



Development of Retirement Readiness Measures Based on the Capacity- Willingness-Opportunity Model

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ABSTRACT

In an effort to avert the high old-age dependency ratio in Malaysia, the study reconceptualized and developed retirement readiness scales based on the Capacity Willingness Opportunity Model (CWOM). The developed scales emphasized the importance of capacity and opportunity as catalytic traits in a retirement preparatory process. The study adopted three phases of designing a scale meticulously- item development, scale development, and scale evaluation. This process involved qualitative and quantitative research approaches. In the pilot study, out of the 61 items loaded into the exploratory factor analysis (EFA), 27 items were retained based on items with reasonable inter-item correlation, and they yielded four components. This study applied a multistage sampling technique to collect data from an adult family member of students from a local university in Klang-Valley, Malaysia. Based on the four factors yielded by the EFA in the pilot study, the researchers conducted another EFA using Varimax rotation with the remaining items and discovered a similar result to the pilot outcome. Subsequently, a pooled confirmatory factor analysis on 27 items confirmed the psychometric properties of 17 newly developed indicators. Notably, the study contributes to the literature on the robustness of CWOM as a catalyst for retirement readiness and establishes the statistical compatibility of the constructs.

JEL Classification: J26, J32

Keywords: Capacity; Malaysian employees; Opportunity; Retirement readiness scales; Willingness to plan

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INTRODUCTION

Retirement is a major transition in human life that requires thoughtful planning and constant process evaluation to suit global and or regional economic changes. The issues of retirement and retirement planning have continued to be a concern in almost every country (Haron et al., 2019). Research shows that one-third of grownups in their 50s have failed to design an economic conservation plan to ensure a good retirement lifestyle (Lusardi, 1999). Specifically, almost 40 percent of Malaysian citizens do not have a retirement plan (Business Times, 2024). While retirement concerns have gained prominence in developed countries in the past two decades, the issues of retirement and its readiness or preparedness are relatively new in Malaysia (Haron et al., 2019). Hence, the dearth of retirement readiness or preparedness will eventually affect Malaysians' retirement confidence (Zulfaka and Kassim, 2021). Correspondingly, financial experts have different views towards retirement, whereas individuals have given minimal attention to it (Krishnan et al., 2018). Malaysians largely depend on the Employees Provident Fund (EPF), a compulsory deduction from private and non-pensionable employees' monthly salaries or wages. After this deduction, the high cost of living mostly prevents many adult Malaysian employees from saving (AKPK, 2018). As such, the sad reality is that only 4.0 percent of Malaysians are reported to be able to afford retirement (Business Times, 2024).

Malaysia will be an aged nation in the year 2040 when about 14% of the population will be 65 years and above (The Sun, 2024; DOSM, 2016). One of the greatest challenges pre-retirees encounter is increased living costs and longer retirement periods (Noone et al., 2010). Given the challenges that await pre-retirees, Malaysia may be in for a high old-age dependency ratio which could hinder existing economic growth if retirement and or the readiness to retire is not properly delineated. Despite Malaysian employees aged 50 to 59 years old scoring highest on retirement planning, other Malaysian employees below 50 averagely score low on retirement planning (AKPK, 2018), suggesting that most Malaysian employees are not prepared for retirement. They may have misconstrued retirement, including its measures, or lack the resources for adequate retirement preparation.

Consequently, due to continuous poor delineation and investigation of retirement planning or readiness (cf. Kerry, 2018), Malaysian employees require extensive and local knowledge of retirement and retirement readiness or preparedness to ensure a healthy lifestyle after retirement, because the provision of social protection services in Malaysia is different from those in some other countries (EPF). For instance, social protection in Malaysia is limited in terms of benefits and coverage (Khazanah Research Institute, 2021), whereas in some countries such as Australia, Philippines, Singapore, and the USA, social protection services cover risks of unemployment, protection of women and girls from crises, protecting the citizens against poverty, vulnerability, death, and other exceptional circumstances. This is due to the pattern of human response to retirement, i.e., they understand it (conscientize and represent it in mind) before they ponder the implications and necessary actions (Seidl et al., 2020).

Furthermore, a thorough literature review on retirement has highlighted the meaning of retirement and or its readiness amid increasing job mobility and longer life expectancies as important areas for future work-retirement research domains. Apart from the widely acceptable retirement scales developed by Noone et al. (2010), the development of retirement or retirement readiness and its factors' scales in Malaysia is essential because the existing scale did not incorporate Malaysian culture. For instance, it is a common culture for retirees in Malaysia to entertain unexpected expenses from their extended family members. Research shows that Malaysia is a collectivistic country (Chinedu et al., 2021; Hofstede Insights), whereas New Zealand (the home country of Noone et al. (2010) scales) and many Western countries are rated high on individualism scores of cultural values (cf. Hofstede Insights). Hence, certain issues or attributes in the measurement of retirement or retirement readiness and its factors in individualistic countries may not conform with those of collectivistic nations. In addition, the scope of social protection in Malaysia significantly differs from Western countries (EPF), especially in benefits and coverage (Khazanah Research Institute, 2021).

