Predictors of Pension Finance Literacy: A Survey of Members of Occupational Pension Schemes in Kenya

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Abstract

Pension finance literacy enables individuals to plan for retirement, make proper choices on pension products and contribute effectively in management of their pension schemes. This study sought to determine the pension finance literacy levels and the variables that influence it amongst members of occupational retirement schemes in Kenya. The sample consisted of 2395 (response rate 65%) individuals drawn from 648 occupational retirement schemes. A binary measure of pension finance literacy was constructed and one way ANOVA and post hoc tests using the Tukey approach were conducted to determine the bases on which pension finance literacy levels differ. The study concludes that pension finance literacy differs significantly on the basis of age, education level, gender, job experience, management level, income, pension plan design, participation in previous pension finance literacy program, area of specialization and membership in a pension plan board but does not differ on the basis of the marital status of the individuals.

Keywords: Pension finance literacy, Occupational pension schemes

1. Introduction

Financial market advancements of the 21 Century have forced the global financial sector to transfer substantial risks to households as a result of which individuals bear the responsibility to manage their own financial and pension risks. Moreover, the financial landscape has brought about complicated financial products, more flexible regulations and minimal financial disclosures (Messy, 2009) which expose individuals to not only great opportunities to maximize wealth but also more potential to make wrong financial decisions. With minimal pension finance literacy, individuals risk failing to plan for retirement, underestimate their retirement needs, under price pension financial products, undercover retirement risks and incur excessive pension management costs. Indeed, Hastings, Mitchell & Chyn (2011) conclude that people with lower levels of pension finance literacy rely on employers, coworkers and friends as opposed to cost fundamentals when choosing pension funds.

The unique nature of pension products particularly makes pension finance literacy imperative. The products create long term contracts, which are complicated by uncontrollable factors such as inflation, interest rates, fiscal policies and assumptions of future income (Messy, 2009). Additionally, the changing demographics and systematic trends in the pension industry that are characterized by increased longevity coupled with shorter working lives, decreased public pensions, the shift from defined benefit to defined contribution schemes, increased individual choices and the changing retirement regulations require individuals to have knowledge on pension finance (Arnone, 2004).

Apathy, indifference to pension planning and access to financial education programs form a large barrier to improving people's knowledge of the pension systems and how it affects them (Besley & Prat, 2005; Worthington, 2005; Skog, 2006; Tippet & Kluvers, 2007; James, 2009). Evidence from both developing and developed countries indicates that many individuals do not know where to get trustworthy and impartial advice about pension and financial issues, for instance, in the United States of America, where households have a wide

array of financial products, low levels of financial literacy prevents consumers from making good decisions on financial products and pension systems (Lusardi & Mitchell, 2006; OECD, 2008; James, 2009; Lusardi, Mitchell & Curto, 2010).

Financial literacy surveys indicate inadequate pension finance literacy levels amongst the general population. For instance, DFID (2008) reported that only half of the adult population in Africa knew how to use basic financial products and in seven African countries only 29% of adults had a bank account and 50% did not use any financial products, not even informal financial products. In 2006, 80% of informal workers did know what a pension was in India; in China, low awareness on the pension arrangement excluded 89% of the informal workers; in Chile, pension awareness was rated at 2.1 on a scale of 7 and in UK 25% of the pension credits were not claimed as people did not know that they were eligible; in the US, 50% of the workers did not make voluntary contributions to pension funds due to lack of awareness and in Japan, 3 million people were not contributors to the national pensions system due to low awareness (Stewart, 2006). Additionally, Chileans were found to have limited knowledge on the pension system in 2010 (Landerretche & Martinez, 2011). In 2008, only 68% of retirees in Kenya had knowledge of the benefits they expected on retirement and 80% of the retirees were never advised on how to spend their retirement benefits and 91% had never attended pre retirement training (RBA, 2008).

