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Understanding Financial Literacy and Retirement Preparedness: Examining the Mediating Effect of Staff Retirement Attitude in Ugandan Public Universities

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Abstract

Pre-retirement preparation plays a key role in ensuring post-retirement sustainability. It lays a foundation for financial independence, financial protection, and reduced anxiety. This study aimed to investigate the impact of financial literacy on retirement preparedness and whether retirement attitude mediates this relationship among academicians in Ugandan public universities. The study employed an analytical cross-sectional research design. Data were collected from 298 academic staff members from selected public universities in Uganda using a structured questionnaire and analysed using SmartPLS- Structural Equation Modelling software to test our hypotheses. The findings indicate that financial knowledge and financial behaviour are key determinants of retirement preparedness, while financial skills have no significant direct impact. Retirement attitude partially mediates this relationship. These results show that behavioural and perceptual aspects of financial literacy are major predictors of retirement preparedness, casting doubt on the generalisation of retirement attitude as a psychological mechanism of influence. Ugandan Public universities should develop and implement retirement planning interventions, provide financial counselling, and behavioural strategies as necessary policies to limit early pension savings withdrawals and strengthen a long-term saving culture. This work builds on the literature on retirement planning by supplying the first empirical evidence in the context of a low-income country, particularly in the under-researched academic sector of Uganda. It further contributes to the theoretical dialogue by analysing the mediating effects of retirement attitude in rigid structural conditions.

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Institutional Review Board Statement: This study was approved by the College Institutional Ethics Review Board of the University of South Africa, South Africa under protocol number (Ref. No. 2024/CEMS/DFRB/1357). Informed verbal consent was obtained from all participants, and all data were anonymized to protect participant confidentiality.
Transparency: The authors declare that the manuscript is honest, truthful and transparent, that no important aspects of the study have been omitted and that all deviations from the planned study have been made clear. This study followed all ethical guidelines for writing.
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1. Introduction

Adequate retirement preparation is essential for post-retirement sustainability (Kumaraguru & Geetha, 2021; Mustafa et al., 2023). Retirement represents a significant life change that requires not only financial planning, but also psychological and social welfare (Hurtado & Topa, 2019; Murari, Shukla, & Adhikari, 2021). The critical role of pre-retirement preparation to support later life stages – for an enhanced, relaxed, and fulfilled life after a career, is unquestionable, especially for the financial independence, financial protection, reduced anxiety, and other advantages that last for a long time (Egboh & Chidozie, 2021). While this points to the importance of financial literacy as a major element of retirement savings, empirical evidence shows a continued gap between financial literacy and retirement preparedness. For instance, Arthasad and Rajapakse (2018) show moderate levels of financial literacy among academics in their study (68.52%), yet their corresponding behavioural retirement indicators remain significantly lower (59.56%). Other studies record

similar findings as noted by Bhabha and Shah (2023) and Sarpong-Kumankoma (2021) who found a positive relationship (r = 0.661) between financial literacy and retirement planning in Ghana and Nigeria respectively, and Harjayanti, Rovita, Nurmasari, and Oktariswan (2023) who found no significant relationship between the variables, suggesting the possible presence of mediating variables in the relationship.

This "knowledge-behaviour" gap is compounded by gender disparities (Larisa, Njo, & Wijaya, 2021). Male academics have been found to exhibit higher levels of financial literacy and retirement planning behaviours than their female counterparts (Abdillahi, 2015; Frank, Condon, Dunlop, & Rothman, 2000). These observations highlight the importance of socio-cultural and institutional dynamics in assessing retirement preparedness. Similarly, new studies have found that attitude toward retirement is an important mediator in determining whether people engage in retirement planning. Reflective constructs, including goal clarity, future time perspective, and retirement anxiety, have been found to have a high predictive power on retirement preparedness (Guo, Nazri, & Fernandez, 2025; Ugwu, Ajele, & Idemudia, 2024; Voleti, Kumar, Nanda, & Debata, 2024). For instance, Guo et al. (2025) found that retirement goals were significantly associated with a stronger intention to plan, while Voleti et al. (2024) showed that thinking about the future improves saving behaviour. Conversely, negative attitudes like retirement anxiety may inhibit planning actions, albeit such effects can also be the result of parental and/or peer influence (Ugwu et al., 2024).

Observably, the empirical discourse on this relationship and its effects remains scant within the African context and particularly in Uganda Retirement Benefits Regulatory Authority (URBRA) (2024) cited the importance of retirement planning using a case study of the Ugandan working population. They found that the average life expectancy of individuals, after retirement, was about 18 years, implying a protracted period of financial dependence, underlying several other systemic challenges in the country. Other studies indicate that 80% of Ugandan retirees exhaust their lump-sum benefits within two years of retirement (Mukiibi, 2025) while many search for contractual reemployment or try to reduce their age on paper to delay retirement (Ongom, 2023). Accessing retirement funds earlier than scheduled creates a significant risk of running out of money during retirement, and lifestyle choices, inflation, and broken pension systems compound the short-term risks to retirement readiness (Uganda Retirement Benefits Regulatory Authority (URBRA), 2024).

Despite the Ugandan Workers Retirement Benefits Regulatory Authority (URBRA) and the National Social Security Fund (NSSF) launching both financial literacy campaigns and voluntary savings schemes, Ugandan workers' readiness for retirement is still below par (URBRA, 2024). . Current initiatives overlook the value of non-financial preparation, which contributes significantly to retirement outcomes and includes, among others, individual mental health and social adjustment (Noone et al., 2022). There is currently no known research on the financial and psychological preparedness for retirement among the academics of public universities in Uganda, since most existing studies focus on high-income economies and apply to non-academic settings. This paper explores the mediating role of individual retirement attitudes in the financial literacy – retirement preparedness relationship among the academic staff of public universities in Uganda. The latter provides a suitable research context for a number of reasons. Firstly, the country's financial markets are comparatively underdeveloped. Secondly, its working population demonstrates a limited knowledge about pension systems, and lastly, the country's life expectancy is rising. As such, an understanding of academics' responses to retirement preparedness is crucial to developing appropriate financial interventions and policies.

