

Financial Literacy and Retirement Planning in the Informal Sector in Kenya

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ABSTRACT

Old age dependency has become a major issue of concern to governments today. This is because a large number of retirees lack any form of regular income to sustain them in retirement. Kenya has one of the highest levels of old age dependency currently estimated at 56%. The purpose of this study was to establish the impact of financial literacy on retirement planning in the informal sector in Kenya. The study found that financial literacy remains low in Kenya. Financial literacy was found to have a positive impact on retirement planning; however the results indicate that other factors such as income levels, age, marital status and level of education are also strongly related to retirement planning. Gender was found to have no impact on retirement planning. The study established that the probability of a financially illiterate person having no retirement planning is significantly high calling for increased investment in financial literacy programs to reverse the trend. The study recommends the development of a curriculum on financial education and pension education in middle level and higher learning institutions as well as community pension awareness programs such as road-shows and aggressive advertising campaigns to enlighten the people on importance of retirement planning.

Key words: Retirement planning, financial literacy, pensions

1.0 Introduction

A pension is a promise by an employer to provide benefits to employees on attaining the normal retirement age upon retirement. It is income in retirement paid to a person who has retired from active employment and is primarily payable for life. According to Sze (2008), pension funds are the principal sources of retirement income for millions of people in the world

With the breakdown of the traditional family set-up where the old relied on the younger generation for sustenance, the old now have been left to care for themselves. The family is no longer a cohesive unit and old people can no longer rely on the immediate family or relatives to provide for them, thereby necessitating pension arrangements. Further, owing to urbanization and modernization, people are too preoccupied with their own issues and have little time for others. Sadly, pension is still a dream for most Kenyans. Experts say the problem arises partly due to poor saving culture and insufficient policies that could have encouraged savings. According to the Finance Permanent Secretary, Joseph Kinyua, over 80 per cent of our work force lack any form of

pension plan, which is worrisome, and every effort should put to reverse this trend (The Standard, February 23, 2010).

Pension schemes if properly developed could offer the solution. The Kenyan pension system has four main components: First is the National Social Security Fund (NSSF); Secondly is the Civil Service Pension Scheme; Third are the privately managed occupational retirement schemes; and finally Individual Retirement Pensions products sold by financial institutions such as insurance companies. Overall the system is estimated to cover about 15 percent of the labor force (IPC, 2006). The pension industry is estimated to have accumulated assets worth KShs300 billion and accounts for about 18 per cent of Kenya's GDP (Njuguna, 2010).

Providing for retirement income is the biggest financial challenge facing the world today. At an individual level one can borrow money to buy a house, a car or pay college fees. However when it comes to retirement no one will lend you money to live on in your old age. This may lead the individual to suffer with indignity and become a burden to the children and family. The situation is made worse owing to longevity of life whereby new medical and scientific breakthroughs have resulted in people living for long thereby necessitating long term dependency for those with no retirement arrangement.

Old age poverty rates are increasing in the 21st Century. The Institute for Pension Supervisors (IOPS) (2008a) estimates the old age poverty rates at 30.6% in Ireland, 26.9% in Australia, 23.6% in USA, 22% in Japan, 10.3% in UK, 9.9% in German, 8.8% in France and 56% in Kenya with other African countries recording much higher rates, Njuguna (2010).

With 56% old age poverty rate, the Kenya Government and other stakeholders should definitely be concerned since this creates many other social problems including dependency burdens, security, illiteracy and health. With the breakdown of the traditional African society where relatives relied on each other, the burden for supporting the old destitute people falls on the government.

There are many different reasons that could be advanced for the high poverty rate in old age in Kenya. One of the problems which is the concern of this paper is that Kenyans lack financial literacy leading to lack of knowledge on how to prepare for retirement. Studies done in the US and Russia have established that lack of financial literacy results in poor retirement planning Lusardi and Mitchell (2011).

Financial literacy has been defined as the ability to make informed judgments and to make effective decisions regarding the use and management of money (Worthington, 2005). Financial knowledge enables individuals to build their financial skills and gives them confidence to undertake financial decisions for their pension schemes (Agnew, Szykman, Utkus, & Young, 2007). Knowledge on savings and plans to save is critical for effective long term financial decision making that is relevant to pension funds (Gitari, 2012).

