

MEDIATING ROLE OF FINANCIAL KNOWLEDGE AND FINANCIAL RISK TOLERANCE BETWEEN FUTURE TIME PERSPECTIVE AND PERCEIVED FINANCIAL PREPAREDNESS FOR RETIREMENT OF TECHNICAL EDUCATION TEACHERS IN INDIA.

V. Kiran Kumar

Department of Management studies, Kirloskar Institute of Management, Pune, Maharashtra, India.

Dr. Pawan Kumar

Mittal School of Business, Lovely Professional University, Phagwara, Punjab, India.

Dr. Ashok Patil

Department of Management studies, Kirloskar Institute of Management, Pune, Maharashtra, India.

Abstract

Changing times affect the lifestyle and expenditure associated with the changed lifestyle. If not financially planned properly in advance, the consequences are the poor standard of living post-retirement. It is imperative that individuals are aware and act with financial prudence to avoid these adverse consequences. Extensive literature review suggests that there is a correlation between financial literacy and retirement planning, which is a function of socio-demographic, health and psychological factors. This paper focuses on financial preparedness of the technical teachers of various engineering colleges of Andhra Pradesh, a well-developed state of India. This paper shows that financial knowledge and financial risk tolerance play mediating role between future time perspective and perceived financial preparedness for retirement. A sample of 431 respondents was collected and logistic regression was used to show the mediating role of financial knowledge and financial risk tolerance. This paper is also aimed at measuring the influence of socio-demographic and health factors on perceived financial preparedness for retirement.

Keyword: Financial preparedness, retirement planning, Financial literacy, Future time perspective (FTP), Financial Knowledge (FK) & Financial risk tolerance (FRT).

Introduction:

Aging is a global phenomenon, and it is evident that many countries today face an unprecedented set of issues due to aging, such as increased expenditure due to health, potential problems with old-age income security, and post-retirement financial security. India's population is getting older at a quicker rate than predicted, with 20% of the country's population expected to be over 60 by 2050. According to the "India Ageing Study 2017" report by the United Nations Population Fund (UNFPA), the senior citizen population increased from 8% in 2015 to a projected 19% in 2050. Our country's population is expected to grow by 56%

between 2000 and 2050, with people over 60 increasing by 326% and people over 80 increasing by 70%. Human life expectancy is increasing dramatically as a result of improved healthcare, hygiene, adequate food, and good access to life-saving drugs. According to a 2019 BMJ Global Health report, the number of adults over the age of 80 has tripled in the previous three decades, reaching 143 million in 2019. This figure is expected to rise to 426 million by 2050 and to 881 million by 2100. According to the same data, it is also calculated that the average life like hood at birth in our country is 69 years. It is also true that when individuals decide to retire, they expect to live for 70 to 75 years. This figure rises to 76 years for urban residents with a high income. According to World Health Organization research, life expectancy in India increased from 2000 to 2015, and with enhanced medical support, it is likely to increase further. According to the HSBC Future of Retirement survey, 76% of employee's in our nation anticipate a comfortable retirement, yet 33% are saving money to fund it.

Everyone notices a decline in commitment to work with long-term and consistent financial security as they get older. It is thereby vital to plan for financial preparedness, which requires significant levels of financial literacy in the human life cycle. A study by Warshawsky and Ameriks in 2000 indicated that financial planning is significant for maintaining a proactive and entertaining lifestyle after retirement. Many studies have been carried out to understand the importance of financial preparedness in cross-cultural settings (Agabalinda & Isoh, 2020; Segel-Karpas & Werner, 2015; Boisclair et al., 2017; Nolan & Doorley, 2019; Hui et al., 2016). A few studies have also attempted to understand Millennials' perceptions of retirement planning (Young et al., 2017). Extensive literature reviews reveal that financial planning and investing have used demographic indicators (Hershey et al., 2007; Stawski et al., 2007) and psychological mechanisms that underlie financial planning for retirement (Hershey et al., 2007; Hershey and Mowen, 2000). Later, a study by Karpas and Werner (2015) on perceived financial retirement preparedness was conducted among 227 non-retired Israeli adults. They investigated the impact of perceived financial involvement and knowledge, social and institutional support, and retirement attitudes. Since then, many researchers have been studying to examine and thoroughly investigate the effect of financial literacy on financial preparedness for retirement (Agabalinda & Isoh, 2020; Elif & Asli, 2021). Numerous studies have also discovered various aspects influencing perceived financial preparation for retirement, including future time perspective (Noone et al., 2012) Financial risk tolerance (Arora et al., 2022; Heejung Park & William Martin, 2021), and financial knowledge (Ademola et al., 2019; Heraty and McCarthy, 2015).

However, an extensive literature review reveals that a significant number of studies have been carried out on financial preparedness for retirement. It is also evident that many studies have been carried out in a cross cultural and cross sectional context. Few studies have been carried out to understand the attitude of millennials, young people, and healthcare professionals towards financial preparedness for retirement. In India, there has been a rise in the number of technical institutions and thereby the recruitment of technical teachers. As per AICTE, it is estimated that 30,000 technical teachers are being recruited every year. It is also evident that teachers from central universities and state universities were being provided with attractive pension plans after retirement. However, many technical teachers from private institutions invest in the national pension scheme, public provident funds, mutual funds, medical insurances, etc. No study has explored the perception of technical teachers towards their overall

financial preparedness for retirement, both in the Indian and global contexts. The aim of the current research is to identify various factors that significantly affect retirement preparedness. Secondly, the researchers suggest a conceptual framework for assessing technical instructors' perceived financial preparation for retirement in the Indian setting.