The inimitable nature of pension arrangements and the consequent low level of awareness underscore the importance of pension finance literacy. The present study investigates the predictors of pension finance literacy amongst members of retirement schemes in Kenya. The findings will inform policy makers in the design of pension finance literacy programs as Kenya prepares a national financial literacy strategy. This paper is organized as follows; section 2 provides a literature review, section 3 discusses the research methodology, section 4 discloses the results of the statistical analyses of the data and the consequent discussion of the results while section 5 concludes.

2. Literature Review

2.1 Pension System in Kenya

Pension systems in Kenya were first put in place after independence in 1963. The first post independent pension fund body, the National Social Security Fund (NSSF), was established in 1965. The pension system in Kenya has been supervised by the independent Retirement Benefits Authority (RBA) since 2000, which oversees the 1997 RBA Act that brought about regulation, protection and structure to the pension fund industry. RBA continues work to develop the industry and advise the government on pension policy reforms. Kenya's pension system embraces four components namely the NSSF, Civil Servants Pension Scheme (CSPS), Occupational Retirement Schemes (ORS) and Individual Retirement Schemes (IRS). Overall the system is estimated to cover 15% of the labour force and to have accumulated assets of 18% of the GDP in 2006 (Kakwani, Sun & Hinz, 2006) and 30% of the GDP in 2009 (RBA, 2010). The pension system covers an estimated 2 million workers leaving an estimated 5 million workers uninsured under any retirement scheme, of which at least 10% were at or near the retirement age in 2006 (Kakwani *et al*, 2006). RBA has succeeded in training over 1,000 schemes with 2611 trustees which accounts for approximately 83% of the total registered pension schemes in Kenya (Mutuku, 2007). However, this training is only centered on the trustees with the hope that the knowledge and information they acquire will trickle down to the other members of the pension scheme. However, this may not necessarily be the case. Although RBA provides measures to protect individuals by adopting risk based supervision of pension plans, it encourages individuals to customize their retirement savings to their individual requirements, future plans and risk profiles, which necessitates pension finance literacy.

2.2 Importance of Pension Finance Literacy

Financial knowledge has been defined as the ability to make informed judgments and to make effective decisions regarding the use and management of money (Worthington, 2005). Remund (2010) on the other hand defines it as a measure of understanding key financial concepts. Financial knowledge enables individuals to build their financial skills and gives them confidence to undertake financial decisions for their pension schemes (Choi, Labson & Madrian, 2005; Agnew, Szykman, Utkus & Young, 2007; Tippet & Kluvers, 2007). Knowledge on savings and plans to save is critical for effective long-term financial decision making that is relevant to pension funds (Landerretche & Martinez, 2011). Households with low financial knowledge do not plan and so they have lower retirement savings, shorter planning horizons and are less likely to contribute to pension fund's decisions than those with the requisite knowledge (Mitchell & Utkus, 2003; Lusardi, 2006). Financial knowledge is directly correlated with self beneficial financial behavior and without it individuals will most likely have problems with debt, not save, engage in exorbitant mortgages and will not plan for retirement (Kefela, 2010; Landerretche & Martinez, 2011; Hastings & Mitchell, 2011). Financial knowledge has been found to have a strong positive relationship to individual's involvement in pension matters (Moore, 2003), understanding of rights and obligations in pension schemes (Choi *et al*, 2005), sharpening the risk attitude (Agnew & Szykman, 2005), increasing savings and investments in complex assets (Lusardi & Mitchell, 2006) and enhancing innovative ideas (Calvert, Campbell & Sodini, 2005). Low level of knowledge is associated with limited success

of voluntary savings schemes, for instance, in Kenya, the lack of a unified financial education program impacts negatively on the general savings culture and low awareness on pension matters (RBA, 2007).

2.3 Determinants of Pension Finance Literacy

Arnone (2004) documents that the general population varies according to types of information they need and can process on pension finance. Arnone thus implies that distinct variables like age, education level, gender, job experience, management level, income and marital status influences a person's knowledge on pension finance matters. These factors are discussed in turn;

2.3.1 Age

According to Arnone (2004), older individuals are likely to be more knowledgeable on pension finance matters since retirement planning programs are limited to those who are about to retire where the goal of this pre retirement planning program is to help participants identify their basic retirement decisions and start preparing for retirement. Additionally, retirement savings increases with age, which creates consciousness amongst the population as they grow older suggesting that they will seek more of pension finance knowledge (Bell, Carasso & Steuerle, 2005; Edmiston & Gillet-Fisher, 2006).