Financial literacy remains an interesting issue in both developed and developing economies, and has elicited much interest in the recent past with the rapid change in the finance landscape. OECD (2005), defines financial literacy as the combination of consumers and investors understanding of financial products and concepts and their ability and confidence to appreciate financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being (Miller et al., 2009). Financial literacy helps in empowering and educating consumers so that they are knowledgeable about finance in a way that is relevant to their lives and enables them to use this knowledge to evaluate products and make informed decisions (Mwangi & Kihui, 2012).

Greenspan (2002) argues that financial literacy helps to inculcate individuals with the financial knowledge necessary to create household budgets, initiate savings plans, and make strategic

investment decisions. Proper application of that knowledge helps households to meet their financial obligations through wise planning, and resource allocation so as to derive maximum utility (Mwangi & Kihui, 2012).

This paper explores the relationship between financial literacy and retirement planning in the informal sector in Kenya. The individuals in the informal sector rely on individual retirement products sold by financial institutions, mainly the insurance companies as well as newly introduced Mbao Pension Scheme organized by the government. It calls upon the individuals to take their own initiatives to enlist themselves with these pension schemes and make periodic contributions as per the arrangements. Some level of financial literacy may therefore come in handy for the individuals to make a conscious and informed decision.

1.1 Problem Statement

Low financial literacy is one of the main causes of poor retirement planning in the informal sector in Kenya. From the foregoing it is necessary to conduct this research so as to ascertain that low financial literacy leads to poor planning for their retirement. This will inform our policy makers especially the Retirement Benefits Authority, as well as inform those seeking to target financial literacy programs to those in most need.

1.2 General objective

This study seeks to establish the level of financial literacy in the informal sector in Kenya and its impact on retirement planning.

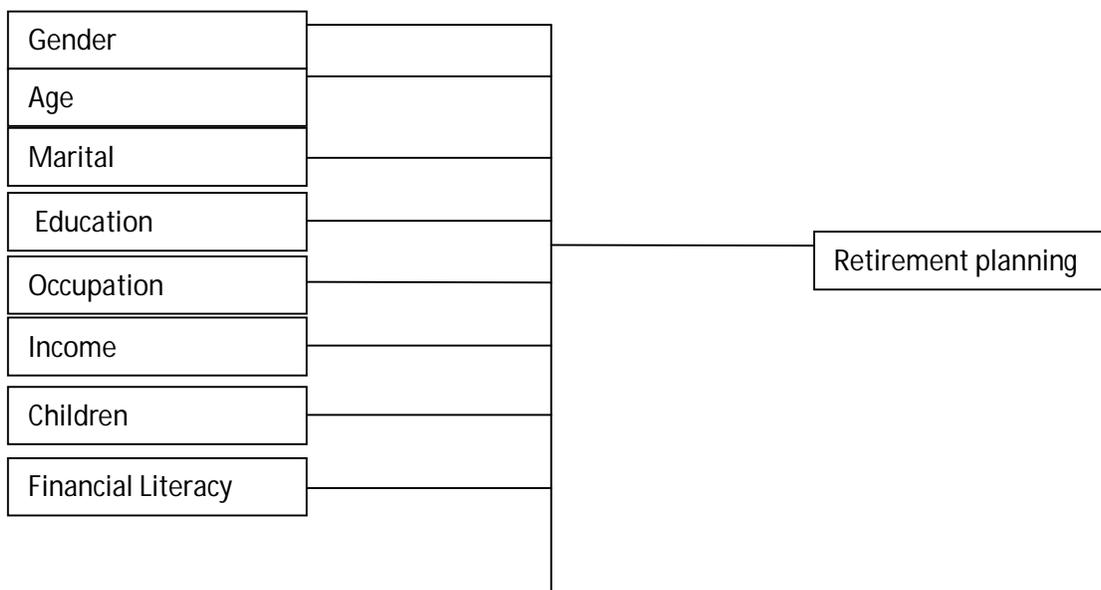
1.2.1 Specific objectives

- To investigate the level of financial literacy among the individuals in the informal sector in Kenya.
- To identify the factors that affect retirement planning in the informal sector in Kenya.
- To investigate the impact of financial literacy on retirement planning decisions by individuals in the informal sector in Kenya.
- To identify the different ways in which individuals in the informal sector are saving for retirement.