This paper is based on two major theories: the Life Cycle Theory by Ando and Modigliani (1963) and the Theory of Planned Behaviour by Ajzen (1991). According to Life Cycle Theory, individuals save consistently throughout their working lives and use the savings during retirement to help finance their consumption. It is based on rational decision-making in consumption and saving over time to maximise utility (Githua, Afande, & Theuri, 2015; Mustafa et al., 2023). Often, however, this rationalist hypothesis neglects the impact of cognitive biases like financial illiteracy and social–psychological dynamics on actual behaviour in practice (Holzmann, Ayuso, Alaminos, & Bravo, 2019; Lusardi & Mitchell, 2014). To extenuate this, the Theory of Planned Behaviour Ajzen (1991) is used to further examine the non-financial aspects of retirement preparedness. This model posits that behaviour results from the combined influence of attitudes, subjective norms, and perceived control over behaviour, providing a solid framework for understanding the psychological drivers of retirement decision-making (Bystrov, 2023). Combining these two lenses potentially allows for a richer investigation into both the economic and psychological determinants of retirement readiness.

Therefore, this study ameliorates existing literature with a unique perspective of contextualising financial literacy within the broader psychological context of attitudes towards retirement, and applies these insights to the under-researched academic sector of Uganda. It offers empirical support for theory-driven interventions and serves as a foundation for context-sensitive policy development initiatives, especially for African universities, and encourages the integration of financial education with behaviour support mechanisms. The paper is structured as follows: Section 2 provides the theoretical and empirical perspectives on financial literacy and retirement preparedness in Uganda, and develops the study's hypotheses. Section 3 details the research methodology, explaining the data sources and the analytical approaches used to test the hypotheses. Section 4 summarises the core findings of the study, while the last section draws on the conclusions to offer discussions on policy implications, limitations and suggested areas of further inquiry.

2. Review of Related Literature and Formulation of Hypotheses

2.1. Financial Knowledge and Retirement Preparedness

Recent studies confirm the importance of financial knowledge in retirement preparedness across diverse cultural settings. Niu, Zhou, and Gan (2020) used data from the 2014 China Family Panel Studies (CFPS) and employed investment-related questions and daily trading queries to assess financial knowledge. Their findings confirmed that possessing financial knowledge positively relates to more initiative-taking retirement planning behaviours, such as determining financial needs, acquiring private pension insurance, and creating long-term financial plans. While these findings confirm the hypothesis that financially knowledgeable individuals are likely to prepare for their retirement, García Mata (2021) finds slightly contrasting findings. His study investigated this relationship among Mexican youths aged 18 – 35 years using data from the 2019 National Survey for Financial Inclusion, and while the study confirmed the importance of financial knowledge, it found that the latter only correlated with more passive retirement planning methods like reliance on government subsidies and support from family and friends. However, this study relied on cross-sectional data, thereby limiting longitudinal findings, and applied to a younger than older age cohort for the findings to be generalised.

Furthermore, Agabalinda and Isoh (2020) investigated financial literacy's influence on financial retirement preparedness among Uganda's small and medium enterprises. The study found that having financial knowledge is essential for preparing for retirement. A better understanding of investment options, financial products, and how interest on retirement benefits is calculated, significantly enhances retirement planning of individuals (Safari, Njoka, & Munkwa, 2021). Baker, Tomar, Kumar, and Verma (2021) further confirm that knowledge of various investment options and skills increases the likelihood of saving for retirement. Retirement income is influenced by investment choices and the returns on assets. Individuals who are knowledgeable about different financial assets can effectively manage their portfolios to achieve better yields. Maximising investment returns requires knowledge of when, how, and where to invest (Kumar, Tomar, & Verma, 2018). Although Agabalinda and Isoh (2020) study was conducted in Uganda, it focused solely on financial preparedness among small and medium-sized enterprises, while Safari et al. (2021) study lacked measurement details for retirement planning and focused solely on public-sector employees of one city in Congo, limiting its representativeness. In a qualitative study, Amani (2022) connotes that insufficient knowledge of pre-retirement planning hinders the retirement preparedness of academic staff, with many unsure of how to suitably prepare. Based on the findings above, we state our first hypothesis as follows:

H_{1a}: Financial knowledge significantly influences retirement preparedness among public university employees in Uganda.

2.2. Financial Skills and Retirement Preparedness

Individuals with greater competencies and knowledge tend to be more responsible and informed about financial matters and other aspects of life. Such skills enable them to assess their options, avoid mistakes, and make decisions that foster long-term benefits (Dajana Barbić, Lučić, & Chen, 2019). Developing basic financial skills, namely budgeting, saving, and gathering financial information, is important for everyone (Elbogen, Tiegreen, Vaughan, & Bradford, 2011). Strengthening these skills is especially important for older workers preparing for retirement, and engaging in voluntary training can be immensely beneficial in this regard. People with good financial skills become better money managers (Lusardi & Mitchell, 2011; Singh & Kumar, 2017). They create and use budgets as tools, leading to informed decisions and improved financial stability (Dajana Barbić et al., 2019). Thus, skills have a direct influence on financial decisions (Kumar, Pillai, Kumar, & Tabash, 2023). However, gaps in financial competencies can hamper retirement preparedness. Amani (2022) investigated the relationship between financial skills and retirement preparedness among academic staff in Tanzania and found that academics who lacked investment skills were more likely to face challenges during retirement.