Notably, about seven standardized measures were found in the literature for measuring retirement planning (cf. Table 1), and three of the seven measures (Leandro-França et al., 2014; Muratore and Earl, 2010; Noone et al., 2010) have a strong theoretical basis. However, Leandro-França and colleagues' measures did not show criterion-related validity, and Muratore and Earl contained items that were specific to the Australian context (Seidl et al., 2020). In contrast, Noone and colleagues' measure was considered more appropriate as it does not have country-specific items and has already been translated into other languages. Yet, the capacity to draw on process theory enables researchers to test hypotheses about how people plan, rather than just whether

they are planning for retirement or not (Friedman and Scholnick, 1997) which is influenced by cultural, or demographic differences. Furthermore, this study is a response to Seidl et al.'s (2020) calls for improved operationalization of preparedness (readiness in the present study) to capture better retirement planning in terms of behavior. Consequently, the main purpose of this study is to locally conceptualize retirement or retirement readiness and identify the related factors and the measures using Capacity Willingness Opportunity Model.

Table 1 Retirement Planning Measures

Authors (Year)	Scale Name	Number and Names of each Dimension	Number of Items	Answers Scales	Reliability	Languages
Lee and Law (2004)	Retirement Planning Behaviors	4-Financial, health, living arrangements, psychological	19	Dichotomous (yes, no)	Not provided	Chinese
Petkoska and Earl (2009)	Retirement Planning Questionnaire I	4-Financial, health, interpersonal, work	36	Dichotomous (yes, no)	.53 to .80	English
Muratore and Earl (2010)	Retirement Planning Questionnaire II	3-Public protection, self-insurance, self-protection	28	5-point Likert	.80 to .88	English
Noone et al. (2010)	Process of Retirement Planning Scale	4-Financial, health, lifestyle, psychosocial	52	5-point Likert	.67 to .88	English
Maggiori et al. (2013)	Transition to Retirement Questionnaire (TRQ)	5-Continuers, Adventurers, Easy gliders, Searchers, Retreaters	31	6-point Likert	.69 to .89	French
Wang et al. (2014)	Checklist for Retirement Plans	1-Future plans for retirement	7	Dichotomous (yes, no)	Not provided	English
Leandro-França et al. (2014)	Change in Retirement Planning Behavior Scale	2-Occupational-social, autonomy, and well-being	15	5-point Likert	.71 to .75	Portuguese

Note: This table is adapted from Rafalski et al. (2017)

LITERATURE REVIEW

Retirement is a permanent cessation of an individual's routine full-time work in which the age coincides with eligibility for claiming Social Security benefits (Shoven and Slavov, 2012), or EPF in the Malaysian context. Although individuals can receive retirement pay and be engaged in bridge employment (Kerr and Armstrong-Stassen, 2011), retirement entails a withdrawal from the labor force and the claiming of income from pensions, Social Security, and other retirement schemes (Purcell, 2000). This calls for a lifetime plan that encompasses individual spending including but not limited to health or medical bills, leisure, and basic needs. Thus, sensible retirement planning entails ensuring that retirement resources last many decades (Sharpe, 2020).

Several studies on retirement have identified different factors such as level of education, age, level of household income, and financial literacy as precursors of retirement readiness (cf. Ade, 2013; Yuh and Olson, 1997). However, there ought to be some reservations in concluding that the aforementioned factors determine retirement readiness. For instance, while a lot is being studied on the effects of financial literacy on retirement or retirement readiness, caution must be exercised in concluding that financial education could affect retirement readiness or savings for four reasons. First, a very small percentage of workers ever attended retirement workshops; second, the extensive financial illiteracy among workers may require repeated lectures or seminars on financial economics for a desired outcome; third, reports that people have difficulties in maintaining designed action points that education alone may not be the solution; fourth, human beings differ in the level of financial literacy and saving patterns are very diverse (Lusardi and Mitchell, 2006).

Based on the above, the researchers posit that the existing factors of retirement or retirement readiness are not exhaustive because circumstantial issues such as salary range and individual ability to plan could outweigh structural parameters (age, years of service, or employment) of retirement readiness. This is because a worker who did not plan, set money aside for his or her retirement, or possess adequate skills in managing his or her little financial resources could not be regarded as a prepared potential retiree irrespective of the person's age or years of service. Thus, capacity and opportunity are crucial elements of retirement readiness. In cognizance of the perceived circumstantial issues and structural parameters of retirement readiness, it is argued

that retirement and retirement readiness could be interpreted differently in different parts of the world. For example, the retirement age varies between 57 years in Indonesia and 67 years in Italy and Norway, with a proposition of 68 years in the UK and Ireland as retirement age in 2037 and 2028 respectively (Schroders.com).