REVIEW OF LITERATURE

A. Perceived Financial Preparedness for Retirement (PFPR)

Retirement is the process of leaving the labour force entirely. It is also called the end of one's working or professional career (Atchley, 1982). According to a study conducted by Denton and Spencer in 2009, "retirement" is depicted as an age-related withdrawal from paid working life without commitment to work. Moreover, financial preparedness before retirement is vital for a sustainable life cycle. Financial readiness for retirement reflects a person's ability to preserve financial independence after retirement by examining their proactive and enjoyable lifestyle while they are employed and concentrating on whether it is still attainable after the end of their active, formal work. Warshawsky & Ameriks, (2000). According to Hershey et al. (2007), financial readiness may be characterised as the conviction that one's existing savings will be sufficient for the time after retirement. Retirement readiness is also characterised by asset ownership and active financial decision-making. Lusardi & Mitchell, (2011).

However, research done in Israel revealed that a significant number of Israelis felt unprepared financially for retirement. (Segel-Karpas & Werner, 2015). It is also found that Millennials will have better retirement planning when compared with other groups, however, when they are single without a full-time affiliation, it is difficult to educate them about financial literacy (Young et al., 2017). Numerous studies have shown that self-employed people and workers may save much over the course of their lives by maintaining more diverse portfolios. (Koh & Mitchell, 2019). Financially literate people are more likely to maintain diversified retirement benefits. (Nolan & Doorley, 2019). The outcome of the study done by Hui et al. (2016) indicated that a higher range of confidence in financial literacy is viable with adequate future financial planning. One study by Noone et al. (2012) found that women have relatively inferior perceptions of retirement and economic living standards compared to men regarding financial readiness. However, based on an earlier literature review, it is observed that a person having a high range of maturity on financial literacy skills was more focused on retirement planning. Retirement planning and financial literacy are closely related. (Boisclair et al., 2017). investigated the effects of financial literacy on retirement financial preparedness among academic staff in higher learning institutions in the Kingdom of Eswatini. They used 144 respondents proportionately recruited from a pool of 612 employees from higher education institutions. The study discovered that only financial instrument knowledge significantly affects retirement financial readiness.

Extensive literature reviews make it evident that many studies of financial planning and investing have used demographic indicators (e.g., age, gender, and income) to predict individual differences in saving (Hershey et al., 2007; Stawski et al., 2007). Many studies have

found that age (Grable & Lytton, 1998), level of household income, level of education (Yuh & Olson, 1997), and gender & marital status (Glass & Kilpatrick, 1998) are all positively related to retirement savings tendencies. Nyoro & Otieno (2016) carried out extensive research to understand various predictors of employee preparedness for retirement in public institutions within Mombasa County, Kenya. They conducted a descriptive survey of 353 employees from governmental institutions in Mombasa County. To evaluate several facets of their retirement planning, a purposeful and stratified random selection was used. The study evaluated the extent to which employee demographics (biodata), SACCOS membership, financial literacy level, and financial life cycle predicted their readiness for retirement. Findings indicated that an employee's overall work experience and monthly income, as key variables, are significant predictors of employee preparedness for retirement. It was also found that many researchers studied the psychological device that supports the financial planning for retirement. Hershey et al. (2007) evaluated the psychological markers in one of their investigations (FTP, retirement goal clarity, and self-rated FK).

The researchers used data from 265 middle-aged working adults to conduct a path analysis. They identified that there is a significant role for the above-mentioned psychological indicators in overall retirement financial planning. Hershey and Mowen (2000), in their research, considered a sample size of 230 members of an Arkansas household research panel to identify the psychological determinants of financial preparedness and retirement. The authors used SEM techniques to measure the relationships between individuals' FK, personality characteristics, and financial preparedness. The result inferred that personality constructs and FK were notable predictors of pre-retirement planning. A study by Karpas and Werner (2015) on perceived financial retirement preparedness was conducted among 227 non-retired Israeli adults. They studied the effect of perceived financial knowledge and involvement, social & institutional support, and attitudes toward retirement. They used SPSS Version 20 for the descriptive and ordinary least squares (OLS) hierarchical regression to assess the determinants of financial preparedness. They came to the conclusion that only about 20% of the sample thought they were financially prepared for post-retirement. FK and involvement in financial activities were the main correlates of financial preparedness. According to the findings, the majority of Israelis are unprepared for retirement planning. Moray and Vanishree (2019) conducted research to identify the demographic factors and behavioural biases influencing Millennials' financial planning. The researcher used the Retirement Wellness Score to investigate the financial behaviour of IT Millennials as a representative sample in terms of retirement planning.

The researcher used logistic regression analysis to show the relationship between study variables and develop the predictive model to determine whether Millennials are ready for retirement. When it comes to assessing Millennial retirement readiness, the study found that future time perspective, financial literacy, and financial and retirement saving practises are all significant constructs, both individually and collectively.

Agabalinda and Isoh (2020) conducted a study in Uganda with a sample size of 380 to investigate the direct effect of financial literacy on financial preparedness for retirement and the moderating effect of age. The descriptive data was validated and tested for reliability using SPSS, composite reliability scores, and average variance explained (AVE) scores for all items.

The researchers used structural equation modelling (SEM) to test the hypothesis and then performed multigroup analysis to see if age had a moderating effect on the relationship between financial literacy and retirement preparedness. According to the study, knowledge, skills, and age were discovered to be predictors of retirement preparedness, while attitude was discovered to be an insignificant predictor.