Furthermore, Rasiah et al. (2020) examine how financial literacy, retirement planning conflict, attitude, and goal clarity affect retirement readiness. The study uses a purposive sampling technique to collect data from individuals aged 35 to 60 years. The results confirmed that financially skilled individuals can assess different retirement benefit schemes and investment options to start saving early enough, leading to better retirement preparation. Xue, Gepp, O'Neill, Stern, and Vanstone (2019) investigated Australians aged over 54 years and those who had retired. Using a lasso regression, the results revealed that pre-retirees possessed good financial understanding and abilities that enabled them to make healthy investment decisions. However, this study was limited by the observation that it excluded individuals under the age of 55 years, since financial literacy is relevant to the younger population as well. Kumari (2020) found that financial skills significantly influenced the investment decisions made by undergraduate students, suggesting the need to impart such skills to students earlier in life. According to Saha (2016) financially skilled individuals can discern different financial products and make wise decisions about investments. Based on these findings, we state the study's second hypothesis as follows:

H_{1b}. Financial skills significantly influence retirement preparedness among public university employees in Uganda.

2.3. Financial Behaviour and Retirement Preparedness

Different scholars have demonstrated the role of financial behaviour in retirement preparation. For instance, García Mata (2021) explored the association of gender, financial literacy, and retirement planning among Mexican youths, using a stratified random sampling approach. Findings revealed that retirement planning influences financial behaviour, with positive behaviours like investing in pension funds and real estate, leading to more active preparation. However, only youths were considered for the study, thereby limiting the generalisation of the findings. Similarly, Chin, Chua, Sivanathan, and Cham (2025) investigated the drivers of retirement preparation among Malaysians employed in Penang and used regression to establish the relationships between the study variables. Financial behaviour was found to affect individuals' decisions on retirement planning by translating learned knowledge into actionable steps like budgeting, consistent savings, and paying bills on time, which improves financial outcomes.

Arifin (2019) analysed how financial behaviour affects investment choices among private and government employees in the Jakarta region and established a positive correlation between financial behaviour and investment decisions for retirement. Developing the habit of saving is important for making investment decisions that lead to greater returns in retirement. However, this study focused on financial preparedness, particularly retirement investments, while the current study examines the financial and non-financial readiness. Furthermore, Heejung and Martin (2022) used secondary data from the United States to examine how financial behaviour, particularly savings, correlates with retirement planning behaviour. Their study found that consumers with savings habits demonstrate a greater propensity for retirement planning. Based on these findings, we have our third hypothesis as follows:

H_{1c}. Financial behaviour significantly influences retirement preparedness.

2.4. Retirement Attitude as a Mediator in the Financial Literacy – Retirement Preparedness Relationship

Empirical evidence on how attitudes towards retirement influence the relationship between financial literacy and retirement preparedness is scant. This study relies on the paucity of empirical literature available. Firstly, Barbić, Palić, and Bahovec (2016) investigated the causality between financial literacy and retirement planning habits and the relationship between financial literacy and retirement preparedness among a sampled population of Croatians. Using a logistic regression output, they found that having the necessary financial ideas and basic financial skills had a positive impact towards planning for retirement and making private investments for retirement among Croatians. Secondly, Lim et al. (2013) applied the Australian and New Zealand (ANZ) framework[1] for measuring financial literacy to assess levels of the latter among ethnic groups in Sabah, Malaysia. They found that while financial literacy alone does not directly influence financial decisions, it fosters a positive attitude towards financial behaviour. Similarly, Sabri and MacDonald (2010) examined the savings behaviour and financial literacy of Malaysian college students. They concluded that students with a better understanding of personal finance usually engage in financial practices that are positive, like saving for retirement and making investments, leading to better financial behaviours in adulthood. Batty, Collins, and Odders-White (2015) in their study on financial education and students ' knowledge, attitude, and behaviour also noted that improved attitudes towards saving from increased financial knowledge later affect financial behaviour. We therefore defined our final hypothesis as follows:

H_2: Retirement Attitude mediates the relationship between financial literacy and retirement preparedness.

3. Methodology

3.1. Design of the Study, Target Population, and Sample

The study employed a cross-sectional and quantitative research methodology to investigate the mediating effect of retirement attitude on the relationship between financial literacy and retirement preparedness, and to answer the research hypotheses. We identified a population of 5,293 academic staff from 10 public universities in Uganda, as registered by the NCHE (2021). Following the Yamane (1973) formula of sample size determination, we randomly drew and administered our questionnaire to a total sample of 371 academic staff members spread across all universities in Uganda. We applied a proportionate stratified sampling approach, in which we subdivided our population to ensure equal representation of each university, and obtained 298 responses from our target sample, representing an 80.1% response rate.

3.2. Data Collection Tool, Measures, and Procedures

Primary data was gathered from respondents using closed-ended structured questionnaires. The questionnaire was pretested and subsequently revised to ensure a high level of internal consistency, and respondents were selected using a purposive sampling method (Uma & Roger, 2016). While some questionnaires were distributed through an online survey, others were personally administered by a team of trained research assistants who were previously given an access letter for each university, along with an ethical clearance certificate from the University of South Africa (UNISA).

[1] ANZ Framework is the adopted criterion for measuring adult financial literacy in the United Kingdom.

3.3. Variables and Measures

The main purpose of the study was to establish the mediating effect of retirement attitude in the relationship between financial literacy and retirement preparedness for academic staff of public universities in Uganda. Therefore, financial literacy, retirement preparedness and retirement attitude were the key variables under study. The questionnaire measurement items generated under each of these constructs were anchored onto a five-point Likert scale starting from strongly agree (5), agree (4), not sure (3), disagree (2) and strongly disagree (1) to elicit the expected responses from the respondents (Koo & Yang, 2025). Financial knowledge, skills, and behaviour were adopted as indicators of financial literacy (Angrisani & Casanova, 2021; Lusardi & Mitchell, 2011) and included key questions such as: *"I have knowledge about financial planning for retirement."* Retirement attitude was assessed using cognitive and affective dimensions (Akben-Selcuk & Aydin, 2021; McLeod & Crowe, 2018) and included questions like: *"I am optimistic about retirement"*. Retirement preparedness, as an outcome variable, was operationalised using financial and non-financial aspects, including financial awareness, social actions, psychological beliefs, and health preparedness (Denton et al., 2004; Ghimire, 2022). Participants were required to comment on statements like *"I diversify my retirement investments to enhance financial security."*