Also, while re-employment could be offered in Singapore up to the age of 67 (Schroders.com), some people may not have such a privilege or even bridge employment. All these make the patterns of retirement over time and between countries challenging (Eyjolfsson et al., 2021). Thus, retirement and its readiness undoubtedly vary along individual understanding and regional economic lines.

In a survey conducted by EPF (2018) on the perceptions and expectations of Malaysians towards aging and retirement, the study found that almost all the respondents indicated that they would like to live up to 80 years. However, the irony of the samples' response is that many are not financially confident about having a comfortable life throughout their retirement years. About half of the respondents are sure of having a comfortable life, while the rest are not very optimistic (EPF, 2018). According to EPF (2018), most of those who feel certain about having a comfortable life postretirement are professionals, whereas non-professionals are less assured. This explicitly dampens the fate of the Malaysian population that are very pessimistic about living a comfortable life throughout their retirement years. Hence, the question is: will those who are not sure of a financially comfortable life throughout their retirement years work till eternity even in the face of health challenges and mental strength, or has longer life expectancy become a misery to them, and or how long will the government be supporting this population? This further expatiates the gap and rationale of the study's main objective (localization of the concept and scale development).

Retirement or Retirement Readiness Localized

Retirement planning/readiness/behavior studies have received substantial attention from scholars (cf. Eyjolfsson et al., 2021; Lusardi and Mitchell, 2011), and Malaysian researchers (cf. Zulfaka and Kassim, 2021; Afthanorhan et al., 2020; Krishnan et al., 2018) have not localized the concept of retirement and its measures. This heightens the level of disregard among Malaysian employees in adopting retirement plan pathways for a robust retirement experience. Localization of retirement and its measures is essential to propagate the importance of planning and its implications for a robust experience during and after retirement among Malaysian workers. Research also shows that those who prepare for retirement are more likely to report higher satisfaction and better adjustment after retirement (Kerry, 2018; Noone et al., 2009). This suggests that many aspects of life experience (perceived) must be considered to ensure better adjustment and higher satisfaction postretirement. Consequently, retirement or retirement readiness is multidimensional: expanding the goal of retirement readiness beyond financial protection and employee routine absence at a workplace must be explicitly highlighted in the conceptualization of retirement or retirement readiness locally. For instance, Yuh et al. (1998) have posited that retirement readiness entails an employee leaving an active work-life at a desired retirement age and being able to maintain his or her social life, psychological strength, good health status, and is financially capable of supporting his or her entire retirement period.

In line with Yuh et al.'s (1998) explanation, retirement readiness is considered to be time-bound, and socio-psychologically interconnected: an ideal retirement readiness calls for employees to start planning for their retirement in their early years of employment. Once a timely cognitive understanding of retirement is developed, goals for the responsibilities that are associated with retirement are established (Noone et al., 2010). The authors aver that a lack of timely commencement of retirement preparation precipitates an ugly retirement experience. Retirement readiness is also socio-psychologically connected because it is the basic concept that drives individual or human well-being during retirement. The perception of individual relativeness with people, especially a significant other, in an environment, absolves the human mind of emotional stress and can foster a positive retirement experience.

Specifically, retirement or retirement readiness entails dogged discipline in keeping to employees' established resource management structure and socio-psychological adjustments over time. This calls for a paternalistic approach in the conservation of resources while in active employment to build up a robust pension paying out benefits over time and when due (EPF, 2018). According to EPF (2018), living longer requires working longer, thereby maintaining pension schemes to ensure an expansive scope for flexible retirement. Hence, employees ought to either delay their retirement and spend more years in their workplaces in order for them to save more or retire at the statutory retirement age and consume less in retirement. Irrespective of the path one adopts, employees must sensitize the rigors of life in retirement such as payment of health bills,

maintenance of a good social life and basic needs, seasonal entertainment of grandchildren or poor relatives due to their collectivistic tendencies, and robust psychological strength. Based on the above, addressing or investigating retirement from a collectivistic lens could strengthen retirees' psychological state, whereby the perception of having people around emboldens retirees' feelings of relatedness.

Capacity Willingness Opportunity Model (CWOM)

This study adopted the Capacity Willingness Opportunity Model (CWOM) proposed by Blumberg and Pringle (1982). According to the CWOM, in order for an individual to achieve quality performance at work, he or she must have the capacity to perform the work, the willingness to execute the work, and the opportunity to accomplish the work. Studies (cf. Hershey and Mowen, 2000; Topa et al., 2018; Herrador-Alcaide et al., 2021) have shown that empirical works that are conducted over the past two decades have established the robustness of CWOM in retirement-related studies. CWOM is a specific and broad framework because it is designed to explain financial planning for retirement and incorporates three dimensions with different variables (Topa et al., 2018). Therefore, CWOM is adopted as a guiding framework for the study.