Elif and Asli (2021) conducted research to develop and test a model of predictors of retirement financial preparedness. As mediators, they used their knowledge and attitude toward retirement planning. Furthermore, the study compared the attitudes of various groups toward the private pension system. The study's sample size was 600 employees, and the researchers used SEM to validate the relationship between the constructs. Retirement planning attitude had a positive effect on perceived financial preparedness, while retirement planning knowledge had a negative effect, according to the researchers. They also discovered a link between parental influence and life satisfaction. Pessimistic future economic perspectives, on the other hand, have a negative impact on perceived financial preparedness for retirement. The study also illustrated the roles of retirement planning knowledge and perceived financial preparedness for retirement as moderators.

B. Factors affecting PFPR

Future time perspective (FTP)

According to research by Hershey and Mowen from 2000, the future-time viewpoint is a measuring scale that is based on predictions for the future rather than on information from the past and present. A person's perception of the time remaining in their own unique life cycle is known as their "future time perspective." Conscientiousness and emotional stability, two cardinal constructs, were found to be significantly related to future time perspective (Noone et al., 2012). Future-time perspective is a statistically significant independent predictor of retirement financial planning (Noone et al., 2012). Hershey and Mowen (2000). The FTP was found to be positively related to self-reported financial readiness for retirement among adults aged 35 to 88 in this study. Furthermore, aggressive saving patterns have been associated with a higher level of future time perspective (Jacobs-Lawson & Hershey, 2005).

Financial Risk Tolerance (FRT)

Financial risk tolerance, as described by Carducci & Wong (1998), is depicted as the most blatant sign of weakness that one may notice while making a financial decision and permeates almost all spheres of private and public action. According to Malkiel (1999), a person's ability to tolerate financial risk depends on their overall financial condition, which includes all of their income sources and types except investment income. Heejung Park and William Martin (2021) conducted a study to examine the impact of retirement planning on the economic and psychological factors of consumers. The large sample used in the research was drawn from the 2012 Youth National Longitudinal Survey. The researchers discovered that consumer psychological factors have a positive correlation and that debt has no meaningful correlation with retirement planning. The researchers also found that a higher level of risk tolerance weakens the relationship between savings and retirement planning. Arora and Mishra (2022) investigated the effect of age as well as professional work experience (PWE) on the risk tolerance of investors in emerging economies. They examined individual financial risk tolerance in India using a one-way ANOVA and a hierarchical regression model. According to the researchers, age and PWE have a positive relationship with financial risk tolerance. Age

and PWE, on the other hand, have a nonlinearly increasing connection to market phase parameters. The researchers also discovered that older investors have a high tolerance for risk in both bull and bear market conditions. Jelita et al. (2021) evaluated the impact of financial literacy on debt ownership, debt anxiousness, and risk tolerance in older New Zealand citizens and found that financial literacy is not affiliated with retirement planning. The researchers have found that having a high level of financial literacy is strongly associated with having a high level of income and education, that also resulted in less debt anxiety and a higher risk tolerance, and they stated that financial literacy is important for retirement preparedness. Fishera and Yaob (2017) investigated the gender gap in financial risk tolerance. They decomposed the gender disparity in financial risk tolerance using the Survey of Consumer Finances, a nationally representative dataset. The researcher discovered that income uncertainty and net worth are the parameters that moderate the relationship among both gender and high risk tolerance. Individual determinants of financial risk tolerance explain gender differences. Ryack et al. (2016) investigated the link between FTP and FRT in young adults. Previous research has shown that young adults should invest in riskier portfolios to increase their wealth accumulation for retirement. The researchers discovered that FTP explain a significant variation in financial risk tolerance. However, the relationship between FTP and FRT varies from person to person. Prospective and risk tolerance have a significant link. This interaction shows how retirement funds are affected. A high degree of risk tolerance equates to an aggressive saving profile (Jacobs-Lawson & Hershey, 2005). Previous research discovered that men were more risk-tolerant than women, that older respondents were more risk-tolerant than younger respondents, that married individuals were more risk-tolerant than single respondents, that experts were more risk-tolerant than lower-income respondents, that higher-paying respondents were more risk-tolerant than lower-paying respondents, and that participants with higher levels of education were more risk-tolerant than others (Grable, 2000). Surprisingly, hazard resistance increases as age increases and other conditions are controlled. Wang and Hanna (2009) Female-headed households are less risk-tolerant than male-headed households or married couples. 1996 (Hanna and Sung) The study's findings indicate that risk resilience is more likely a general disposition than a region-specific one (Grable & Rabbani, 2014).

Financial knowledge (FK)

Knowledge is positively correlated with financial saving and retirement planning actions (Jacobs-Lawson & Hershey, 2005). To use financial resources for investments is a talent, according to the definition of financial knowledge (Ademola et al., 2019). According to research by Huston (2010), using financial knowledge should be part of financial literacy. Character development and financial knowledge were found to be crucial predictors of pre-retirement planning by the first financial model (Hershey and Mowen, 2000). According to the findings, there exists a positive but insignificant link between financial expertise & and speculation decisions, whereas there is a positive but significant relationship between financial information and venture decisions (Ademola et al., 2019). Actions connected to retirement planning and money saving are favourably correlated with knowledge (Jacobs-Lawson & Hershey, 2005). According to the concept of financial knowledge, having the ability to use financial resources for investments is a skill (Ademola et al., 2019). Huston's (2010) study

found that utilising financial knowledge should be a component of financial literacy. The first financial model discovered that character development and financial literacy were significant determinants of pre-retirement preparation (Hershey and Mowen, 2000). The results indicate that financial knowledge and speculative decisions have a positive but negligible link, but financial information and business decisions have a positive but substantial relationship (Ademola et al., 2019).

