in the same house. Thirteen respondents claimed that they lived alone.

Both wealth and financial management after retirement were regarded as important components of the respondents' economic profiles. The assets that were the sources of their retirement income included investment savings and property investments; meanwhile, their monthly expenditure and financial responsibilities, like debts, ultimately indicated their financial consumption. Twenty respondents chose not to disclose the amount they received as their pension. The reported pensions ranged between RM150 and RM10,000 per month. The average pension received by the respondents was RM 2,155.23 per month, with a monthly median of RM 1,900.00. Female respondents had a slightly higher mean pension (RM 2,193.00) than male respondents (RM2,125.81). Those with tertiary education obtained an average pension of RM3,488.26, which was 2.3 times greater than the RM 1,509.80 earned by others with only secondary or primary education.

On the other hand, the most recent trend indicates that the percentage of government employees with a higher degree is growing. Therefore, the average pension received in Malaysia will likely rise in the future. A similar pattern was observed in the study of the pension sums received in relation to the respondent's date of retirement. The average

pension gained by retirees in the previous three years was higher (RM2, 776.07) than the amount received more than 11 years ago (RM1, 824.76).

However, in comparison to males, women had a larger average income. In general, those with tertiary education earned significantly more, on average, than those with only secondary education. Female respondents received a larger average income from their children than the male respondents did. More importantly, this study found that 30% of the retirees depended completely on a pension to sustain their lives and well-being; a significantly large percentage were those with tertiary degrees (40%). In fact, the assets amassed at a younger age may ensure economic freedom in later life. More than 90% of the males who had tertiary education and had been retired for more than 11 years owned at least one house. The proportion of female respondents who were homeowners was 85.8%, compared to 93.4% of male respondents. About 31.8% of the male respondents owned land, compared to 22.8% of the females. Over half the individuals who had just retired had the greatest percentage of savings. Interestingly, none of the retirees aged 80 and above had unpaid debts, indicating that they are financially stable in retirement.

Measurement Model of The Construct

This section discusses how the study assessed the measurement model in terms of validity and reliability. For the reliability assessment, the composite reliability score was utilised with limit values of 0.7, as suggested by Hair et al. (2010). Meanwhile, for the validity, the construct validity was examined through convergent validity and discriminant validity. The measurement model proposed in the previous section encompassed Retirement Readiness (RR), Attitude in Retirement (AR), Retirement Adjustment (RA), Healthcare (HC), Psychology and Spiritual (PS) and Life Satisfaction (LS). Referring to the questionnaires, RR has 10 items, AR has 11 items, RA has 13 items, HC has 10 items, PS has 8 items and LS has 11 items. In order to assess the reliability and validity, confirmatory factor analysis (CFA) was employed using AMOS version 24.

Reliability and Convergent Validity

This section examines the reliability and convergent validity of the measurement model. For reliability, the study utilised composite reliability (CR), as this assessment suitable for SEM. If the CR value is greater than 0.7, this indicates that the items of the dimension are reliable. Meanwhile, for a dimension to achieve convergent validity requires that the Average Variance Extracted (AVE) value is greater than 0.5. This indicates that 50% of the variation among the items is explained by the dimension itself; hence, this shows high convergent validity (Fornell & Larcker, 1981). Table 1 shows the factor loading (beta), AVE and CR values for the full measurement model. The results reveal that all the factor loadings are greater than 0.5, confirming their significant contribution to their corresponding dimension. The CR values were greater than 0.7, ranging from 0.775 to 0.934, which implies that the measurement model has good reliability. The model also has good convergent validity as all the AVE values were greater than 0.5, ranging from 0.508 to 0.656.

Table 1 Statistics of reliability and convergent validity of the measurement model

Factors / Items	Construct Reliability (CR)	AVE (>0.5), $AVE = \sum \frac{\lambda^2}{n}$
Retirement Readiness (RR)	0.934	0.593
Attitude in Retirement (AR)	0.775	0.538
Retirement Adjustment (RA)	0.798	0.570
Healthcare (HC)	0.778	0.538
Psychology and Spiritual (PS)	0.927	0.656
Life Satisfaction (LS)	0.891	0.508

Discriminant Analysis

According to Hair et al. (2010), discriminant validity refers to the degree to which a construct is really distinguishable from other constructs. It entails the relationship between a specific latent construct and other constructs of a similar type (Brown, 2006). This study investigated discriminant validity by employing two methods: the correlation technique and the comparison between squared multiple correlations and AVE values for each dimension. The study proceeded with the assessment of the discriminant validity of the measurement model by comparing the squared multiple correlation and AVE values of each dimension (Table 2). The results reveal that one R^2 between two constructs produced a greater value than the AVE between AR and RA (0.880>0.570), implying that there was a lack

of discriminant capability between RA and AR, as well as confirming the existence of multicollinearity (Hair et al., 2010). As a result, AR was omitted from the model to prevent discriminant validity and multicollinearity issues from arising in the model.

Table 2 The discriminant validity index summary

Dimensions	LS	PS	HC	RA	AR	RR
LS	0.508					
PS	0.306	0.656				
HC	0.581	0.484	0.538			
RA	0.346	0.135	0.341	0.570		
AR	0.402	0.182	0.411	0.880	0.538	
RR	0.445	0.289	0.561	0.334	0.329	0.593

*Diagonal bold are AVE values while the off diagonal is r²

Modified Pooled-Cfa

In dealing with the multicollinearity issue, the study performed the modified pooled-CFA, as highlighted in the preceding section. This ensured that the model did not disrupt any measurement model requirements since it was decided that AR would be excluded from the final model. The final model had RMSEA of 0.071, TLI of 0.911, CFI of 0.922 and Chisq/df of 4.577; thus, it was concluded that the final model achieved construct validity and reliability, and was a good-fitting model.