Hershey et al. (2013) state that individual possession of the capacity to perform implies having various cognitive and personal endowments that distinguish the worker from others. A person's knowledge, skills, fluid and crystallized intelligence, and psychological biases would likely influence the ability to plan and save (Resende and Zeidan, 2015), and these attributes can also promote more effective retirement readiness or preparedness. Willingness consists of the motivational variables that steer planning and saving activities (Hershey et al., 2013). According to Herrador-Alcaide et al. (2021), willingness includes the motivational forces and attitudinal and emotional factors that determine the probability that an individual will begin to plan and maintain an activity over time. Thus, this study asserts that willingness is employees' expressive desire for optimal readiness to retire. Opportunity centers on external forces that influence the worker's performance such as environmental or geographical opportunities or constraints (Hershey et al., 2013). The presence of voluntary retirement saving schemes, tax incentives for saving, and financial advisors in the proximal environment would be associated with the tendency to plan and save for retirement (Topa et al., 2018). In financial planning for retirement, Hershey et al. (2013) have noted that these external forces can be categorized into three factors: social forces (i.e., perceived social norms and social support mechanisms that are linked to retirement planning), institutional opportunities (i.e., forward-thinking policies and programs that encourage employees to save for retirement or future), and economic dynamics and incentives (i.e., significant economic shocks, bank closures, and market upheavals that mess up employees' retirement savings and investment decisions).

This study postulates that the inter-dimensional connections between capacity, willingness, and opportunity imply that employees' retirement readiness could effectively be achieved if their (employees') capacity, willingness, or opportunity is enhanced from a dormant level to a desired positive retirement experience level. Thus, an increase in the level of any of the three will precipitate improvement in the other two areas. For instance, employees' regular access to retirement workshops (opportunity) is believed to enhance their capacity and willingness to prepare for retirement. Therefore, as suggested by Hershey et al. (2013), it can be concluded that CWOM is an appropriate basis for the development of retirement or retirement readiness measures.

METHODOLOGY

The three phases of designing a meticulous scale are item development, scale development, and scale assessment (Hinkin, 1995), which could be further broken down into nine sub-stages (Boateng et al., 2018) is adopted in developing the current measures. Item development consists of the identification of domains and item generation and the assessment of content validity, whereas scale development (harmonization of separate items to a measuring construct) comprises pre-testing questions, sampling or survey, item reduction, and extraction of factors). Accordingly, scale assessment is composed of tests of dimensionality, tests of reliability, and tests of validity.

Phase 1: Item Development

Step 1: Identification of Domain and Item Generation

In line with the Capacity Willingness Opportunity Model (CWOM), three domains (capacity, willingness, and opportunity) that are essential and are believed to affect retirement readiness among Malaysian employees have been identified. Even though this study's literature search has found about six retirement planning measures, the development of the present retirement or retirement readiness and its factors' scales was prompted by the inability of existing measures to emphasize the importance of capacity and opportunity as catalytic traits in a retirement preparatory process. Notably, one of the most widely used Retirement or Retirement Planning Scales (PRePS) (Noone et al., 2010) was based on the theory that conceptualizes planning as a four-stage process from cognition to action (Friedman and Scholnick, 1997). However, it is essential to underscore that without opportunity or access to certain information about retirement, the four-stage process (representation, goal, decision, and preparedness) will hardly be invoked among the employees. Hence, employees' goals or preparedness may not be accomplished without an opportunity. Based on extant literature (Herrador-Alcaide et al., 2021; Hershey et al., 2013; Blumberg and Pringle, 1982), the researchers maintain that capacity, willingness, and opportunity are crucial domains of retirement readiness or preparedness that must be taken into consideration by retirement measures.

Definition of Retirement Readiness and the Three Factors/Domains (Capacity to plan, Willingness to plan, Opportunity to plan)

In this study, the following variables are defined as such:

1. Capacity to plan: We operationalize the capacity to plan as the acceptable level of financial knowledge or skills that are required from employees to achieve a quality retirement experience.
2. Willingness to plan: This is the employees' expected motivation towards a specific financial plan (short or long) or actions that foster a comfortable retirement.
3. Opportunity to plan: This refers to the employees' direct access to financial savings or investment or retirement programs (such as workshops and tax incentives) that encourage a robust retirement experience.
4. Retirement Readiness: Retirement or retirement readiness is the employees' awareness of mandatory absence from a workplace and confidence in maintaining a decent quality of life independently.

To identify appropriate questions that fit the identified domains, the researchers broadly reviewed the literature and assessed existing retirement scales as suggested by Raykov and Marcoulides (2011). Thereafter, an inductive research approach (focus group discussion and interviews) that involved private sector employees in Klang Valley, Malaysia was employed which led to the generation of seventy-nine (79) items.