3.4. Data Analysis

The received data were sorted, coded, and analysed using the SmartPLS 4.0 analytical software, where checks for data entry errors, missing values, outliers, and normality were performed. Descriptive analyses and summary statistics on frequency counts and biographic information were done to better understand the dataset and the participants' backgrounds. SmartPLS 4.0 was then employed to perform Partial Least Squares Structural Equation Modelling (PLS-SEM) analyses for evaluating the "measurement" and "structural models." SEM was chosen because it facilitates the modelling of latent variables while identifying complex relationships among them, performs multiple regressions simultaneously, and provides confidence intervals and associated statistical significance tests for indirect effects that help to identify measurement errors (Hair, Risher, Sarstedt, & Ringle, 2019). For this analysis, a two-stage modelling process was followed, commencing with the appraisal of the measurement model's consistency, accuracy, relevance, and validity, and to ascertain model sufficiency (Hult, Ringle, & Sarstedt, 2022). After verifying this model, we constructed the structural model to relate all variables (latent and manifest) into one complex model and evaluated the inter-associations among financial literacy, retirement attitude, and retirement preparedness. We checked for significance and relevance of these relationships using path coefficients (β), the coefficient of determination (R^2), used to assess the explanatory power of the model, Q^2 for predictive relevance and model goodness of fit (GOF) indices to determine model adequacy (Hair et al., 2022). The mediation effect was confirmed through bootstrapping, which has more power for detecting indirect effects than the Sobel test (Hair et al., 2022).

4. Study Results

4.1. Demographic Features of Participants

The demographic features of respondents are provided using frequency counts and percentage distributions summarised in Table 1. The gender distribution of respondents indicates that most academic staff (66.4%) were male, suggesting a male-dominated sample. This may have implications for financial decision-making and retirement preparedness. PhD holders form most of the sample (56.4%), suggesting an educated sample. Regarding age, those in the prime working age (36 - 50 years) make up 65.1% of the sample, reflecting an adequate sample of individuals expected to be actively planning for retirement. The average gross monthly income range was between USD 2,115 and USD 2,254, earned by 39.6% of respondents and suggesting a moderate earning capacity for saving and investing for retirement. More than half of the lecturers (57.7%) indicated that they are in the middle stages of their academic and work careers. Table 1 shows the demographic characteristics of respondents.

Table 1. Sample characteristics of respondents.

Gender	**Count**	**Percent**	**Cumulative %**
Male	198	66.4	66.4
Female	100	33.6	100
Total	***298***	***100***	
Age bracket	**Count**	**Percent**	**Cumulative %**
30 -35	33	11.1	11.1
36-40	80	26.8	37.9
41-45	67	22.5	60.4
46-50	47	15.8	76.2
51-55	41	13.8	89.9
56-60	30	10.1	100
Total	***298***	***100***	

Education Level	Count	Percent	Cumulative %
Master's degree	113	37.9	37.9
PhD	168	56.4	94.3
Post-Doctoral	17	5.7	100
Total	***298***	***100***	
Designation	**Count**	**Percent**	**Cumulative %**
Ass. lecturer	41	13.8	13.8
Lecturer	171	57.4	71.1
Senior lecturer	51	17.1	88.3
Associate Prof.	23	7.7	96
Professor	12	4	100
Total	***298***	***100***	
Income level	**Count**	**Percent**	**Cumulative %**
5.9-6.6M	82	27.5	27.5
7.6-8.1M	118	39.6	67.1
8.2-9M	59	19.8	86.9
14.8 M	3	1	87.9
15.6M	36	12.1	100
Total	***298***	***100***	

4.2. Measurement Model Evaluation of Reflective Constructs

Reflective constructs of the study were examined to verify their validity and reliability. Since these latent variables are independent and not directly measured, their indicators represent the underlying constructs. Indicator loadings and composite reliability assessed the indicator reliability and internal consistency. Hair et al. (2022) recommend indicator loadings of 0.7 and above as ideal but suggest that indicator loadings between 0.4 and 0.7 are reliable if dropping them does not improve composite reliability or the Average Variance Extracted (AVE). At least three indicators with factor loadings between 0.40 and 0.70 were eliminated to enhance the composite reliability (Hair et al., 2022). While a composite reliability score of 0.7 was considered acceptable, our lowest score was 0.837, thereby confirming adequate internal consistency for all constructs. Composite reliability was chosen because it is appropriate for PLS-SEM and is not influenced by the number of items used to create the models (Hair et al., 2019).

To assess validity, convergent validity was initially evaluated to ensure that the measurement items share a high proportion of the variance. This was assessed using the AVE, with a threshold of 0.5 and above considered as acceptable. All AVE values were above 0.5 as indicated in Table 2 thereby confirming convergent validity. Additionally, multicollinearity was tested among the indicator variables using Variance Inflation Factors (VIFs). All VIF values for the financial literacy indicators were below the 3.0 threshold suggested by Becker, Ringle, Sarstedt, and Völckner (2015) to rule out chances of multicollinearity. According to Kock (2015), VIF values below 3.0 confirm that the model is statistically free of bias (see Table 2). Secondly, discriminant validity was tested using the Heterotrait-Monotrait (HTMT) ratio to ensure that each construct was distinct. A cutoff of 0.85 was used according to Henseler, Ringle, and Sarstedt (2015) and since all values were below this value, discriminant validity was confirmed (see Table 3). Tables 2 and 3 depict the findings of these analyses.

Table 2. Construct reliability, convergent validity, and collinearity checks.