Structural Model

Following the validation of the measurement model's validity and reliability, the structural model was established to test the research hypotheses. The structural model is particularly proficient in depicting the interrelationship between exogenous and endogenous variables. During the computation of this structural model, hypothesis testing must take into account that Income, Expenses and Assets, as latent variables, were not included in the previous section. The life satisfaction model was estimated using AMOS version 24 and the output is shown in Figure 2. Based on the structural model, four indices met the endorsed values for model fit, with RMSEA (0.065<0.008), TLI (0.908>0.9), CFI (0.919>0.9) and Chisq/df (4.079<5.0). The results suggest that this structural model did not require any amendments.

Hypothesis Testing

The structural model is an important part of hypothesis testing as it provides evidence of the hypothesis proposed, which leads to the analyses of direct and indirect relationships. There were only 13 hypotheses related to direct relationships as two hypotheses were removed due to the multicollinearity issue, as mentioned in the previous section. To determine the mediating relationship, six hypotheses were established, as discussed in the rest of the section.

Direct Relationship Analysis

Table 3 reveals that four factors were found to have significant effects or impacts on retirees' life satisfaction, namely retirement adjustment ($\beta = 0.169, p = 0.008$), retirement readiness ($\beta = 0.151, p = 0.028$), healthcare ($\beta = 0.521, p = 0.001$) and income ($\beta = 0.051, p = 0.035$). In this case, the beta values refer to the standardised path, which means that a comparison between the strength of the impact is possible. As a result, the Healthcare (HC) factor was found to have the highest impact on retirees' life satisfaction (LS), followed by retirement adjustment (RA), retirement readiness (RR) and income. The beta values indicate that there were correlations with higher income, a better healthcare system and higher retirement readiness, which implied a higher level of life satisfaction for retirees. The table also shows that the computed R² or endogenous RA is 0.386 which suggest that 38.6% of the exogenous construct contributed to comprehending the RA. The R² value for LS is 0.631, implying that the model can account for 63% of the variance in retirees' life satisfaction.

Table 3 Direct relationship regression path of the Structural model

Hypothesis	Causal Path	Beta (β)	R ²	p-value	Result
H1	RR : RA	0.300	0.386	0.002	Significant
H2	AR : RA	-		-	-
H3	HC : RA	0.413		0.001	Significant
H4	PS : RA	-0.076		0.242	Not Significant
H5	INCOME: RA	0.067		0.032	Significant
H6	EXPENSES: RA	0.001		0.972	Not Significant
H7	ASSET: RA	-0.016		0.469	Not Significant
H8	RA : LS	0.169	0.631	0.008	Significant
H9	RR : LS	0.151		0.028	Significant
H10	AR:LS	-		-	-
H11	HC:LS	0.521		0.001	Significant
H12	PS:LS	0.052		0.390	Not Significant
H13	INCOME: LS	0.051		0.035	Significant
H14	EXPENSES:LS	0.018		0.342	Not Significant
H15	ASSET:LS	-0.010		0.576	Not Significant

Note: RA=Retirement Adjustment, LS=Life Satisfaction, PS=Psychology and Spiritual, HC=Health care, RR=Retirement Readiness

Next, this study evaluated the total effects of each factor on retirement adjustment (RA). The results reveal that retirement readiness ($\beta = 0.300$, $p = 0.002$), healthcare ($\beta = 0.413$, $p = 0.001$) and income ($\beta = 0.067$, $p = 0.032$) had significant impacts on retirement adjustment. By comparing the beta values, it was concluded that healthcare had the most direct influence on retirement adjustment, followed by retirement readiness and then income. It was learned that high income, better healthcare and greater retirement readiness are key factors that result in higher retirement adjustment.

Mediation Relationship Analysis

In order to obtain valid results to test the mediating effect, the independent variables must have a significant direct effect on the dependent variables (Baron & Kenny, 1986; Awang, 2015). Thus, RA was used to mediate a relationship only between RR, HC and Income on one hand, and LS on the other, as the other variables were found to be insignificant, based on the previous direct relationship analysis. The process began by assessing the standardised regression weights and the significance of each path involved in the mediation model. Zainudin (2015) suggested the bootstrapping method must be used to confirm the mediation outcome. From the bootstrapping method, the maximum likelihood estimation can determine the p values of the paths' estimation with a 95% bias-corrected confidence interval and a bootstrapping sample size of 2000.

The results in Table 4 show that the direct relationship in the mediation model between RR and LS is significant ($\beta = 0.151$, $p = 0.028$); thus, the research proceeded to determine the mediation effect.

Table 4 A standardized regression weight for the RA between RR and LS, with its significance path

Hypothesised Path	Beta (β)	p-value	Result
Direct Model			
RR→LS	0.202	0.004	Significant
Mediation Model			
RR→LS	0.151	0.028	Significant
RR→RA	0.300	0.002	Significant
RA→LS	0.169	0.008	Significant

By following the procedures for testing the mediator proposed by Zainudin (2015), Figure 3 illustrates the four steps that demonstrate the standardised regression weight or the RA between RR and LS, with its significance path.

1. The indirect effect = $(0.300 \times 0.169) = 0.051$
2. The direct effect = 0.151
3. As the direct effect (0.151) is larger than the indirect effect (0.051), the beta value from the Direct Model has to be with those from the Mediation Model. (Refer Table 4)
4. In this case, the beta value for the Direct Model is 0.202, which decreases to 0.151 in the Mediation Model, this would provide evidence for partial mediation.