C. Relationship between the factors

Relationship between FTP and FRT and FK

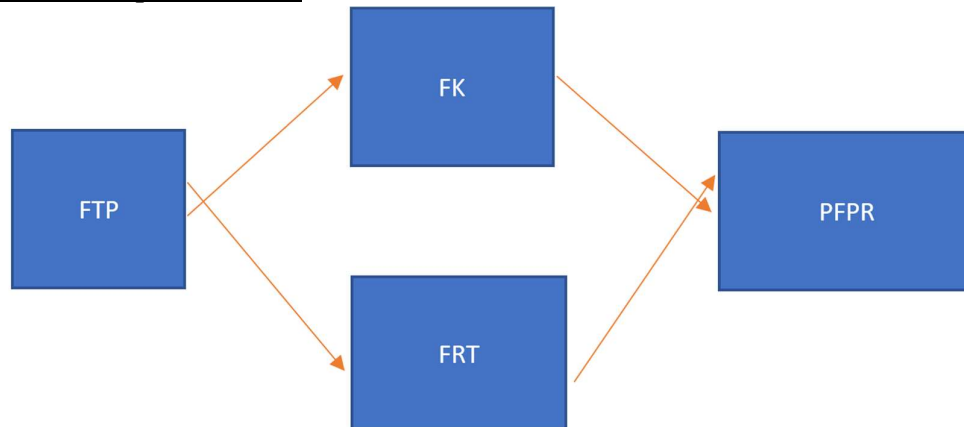
Ryack et al. (2016) investigated the association between future time perspective and financial risk tolerance in young adults. Previous research indicates that young adults invest in riskier portfolios in order to multiply their money for retirement. This study also discovered that there was a considerable degree of variation in financial risk tolerance, as shown by the future-time viewpoint. In order to assess the demographic, socioeconomic, psychological, and cognitive aspects related to financial risk tolerance, Fengzhu (2019) studied adolescents in Hong Kong. According to the findings of this study, when adolescents improve their confidence in their financial knowledge and future time perspective, they are more inclined to live economically and accept financial risks when making decisions. This study was carried out by Bapat (2020) in order to investigate the mediating effect of financial risk tolerance and the antecedents of responsible financial management behaviour among young adults in India. For the study, the researcher used standard partial least squares structural modelling (PLS-SEM) and ordinary least squares (OLS) regression on a sample of 18-35-year-old adults. Financial attitude completely mediates the relationship between financial knowledge and responsible financial management behaviour, and locus of control influences responsible financial management behaviour, according to the researcher. The researcher also discovered that financial risk tolerance modifies the relationship between demographic parameters that influence responsible financial management behaviour (age and employment). Hershey and Mowen (2000) discovered a link between future time perspective and retirement planning in their study. They revealed that, while the retirement transition process normally takes place in later adulthood, individual differences in future time perspective among older people have been linked to the character and quality of retirement planning results, specifically financial understanding.

since higher financial risk has a weak link to future time perspective. Moreover, it is also being observed that higher financial knowledge has a strong link to a future time perspective; therefore, the following proposition is proposed:

Proposition 1: A higher financial risk tolerance will significantly impact the future.

Proposition 2: Higher financial knowledge will significantly impact the future.

Figure:1: Conceptual Model:



RESEARCH METHODOLOGY:

Financial security at work is critical for a long-term human life cycle beyond retirement. As a result, proper financial understanding, the numerous risks connected with tolerance, and hopeful future-oriented behaviour are required when preparing financial preparedness. Critical review of the literature illustrates the range of factors and dimensions influencing retirement financial readiness. In India, approximately 30000 technical teachers are hired in various roles each year. However, little is known regarding technical teachers' perspectives of retirement financial readiness, particularly in the Indian setting. This study is only for Andhra Pradesh technical teachers. The authors make an effort to pinpoint numerous elements that significantly influence financial readiness for retirement in varied circumstances with the aid of a thorough literature research.

In order to gather data over the duration of three months, i.e., from March 2022 to May 2022, a structured questionnaire was distributed to 400 teachers in the state of Andhra Pradesh and 265 responses were received.

The systematic sampling method was used to find and finalise the college names, and the random sampling method was used to pick study participants. The researcher's work at each college has primarily concentrated on one professor, two associate professors, and two assistant professors. R free version was used to analyse the data.