2.3.2 Education level

Individuals with higher education have more knowledge on financial and pension matters (Lerman & Bell, 2006; Hastings & Mitchell, 2011; Hastings *et al*, 2011). Hastings *et al,* attribute the finding to the lack of understanding on basic concepts. Moreover, financial knowledge imparted on the young people form a basis for them to continue with similar education in to the middle age (Lerman & Bell, 2006). A higher level of education attainment leads to a higher likelihood of participating in a pension plan (Bell *et al,* 2005) since financial literacy and schooling are significantly correlated.

2.3.3 Gender

According to RBA (2005), the knowledge on pension finance differs significantly between men and women as 60.7% of the men knew the benefits due to them on retirement in contrast to 57.7% of the women. The low level of pension finance matters by women is attributed to less enthusiasm for, low confidence in and less willingness to learn personal finance than men in addition to being less risk seeking than men (Chen and Volpe, 2002; Zissimopoulos, Karney & Rauer, 2008).

2.3.4 Job experience

The number of years that individuals have worked is positively correlated to the individual's awareness on pension matters (RBA, 2005; Arnone, 2004). Empirical explanations for this lies in the fact that over their working lives individuals accumulate retirement savings and therefore develop interest in the management of the savings. Additionally, as they accumulate years of experience, their retirement dates approach.

2.3.5 Management level

The management level in which the employee serves is related to their awareness of retirement issues (RBA, 2005; Edmiston & Gillet-Fisher, 2006). The studies conclude that high level managers outweigh their counterparts in the lower level management in awareness. Empirical reasons for the finding are linked to the positive correlation between individual's management level and their level of education.

2.3.6 Income

Individual's incomes are positively correlated to their knowledge and awareness of pension matters (Lerman & Bell, 2006; Agnew *et al*, 2008; RBA, 2008; Hastings *et al*, 2011). Overall, budget constraints limit the individual's participation in education programs and limit their savings and consequent interest in participating in pension finance education programs. Retirement savings rise in proportion to income and age (Bell *et al,* 2005). For the low income, savings behavior is difficult to track since many low income people lack consistent attachment to the labor force and are usually employed on seasonal contracts (Bell *et al,* 2005).

2.3.7 Marital status

Married workers participate in pensions at a higher rate than the unmarried workers as a result of low financial literacy levels amongst the unmarried population (Bell *et al,* 2005; Zissimopoulos, Karney, & Rauer, 2008). Forenseca, Mullen, Zamarro and Zissimopouulos (2010) support the findings and point out that unmarried, more so divorced women near retirement age have substantially lower wealth levels than married couples as a result of lack of adequate financial literacy. However, the authors argue that decision-making within couples is sensitive to the relative education level of the spouses for both men and women.

3. Research Methodology and Data Collection

3.1 Population and Sampling Design

The population of the study comprised of members of occupational pension schemes in Kenya. The regulator of the retirement benefits sector in Kenya (Retirement Benefits Authority; RBA) provided the sampling frame that reported 1308 pension schemes with an estimated membership of 2 million. A sample of 2 395 active members

was drawn in stages. The schemes were first clustered in eight provinces namely; Nairobi, Central, Rift Valley, North Eastern, Eastern, Coast, Western and Nyanza as registered by the Retirement Benefits Authority. Purposive sampling was then used to determine the number of participating schemes with a condition to include at least 40% of the schemes in every province since some provinces had very few schemes. The participating schemes were then randomly drawn from the sample. Proportionate stratification was used to select the number of members to participate in the survey from each scheme. The participating members were then randomly selected at the data collection stage with a condition to include at least one trustee (member of the pension scheme's board) from each scheme. Data was collected between 19 August and 31 October 2010. The eventual sample comprised 1549 members, representing a 65% response rate.