1.2.2 Conceptual Framework

Independent variables

Dependent variable



1.2.3 Hypotheses of the study

To achieve the objectives of the study, the following null hypotheses were formulated. In his study Njuguna (2010) formulated null hypotheses to test the impact of different factors affecting pension fund efficiency. The hypotheses formulated in this study were then be tested for significance to enable the research isolate those factors that impact on retirement planning.

H01: Age has no influence on retirement planning.

H02: Gender has no influence on retirement planning.

H03: Marital status has no influence on retirement planning.

H04: Education level has no influence on retirement planning.

H05: Occupation has no influence on retirement planning.

H06: The amount of income has no influence on retirement planning.

H07: The number of children has no influence on retirement planning.

H08: Financial literacy has no influence on retirement planning.

H09: Understanding Time Value for money has no influence on retirement planning.

H010: Understanding Risk has no influence on retirement planning.

H011: Understanding Diversification of investments has no influence on retirement planning.

H012: Understanding the operations of the Stock Markets has no influence on retirement planning.

2.0 Literature Review

Studies on financial literacy and retirement planning have been carried out in many countries including Chile, the United States and in Russia. In their research on financial literacy and financial planning done in the US, Lusardi and Mitchell (2011) found that people who score higher on the financial literacy questions are much more likely to plan for retirement, which is likely to leave them better positioned for old age. They noted that individuals and their families are increasingly taking on responsibility for securing their own financial well-being in retirement in the US and around the world. They found that financial literacy is significantly and positively related to retirement planning involving private pension funds. Thus, along with encouraging the availability of private retirement plans, efforts to improve financial literacy can be pivotal to the expansion of the use of such pension funds.

Accordingly, Lusardi and Mitchell (2011) state the individually managed accounts will increasingly become the mainstay of retirement. For this reason, individuals will increasingly be called to 'roll their own' retirement saving and decumulation plans, and their retirement security will depend ever more on their own decisions and behavior. The paper by Lusardi investigated the extent to which Americans are equipped to make decisions in this new pension and financial landscape and, in particular, whether they are sufficiently knowledgeable about economics and finance to plan for retirement. Their goal was to focus on financial literacy, which means knowledge of fundamental financial concepts and the ability to do simple financial calculations. The analysis is facilitated by a new US dataset of 1,488 American adults collected as part of the National Financial Capability Study (Lusardi and Mitchell, 2011).

The above study relied on data collected in 2009, by the Financial Industry Regulatory Authority (FINRA) Investor Education Foundation, which undertook a detailed survey known as the National Financial Capability Survey, intended to benchmark key indicators of financial capability and link these indicators to demographic, behavioral, attitudinal, and financial literacy characteristics. About 1,500 American adults were contacted by telephone; the primary sample of 1,200 respondents was constructed to be representative of the general adult US population. Since financial capability is multidimensional, several indicators were collected. Consistent with surveys from other countries, the National Survey explored how people manage their resources and make financial decisions, what skill sets they use in making such decisions, and how they search for and glean information when making those decisions. In the paper, the researchers focused on two main areas of financial capability, namely, financial literacy and self-assessed skills, and retirement planning.

Another study on financial literacy and retirement planning was conducted by Klapper and Panos (2011) in Russia, a country with a relatively old and rapidly ageing population, large regional

disparities, and emerging financial markets. The researchers found that only 36% of respondents in the sample understood interest compounding and only half could answer a simple question about inflation. In a country with widespread public pension provisions, they that financial literacy is significantly and positively related to retirement planning involving private pension funds. Thus, along with encouraging the availability of private retirement plans, efforts to improve financial literacy can be pivotal to the expansion of the use of such funds.

Their paper extends the extant literature in a new direction, analyzing results of a detailed survey of financial literacy administered to a nationally representative sample of about 1,400 Russian individuals. The survey included questions on financial literacy, retirement planning, and the use of various financial products as well as detailed demographic and socioeconomic information. They addressed some novel questions: for instance, what is the level of financial literacy in a country without a legacy of consumer credit or financial education? What is the level and asset mix of retirement planning in Russia, in view of the demographic situation, the fears for the future, and the recent pension reforms? Is financial literacy linked to the use of different types of pension funds, and, importantly, are higher levels of financial literacy related to participation in individual private pension plans? Finally, because Russia is a country with pronounced regional inequalities and gender gaps, the researchers were very interested in examining whether there are significant differences among certain population segments with respect to financial literacy and retirement planning (Klapper and Panos, 2011).