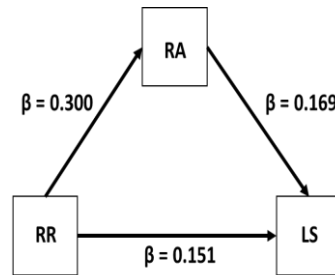


Figure 3 Assessing the mediation of RA between RR and LS

To confirm the occurrence of partial mediation, Table 5 reveals the results of the bootstrapping method used to test retirement adjustment as a mediator on the relationship between retirement readiness and life satisfaction.

In particular, both the direct effect ($p=0.028$) and indirect effect ($p=0.007$) of the mediation model seem to be significant, supporting the existence of partial mediation.

Table 5 The results of bootstrapping procedure for testing retirement adjustment as a mediator on the relationship between retirement readiness and life satisfaction

	Indirect Effect	Direct Effect
Bootstrapping Results	0.051	0.151
Bootstrapping P-Value	0.007	0.028
Result	Significant	Significant
Type of Mediation	Partial Mediation since direct effect is also significant	

In terms of the mediation effect of retirement adjustment on healthcare and life satisfaction, Table 6 demonstrates that the results of the direct relationship in the mediation model between HC and LS are significant ($\beta = 0.521$, $p = 0.001$). Hence, the study proceeded to determine the mediation effect, as described in Figure 3, by assessing the mediation of RA between HC and LS (Refer to Figure 4).

Table 6 A standardised regression weight for the RA between HC and LS, with its significance path

Hypothesised Path	Beta (β)	p-value	Result
Direct Model			
HC→LS	0.590	0.001	Significant
Mediation Model			
HC→LS	0.521	0.001	Significant
HC→RA	0.413	0.001	Significant
RA→LS	0.169	0.008	Significant

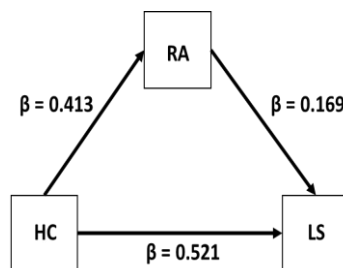


Figure 4 Assessing the mediation of RA between HC and LS

Similarly, four steps are used in determining the mediation effect:

1. The indirect effect = $(0.413 \times 0.169) = 0.069$
2. The direct effect = 0.521
3. As the direct effect (0.521) is larger than the indirect effect (0.069), the beta value from the direct model has to be compared with those from the mediation model (Refer to Table 6).
4. In this case, the beta value for the direct model was 0.590, which decreased to 0.521 in the mediation model, providing evidence of the existence of partial mediation.

To confirm the occurrence of partial mediation, Table 7 shows that the indirect effect is significant, thus confirming the existence of partial mediation. The direct effect (p=0.001) and indirect effect (p=0.003) of the mediation model are both significant, supporting the existence of partial mediation.

Table 7 The results of bootstrapping procedure for testing retirement adjustment as a mediator on the relationship between healthcare and life satisfaction

	Indirect Effect	Direct Effect
Bootstrapping Results	0.070	0.521
Bootstrapping P-Value	0.003	0.001
Result	Significant	Significant
Type of Mediation	Partial Mediation since direct effect is also significant	

Finally, the study examined the mediation effect of retirement adjustment on income and life satisfaction using the same procedure as above (Refer to Figure 5).

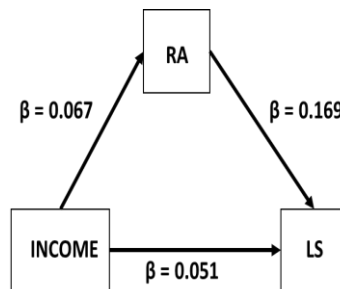


Figure 5 Assessing the mediation of RA between Income and LS

The steps for determining the mediation effect are:

1. The indirect effect = (0.067 X 0.169) = 0.011
2. The direct effect = 0.051
3. As the direct effect (0.051) is larger than the indirect effect (0.011), the beta values from the direct model have to be compared with those from the mediation model (Refer to Table 8)

Table 8 A standardized regression weight for the RA between Income and LS, with its significance path

Hypothesised Path	Beta (β)	p-value	Result
Direct Model			
INCOME→LS	0.063	0.018	Significant
Mediation Model			
INCOME→ LS	0.051	0.035	Significant
INCOME→RA	0.067	0.032	Significant
RA→ LS	0.169	0.008	Significant

4. In this case, the beta value for the direct model was 0.063, which decreased to 0.051 in the mediation model, providing evidence of the existence of partial mediation.

In a similar vein, the bootstrapping method was performed to confirm the occurrence of partial mediation. Table 9 shows that the indirect effect is significant, which implies the existence of partial mediation.

Table 9 The results of bootstrapping procedure for testing retirement adjustment as a mediator on the relationship between income and life satisfaction

	Indirect Effect	Direct Effect
Bootstrapping Results	0.011	0.051
Bootstrapping P-Value	0.025	0.035
Result	Significant	Significant
Type of Mediation	Partial Mediation since direct effect is also significant	

In particular, the direct effect (p=0.035) and indirect effect (p=0.025) of the mediation model are both significant, which supports the existence of partial mediation.

In summary, the results supported hypotheses H1a, H3a and H5a as partially mediated, as the AR variable was omitted from the model. In other words, there was no mediation test for H2a. However, for H4a, H6a and H7a, mediation analysis was also not been performed as the relationship did not exist.