3.2 Questionnaire

The purpose of the study was to determine whether pension finance literacy differ significantly in Kenya on the basis of the variables determined in other studies namely; age, education level, gender, job experience, management level, income and marital status. Four other variables observed in Kenya namely; pension plan design, participation in previous finance or pension literacy program, membership in a pension plan board and area of specialization were included to enrich the study. The questionnaire used in data collection had two sections. The first section sought to determine the independent variables while the second section contained a six question quiz on pension finance matters that the respondents were required to answer on the spot without assistance from other respondents or the interviewer.

3.3 Validity and Reliability of the Questionnaire

The questionnaire's content validity was guaranteed by the inclusion of items that were supported by literature review as predictors of financial literacy (section 2.3). Additionally, the quiz, included items that tested specific form of knowledge, ability or skills to apply the knowledge and perceived knowledge as recommended in Hung, Parker & Yoong (2009). Besides, the quiz questions were drawn from empirical studies (Moore, 2003; Lusardi & Mitchell, 2008) and customized to fit the Kenyan situation.

3.4 Data Analysis

To determine pension finance literacy levels, a binary measure of literacy advanced by Moore (2003); Lusardi & Mitchell (2008); Hung, Parker & Yoong (2009) was used. The methodology involves contextualizing basic literacy questions which respondents answer. The quiz used in the current survey included six questions. Based on their responses, individuals were separated in to a "low" literacy group (0 – 3 correct answers) and a "high" literacy group (4 – 6 correct answers). The pension literacy quiz asked the respondents; whether it was possible for an investment in ordinary shares listed at the stock exchange to reduce in value after six months, the product to invest in to have the highest expected long-term growth (ordinary shares or treasury bills), required them to identify their pension scheme designs, (defined contribution or defined benefit), asked whether members are allowed to borrow from the pension scheme, asked the persons who elect pension scheme trustees (members alone, sponsors alone, RBA or a combination of sponsors and members) and whether members can withdraw 50% of their savings from pension schemes to attend to their personal emergencies. These questions were borrowed from Moore (2003) and Lusardi & Mitchell (2008) and contextualized to fit the Kenyan scenario. Percentage scores for each of the respondents were calculated. One way ANOVA was used to test whether the means of the pension literacy scores differ significantly on the basis of the independent variables. Post Hoc analysis was conducted by use of the Tukey approach using SPSS version 15.

4. Findings and Discussion

4.1 Demographic Composition of the Sample

Table 1 shows that most of the respondents were male (58.6%), were aged between 30 and 35 (27.2%), have university education (46.3%), are predominantly married (70.9%), in the middle management (53.4%), are not board members of their pension plans (80.2%), were specialized in business courses (54.6%), in the monthly income levels of between Ksh. 20 001 – 40 000 (22.6%) with job experience ranging from 6 to 10 years (30.7%) and had not attended to any form of pension finance literacy education.

4.2 Pension Finance Literacy Scores

The overall pension literacy rate amongst the respondents is 53.7% (standard deviation 0.255) as reported in table 2. Regarding the specific literacy questions table 2 discloses that 60.3% (standard deviation 0.489) knew that stocks can have a value less than the cost six months after purchase, 27% (standard deviation 0.444) knew that investment in stocks give long-term returns compared to the treasury bills, 72.5% (standard deviation 0.447) were aware of their pension designs, 65.8% (standard deviation 0.474) knew that they are not allowed to borrow from their pension schemes, 41.2% (standard deviation 0.492) knew that the pension board trustees are appointed by both the members and the sponsors while 55.1% (standard deviation 0.498) knew that it was not possible to withdraw pension benefits prematurely. Each of the responses has a range of 100% with 4.8% of the respondents having answered all questions wrongly and 5.7% having answered all the questions correctly. An analysis of the respondents who answered at least one question correctly shows that, 10.3% answered one,

15.6% answered two, 24.5% answered three, 15.4% answered four and 16.2% answered five. The results indicate a normal distribution that is slightly skewed to the right.