Step 2: Assessment of Content Validity

To ensure that the content validity of the items was established, the study followed the five conditions (a generally accepted definition, the domain is unambiguously defined, the domain's content is relevant to the purposes of measurement, a consensus among qualified judges on the sampling adequacy of the domain, and the response content must be reliably observed and evaluated) suggested by Guion (1997). The Delphi method with five expert judges was adopted to assess each item that constitutes the domains for content relevance and technical quality. Adopting the Delphi method narrowed the number of items to sixty-one (61) under four 4 domains on a 4-point Likert scale (i.e.: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree). The researchers further evaluated each item constituting the domains for representativeness of experience from a sub-section of the target population by conducting cognitive interviews with end users of the scale items (above 45-year-old employees) to assess face validity (Haynes et al., 1995).

Phase 2: Scale Development

Step 3: Pre-testing Questions

To assess the extent to which the questions reflect the domains of interest and that answers have yielded valid measurements; draft questions to nine (9) interviewees in 3 rounds are administered as the participants verbalize the psychic process required in providing answers (Beatty and Willis, 2007). Through a series of interviews, the end users identified some confusing questions, and the researchers improved them for clarity. In some cases, they suggested rewording perceived problematic items and then opined that the items are good measures of the domains of interest. Their opinion further supported the insights garnered from the expert judges (Delphi method); implying that the tentative scales are ideal for pre-testing.

Step 4: Administration of Survey and Sampling

The researchers administered potential scale items on a sample, which although small, reflects the range of the target population using questionnaires. In the pilot study, the researchers sampled 54 respondents through cross-sectional data collection to facilitate scale development and validation through exploratory factor analysis (EFA).

Step 5: Item Reduction

The study used IBM SPSS version 25 to conduct the EFA, reliability test, and computation of mean scores. Given the meager data available for the pilot study, efforts have been intensified to ensure that the potential scales are parsimonious by imputing (replacing) cases of items with few missing values with mean in the case of symmetric distributions, and mid-point of nearby cases for skewed distributions of the variables; meanwhile, about two cases of missing values were deleted to guarantee the availability of complete cases for scale development (cf. Gottschall et al., 2012). This reduced the pilot study sample to 52 cases. In addition, the researchers examined the distractor efficiency of the items to show the frequency of incorrect options and their contribution to the quality of the multi-choice items (Tarrant et al., 2009). The study identified two non-functional distractors- one was modified and retained, whereas the other was replaced with a better distractor. Items in the pool were further reduced through a thorough examination of the inter-item correlations in the correlation matrix of the EFA output. Items with very low correlations (<0.30) are less desirable Pallant (2011); thus, they were deleted from the tentative scale. Sequel to the deletion of items with very low correlations in the pilot study, the total number of items that remain for further validation was twenty-seven (27) which produced four (4) components with eigenvalues >1 .

To finalize the process, the researchers then collected another set of data ($n=528$) using a multistage sampling technique for the actual study. For this purpose, a public university in Klang Valley, Malaysia was randomly selected. Prior to this, permission from the Universiti Putra Malaysia (UPM) Ethics Committee for Research Involving Human Subjects was obtained. Authorization was also received from the Deans of the faculties who were involved in the survey. Participating students were randomly selected from four faculties (2 social science, and 2 science and technical-based faculties). Subsequently, the researchers chose one department from each of the four faculties. For each department, every 4th student entering the department was approached by the trained enumerators and was asked to participate. The participating students were later trained on the selection criteria (i.e., adult family members and one respondent per family) and how to administer the questionnaires to their respective adult family members. Furthermore, informed consent forms were attached to the questionnaires, and the participating students were made to understand that participation was voluntary and that their adult family members answering the questions could withdraw at any time. The participating students returned 427 completed and valid questionnaires, which represented around 81% of the total number of distributed questionnaires.

Step 6: Extraction of Factors

EFA using varimax rotation was performed on twenty-seven (27) items in the actual study ($n=427$) to simplify the item factoring and facilitate alignment with those coordinates. The study adopted the Kaiser criterion and Cattell's Scree Test criterion in deciding the number of factors to retain. The Kaiser Meyer-Olkin (KMO) was .939, exceeding the recommended value of .60 (Kaiser, 1974) and Bartlett's Test of Sphericity was highly significant ($p < .001$), supporting the sample adequacy and factorability of the correlation matrix. As shown in

Appendix A, the rotation extracted 4 components with eigenvalues greater than 1 and explained a 59.58% variance in the model. Also, the scree plot (graph) which shows the eigenvalues presented in descending order and linked with a line (Cattel, 1966) indicated a significant break in the fourth component of the scree plot. This lends support to the study's first criterion (Kaiser criterion) and as a result, solidifies the extraction of 4 components. Interestingly, all the items displayed factor loadings $> .40$ and the inter-item correlation was $> .30$ with other items.

Phase 3: Scale Evaluation

Step 7: Tests of Dimensionality

The extraction of 4 components that consist of 27 items from a Varimax rotated EFA proves that the latent constructs are developed based on a theorized performance model. The study estimated the measurement invariance of the proposed measures through a comparison of the similarities between the pilot and the actual studies' factorial invariances to ensure that the earlier hypothetical structure fits the items. The results were identical across the two samples, implying that the pattern of relationships and factors is consistent across groups. Then, the scale scores were calculated through the computation of the mean for raw item scores (cf. Armor, 1973), and by using a weighted approach applying confirmatory factor analysis (CFA).