DISCUSSION

The study's findings have led to the recognition of a number of key factors as significant contributors to the retirement adjustment. Evidently, the following three factors were identified as being significant: healthcare (HC), retirement adjustment (RA), retirement readiness (RR), and income. The study supports the findings of earlier studies (Earl et al., 2015; Muratore and Earl, 2015) that people with health issues have a difficult time adjusting to retirement, supporting the significance of healthcare (HC) in impacting retirement adjustment (RA). Health issues, such as chronic illnesses or impairments, can make it more difficult for retirees to adjust to their new lifestyle (Bender, 2012). This finding underscores the importance of healthcare in relation to retirement which is primarily performed by Malaysia's Ministry of Health (MOH). Various health-related services are offered by the MOH, including health promotion, disease prevention, curative and rehabilitative care delivered through clinics and hospitals, and long-term care provided by special institutions. Public retirees are still entitled to free medical treatment at any government clinic or hospital. Hence, they definitely benefit from having access to quality health care during retirement. Quality health care gives them a peace of mind, knowing that they will have access to the care they need, should they need it. This type of access to health care helps to ensure that public retirees have the necessary resources to maintain their health and well-being. Having access to high-quality healthcare helps ease the financial burden of medical expenses, which can be a major concern for retirees.

Next, this study found retirement readiness to be the second determinant in influencing retirement adjustment. The results were consistent with previous studies by Donaldson et al. (2010) and Rietzes and Mutran (2004) which emphasised the importance of being prepared and having a plan in place to ensure a well-adjusted retirement experience. Retirement readiness includes preparation in having a stable support system, establishing financial security, and planning on activities that are meaningful to them (Panos, 2011; Petkoska and Earl, 2009; Lusardi et al., 2006; Hershey and Mowen, 2000). Consistently, Lusardi et al. (2006) discovered that individuals that have a lack of knowledge in making proper retirement and saving decisions frequently struggle to enjoy life during retirement years. People who are well-prepared for retirement are more likely to adjust to retirement smoothly and favourably (Wang et al., 2007). Individuals who are less prepared for retirement may have a hard time adjusting to it and finding meaning and purpose in their golden years.

This study also discovered that income is a significant factor influencing the transition to retirement. This is consistent with research by Wang (2011), Donaldson et al. (2010), Maclean (1983), and Thompson et al. (1960) that demonstrates the advantages of retirees having a constant income, since it offers them peace of mind and financial security. According to Preston et al. (2018), financial security is critical to preparing for retirement, as unstable income may compromise the ability to pay for essential services such as utilities, residential properties and medications. As for public retirees residing in Klang Valley, the importance of having enough income to support their lifestyle during retirement is seen as vital. This is because the cost of living in the urban area is likely to face more challenges compared to the rural area. Failure to have adequate financial standing could lead to financial hardship and put them at risk of poverty (Suwaranda, 2018). A certain group of individuals may have a falsely positive view of their retirement lifestyle as a result of ignoring the issue or overestimating the value of their future pension benefits (Elder, 2000). Many of them have indicated that there is no time for them to determine how much money they will need in retirement or that they are afraid of the answer (Yakoboski and Dickemper, 1997). As a result, they are unable to deal with the reality of retirement and are doomed to face difficulties even after retirement.

Numerous longitudinal studies have observed diverse consequences of retirement (HeyBroek et al., 2015; Muratore et al., 2014; Pinguart and Schindler, 2007; Wang, 2007), and a large proportion of older workers have difficulties adjusting to the retirement life. These elements are seen to be crucial in enabling citizens to contribute productively to the national economy. In contrast, some of the determinants studied did not indicate significant findings. The three elements—assets, costs, and psychology and spirituality (PS)—do not have a major impact on how successfully public retirees adjust to retirement life. This contradictory outcome is might due to the status of the respondents as a public retiree who receives a permanent pension on a monthly basis.

In Malaysia, there are a number of advantages or facilities available to public retirees, particularly in the area of purchasing a home as an asset while still in the service (Chee, 1997). Housing loan facilities during their service are among the determinants contributing to the asset ownership of each public servant in Malaysia. Thus, this reason would contribute to the unsupported outcome of the asset factor in the retirement adjustment. In terms of expenses, it turns out that nearly 60% of public retirees live in a small number of households (1–3 persons), and this would contribute to the insignificant factor of expenses as there is no need to adjust the expenses during the retirement life due to the adequate monthly pension received. Moreover, as residents of urbanised areas, these retirees can easily take advantage of special rates and prices for a variety of establishments, including dining establishments, public transit, hotel buffets, and healthcare. In addition, the psychological and spiritual (PS) determinants also insignificant toward retirement adjustment.

The majority of public retirees in this study are Muslims and Malay. Malaysia is a Muslim-majority country where Islam is the official faith. The items underlying this construct involve answering questions about religious norms. Religious norms are the values people uphold in accordance with the beliefs they perceive in their day-to-day lives. Accordingly, religion has a major impact on respondents' responses concerning this issue, thus these respondents are trying to avoid any beliefs that would deviate from their beliefs as Muslims. It could therefore be that the PS determinant does not affect the retirement adjustment significantly.

The results showed that retirement adjustment (RA) partially mediates the relationship between readiness (RR), health care (HC), and Income with life satisfaction (LS). The HC determinants found to partially mediate the relationship between RA and LS, thus consistent with past studies, the findings of this study support cross-sectional research signifying that retirees who are in good health are able to adjust better (Muratore and Earl, 2015; Donaldson et al., 2010), experience more satisfaction (Asebedo and Seay, 2014), and achieve a higher level of overall retirement satisfaction (Hoppman et al., 2017; Jones et al., 2003).

It has also been found that negative health changes in retirement are associated with more adjustment difficulties (Gall et al., 1997), which ultimately leads to decreased satisfaction (Van Solinge and Henkens, 2008). The findings suggest that retirees who are well prepared (retirement readiness) upon entering the retirement phase will adjust well during their retirement years, which eventually leads to life satisfaction throughout retirement.