4.3 Determinants of Pension Finance Literacy

One way Anova results in table 3 show significant differences in the pension finance literacy levels on the basis of education level, gender, management level, income, pension plan design, participation in previous finance education, and membership in a pension plan board (trustee) ($\alpha < 0.01$) while age, job experience and area of specialization were significant at $\alpha < 0.05$. The results are consistent with previous studies. The only variable in which significant differences in the level of pension finance literacy was not noted was marital status. This result contrasts with Bell *et al* (2005) who find married workers outperforming unmarried ones in terms of pension awareness and knowledge. In Kenya therefore, the marital status does not influence the level of pension literacy. With regard to the variables that did not require post hoc analysis namely; gender, pension plan design, participation in previous education and membership to the pension plan board; men had higher literacy scores than women (mean 56.2%, 50.1% respectively) confirming the findings in Chen & Volpe (2002) and Arnone (2004), members of defined contribution designs had higher literacy scores than those in defined benefit designs (mean 64.6%, 31.3% respectively), those who had participated in previous pension finance education had higher literacy scores (mean 63.4%; 47.3% respectively) and pension plan board members had higher literacy scores than the other members (mean 61.3%; 51.8% respectively) since RBA's training targets them (Mutuku, 2007).

4.4 Post Hoc Analysis

Post hoc analysis summarized in table 4 shows that pension literacy differs significantly between the age groups 24 - 29 and 42 - 47 (mean 50.2%, 58.1% respectively) ($\alpha < 0.05$). The finding confirms the assertions of Arnone (2004); Bell *et al* (2005), RBA (2005) and Edmiston & Gillet-Fisher (2006) who argue that older employees are likely to have more exposure and hence higher pension finance literacy. Post hoc analysis in table 5 shows that pension finance literacy levels do not differ significantly between those with primary education and secondary education (mean 35.6%; 42.3% respectively). The literacy levels however differ significantly between those with primary and secondary education on one hand and those with college and university education on the other ($\alpha < 0.01$). These findings confirm those in Lerman & Bell (2006) and Hastings *et al* (2011) who document that education exposes individuals and enables them to learn and acquire knowledge in different spheres of life. Further, Post Hoc analysis (table 6) discloses that pension plan workers with less than 5 years of work experience have significantly lower pension literacy scores (mean 49.6%) compared to those with more experience (6-10, mean 54.6%; 11-15, mean 55.7%; 16-20, mean 54.6%; 20+, mean 53.9%). On the basis of the management level; table 7 shows that the literacy levels differ significantly between top, middle and lower management levels (mean 65%, 55.2% and 49.8% respectively) confirming the findings in RBA (2005) and Edmiston & Gillet-Fisher (2006). Regarding the specialization of the respondents, the mean pension finance literacy scores differ significantly between those with arts and business specializations (mean 51.2% and 55.8% respectively) although those with specialty in sciences have a lower overall score (mean 51.1%) (table 8). On the basis of income, table 9 disclose that those who earn less than Ksh. 20 000 have significantly different average pension literacy scores (mean 37.5%) than those who earn 20 001-40 000 (mean, 48.3%), 40 001-60 000 (mean 53.1%), 60 001-80 000 (mean 54.8%), 80 001-100 000 (mean 58.1%) and those who earn more than 100 000 (mean 65.9%). There is however no significant difference between the pension finance literacy scores by the 20 001-40 000 and 40 001-60 000 categories, 40 001-60 000 and 60 001-80 000 groups, 40 001-60 000 and 80 001-100 000 groups, 60 001-80 000 and 80 001-100 000 groups and 80 001-100 000 and over 100 000 groups. These findings are congruent with Lerman & Bell (2006); Agnew *et al* (2008) and Hastings *et al* (2011).

5. Limitations of the Study

The data used in the analysis was collected from the members of the occupational pension schemes in Kenya. Although these schemes cover the majority of the population covered by the pension arrangements, it excluded those covered by the civil service pension scheme and the individual retirement schemes and so the findings cannot be generalized to all the savers in the pension industry in Kenya.