Items	Factor loading	Cronbach's alpha coefficients (α ≥ 0.7)	rho_A	Composite reliability coefficient (CR ≥ 0.7)	Average variance extracted AVE (≥0.5)	Variance inflation factor (VIF)
Financial behavior						
FLFB1	0.692	0.817	0.823	0.867	0.522	1.673
FLFB2	0.729					
FLFB3	0.784					
FLFB4	0.712					
FLFB5	0.697					
FLFB6	0.718					
Financial knowledge						
FLJK1	0.707	0.814	0.816	0.866	0.519	1.654
FLJK2	0.77					
FLJK3	0.712					
FLJK4	0.735					

FLJK5	0.736					
FLJK6	0.66					
Financial skills						
FLSK1	0.799	0.834	0.84	0.879	0.549	1.775
FLSK2	0.663					
FLSK3	0.804					
FLSK4	0.753					
FLSK5	0.748					
FLSK7	0.665					
Affective						
RTAF2	0.752**	0.813	0.818	0.866	0.52	1.728
RTAF3	0.696**					
RTAF5	0.707**					
RTAF6	0.719**					
RTAF8	0.706**					
RTAF9	0.672**					
Cognitive						
RTCO1	0.792**	0.813	0.818	0.866	0.52	1.728
RTCO2	0.787**					
RTCO3	0.710**					
RTCO6	0.620**					
RTCO7	0.717**					
RTCO9	0.588**					
Financial preparedness						
RPFP1	0.746**	0.781	0.78	0.851	0.534	1.673
RPFP2	0.743**					
RPFP3	0.748**					
RPFP4	0.657**					
RPFP6	0.662**					
RPFP7	0.679**					
Health preparedness						
RPHP1	0.663**	0.819	0.835	0.837	0.603	1.555
RPHP3	0.726**					
RPHP5	0.706**					
RPHP6	0.648**					
Psychological preparedness						
RPPS2	0.667**	0.841	0.844	0.881	0.517	1.846
RPPS3	0.742**					
RPPS4	0.703**					
RPPS5	0.772**					
RPPS6	0.763**					
RPPS7	0.642**					
RPPS8	0.579**					
Social preparedness						
RPSO1	0.680**	0.879	0.882	0.905	0.544	1.933
RPSO2	0.801**					
RPSO3	0.789**					
RPSO4	0.716**					
RPSO5	0.761**					
RPSO6	0.783**					

Note: ** p< 0.001, *bootstrap with 5000 bootstrap samples* (2-*tailed* test at 5% level of sig).

Table 3. Discriminant validity – Heterotrait-Monotrait (HTMT) ratios.

Financial Literacy	**FB**	**FK**	**FS**	
Financial Behaviour-FB				
Financial Knowledge-FK	0.656			
Financial Skills-FS	0.802	0.824		
Retirement attitude	**AF**	**CG**		
Affective-AF				
Cognitive-CG	0.175			
Retirement preparedness	**FC**	**HT**	**PY**	**SC**
Financial-FC				
Health-HT	0.243			
Psychological-PY	0.518	0.222		
Social-SC	0.615	0.171	0.424	

4.3. Model Results

The primary objective of the study was to investigate the mediating effect of retirement attitude on the relationship between financial literacy and retirement preparedness among academic staff of public universities in Uganda. This section presents the model results based on the hypotheses set for the study. Subject to a robust measurement model, the structural model was assessed based on (i) the significance of path coefficients, and (ii) the coefficients of determination to assess the model's explanatory power. Results are depicted in Table 4.

Hypothesis H_{1a}: Financial knowledge significantly influences the retirement preparedness of academic staff of public universities in Uganda.

Consistent with this hypothesis, the study found that financial knowledge positively and significantly affects retirement preparedness ($\beta = 0.391$, $t = 4.498$, $p < 0.000$, 95% CI = (0.156; 0.517) as depicted in Table 4 below. The β value indicates that every standard deviation increase in financial knowledge causes retirement preparedness to increase by 0.391 standard deviations. This suggests a moderately positive but significant relationship between the variables. A *p-value* of 0.000, lying below the 5% threshold, means that there is only a 0.1% probability that this relationship occurred by chance, and confidence intervals with positive values imply that the relationship is statistically significant. The results suggest that financially knowledgeable academics at public universities in Uganda are preparing for retirement. Understanding financial concepts like savings, investments, and retirement planning encourages academics to make informed decisions and take the necessary actions to prepare for their retirement. This finding is consistent with Guo et al. (2025) and Lusardi and Mitchell (2014) confirming that confidence and perceived capability lead to changes in financial behavior.

Hypothesis H_{1b}: Financial behaviour positively and significantly influences the retirement preparedness of academic staff of public universities in Uganda.

The study confirmed a statistically significant and moderately positive relationship between financial behaviour and retirement preparedness among academics of public universities in Uganda ($\beta = 0.302$, $t = 3.419$, $p = 0.001$, CI = [0.129, 0.478). Table 4 indicates that a one-standard-deviation increase in financial behavior causes retirement preparedness to increase by 0.302 standard deviations. A *p-value* of 0.000, which lies below the 5% threshold, indicates that there is only a 0.1% probability that this relationship occurred by chance, and the positive confidence interval values confirm that the relationship is statistically significant. This implies that positive financial behaviours are associated with better retirement preparedness. Habitual engagement in investment-related activities like saving, debt management, and budgeting, among others, is an important trait for improving individuals' retirement readiness. In effect, knowledge about saving or budgeting is irrelevant unless applied.

Hypothesis H_{1c}: Financial skills positively influence the retirement preparedness of academic staff of public universities in Uganda.

The study found no statistically significant relationship between financial skills and retirement preparedness ($\beta = 0.043$, $t = 0.565$, $p = 0.572$). A path coefficient represented by a β of 0.043 indicates a weak relationship, and the *p-value* of 0.572 exceeds the 5% threshold, indicating a 57.2% probability that the finding is purely due to chance. Additionally, the confidence intervals of -0.111 and 0.187 include sub-zero values (see Table 4), confirming that the relationship is not statistically significant. These results suggest that financial skills like budgeting, return on investment calculations, and interest rate assessments do not significantly influence academics' ability to prepare for retirement. The findings confirm that skills do not impact outcomes unless they are linked to motivation, behavioural intention, or facilitating environments (Ajzen, 1991; Cycoń, Mrozik, & Piotrowska-Seget, 2019).