It is to note that building a strong social support is a necessary part of retirement readiness. Zimet et al. (1988) defines social support as perceptions of adequate social support. As a firm predictor of adaptation to adjustment and challenging life situations, social support plays an essential role in retirement life satisfaction (Hobfoll, 2002). In retirement, it has been shown that the quality of social relations affects one's ability to adjust to achieve life satisfaction (Price and Balaswamy, 2009; Pinquart and Sorensen, 2000). For that reason, having a higher level of social support should facilitate the adjustment process and lead to a higher level of life satisfaction. A positive impact on life satisfaction would come from increased social support after retirement as a result of more time spent with friends and family (Yoon et al., 2017). This study is consistent with those of Wang (2007) and Reitzes and Mutran (2004), who found that retirement planning helps people adjust more easily and experience greater levels of satisfaction. Being financially secure, physically fit, mentally alert, and emotionally ready are all characteristics of those who are well-prepared for retirement, which results in less stress and worry. The study also confirms the findings of Donaldson et al. (2010), Wong and Earl (2009), that retirees with higher incomes report better adjustment as well as higher levels of satisfaction. In addition, income decline (Gall et al., 1997; Van Solinge and Henkens, 2008) or decrease in income adequacy (Kim and Moen, 2002) are related to more adjustment problems and leads to less satisfaction in retirement. The ability to meet immediate financial demands is referred to as having basic financial resources, and financial satisfaction is referred to as being content with one's current financial condition are used as indicators of financial resources. As Diener and Seligman (2004) argued that financial security and income adequacy are generally better predictors of subjective well-being than excessive wealth, especially in economically developed countries (Diener and Biswas-Diener, 2002). Access to basic financial resources should facilitate better adjustment in retirement while lack of financial security is assumed to increase the risk for adjustment problems (Earl et al., 2015; Muratore and Earl, 2015; Boon et al., 2011). Decreased financial satisfaction due to lowered income in retirement would have a negative impact on life satisfaction, while increased financial satisfaction is assumed to be beneficial for life satisfaction.

CONCLUSION

The lives of retirees and other senior citizens are not something that should be taken lightly, particularly given that Malaysia is projected to become an ageing society by 2030. There is cause of concern if there is insufficient planning on the part of each person who will eventually reach old age. Hence, any person who is contemplating retirement or is already retired should devise a plan and be willing to invest in order to improve their retirement financial literacy. In order to maintain a healthy retirement, retirees and those who are about to retire must make physical and mental preparations before retiring. Indirectly, the social and economic support that retirees receive from family members in particular and the country in general may enable them to live the best life possible.

Retirement adjustment partially mediates life satisfaction for retirees, suggesting that retirement planning programs should emphasise factors that affect retirement adjustment. These social and economic factors should include increasing financial literacy knowledge, making health care awareness more accessible, and promoting social support networks and social participation in order to facilitate a successful retirement adjustment. By increasing their financial literacy knowledge, retirees can better understand how to manage their finances and plan for retirement. More importantly, increasing access to health information can assist people in learning how to manage their health after retirement. Retirees' sense of engagement with the world around them can be increased through encouraging social support networks and social activity, which helps lessen feelings of loneliness or isolation.

In sum, policymakers can take action by preparing a retirement framework that priorities the needs of Malaysian retirees. Retirees could be required to report their financial and health status during their retirement period. This can be done periodically to ensure their well-being during retirement is tracked. This would help policymakers identify the gaps in the current retirement framework and make the necessary changes to better support retirees.

Policymakers should also think about marketing strategies that make use of the appropriate communication tools, visuals, and consistent language to ensure that public retirees fully understand the challenges they will face in retirement because retirement readiness and income factors have a significant impact on retirement adjustment and life satisfaction. With this knowledge, retirees will be better equipped to plan their finances for retirement, maximise their savings, and adjust more easily to their retirement lifestyle. Apart from financial planning, based on the significant relationship of health care factors to the adjustment and life satisfaction of retirees, it is recommended that retirees have health checkups every five years, or more frequently if deemed necessary. Thus, it is crucial to build a community health care monitoring and advisory service for retirees since doing so would give them access to high-quality healthcare in their neighbourhood, which is good for their overall health and wellbeing. This would help to reduce the burden on the public healthcare system, as retirees would be able to receive care in their own communities.

Therefore, identifying the socio-economic factors incidence among older persons is crucial for assisting in the formulation of appropriate policy responses. The key strategies that contribute to a higher standard of living are to create sustainable environments that promote economic growth while enhancing social services. The findings imply that retirees with greater life satisfaction could make a valuable contribution to their communities and the nation as a whole.

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REFERENCES

- Ali, S., 2013. *Financial Literacy in Malaysia : Issues and Status Update*. Kuala Lumpur.
- Astakhova, L., Tokranov, A. and Bukharaev, Y., 2012. Destructiveness as a Disfunction of Religious Identity : A Comment on the Methodology of Research into New Religious Movements, *20(1)*, pp. 7–14. <https://doi.org/10.5829/idosi.wasj.2012.20.01.2804>