Step 8: Tests of Reliability

To assess the internal consistency of the scales, the Cronbach alpha of the pilot study was estimated, followed by the use of construct reliability (CR) to determine the internal consistency of the scales in the actual study. The pilot study's Cronbach alpha ranged from .861 to .960, while the CR for the actual study ranged between .776 and .930, as shown in Table 2., indicating that the items' scores are consistent over time. Hence, the new measures attained acceptable reliability values as recommended by Hair et al. (2010), and the corrected item-total correlation for all the items was conspicuously high; thus, each of the indicators depicted maximum coherence with other items that were used to measure a collective construct.

Step 9: Tests of Validity

Confirmatory factor analysis (CFA) was conducted for a robust validity check with the use of AMOS version 24. Construct validity was achieved by ensuring that the model's fit indices were within the recommended threshold and that the measures fulfilled the criteria for both convergent and discriminant validity using a pooled CFA with maximum likelihood estimation.

Indisputably, exploratory factor analysis (EFA) results from the pilot study and the actual study yielded four factors respectively (with similar structures) that consisted of twenty-seven (27) items with the following structures: Readiness had three items; Opportunity retained seven items; Willingness retained nine items, while Capacity had eight items. To establish convergent validity, the factor loadings of the indicators, construct reliability, and average variance extracted (AVE) ought to be considered (Hair et al., 2014). Standardized factor loadings must be $> .50$ and < 1.0 (Hair et al., 2010), while AVE ought to be $\geq .50$ for the establishment of convergent validity of the measures (Hair et al., 2014). For a model to achieve a good fitness index, the root mean square of error approximation (RMSEA) must be $< .08$ (Byrne, 2001); Relative Chi square < 5.0 (Bentler, 1990); comparative fit index (CFI) $> .90$ (Bentler, 1990); normed fit index (NFI) $> .90$ (Bentler and Bonett, 1980); and Tucker-Lewis index (TLI) $> .90$ (Bentler and Bonett, 1980).

In line with recommendations in the literature, all the indicators generated from the EFA in the measurement model were included. There were incidents of low factor loadings (that is $< .50$) associated with some of the observed variables, and model misfits (inability to achieve the recommended fit indices). This led to the removal of indicators with low factor loadings. After purging our measurement model of low-factor loadings, the fit indices still displayed some misfits. Guided by modification indices, the redundant (irrelevant) indicators were expunged and finally achieved acceptable model fitness indices (Relative Chi-Square = 2.935; GFI = .915; CFI = .948; TLI = .937; RAMSEA = .067). As a result, 10 indicators were deleted from the provisional measures. The researchers also ensured that every factor loading was $\geq .60$ and that the constructs' AVEs were $> .50$ as shown in Table 2. Hence, the convergent validity of the measures was established.

Table 2 Construct Reliability, Average Variance Extracted (on the diagonal), and Inter-Construct Squared Correlation Coefficients of the Measures (on the off-diagonal)

	CR	Mean	Readiness	Opportunity	Willingness	Capacity
Readiness	0.776	20.80	0.539			
Opportunity	0.820	21.93	0.185	0.534		
Willingness	0.930	36.03	0.312	0.456	0.688	
Capacity	0.815	26.90	0.533	0.238	0.582	0.526

Note: CR= Construct reliability

On the other hand, discriminant validity is assessed by adopting a heterotrait-monotrait (HTMT) estimate of the correlation between the constructs (Henseler, Ringle, and Sarstedt, 2015). If the indicators of two constructs exhibit an HTMT value that is less than one, the true correlation between the two constructs is most likely different from one, and they ought to differ (Henseler et al., 2015). Although Henseler et al. (2015) suggested correlation values <1 between constructs as a measure of discriminant validity, Kline (2011) recommended a correlation threshold of <.85. The newly developed measures' discriminant validity was assessed based on correlation values between the constructs. As shown in Figure 1, all the inter-construct correlation values ranged between .430 and .763; thus, correlations between the constructs were within the recommended threshold. Therefore, the measures fulfilled discriminant validity assumptions.