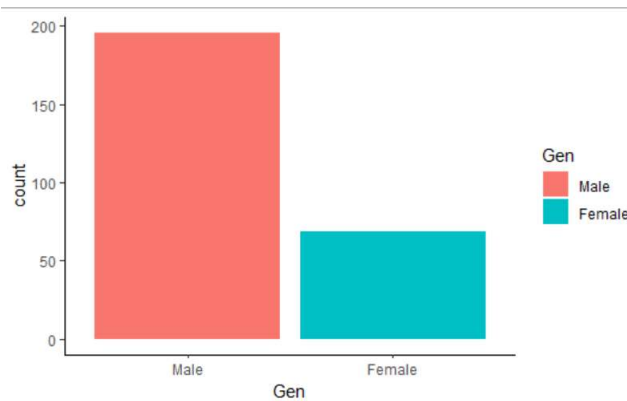
Data Analysis:

a) Research Data:

Structured questionnaires were employed to collect data, which were triangulated by qualitative data collected by Survey method. The first section (A) of questionnaire had twenty-three items covering demographic and health characteristics of the respondents. The second section (B) had twenty-five items capturing post-retirement financial planning behaviour. This was further subdivided into four constructs: FTP, FK, FRT and PFPR. These constructs were constructed on sub-statements. FTP was constructed based on 10 sub-statements, FK on 6 sub-statements, FRT on 5 sub-statements, and PFPR on 4 sub-statements. Each of these sub-statements had 7-point Likert scale measurements; namely, 1 = Strongly Disagree, 2 =

Disagree, 3 = somewhat disagree, 4 = Neither Agree nor disagree, 5 = Somewhat agree, 6 = Agree and 7 = Strongly Agree. A total of 265 responses were valid.

Figure:2 Profile of respondents by gender



Source: Primary data – collected from the respondents.

The KMO test shows the overall measure of sample adequacy (MSA) is 0.9376, confirmed by Bartlett’s test ChiSq value of 9388.207 (with a p-value << 0.01) (Field, 2013). The Cronbach alpha is 0.97, indicating that we have valid and reliable set of variables.

Factor Analysis:

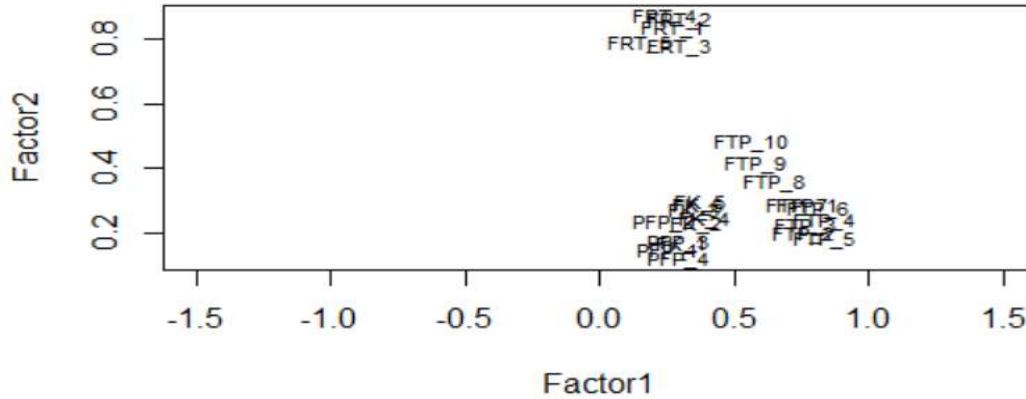
Factor analysis of the data supports the construct of the variables in Section B. Table below indicates corresponding factor loadings of sub-items.

Table :1 Showing Factor loadings of constructs sub-items

| | FTP | FRT | PFP | FK |
|-----------|---------|---------|---------|---------|
| Sub Items | Factor1 | Factor2 | Factor3 | Factor4 |
| PFP_1 | | | 0.78052 | |
| PFP_2 | | | 0.81833 | |
| PFP_3 | | | 0.84691 | |
| PFP_4 | | | 0.81585 | |
| FK_1 | | | | 0.67529 |
| FK_2 | | | | 0.68658 |
| FK_3 | | | | 0.74561 |
| FK_4 | | | | 0.65764 |
| FK_5 | | | | 0.75952 |
| FK_6 | | | | 0.75656 |
| FTP_1 | 0.77485 | | | |
| FTP_2 | 0.75556 | | | |
| FTP_3 | 0.76402 | | | |
| FTP_4 | 0.83602 | | | |
| FTP_5 | 0.83446 | | | |
| FTP_6 | 0.81135 | | | |
| FTP_7 | 0.73466 | | | |
| FTP_8 | 0.65182 | | | |

| | | | |
|--------|---------|---------|--|
| FTP_9 | 0.57956 | | |
| FTP_10 | 0.56629 | | |
| FRT_1 | | 0.83308 | |
| FRT_2 | | 0.85916 | |
| FRT_3 | | 0.78035 | |
| FRT_4 | | 0.8737 | |
| FRT_5 | | 0.78747 | |

Figure:3 Plot factor loadings



The above figure confirms the groupings of the variables under the constructs of each variable.

Logistic Regression:

Next various models are fit to test the relationship between FTP, FRT, FK and PFP. Free software R was used to conduct the tests.

Table:2 List of models used for testing

| | |
|---------|--|
| Model 1 | FPLogical ~ DepPer + PerInc + FK * FTP + FRT * FTP |
| Model 2 | FPLogical ~ FTP |
| Model 3 | FPLogical ~ FTP + FRT |
| Model 4 | FPLogical ~ FTP + FRT + FK |
| Model 5 | FPLogical ~ FTP + Gen |

Source: Author generated

Table:3 Deviance of Models

| Model | Resid. Df | Resid. Dev | Df Deviance |
|-------|-----------|------------|-------------|
| 1 | 255 | 162.02 | |
| 2 | 263 | 240.20 -8 | -78.183 |
| 3 | 262 | 237.59 1 | 2.613 |
| 4 | 261 | 189.41 1 | 48.174 |
| 5 | 262 | 239.36 -1 | -49.942 |

Source: R programming

Table:4 AIC criteria of the Model

| Model | df | AIC |
|-------|----|---------|
| 1 | 10 | 182.019 |
| 2 | 2 | 244.201 |
| 3 | 3 | 243.588 |
| 4 | 4 | 197.414 |
| 5 | 3 | 245.356 |

Source: R programming

Table :5 BIC Criteria of the Models

| Model | df | BIC |
|-------|----|---------|
| 1 | 10 | 217.816 |
| 2 | 2 | 251.361 |
| 3 | 3 | 254.327 |
| 4 | 4 | 211.733 |
| 5 | 3 | 256.095 |

Source: R programming

All the above tests indicate that Model 5 is the best model.