- Bakar, H. A., Mahmood, R. and Ismail, N. N. H., 2015. Effects of knowledge management and strategic improvisation on SME performance in Malaysia. *Asian Social Science*, 11(9), pp. 207–214. <https://doi.org/10.5539/ass.v11n9p207>
- Baron, R. M. and Kenny, D. A., 1986. The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality and Social Psychology*, 51(6), pp. 1173–1182.
- Been, J., 2015. *Pensions, Retirement, and the Financial Position of the Elderly*.
- Bender, K. A., 2012. An analysis of well-being in retirement: The role of pensions, health, and “voluntariness” of retirement. *Journal of Socio-Economics*, 41(4), pp. 424–433. <https://doi.org/10.1016/j.socec.2011.05.010>
- Bernheim, B. D., Garret, D. M. and Maki, D. M., 1997. *Education and saving: The long-term effects of high school financial curriculum mandates* (No. 6085).
- Bogaard, L. Van Den, Henkens, K. and Kalmijn, M., 2016. Retirement as a Relief? The Role of Physical Job Demands and Psychological Job Stress for Effects of Retirement on Self-Rated Health. *European Sociological Review*, pp. 1–12. <https://doi.org/10.1093/esr/jcv135>
- Boon, T. H., Yee, H. S. and Ting, H. W., 2011. Financial literacy and personal financial planning in Klang Valley, Malaysia. *International Journal of Economics and Management*, 5(1), pp. 149-168.
- Bridgman, B., Dugan, A., Lal, M. and Osborne, M., 2012. Accounting for Household Production in the National Accounts, 1965–2010. *Survey of Current Business*, (May), pp. 23–36.
- Brown, M. and Graf, R., 2013. Financial Literacy and Retirement Planning in Switzerland. *Numeracy*, 6(2), Article 6. <https://doi.org/http://dx.doi.org/10.5038/1936-4660.6.2.6>
- Carr, D. C. and Kail, B. L., 2013. The influence of unpaid work on the transition out of full-time paid work. *Gerontologist*, 53(1), pp. 92–101. <https://doi.org/10.1093/geront/gns080>
- Chadeau, A., 1992. What is households’ non-market production worth? *OECD Economic Studies*, (18).
- Chee, L. K., 1997. The Malaysian Government Pension Scheme : Whither Its Future Direction? *Journal of Economics Malaysia*, 31, pp. 87–106.
- Clark, A. E. and d’Ambrosio, C., 2014. Attitudes to Income Inequality : Experimental and Survey Evidence To cite this version : Working Paper No 2014 – 16 Attitudes to Income Inequality : Experimental and Survey Evidence.
- Cox, H. and Bhak, A., 1978. Symbolic Interaction And Retirement Adjustment : An Empirical Assessment, 9(3), pp. 279–286. <https://doi.org/10.2190/V0TP-17MK-04L0-J7J1>
- Crawford, R., 2013. The effect of the financial crisis on the retirement plans of older workers in England. *Economics Letters*, 121(2), pp. 156–159. <https://doi.org/10.1016/j.econlet.2013.07.024>
- Cummins, R. A., 2013. *Personal Wellbeing Index – Adult PWI-A (English .*
- Davies, E. M. M., Van der Heijden, B. I. J. M. and Flynn, M., 2017. Job satisfaction, retirement attitude and intended retirement age: A conditional process analysis across workers’ level of household income. *Frontiers in Psychology*, 8(MAY), pp. 1–13. <https://doi.org/10.3389/fpsyg.2017.00891>
- Diener, E. and Chan, M. Y., 2011. Happy People Live Longer : Subjective Well-Being Contributes to Health and Longevity. *Applied Psychology: Health and Well-Being*, 3(1), pp. 1–43. <https://doi.org/10.1111/j.1758-0854.2010.01045.x>
- Donaldson, T., Earl, J. K. and Muratore, A. M., 2010. Extending the integrated model of retirement adjustment : Incorporating mastery and retirement planning. *Journal of Vocational Behavior*, 77(2), pp. 279–289. <https://doi.org/10.1016/j.jvb.2010.03.003>
- Elder, H., 2000. Beliefs and actions: expectations and savings decisions by older Americans. *Financial Services Review*, 9(1), pp. 33–45. [https://doi.org/10.1016/s1057-0810\(00\)00054-8](https://doi.org/10.1016/s1057-0810(00)00054-8)
- Fornell, C. and Larcker, D. F., 1981. Fornell, C. and Larcker, D.F., 1981), “Evaluating structural equation models with unobservable variables and.pdf. *Journal of Marketing Research*, XVIII(February), pp. 39–50.
- George, L. K., 2013. Sociological on Life Perspectives Transitions. *Annual Review of Sociology*, 19(1993), pp. 353–373.
- Gerrans, P. and Clark-Murphy, M., 2004. Gender differences in retirement savings decisions. *Journal of Pension Economics and Finance*, 3(2), pp. 145–164. <https://doi.org/10.1017/S1474747204001477>