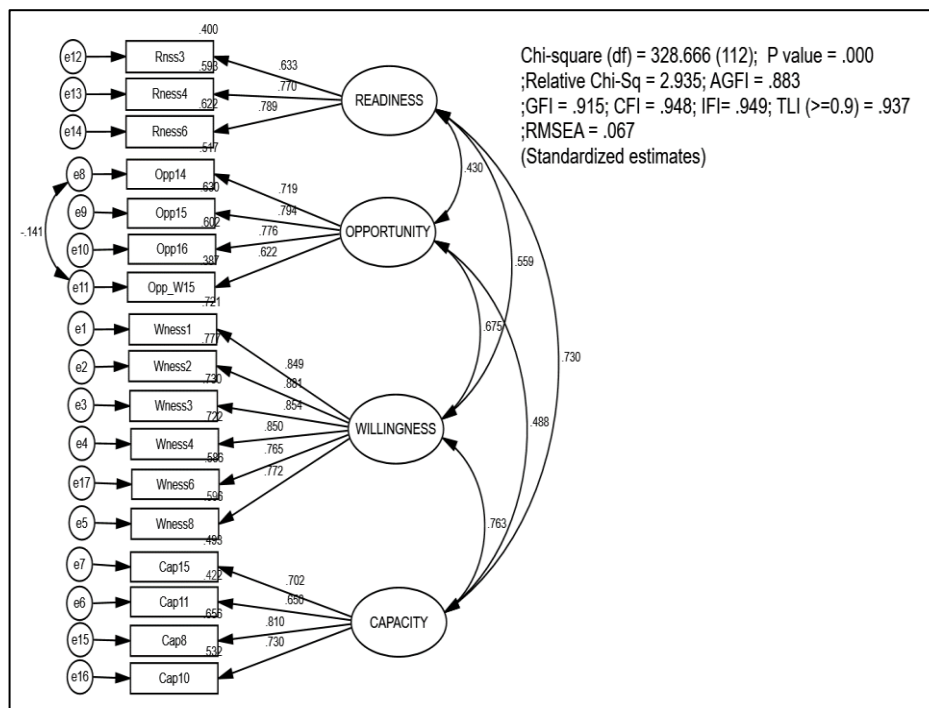


Figure 1 Measurement model

CONCLUSION

The laxity of Malaysian employees towards retirement readiness which is ostensibly precipitated by non-localization of retirement readiness or preparedness, its factors, and measures has been observed with great concern. Due to financial experts' varying opinions towards retirement and its factors, including the inadequate attention to these concepts by Malaysian employees, the study reconceptualized retirement readiness and its factors and developed the scales to enhance Malaysian employees' understanding and timely realignment of their socio-psychological and financial dispositions. Further triggered by the need to avert the high old-age dependency ratio in Malaysia which could affect the existing economic growth and longer periods of retirement, the study envisaged a dire need for employees especially Malaysians to revisit their life plan and design a sustainable economic conservation plan for a robust retirement experience.

Building on the Capacity Willingness Opportunity Model (CWOM) which has been suggested by Blumberg and Pringle (1982) for work performance, and Hershey et al. (2013) for retirement financial planning,

this study locally operationalized these concepts in relation to retirement and attributed them (capacity to plan, willingness to plan, and opportunity to plan) to prerequisite factors of retirement readiness. Bearing in mind that people first understand (conscientize and represent in mind) retirement before they ponder over its ensuing implications and necessary actions (cf. Seidl et al., 2020), three phases of rigorous scale development that consist of nine steps as suggested in the literature have been adopted. The process confirmed the psychometric properties of seventeen (17) indicators for the measurement of retirement or retirement readiness, capacity to plan, willingness to plan, and opportunity to plan. Please, see Appendices A and B for the list of the 17 indicators with acceptable (confirmed) psychometric properties.

Interestingly, this study contributes to the literature on the robustness of CWOM as a catalyst for the execution of desired actions (in this context retirement). It specifically supports studies such as Herrador-Alcaide et al. (2021), Topa et al. (2018), and Hershey et al. (2013). Notably, the results of this study empirically established the statistical compatibility of these constructs and supported the existing theoretical linkage in the literature. This implies that the constructs are theoretically related and thus suitable for desired investigations. Remarkably, the study's conceptualization of retirement or retirement readiness addressed retirement from a collectivistic perspective which has been ignored in the literature. In a collectivistic society, retirement readiness or preparedness transcends personal preparations for a smooth transition to a robust retirement experience. This is because collectivists exhibit a tightly integrated relationship tie, extended family members and others with we mentality into in-groups to take care of them in exchange for unwavering loyalty (Hofstede, 2011). Hence, for a Malaysian employee to be ready or prepared for retirement, he or she will take into consideration the necessary connections and requisite mechanisms to address both personal and group (social circle) challenges during and after retirement. In a developing country with limited coverage and benefits in social protection, retirement readiness will hardly be achieved without employees' timely and dogged attitudes toward the existing contributory schemes especially for workers with low wages, irregular employment, and informal workers.

Significantly, policymakers could use this study to understand the intricate nature of retirement or retirement readiness and be properly guided in the provision of retirement scheme policies that adequately cover retirees in a collectivistic country. Specifically, policymakers should enact laws that support the establishment of social insurance pensions which could serve as income security for retirees during their advancing years. They should also expand the coverage and benefit of the existing schemes such as EPF and Social Security Organization (SOSCO) to cover maternity income, irregular employment, and the risks of work injuries. This will douse concerns related to Malaysia's financial support for a post-employed aging population, and significantly reduce the impending high old-age dependency ratio. For researchers, given the sound psychometric properties of the newly developed measures, the new measures are apt for adoption in retirement-related investigations and intervention studies that are aimed at understanding how employees access certain programs or schemes that enhance their readiness to retire.