Model 5 Diagnostic tests:

Hosmer-Lemeshow Goodness-of-fit test:

The test results accept the model (Chi-squared: 8.327, df: 8, p-value = 0.402)

Table:6 Multi-collinearity test among variables

| Variables | GVIF | Df | GVIF ^{1/(2*Df)} |
|-----------|---------|----|--------------------------|
| DepPer | 1.13462 | 1 | 1.065184 |
| PerInc | 1.28203 | 3 | 1.042277 |
| FK | 29.4251 | 1 | 5.42449 |
| FTP | 9.48341 | 1 | 3.079515 |
| FRT | 33.2321 | 1 | 5.764726 |
| FK:FTP | 53.526 | 1 | 7.316143 |
| FTP:FRT | 47.7125 | 1 | 6.907424 |

Source: R programming

All the values less than 10 indicate that there is no multicollinearity.

Table:7 Regression summary for Model-5

| Variable | Estimate | Std. Error | z value | Pr(> z) | Result |
|-----------|------------|------------|-----------|----------|-------------|
| Intercept | -8.1589523 | 2.7455916 | -2.971655 | 0.002962 | significant |
| DepPer | -0.2984505 | 0.3273927 | -0.911598 | 0.36198 | |
| PerInc2 | 0.03099988 | 0.5163181 | 0.06004 | 0.952124 | |
| PerInc3 | 1.14132099 | 0.8148894 | 1.400584 | 0.161339 | |
| PerInc4 | 1.36918369 | 0.6823629 | 2.006533 | 0.044799 | significant |
| FK | 3.45497536 | 0.720246 | 4.796938 | 1.61E-06 | significant |
| FTP | 1.24371508 | 0.5118308 | 2.429934 | 0.015102 | significant |
| FRT | -1.7132164 | 0.7428717 | -2.306208 | 0.021099 | significant |
| FK:FTP | -0.5026991 | 0.1287949 | -3.903098 | 9.50E-05 | significant |

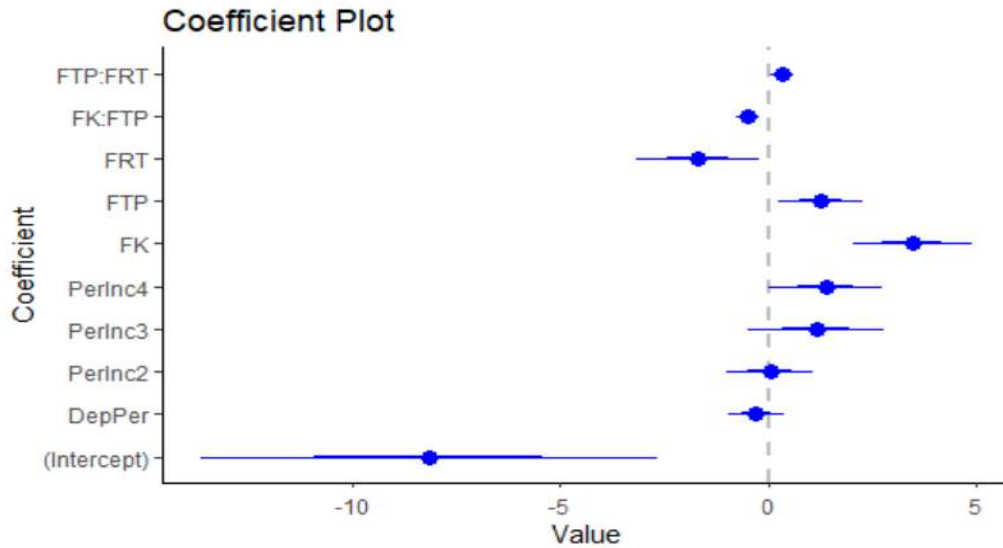
| | | | | | |
|---------|------------|-----------|----------|----------|-------------|
| FTP:FRT | 0.32396467 | 0.1326321 | 2.442582 | 0.014583 | significant |
|---------|------------|-----------|----------|----------|-------------|

Source: R programming

The above table shows that FK, FRT, FTP and two interactive terms FK: FTP and FTP: FRT are significant. This result indicates that there is a mediating role of FK and FRT on PFPR.

Figure:3 Coefficient plot

Plot below shows the significance of the factors in the model.