- Hansson, I., 2019. *Retirement and Life Satisfaction : A Resource-Based Dynamic Perspective*.
- Hershey, D. A. and Mowen, J. C., 2000. Psychological determinants of financial preparedness for retirement. *Gerontologist*, 40(6), pp. 687–697. <https://doi.org/10.1093/geront/40.6.687>
- Ibrahim, D., Isa, Z. M. and Ali, N., 2012. Malaysian Savings Behavior towards Retirement Planning, 28, pp. 102–105.
- Isaksson, K. and Johansson, G., 2000. Adaptation to continued work and early retirement following downsizing: Long-term effects and gender differences. *Journal of Occupational and Organizational Psychology*, 73(2), pp. 241–256. <https://doi.org/10.1348/096317900167001>
- Ismail, Z., WA, W.-I., Zuria, M., Hamjah, S. H., Rosidah, J., Baharuddin, E., ... Mohd. Kusrin, Z., 2012. An Alternative Living Arrangement For Older Malaysian. *Advances in Natural and Applied Sciences*, 6(8)(January), pp. 1568–1572.
- Kashif, M., Shukran, S. S. W., Rehman, M. A. and Sarifuddin, S., 2015. Customer satisfaction and loyalty in Malaysian Islamic banks: A PAKSERV investigation. *International Journal of Bank Marketing*, 33(1), pp. 23–40. <https://doi.org/10.1108/IJBM-08-2013-0084>
- Kharchenko, O., 2011. *Financial Literacy in Ukraine: Determinants and Implications for Saving Behaviour*. Kyiv School of Economics.
- Kim, J. E. and Moen, P., 2001. Is retirement good or bad for subjective well-being? *Current Directions in Psychological Science*, 10(3), pp. 83–86. <https://doi.org/10.1111/1467-8721.00121>
- Kim, J., Kwon, J. and Anderson, E. A., 2004. Factors Related to Retirement Confidence: Retirement Preparation and Workplace Financial Education Jinhee Kim, Jasook Kwon and Elaine A. Anderson, pp. 0–19.
- Lee, J. J. and Miller, S. E., 2013. A self-care framework for social workers: Building a strong foundation for practice. *Families in Society*, 94(2), pp. 96–103. <https://doi.org/10.1606/1044-3894.4289>
- Lusardi, A., 2014. National Tax Association PREPARING FOR RETIREMENT: THE IMPORTANCE OF PLANNING COSTS, 95(2002), pp. 148–154.
- Lusardi, A. and Mitchell, O. S., 2010. Financial Literacy around the World: An Overview Financial Literacy around the World: Introduction and Overview, (December 2010).
- Lusardi, A. and Mitchell, O. S., 2014. The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature*, 52(1). <https://doi.org/10.1257/jel.52.1.5>
- Lusardi, A., Mitchell, O. S., Campbell, J., Caplin, A., Chan, S., Engelhardt, G., ... Rodgers, W., 2006. Financial Literacy and Planning: Implications for Retirement Wellbeing.
- M. Poterba, J., Venti, S. F. and A.Wise, D., 2011. *THE COMPOSITION AND DRAW-DOWN OF WEALTH IN RETIREMENT* (No. 17536).
- MacBride, A., 1976. Retirement as a life crisis: Myth or reality? A review. *Canadian Psychiatric Association Journal*, 21(8), pp. 547–556. <https://doi.org/10.1177/070674377602100809>
- Maclean, M. J., 1983. Differences Between Adjustment to and Enjoyment of Retirement. *Canadian Journal on Aging / La Revue Canadienne Du Vieillessement*, 2(1), pp. 3–8. <https://doi.org/10.1017/S0714980800015592>
- Madrian, B. C. and Shea, D. F., 2001. The power of suggestion: Inertia in 401(k) participation and savings behavior. *Quarterly Journal of Economics*, 116(4), pp. 1149–1187. <https://doi.org/10.1162/003355301753265543>
- Maestas, N., J.Mullen, K. and Powell, D., 2016. *THE EFFECT OF POPULATION AGING ON ECONOMIC GROWTH, THE LABOR FORCE AND PRODUCTIVITY* (No. 22452). Massachusetts Avenue Cambridge. Retrieved from <http://www.nber.org/papers/w22452>
- Mbarire, Trizah Thara. Ali, A. I., 2014. Determinants of financial literacy levels among employees of Kenya ports authority in Kenya. *Research Journal of Finance and Accounting*, 5(16), pp. 44–52.
- Mcneil, C. and Hunter, J., 2014. *THE GENERATION STRAIN*. London, UK.
- Ministry of Finance, Malaysia 2017/2018 Economic Report.
- Mitchell, O. S. and Phillips, J. W. R., 2012. Retirement in Japan and the United States: Cross-National Comparisons using the Japanese Study of Aging and Retirement (J.S.T.A.R.) and the U.S. Health and Retirement Study (H.R.S.).

- Moon, J. R., Glymour, M. M., Subramanian, S. V., Avendaño, M. and Kawachi, I., 2012. Social Science & Medicine Transition to retirement and risk of cardiovascular disease: Prospective analysis of the US health and retirement study. *Social Science & Medicine*, 75(3), pp. 526–530. <https://doi.org/10.1016/j.socscimed.2012.04.004>
- Muratore, A. M. and Earl, J. K., 2015. Improving retirement outcomes: The role of resources, pre-retirement planning and transition characteristics. *Ageing and Society*, 35(10), pp. 2100–2140. <https://doi.org/10.1017/S0144686X14000841>
- Mutran, E. J., Reitzes, D. C. and Fernandez, M. E., 1997. Factors that influence attitudes toward retirement. *Research on Aging*, 19(3), pp. 251–273. <https://doi.org/10.1177/0164027597193001>
- Panos, G. A., 2011. Financial Literacy and Retirement Planning The Russian Case, (October).
- Petkoska, J. and Earl, J. K., 2009. Understanding the Influence of Demographic and Psychological Variables on Retirement Planning. *Psychology and Aging*, 24(1), pp. 245–251. <https://doi.org/10.1037/a0014096>
- Phelan, J. C., Link, B. G. and Tehranifar, P., 2010. Social Conditions as Fundamental Causes of Health Inequalities: Theory, Evidence, and Policy Implications. *Journal of Health and Social Behavior*, 51(1_suppl), pp. S28–S40. <https://doi.org/10.1177/0022146510383498>
- Pinquart, M. and Schindler, I., 2007. Changes of Life Satisfaction in the Transition to Retirement: A Latent-Class Approach, 22(3), pp. 442–455. <https://doi.org/10.1037/0882-7974.22.3.442>
- Prawitz, A. D., Garman, E. T., Sorhaindo, B., O'Neill, B., Kim, J. and Drentea, P., 2006. InCharge financial distress/financial well-being scale: Development, administration, and score interpretation. *Journal of Financial Counseling and Planning*, 17(1), pp. 34–50. <https://doi.org/10.1037/t60365-000>
- Preston, C., Drydakakis, N., Forwood, S., Ellen-Hughes, S. and Burch, S., 2018. Planning and preparing for later life About the Centre for Ageing Better, (September).
- Quick, H. E. and Moen, P., 1998. Gender, employment, and retirement quality: a life course approach to the differential experiences of men and women. *Journal of Occupational Health Psychology*, 3(1), pp. 44–64. <https://doi.org/10.1037/1076-8998.3.1.44>
- Ratanabanchuen, R., 2013. Demographic Transition, Pension Schemes' Investment, and the Financial Market, (June).
- Reis, M. and Gold, D. P., 1993. Retirement, Personality, and Life Satisfaction: A Review and Two Models. *The Journal of Applied Gerontology*, 12(2), pp. 261–282. <https://doi.org/10.1177/073346489301200209>
- Reitzes, D. C. and Mutran, E. J., 2004. The Transition To Retirement: Stages And Factors That Influence Retirement Adjustment *. *International Journal Aging And Human Development*, 59(1), pp. 63–84.
- Sabri, M. F., Cheng-Xi Aw, E. U. G. E. N. E., Rahim, H. A., Burhan, N. A. S., Othman, M. A. and Simanjuntak, M. E. G. A. W. A. T. I., 2021. Financial Literacy, Behavior and Vulnerability Among Malaysian Households: Does Gender Matter?. *International Journal of Economics & Management*, 15(2).
- Shavisinsky, J., 1995. The Unbearable Lightness of Retirement: Ritual and Support in a Modern Life Passage. *Research on Aging*, 17(3), pp. 243–259. <https://doi.org/https://doi.org/10.1177/0164027595173001>
- Stawski, R. S. and Hershey, D. A., 2007. Goal clarity and financial planning activities as determinants of retirement savings contributions. *International Journal of Aging and Human Development*, 64(1), pp. 13–32. <https://doi.org/10.2190/13GK-5H72-H324-16P2>
- Streib, G. F. and Schneider, C. J., 1973. Retirement in American Society: Impact and Process. *Social Forces*, 51(march), pp. 386–387.
- Sullivan, S. E. and Al Ariss, A., 2019. Employment After Retirement: A Review and Framework for Future Research. *Journal of Management*, 45(1), pp. 262–284. <https://doi.org/10.1177/0149206318810411>
- Thompson, W. E., Streib, G. F. and Kosa, J., 1960. The effect of retirement on personal adjustment: a panel analysis. *Journal of Gerontology*, 15(2), pp. 165–169. <https://doi.org/10.1093/geronj/15.2.165>
- Jackson, T., 2009. Beyond the Growth Economy. *Journal of Industrial Ecology*. <https://doi.org/10.1111/j.1530-9290.2009.00151.x>
- Topa, G., Moriano, J. A. and Moreno, A., 2012. Psychosocial determinants of financial planning for retirement among immigrants in Europe. *Journal of Economic Psychology*, 33(3), pp. 527–537. <https://doi.org/10.1016/j.joep.2012.01.003>