Hypothesis H_2: Retirement attitude mediates the nexus between financial literacy and retirement preparedness.

The mediating effect of retirement attitude on the nexus between financial literacy and retirement preparedness was assessed using a bootstrapping SEM procedure with over 5000 iterations (Hair et al., 2022). First, the indirect effects of financial literacy, retirement attitude, and retirement preparedness were tested and

found to be statistically significant (β = 0.102, t =2.601, *p-value* = .009, CI = 0.031, 0.184), confirming that retirement attitude causes retirement preparedness to increase by 0.102 standard deviations when financial literacy increases by one standard deviation. A *p-value* of 0.009 confirmed that this result had a 0.9% probability of occurring randomly, thereby supporting significant mediation through indirect effects. However, these findings did not indicate whether the mediating effect was full, partial, complementary, or competitive. Hence, the direct effects of this relationship were run to determine the type of mediation. Results showed a statistically significant relationship (β = 0.415, t = 5.765, p < 0.000, CI = 0.027, 0.339), with a β value indicating a strong positive but direct effect and less than a 0.1% probability that the outcome occurred by chance.

Furthermore, the bias-corrected confidence intervals at the 95% level indicated that both effects were positive, thereby confirming complementary partial mediation and suggesting that both effects point in the same direction. This confirms that retirement attitude partially mediates the relationship, as depicted in Table 4. However, other unidentified factors likely mediate this relationship. Nevertheless, financial literacy fosters a positive attitude towards retirement preparedness by minimising fear and promoting acceptance, which in turn motivates academics to save, invest, and engage socially. Similarly, financially literate academics save or invest for their retirement without having to change their attitude towards retirement. These findings support hypothesis H_2 and are corroborated by a Total Variance For (VAF) of 65.3%, which measures the proportion of the total variance in actual values accounted for by the variance in predicted variables to support model fit. Finally, demographic characteristics like age and education level did not have a statistically significant influence on retirement preparedness as indicated in Table 4.

Table 4. Result for direct and indirect (Mediation) path effects, model fit indices and prediction estimates.

Construct	Hypothesis	Beta	T statistics	P values	Confidence interval – 5.0%	Confidence interval – 95.0%
Lower - Order construct results - Direct path result						
Age bracket -> Retirement Preparedness		0.004	0.083	0.934	-0.101	0.102
Education level ->Retirement preparedness		0.005	0.099	0.921	-0.11	0.088
Financial knowledge-> Retirement – Prep.	H_{1a}	0.391	4.498	0	0.156	0.517
Financial behavior -> Retirement – Prep.	H_{1b}	0.302	3.419	0.001	0.129	0.478
Financial skills -> Retirement – Prep.	H_{1c}	0.043	0.565	0.572	-0.111	0.187
Direct path result in presence of a mediator						
Financial literacy -> Retirement - Preparedness	H_1	0.415	5.765	0	0.263	0.549
Indirect effect (Mediation results)						
Financial literacy -> Retirement attitude -> Retirement - Preparedness	H_2	0.102	2.601	0.009	0.031	0.184
Total effect						
Financial literacy -> Retirement - Preparedness		0.156	9.412	0	0.388	0.611
Model values						
SRMR value		0.07				
NFI		0.921				
Prediction estimates –	Q^2 *predict*	R^2			R^2 *Adj.*	
Retirement attitude	0.242	0.258			0.255	
Retirement preparedness	0.248	0.299			0.289	

4.4. Model Robustness

Finally, Table 4 indicates that the final model for retirement preparedness had a moderate explanatory power R^2 of 0.299 and an adjusted R^2 value of 0.289, while the predictive relevance for retirement preparedness and retirement attitude was $Q^2 = 0.248$ and $Q^2 = 0.242$, respectively. Since these values were above zero, we confirmed the model's predictive accuracy (Hair et al., 2022) implying that the variance in financial literacy explained about 29.9% of the variance in retirement preparedness. Similarly, model fit indices indicated a standardised root mean square residual (SRMR) of 0.070 and a normal fit index (NFI) of 0.921, with both values supporting acceptable model fit (Hair et al., 2019; Hussain, Fangwei, Siddiqi, Ali, & Shabbir, 2018).

5. Discussion of Findings

5.1. Financial Knowledge and Retirement Preparedness

The significance of subjective financial knowledge as a positive determinant of retirement preparedness among public university academics in Uganda highlights how self-perceived financial knowledge informs retirement preparedness. This finding confirms that self-perception of financial knowledge leads to greater confidence and initiative-taking behaviour in preparing for retirement. The finding is consistent with the emerging body of literature, which suggests that an individual's confidence in financial matters affects their financial decisions more than objective financial knowledge alone (Guo et al., 2025; Lusardi & Mitchell, 2014). A review of the literature also confirms that subjective financial knowledge is a systematic predictor of financial planning, and this effect is more pronounced in academic and professional contexts. For instance, Guo et al. (2025) identified perceived financial knowledge as a significant predictor of the intention to plan for retirement, revealing its motivational power despite the typically low technical skills. This finding is also salient in Uganda, where the opportunity for formal financial education among some segments of the population, including universities, is limited. Within this context, motivation to engage in financial activities is supported by the inherent value of subjective knowledge, which translates into confidence in performing behaviours and enables retirement planning behaviour. It compensates for the deficits in formal training or technical skills and is limited to the literature of behavioural finance, which highlights the difference between perceived and actual ability. Lusardi and Mitchell (2014) observe that the former translates into low confidence, implying that individuals fail to take key steps towards planning, despite their knowledge base.