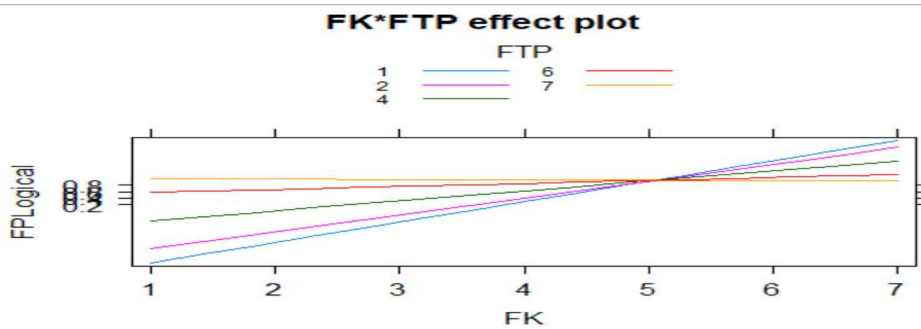


Interaction plots:

1) FK:FTP

It is clear from the graph that the odds of perceived financial preparedness increases for all the respondents with the increase in the FK. However, the graph also shows that the odds of financial preparedness of respondents with low FTP increases faster than respondents with higher FTP with the increase in the FK. In other words if the knowledge of the low FTP respondents is increased there is good chance that these respondents will improve on their perceived financial preparedness.

Figure:4 FK*FTP effect plot

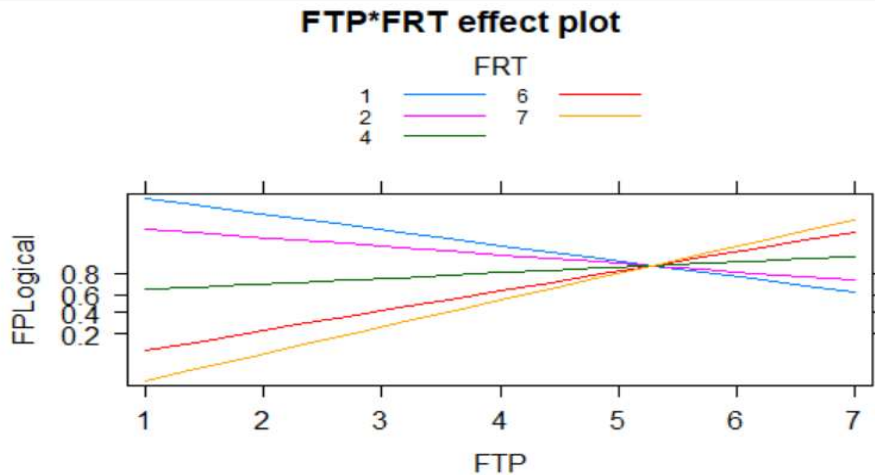


2. FTP*FRT

The plot shows that the odds of PFP increases with respondents having high FRT as FTP increases as against the respondents with low FRT.

The odds of PFP of the respondents increases faster for the highest FRT than higher FRT when FTP increases. On the other hand, the odds of PFP of the respondents decreases faster for the lowest FRT than lower FRT when the FTP increases.

Figure:5 FK*FTP effect plot



Conclusion:

This paper attempts to find the mediating role of FK and FRT in the relationship between FTP and PFP. A survey was conducted to collect 267 responses on the structured questionnaire, out of which 265 were used for the analysis. After confirming the reliability of the questionnaire, factor analysis was conducted to confirm the definition of the constructs. The results of logistic regression indicated that personal income, FK, FTP, FRT are significant as standalone variables. Two interaction terms, FK/FTP and FTP and FRT are significant.

The results indicated that there is a mediating role of FK and FRT on perceived Financial Preparedness (PFP). The interaction terms show that the odds of financial preparedness of respondents with low FTP increases faster than respondents with higher FTP with the increase in the FK. In other words if the knowledge of the low FTP respondents is increased there is good chance that these respondents will improve on their perceived financial preparedness. The odds of PFP of the respondents increases faster for the highest FRT than higher FRT when FTP increases. On the other hand, the odds of PFP of the respondents decreases faster for the lowest FRT than lower FRT when the FTP increases.

REFERENCES

1. Ademola, S. A. Musa, A. S. & Innocent, I. O. (2019). Moderating Effect of Risk Perception on Financial Knowledge, Literacy and Investment Decision. *American International Journal of Economics and Finance Research*, 1(1), 34–44. DOI:10.46545/AIJEFR.V1I1.60.
2. Agabalinda, C., & Isoh, A. V. N. (2020). The impact of financial literacy on financial preparedness for retirement in the small and medium enterprises sector in Uganda. *International Journal of Applied Behavioral Economics (IJABE)*, 9(3), 26-41.
3. Ameriks, J. (2000). Using retirement planning software to assess Americans' preparedness for retirement: An Update. *Benefits Quarterly*, 16(4), 37.