- Tucker, P. T., Folkard, S., Ansiau, D. and Marquie, J., 2011. The Effects of Age and Shiftwork on Perceived Sleep Problems, (October 2018). <https://doi.org/10.1097/JOM.0b013e318221c64c>
- Turner, M. Jean, Bailey, W. C. and Scott, J. P., 1994. Factors Influencing Attitude Toward Retirement and Retirement Planning Among Midlife University Employees. *The Journal of Applied Gerontology*, 13(2), pp. 143–156. <https://doi.org/10.1177/073346489401300203>
- van Solinge, H. and Henkens, K., 2008. Adjustment to and Satisfaction With Retirement: Two of a Kind? *Psychology and Aging*, 23(2), pp. 422–434. <https://doi.org/10.1037/0882-7974.23.2.422>
- Waggle, D. and Englis, B., 2000. Asset allocation decisions in retirement accounts: an all-or-nothing proposition? *Financial Services Review*, 9(1), pp. 79–92. [https://doi.org/10.1016/s1057-0810\(00\)00057-3](https://doi.org/10.1016/s1057-0810(00)00057-3)
- Wang, F., 2017. The economics of ageing and health. *The Journal of the Economics of Ageing*. <https://doi.org/10.1016/j.jeoa.2017.09.003>
- Wang, M., 2007. Profiling retirees in the retirement transition and adjustment process: Examining the longitudinal change patterns of retirees' psychological well-being. *Journal of Applied Psychology*, 92(2), pp. 455–474. <https://doi.org/10.1037/0021-9010.92.2.455>
- Wang, M., 2011. Retirement Adjustment: A Review of Theoretical and Empirical Advancements. <https://doi.org/10.1037/a0022414>
- Wang, M. and Hesketh, B., 2012. Achieving Well-Being in Retirement: Recommendations from 20 Years of Research. *SIOP White Paper Series*, 22.
- Wang, M. and Shi, J., 2014. Psychology Research on Retirement. *Annual Review of Psychology*, 65, pp. 209–233. <https://doi.org/10.1146/annurev-psych-010213-115131>
- Wang, X., Steier, J. B. and Gallo, W. T., 2021. The effect of retirement on alcohol consumption: Results from the US Health and Retirement Study The effect of retirement on alcohol consumption: results from the US Health and Retirement Study, (March). <https://doi.org/10.1093/eurpub/cku027>
- Warshawsky, M. and Ameriks, J., 2000. How prepared are Americans for retirement? ... *Retirement Needs and Retirement* ..., (1998), pp. 33–67. Retrieved from <http://books.google.com/books?hl=en&lr=&id=llteQcSykLcC&oi=fnd&pg=PA33&dq=How+prepared+are+americans+for+retirement&ots=BsMKqRu78-&sig=Osu5PUuGoM270wZLCJGwIG-sDzI>
- Yakoboski, P. and Dickemper, J., 1997. Increased Saving but Little Planning: Results of the 1997 Retirement Confidence Survey, (November), pp. 1–23.
- Yoon, Y., Witvorapong, N. and Pothisiri, W., 2017. Perceptions Towards the Elderly Among the Thai Working-Age Population: A Structural Equation Modeling Analysis. *International Journal of Economics & Management*, 11.