6. Conclusion

This paper contributes to the existing research on pension finance literacy in a developing country. The topic is particularly important because new pension products are offered continuously and the general population is increasingly being left to take responsibility for the management of their retirement welfare. The study concludes that pension finance literacy amongst Kenyan pension scheme members stands at 57.3% with approximately 4.9% of the population being completely illiterate and 5.7% being fully literate. These literacy levels are low given that the respondents were drawn from the formal sector (employees in formal employment). The conjecture is that amongst the workers in the informal sector who form 75% of the working population in Kenya could be having far less pension finance literacy levels. The pension finance literacy levels differ significantly on the basis of age, education level, gender, number of years of service, management level, income, pension plan design, participation in previous finance or pension literacy program, membership in a pension plan board and area of specialization. These findings call for policy makers to develop pension finance literacy programs that

cater for the specific needs of the distinct niches identified in the study. Pension finance programs should be customized for different age groups, education levels, gender, the number of years of service, management levels, income, pension plan designs, those who have already participated in prior pension finance programs, trustees and area of specialization. Specifically, most pension finance literacy efforts should be directed to the younger employees who form a large proportion of the workers so that they make early rightful retirement decisions. Moreover, new workers should be oriented to the pension arrangements at the work place to captivate their interest in pension finance. Additionally, much effort in training should be geared towards pension investments and operations as lower levels of literacy are recorded in these topics. Further research efforts should be devoted to the determination of the specific training needs required for the groups identified and a replication of the study with respondents being drawn from the informal sector.

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Table 1. Demographic composition of the sample

Demographic characteristic		Frequency	Percentage
Gender	Male	907	58.6
	Female	642	41.4
Age	18 – 23	26	1.7
	24 – 29	245	15.8
	30 – 35	422	27.2
	36 – 41	381	24.6
	42 – 47	271	17.5
	48 – 53	148	9.6
	54 and above	56	3.6
Marital status	Single	393	25.4
	Married	1099	70.9
	Separated or divorced	28	1.8
	Widowed	29	1.9
Education level	Primary school	15	1.0
	Secondary school	184	11.9
	Tertiary level	634	40.9
	University degree	716	46.2
Specialization	Arts except business	326	21.0
	Sciences	378	24.4
	Business	845	54.6
Management level	Top management	102	6.6
	Middle management	827	53.4
	Lower management	620	40.0
Membership of pension board	Trustee	306	19.8
	Non-trustee	1243	80.2
Participated in pension training	Participated	612	39.5
	Not participated	937	60.5
Job experience (years)	<5	327	21.1
	6 - 10	476	30.7
	11 - 15	295	19.0
	16 - 20	230	14.8
	>20	221	14.3

Table 1 shows the demographic information of the respondents.

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Table 2. Pension literacy quiz and scores

Question	**Answer**	**% Correct**	**Standard deviation**	**Range %**
If your pension scheme invested Ksh. 100 000 in shares of a company, it would be possible to have the shares valued less than Ksh. 100 000 after six months. (True, False, Not sure)	True	60.3	0.489	100
Which of the following products would your pension scheme invest in to earn the highest expected long term growth? (Stocks, Treasury bill, not sure)	Stocks	27.1	0.444	100
What is your pension scheme's design (defined benefit, defined contribution, I don't know)	DB or DC depending on the scheme	72.5	0.447	100
Are members of your pension scheme allowed to borrow loans from the scheme? (Yes, No, Not sure)	No	65.8	0.474	100
Who appoints trustees of your pension board? (sponsor, members, both sponsors and members, RBA)	Depends on the scheme but not RBA	41.2	0.492	100
I can withdraw 50% of my pension before retirement to attend to an emergency (True, False, Not sure)	No	55.1	0.498	100

Table 2 documents the questions that the respondents were asked to answer, the percentage of respondents who answered the questions correctly, the standard deviation and the range. The overall correct score was 57.3%, standard deviation 0.255, range 100% (4.9% did not get any of the answers correct while 5.7% got all the answers correct).