The limitations of the present study mainly center on the selection of adult family members of students from four faculties in UPM without incorporating the views of respondents or participants from other walks of life in Malaysia. Thus, limiting the participants to relatives of the students from the four faculties at UPM with no focus on the nature of the samples' jobs, income level, and type of organizations they work with. Notably, caution should be exercised in generalizing the findings of this study because differences in national fiscal policies and culture (collectivist) make it difficult to use retirement research of other nations as a universal model. While the measures could be used by all, primary data are needed for contextual balance. Future studies should probe the nature, organization type, and income levels of respondents, including featuring potential retirees from other walks of life in Malaysia rather than restricting the participants to students' relatives.

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APPENDICES

Appendix A: Actual Study EFA

KMO and Bartlett's Test

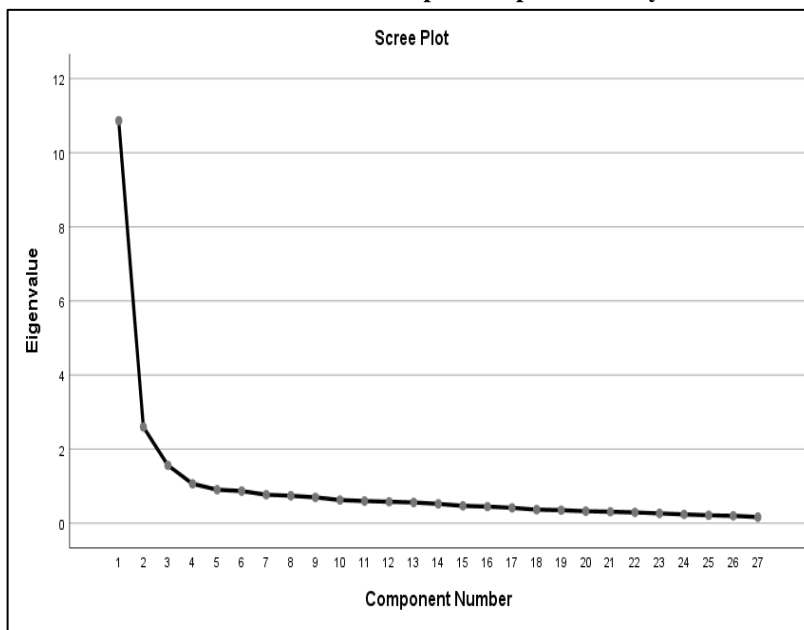
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. .939

Bartlett's Test of Sphericity	Approx. Chi-Square	6589.935
	df	351
	Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.863	40.232	40.232	5.736	21.243	21.243
2	2.598	9.622	49.854	4.240	15.703	36.946
3	1.560	5.779	55.633	3.606	13.356	50.302
4	1.065	3.944	59.577	2.504	9.275	59.577
5	.903	3.345	62.922			
6	.868	3.213	66.136			
7	.768	2.845	68.981			
8	.741	2.744	71.725			
9	.696	2.579	74.304			
10	.627	2.320	76.625			
11	.597	2.212	78.837			
12	.579	2.144	80.981			
13	.560	2.074	83.055			
14	.523	1.935	84.990			
15	.469	1.736	86.726			
16	.448	1.659	88.385			
17	.416	1.539	89.925			
18	.366	1.355	91.279			
19	.351	1.299	92.579			
20	.324	1.200	93.779			
21	.309	1.143	94.922			
22	.291	1.078	96.000			
23	.265	.980	96.980			
24	.237	.878	97.858			
25	.215	.796	98.655			
26	.199	.737	99.391			
27	.164	.609	100.000			

Extraction Method: Principal Component Analysis



Appendix B

List of the new scales (17 indicators with acceptable psychometric properties)

Retirement/Retirement Readiness

I have a clear vision of how life will be in retirement.
I think a great deal about my quality of life in retirement.
How confident are you of having a decent standard of living in your retirement?

Opportunity to Plan

I have access to professional investment advice that could enhance my retirement experience.
Some opportunities to learn about retirement planning are available to me.
I invest in retirement-saving products to obtain incentives.
I am privileged to diversify my retirement funds.

Willingness to Plan

I will calculate the amount of my savings to know if it could offer me a quality life in retirement.
I have set short-term or long-term financial goals.
I intend to gain more information about retirement.
I have set specific goals to save for retirement.
I am willing to ensure that I stick to the amount of money I should save every month.
I have written a comprehensive financial plan for my retirement.

Capacity to Plan

I can do my retirement planning.
I can set aside money in advance for my retirement or unexpected expenses.
Whenever I receive money, I plan how to use it to ensure a good retirement experience.
If I disagree or quarrel with a financial organization concerning my retirement, I have the skills to resolve it.