Furthermore, these findings strengthen the Theory of Planned Behaviour (Ajzen, 1991), which asserts that behavioural intention is guided by attitudes, perceived behavioural control, and subjective norms. In this respect, financial subjective knowledge may be viewed through Ajzen's framework as a construct that represents a kind of perceived behavioural control, that is, individuals' beliefs regarding their ability to exert influence over financial management decisions to ultimately promote retirement preparedness behaviour. It aligns with the literature wherein Voleti et al. (2024) in Willows (2020) in South Africa found that, despite the level of technical literacy and/or its variability across participants, individuals who were good with finances were most likely to engage in optimal retirement saving habits. Similarly, Baker et al. (2021) found that better retirement planning decisions, which lead to higher savings rates, are the result of greater financial planning knowledge. Conversely, however, these findings depart from those of Willows (2020); Antoni, Saayman, and Vosloo (2020) and Sreeram, Kesharwani, and Desai (2017), who found an insignificant relationship between financial knowledge and retirement planning behaviour.

Therefore, while the significant correlation for Uganda confirms the value of subjective knowledge, it also raises caution since overconfidence can be dangerous if it is not based on actual skills alone, because the latter results in a lack of foresight when planning. This knowledge can only be effective through personal finance activities like saving, budgeting, managing risk and expenses, investing, taking loans, and the like. Hence, Willows (2020) asserted that subjective confidence due to high levels of financial knowledge must be matched with actual competence to prevent suboptimal outcomes. And so, interventions to enhance retirement preparedness should not only provide technical knowledge but promote self-awareness and realistic confidence through reflective training methods that equip individuals with financial skills. As such, self-awareness should be promoted through personalised financial counselling.

5.2. Financial Skills and Retirement Preparedness

The results showed a non-significant relationship between financial skills and retirement preparedness, implying that financial skills like the calculation of loan interest payments, comparison and choice between different financial products, and the use of investment products, among others, do not significantly influence retirement preparedness in our sample. This outcome suggests the need to develop and promote financial intervention programs that enhance financial knowledge and its practical application to improve individual financial skills. The latter aligns with personal finance management when financial knowledge is applied.

Several studies highlight this misalignment and attribute it to the lack of psychological and behavioural attributes that enhance technical capacity among individuals. For instance, Jonasi and Towo (2024) found that mathematical abilities were not key to retirement preparedness, while Maier, Thatcher, Grover, and Dwivedi (2023) concluded that numeracy skills did not impact retirement investments when ignored. They found that

financial knowledge and behaviour are more important than financial skill sets, suggesting that while math skills are useful, other aspects of financial literacy, like understanding financial concepts and tracking market behaviour, are more important for investing. Indeed, Willows (2020) confirms that financial behaviour and subjective understanding are stronger predictors of financial outcomes than technical skills, especially in countries with underdeveloped or poorly regulated financial markets like Uganda. Conversely, the findings contradict the views of Agabalinda and Isoh (2020) and Antoni et al. (2020) who found that financial skills were significantly associated with retirement preparedness.

In Uganda's context, most public university academics have limited opportunities to apply their technical financial skills, primarily due to the passive nature of most investments. Additionally, the country's underdeveloped capital markets with fewer retirement investment vehicles (URBRA, 2024) offer less opportunity for effective product evaluation and choice. This mirrors earlier observations by Egboh and Chidozie (2021) in Nigeria and Jonasi and Towo (2024)in Southern Africa, who found that weak institutional support undermines individual financial capacity on retirement preparedness. While Ando and Modigliani (1963) Life Cycle Theory assumes rational economic behaviour over time, Holzmann et al. (2019) disagree with the notion that the possession of information nurtures the ability to make logical decisions. Uganda's case attests that even financially skilled individuals may be constrained by income uncertainties, and so, mid-term pension withdrawal options often negate the value of their technical skills. This is why implications about financial skills must be holistic to extend beyond technical training, behavioural nudges, psychological framing, and contextual adaptation. The latent value of financial skills is better adapted by programs that include experiential learning, financial coaching, and social reinforcements.

5.3. Financial Behaviour and Retirement Preparedness

Results supported the hypothesis that financial behaviour positively and significantly influences the retirement preparedness of academics of public universities in Uganda. This finding suggests that aspects of financial prudence, such as regular savings, budgeting, tracking of expenses, and avoiding unnecessary debt, influence retirement preparedness among Ugandans. Findings are in line with empirical literature highlighting the importance of behaviour in linking the gap between knowledge and retirement preparedness. Our findings align with García Mata (2021) who confirms that embracing positive financial behaviour triggers active retirement planning habits like investing in pension funds and real estate, and Heejung and Martin (2022) who confirm that savings have a positive correlation with consumers' retirement planning purchases. Related literature further supports our findings including Willows (2020), who found that compliance with a personal financial blueprint directly affected retirement saving choices, and Gunawan, Radiman, Pulungan, and Koto (2019) who found that financial behaviour is more important than other financial literacy components in predicting the retirement preparedness of Indonesians. This means that the persistent adoption of astute financial practices translates into sound retirement preparedness behaviour. It is therefore prudent for Ugandans to engage in sound financial practices that are supported by societal safety nets to prevent the abuse of midterm pension withdrawals currently permitted in the country. The absence of institutional limitations on early access to retirement funds implies that individuals must self-regulate to save for the future. This could include behavioural self-management practices like resisting the urge to dip into retirement savings earlier, setting long-term savings goals, and choosing more needs over wants to spend on.

5.4. The Mediating Role of Retirement Attitude on the Financial Literacy – Retirement Preparedness Relationship Among Academics of Public Universities in Uganda

Overall, the results confirm a positive and statistically significant relationship between financial literacy and retirement preparedness among academics at public universities in Uganda. However, this relationship is indirect, in that financial literacy influences retirement attitudes, which in turn enhance the attainment of retirement behaviour. The assertion here is that financial knowledge influences attitude, which then mediates the knowledge consequence on financial behaviour, resulting in retirement preparedness. Therefore, retirement attitude serves as a pathway through which financial literacy is channeled into retirement planning behaviour, or conversely, financial literacy enhances retirement attitudes, which enhance retirement readiness among individuals.