Table 3. ANOVA Test

Factor		Sum of squares	Mean square	F- value	Sig. value
Age	Between groups	1.246	0.208	3.220	0.004*
	Within groups	99.474	0.065		
	Total	100.72			
Education level	Between groups	5.565	1.855	30.118	0.000**
	Within groups	95.155	0.062		
	Total	100.72			
Gender	Between groups	1.414	1.414	22.027	0.000**
	Within groups	99.306	0.64		
	Total	100.72			
Job experience	Between groups	0.712	0.178	2.748	0.027*
	Within groups	100.008	0.065		
	Total	100.72			
Management level	Between groups	2.459	1.230	19.346	0.000**
	Within groups	98.261	0.064		
	Total	100.72			
Income	Between groups	10.995	2.199	37.817	0.000**
	Within groups	89.725	0.058		
	Total	100.72			
Marital status	Between groups	0.430	0.143	2.209	0.085
	Within groups	100.290	0.065		
	Total	100.72			
Pension plan design	Between groups	27.909	27.909	592.962	0.000**
	Within groups	72.812	0.047		
	Total	100.72			
Attended previous finance education	Between groups	9.631	9.631	163.573	0.000**
	Within groups	91.089	0.059		
	Total	100.72			
Area of specialization	Between groups	0.813	0.406	6.288	0.002*
	Within groups	99.908	0.065		
	Total	100.72			
Membership to pension plan board	Between groups	2.206	2.206	34.673	0.000**
	Within groups	98.515	0.064		
	Total	100.72			

*p<0.05; **p<0.01

Table 3 indicates that pension literacy levels differ significantly on the basis of age, job experience and area of specialization at the 0.05 level of significance and education level, gender, management level, income, pension plan design, attendance to previous financial education and membership to the pension plan board at the 0.01 significance level. The pension finance literacy levels do not differ significantly on the basis of marital status.

Table 4. Post hoc analysis for age using the Tukey method

Age I - J	Mean I	Mean J	Mean difference (I-J)	Sig. Value
18 - 23 and 24 - 29	0.4487	0.5020	-0.0533	0.950
18 - 23 and 30 - 35	0.4487	0.5332	-0.0845	0.653
18 - 23 and 36 - 41	0.4487	0.5481	-0.0994	0.460
18 - 23 and 42 - 47	0.4487	0.5812	-0.1325	0.146
18 - 23 and 48 - 53	0.4487	0.5282	-0.0795	0.762
18 - 23 and 54+	0.4487	0.4851	-0.0364	0.997
24 - 29 and 30 - 35	0.5020	0.5332	-0.0312	0.729
24 - 29 and 36 - 41	0.5020	0.5481	-0.0461	0.288
24 - 29 and 42 - 47	0.5020	0.5812	-0.0792	0.008*
24 - 29 and 48 - 53	0.5020	0.5282	-0.0262	0.957
24 - 29 and 54+	0.5020	0.4851	0.0169	0.999
30 - 35 and 36 - 41	0.5332	0.5481	-0.0149	0.982
30 - 35 and 42 - 47	0.5332	0.5812	-0.0480	0.187
30 - 35 and 48 - 53	0.5332	0.5282	0.0050	1.000
30 - 35 and 54+	0.5332	0.4851	0.0481	0.838
36 - 41 and 42 - 47	0.5481	0.5812	-0.0331	0.658
36 - 41 and 48 - 53	0.5481	0.5282	0.0199	0.984
36 - 41 and 54+	0.5481	0.4851	0.0630	0.594
42 - 47 and 48 - 53	0.5812	0.5282	0.0530	0.388
42 - 47 and 54+	0.5812	0.4851	0.0961	0.134
48 - 53 and 54+	0.5282	0.4851	0.0431	0.934

*p<0.05; **p<0.01

Table 4 shows that the pension literacy level is not significantly different across the age groups except between the age groups 24 - 29 and 42 - 57.

Table 5. Post hoc analysis for education level using the Tukey method

Education level I-J	Mean I	Mean J	Mean difference (I-J)	Sig. Value
Primary and high school	0.3556	0.4230	-0.0674	0.742
Primary and college	0.3556	0.5105	-0.1549	0.000**
Primary and university	0.3556	0.5929	-0.2373	0.001*
High school and college	0.4230	0.5105	-0.0875	0.000**
High school and university	0.4230	0.5929	-0.1699	0.000**
College and university	0.5105	0.5929	-0.0824	0.000**

*p<0.05; **p<0.01

Table 5 discloses that the pension literacy levels differ significantly on account of the education level of the participants since those with college and university education record higher pension finance literacy scores than those with primary and high school education. There is however no significant difference between the pension finance literacy levels amongst those with primary school and high school education levels.