4. Arora, N., & Mishra, B. K. (2022). Influence of bull and bear market phase on financial risk tolerance of urban individual investors in an emerging economy. *Review of Behavioral Finance*.
5. Atchley, R. C. (1982). Retirement as a social institution. *Annual review of sociology*, 263-287.
6. Bapat, D. (2020). Antecedents to responsible financial management behavior among young adults: moderating role of financial risk tolerance. *International Journal of Bank Marketing*, 38(5), 1177-1194.
7. Boisclair, D., Lusardi, A., & Michaud, P. C. (2017). Financial literacy and retirement planning in Canada. *Journal of Pension Economics & Finance*, 16(3), 277-296.
8. Carducci, B. J., & Wong, A. S. (1998). Type A and risk taking in everyday money matters. *Journal of business and psychology*, 12(3), 355-359.
9. Denton, F. T., & Spencer, B. G. (2009). What is retirement? A review and assessment of alternative concepts and measures. *Canadian Journal on Aging/La revue canadienne du vieillissement*, 28(1), 63-76.
10. Elif Akben-. Selcuk. &, Asli, E. lif Aydin. (2021). Ready or Not, Here It Comes: A Model of Perceived Financial Preparedness for Retirement. *Journal of Adult Development*, nt. Volume 28(2) . DOI: 10.1007/s10804-021-09387-z.
11. FengZhu, A. Y. F. (2019). Financial risk tolerance of Hong Kong adolescents: A hierarchical model. *Children and Youth Services Review*, 10(2), 193-200. <https://doi.org/10.1016/j.chilyouth.2019.05.014>.
12. Fisher, P. J. & Yao, R. (2017). Gender differences in financial risk tolerance. *Journal of Economic Psychology*, 6(1), 191-202.
13. Glass Jr, J. C., & Kilpatrick, B. B. (1998). Gender comparisons of baby boomers and financial preparation for retirement. *Educational Gerontology: An International Quarterly*, 24(8), 719-745.
14. Grable, J. E. (2000). Financial risk tolerance and additional factors that affect risk taking in everyday money matters. *Journal of Business and Psychology*, 14(4), 625-630.
15. Grable, J. E., & Rabbani, A. (2014). Risk tolerance across life domains: Evidence from a sample of older adults. *Journal of Financial Counseling and Planning*, 25(2), 174-183..
16. Grable, J. E., Lytton, R. H., & Kratzer, C. Y. (1998). Determinants of Defined Contribution Plan Employee Participation: A403 (b) Perspective. *Consumer Interests Annual*, 44, 109-114.
17. Heraty, N. & McCarthy, J. (2015). Unearthing psychological predictors of financial planning for retirement among late career older workers: Do self-perceptions of aging matter? *Work, Aging and Retirement*, 1(3), 274-283.
18. Hershey, D. A. & Mowen, J. C. (2000). Psychological determinants of financial preparedness for retirement. *The Gerontologist*, 40(6), 687-697. <https://doi.org/10.1093/geront/40.6.687>.
19. Hershey, D. A., Jacobs-Lawson, J. M., McArdle, J. J. & Hamagami, F. (2007). Psychological foundations of financial planning for retirement. *Journal of Adult Development*, 14(1–2), 26-36.
20. Hui, T. S. W., Nguyen, C., Palameta, B., Gyarmati, D., Wagner, R. A., Rose, N., & Llp, F. (2016). The role of financial literacy in financial decisions and retirement

- preparedness among seniors and near-seniors. Ontario: Social Research and Demonstration Corporation.
21. Jacobs-Lawson, J. M., & Hershey, D. A. (2005). Influence of future time perspective, financial knowledge, and financial risk tolerance on retirement saving behaviors. *Financial Services Review-greenwich-*, 14(4), 331.
 22. Koh, B. S., & Mitchell, O. S. (2019). Retirement preparedness and financial literacy in Singapore: how do the self-employed compare?. Wharton Pension Research Council Working Paper, (2019-01).
 23. Lusardi, A., & Mitchell, O. S. (2011). Financial literacy around the world: an overview. *Journal of pension economics & finance*, 10(4), 497-508.
 24. Malkiel, B. G. (1999). *A random walk down Wall Street: including a life-cycle guide to personal investing*. WW Norton & Company.
 25. Nolan, A., & Doorley, K. (2019). Financial literacy and preparation for retirement.
 26. Noone, J., O'Loughlin, K., & Kendig, H. (2012). Socioeconomic, psychological and demographic determinants of Australian baby boomers' financial planning for retirement. *Australasian journal on ageing*, 31(3), 194-197.
 27. Noviarini, J., Coleman, A., Roberts, H., & Whiting, R. H. (2021). Financial literacy, debt, risk tolerance and retirement preparedness: Evidence from New Zealand. *Pacific-Basin Finance Journal*, 68, 101598.
 28. Nyoro, K. N., & Otieno, O. J. (2016). Predictors of employee preparedness for retirement in public institutions within Mombasa county, Kenya. *International Journal of Humanities Social Sciences and Education*, 3(1), 136-145.
 29. Park, H., & Martin, W. (2022). Effects of risk tolerance, financial literacy, and financial status on retirement planning. *Journal of Financial Services Marketing*, 27(3), 167-176.
 30. Ryack, K. N. and & Aamer, S. (2016). The relationship between time perspective and financial risk tolerance in young adults. *Financial Services Review*, 25(2), 157-180.
 31. Segel-Karpas, D., & Werner, P. (2015). Perceived financial retirement preparedness and its correlates: A national study in Israel. *The International Journal of Aging and Human Development*, 79(4), 279-301.
 32. Stawski, R. S., Hershey, D. A., & Jacobs-Lawson, J. M. (2007). Goal clarity and financial planning activities as determinants of retirement savings contributions. *The International Journal of Aging and Human Development*, 64(1), 13-32.
 33. Sung, J. & Hanna, S. D. (1996). Factors related to risk tolerance. *Financial Counseling and Planning*, 7(1), 11-19.
 34. Wang, H. & Hanna, S. D. (1997). Does risk tolerance decrease with age? *Financial Counseling and Planning*, 8(2), 27-32.
 35. Warshawsky, M. J. & Ameriks, J. (2000). How prepared are Americans for retirement? *Forecasting Retirement Needs and Retirement Wealth*, 33-67.
 36. Young, J. H., Hudson, C. R., & Davis, E. L. (2017). A survey of retirement readiness among African-Americans. *Journal of African American Studies*, 21(4), 551-566.
 37. Yuh, Y., & Olson, P. (1997). Factors affecting the retirement fund levels of self-employed households and wage and salary households. *Family Economics and Resource Management Biennial*, 2, 25-31.