Furthermore, the results support the contention that knowledge about financial matters does not guarantee effective retirement preparedness behaviour in the absence of favourable attitudinal preferences towards the future. As Barbić et al. (2016) observe, individuals with a more positive retirement outlook often engage in preparatory retirement behaviours when demographic factors are considered constant. Similarly, Lusardi and Mitchell (2014) confirm that financial literacy affects not only the knowledge to make wise decisions, but the courage and will to effect long-term financial commitments. Therefore, the partial mediating role of financial literacy is both direct and indirect in the sense that the former not only provides an individual with the ability to plan, but it also pervades them with a positive psychological predisposition, which enables them to feel that life post-retirement is controllable and expected. This dual effect is consistent with Ajzen's 1991 Theory of Planned Behaviour, which recognises cognitive aspects and attitudinal factors as predictors of behavioural intention.

Finally, retirement attitude may be representative of a more general constellation of attitudes about aging, future time perspectives, and self-efficacy. Van Rooij, Lusardi, and Alessie (2011) showed that future-oriented beings with high financial capability planned well for retirement, particularly if their attitude towards retirement was positive as opposed to fear-driven. From a real-world perspective, these findings suggest that retirement education and financial planning interventions should extend beyond knowledge transfer alone. Institutional retirement training programs that offer motivational features such as facilitating goal setting, envisioning life in retirement, and changing attitudes may be necessary. According to Hershey, Jacobs-Lawson, and Austin (2012) a proactive retirement mindset can serve as a trigger since it turns financial literacy into intentional behavior.

Our findings are congruent with a growing body of literature that supports a multi-dimensional model of retirement planning, which includes economic, cognitive, and psychological factors. Hence, the study improves on the understanding of the determinants of retirement readiness and advances policy implications for legislators, educators, and financial advisers seeking to improve retirement preparedness among the population of Uganda and beyond.

6. Conclusion and Implications

6.1. Conclusion

This study investigated the mediating effect of retirement attitude on the relationship between financial literacy and retirement preparedness among the academics of public universities in Uganda. It was motivated by the Life Cycle Hypothesis by Ando and Modigliani (1963) and the Theory of Planned Behavior (Ajzen, 1991). Results confirm that financial literacy positively and significantly affects the retirement preparedness of academics in Uganda. Empirical results show a positive and significant relationship between subjective financial knowledge and financial behavior on retirement preparedness. The results underpin the importance of financial literacy as a cognitive, behavioural, and perceptual trait to financial behaviour among individuals. Conversely, financial skills, which define the technical aspects of financial literacy, did not have a positive and statistically significant effect on retirement preparation among our sample. This means expertise by itself does not guarantee that prospective retirees prepare for retirement in the absence of certain accompanying behaviours and/or attitudes. Finally, retirement attitude was found to partially mediate the financial literacy–retirement preparedness relationship. These findings collectively support and provide implications for extant literature linking financial literacy to retirement preparedness and highlight retirement attitude as a plausible mediator to the process in the context of Uganda.

6.2. Implications

6.2.1. Theoretical Implications

Our study makes a meaningful contribution to the retirement preparedness literature by validating and contradicting aspects of the financial literacy – retirement preparedness nexus. It aligns subjective financial knowledge and behaviour with the Theory of Planned Behaviour (Ajzen, 1991) and finds support for the mediating role of retirement attitude, confirming that employees who have control over their financial decisions prepare better for retirement. Additionally, the study finds partial support for the Life Cycle Theory (Ando & Modigliani, 1963) but proffers a rationale that the weak results could be attributed to several contextual but unique factors in Uganda, like the premature access of pension funds, hyperinflation, and the underdeveloped financial markets, which undermine long-term financial planning. Overall, the study asserts that financial literacy extends beyond knowledge and behaviour to include cognitive skills, context, and culture.

6.2.2. Practical Implications for Policy and Practice

The study identifies the need for financial education programs on retirement planning that extend beyond technical financial skills to emphasise the enhancement of subjective financial knowledge among Ugandans. It stresses the need to build financial confidence and increased awareness among employees, particularly those working within the academic institutions of the country. Such interventions will have a positive impact on guiding individual financial decisions, encouraging financial habit formation, and instilling behavioural consistency in financial decision-making. There is a critical need for policymakers to institute financial educational programs that promote financial goal setting among individuals at the various stages of their careers and integrate psycho-educational curricula that address both financial and emotional aspects of retirement, to establish clearer retirement goals and reduce individual financial anxiety. Finally, the government must revisit and revise policies that grant midterm access to accumulated pension funds in Uganda. While these withdrawals provide temporary financial relief to individuals, they significantly disrupt future financial preparedness among individuals. Therefore, regulatory bodies like URBRA and NSSF need to limit such withdrawals and/or provide financial counselling to prevent potential misuse.

7. Limitations and Directions for Future Inquiry

This study is not without its limitations. First, we adopted a cross-sectional research design, thereby limiting our findings to a point in time. Future studies could adopt a longitudinal research design to assess the dynamic characteristics of the sample and study variables over time. We believe that a longitudinal study would provide comparatively invaluable information on how financial literacy, retirement attitude, and retirement preparedness relate with one another over time, and hopefully yield more robust interactions and/or stronger evidence of causality. Secondly, the study employed a quantitative research approach based on the nature of the data. Future studies could benefit from a mixed methods or qualitative approach to better understand the underlying qualitative characteristics and drivers of retirement planning behaviours. Thirdly, the study focused on academics of public universities in Uganda, thereby limiting the generalisability of the findings. Future inquiry could consider investigating the retirement preparedness of employees in other public and private sectors of the country, like healthcare, private universities, and banking, among others, to elicit comparative insights on sector-specific drivers and barriers to retirement preparedness. Finally, future researchers should investigate alternative mediators like self-efficacy and/or future time perspectives on the financial literacy – retirement preparedness relationship.

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