Table 6. Post hoc analysis for job experience using the Tukey method

Job experience (years) I-J	Mean I	Mean J	Mean difference (I-J)	Sig. Value
<5 and 6 - 10	0.4964	0.5462	-0.0498	0.002*
<5 and 11 - 15	0.4964	0.5565	-0.0601	0.068
<5 and 16 - 20	0.4964	0.5464	-0.0500	0.152
<5 and 20+	0.4964	0.5392	-0.0428	0.302
6 - 10 and 11 - 15	0.5462	0.5565	-0.0103	0.983
6 - 10 and 16 - 20	0.5462	0.5464	-0.0002	1.000
6 - 10 and 20+	0.5462	0.5392	0.0070	0.997
11 - 15 and 16 - 20	0.5565	0.5464	0.0101	0.991
11 - 15 and 20+	0.5565	0.5392	0.0173	0.941
16 - 20 and 20+	0.5464	0.5392	0.0072	0.998

*p<0.05; **p<0.01

Table 6 shows that respondent's pension finance literacy scores increased with years of experience. The scores differed significantly amongst the respondents who had worked for less than 5 years and those who had worked for 6 – 10 years at the 0.05 significance level.

Table 7. Post hoc analysis for management level using the Tukey method

Management level I-J	Mean I	Mean J	Mean difference (I-J)	Sig. Value
Top and lower	0.6503	0.5520	0.0983	0.001**
Top and middle	0.6503	0.4976	0.1527	0.000**
Middle and lower	0.5520	0.4976	0.0544	0.000**

*p<0.05; **p<0.01

Table 7 discloses significant differences in the pension finance literacy scores amongst all levels of management.

Table 8. Post hoc analysis for the area of specialization using the Tukey method

Specialization I-J	Mean I	Mean J	Mean difference (I-J)	Sig. Value
Arts and sciences	0.5123	0.5110	0.0013	0.998
Arts and business	0.5123	0.5576	-0.0453	0.017*
Business and sciences	0.5576	0.5110	0.0466	0.009

*p<0.05; **p<0.01

Table 9. Post hoc analysis for monthly income using the Tukey method

Income level I-J	Mean I	Mean J	Mean difference (I-J)	Sig. Value
<20 000 and 20 001 - 40 000	0.3750	0.4829	-0.1079	0.000**
<20 000 and 40 001- 60 000	0.3750	0.5307	-0.1557	0.000**
<20 000 and 60 001 - 80 000	0.3750	0.5478	-0.1728	0.000**
<20 000 and 80 001 – 100 000	0.3750	0.5806	-0.2056	0.000**
<200 00 and 100 000+	0.3750	0.6586	-0.2836	0.000**
20 001 - 40 000 and 40 001 – 60 000	0.4829	0.5307	-0.0478	0.112
20 001 - 40 000 and 60 001 - 80 000	0.4829	0.5478	-0.0649	0.021*
20 001 – 40 000 and 80 001 – 100 000	0.4829	0.5806	-0.0977	0.000**
20 001 - 40 000 and 100 000+	0.4829	0.6586	-0.1757	0.000**
40 001 – 60 000 and 60 001 – 80 000	0.5307	0.5478	-0.0171	0.966
40 001 - 60 000 and 80 001 - 100 000	0.5307	0.5806	-0.0499	0.286
40 001 – 60 000 and 100 000+	0.5307	0.6586	-0.1279	0.000**
60 001 - 80 000 and 80 001 - 100 000	0.5478	0.5806	-0.0328	0.785
60 001- 80 000 and 100 000+	0.5478	0.6586	-0.1108	0.000**
80 001 - 100 000 and 100 000+	0.5806	0.6586	-0.0780	0.012*

*p<0.05; **p<0.01

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