The study in Russia used information from a dataset collected via face-to-face interviews of 1,400 individuals in June 2009. The sample was designed to be nationally representative at the individual and the household level and was weighted by gender, age, education, and region.

A similar was conducted in Kenya investigating the relationship between financial literacy and retirement planning in Nairobi (Gitari, 2012). The population of the study comprised of members of registered pension schemes and therefore excluded individuals in the informal sector. Stratified sampling was used to select respondents from each of the sampled schemes. A self administered questionnaire was delivered to the respondents and collected after completion. Data was analyzed using SPSS version 16 where the T test was used to examine the data with the objective determining whether there is a significant relationship between financial literacy and retirement planning. The research showed significant determinants of the amount of money individuals have saved for retirement. This research further showed that demographic factors like age and year's individuals have been married are not a significant determinant for individuals in occupational schemes (Gitari, 2012).

Another study carried out in Kenya on financial literacy and access to financial services by Mwangi and Kihui (2012); found that financial literacy remains low in Kenya. Financial literacy helps in empowering and educating consumers so that they are knowledgeable about finance in a way that is relevant to their lives and enables them to use this knowledge to evaluate products and make informed decisions.

Greenspan (2002) argues that financial literacy helps to inculcate individuals with the financial knowledge necessary to create household budgets, initiate savings plans, and make strategic investment decisions. Proper application of that knowledge helps households to meet their financial obligations through wise planning, and resource allocation so as to derive maximum utility. (Mwangi & Kihui).

The current policy and legal framework under which Kenya's pension system operates, ignores to large extent coverage of informal sector workers and focuses to some extent on formal sector workers. According to the Retirements Benefits Authority (2009), the level of pension coverage in Kenya is limited to a mere 15% of the labor force requiring a systemic reform in terms of policy and law in order to widen coverage. Though the definition of informal sector varies by country, informal sector workers are generally those with low incomes or self-employed, working in very small (unregistered) companies or the household sector, often on a part-time basis in industries such as agriculture, construction and services (ILO, 2009).

In my study the particular focus is on the informal sector where there is a research gap given that no previous study has been done. Data was collected from the sampled individuals in Nairobi County via a questionnaire administered directly to the respondents, and not through the phone. This provided the researcher with an opportunity to obtain more information as compared to the US and Russian studies where data was obtained via telephone interviews.

In their study done in Kenya (Gitari 2012), members of registered occupational schemes were targeted. However there is a big difference with this study given that the research targets members of the informal sector who are not covered by the occupational pension schemes.

This study therefore fills the knowledge gap that exists in that no research has been conducted on the relationship between financial literacy and retirement planning specifically targeting the individuals in the informal sector in Kenya. The study strives to establish the extent to which these informal sector individuals have or have not registered with the available Individual Retirement Plans including the newly established Mbao Pension Plan. The study establishes to what extent financial literacy has played a part in the decisions to join the pension savings plans.

3.0 Research Methodology

While carrying out a scientific research, it is necessary to develop a research model to illustrate the relationship between the independent variables and the dependent variable. In their study on financial literacy and retirement planning in Russia (Klapper and Panos, 2011), the researchers note that Russia is a country with pronounced regional inequalities and gender gaps. The researchers were very interested in examining whether there are significant differences among certain population segments with respect to financial literacy and retirement planning.

Kenya is very similar to Russia in terms of regional inequalities and gender gaps. However unlike the Russian study that targeted all the population, my study only targeted the population in the informal sector of the economy. The population included individuals carrying out business activities either as individuals or those in the small and medium enterprises (SME) in Nairobi County. The study used the targeted population in Nairobi due to its proximity and diversity. It is acceptable to assume that Nairobi is a cosmopolitan city representing all the diverse communities in Kenya. The individuals targeted included the owners of the business, the permanent employees as well as those employed on temporary basis in the SMEs. This excluded rural population engaged in agricultural activities as well as those in the formal sector.

People in the informal sector are generally not covered by the occupational pension arrangements that are sponsored by large employers in the formal sector. Therefore, they have to take initiatives at personal level to prepare for retirement, mainly through the individual pension arrangements available through insurance or join the Mbao Pension scheme sponsored by the Government.

Primary data was collected by use of a questionnaire and face-to-face interviews of individuals. The questionnaire was divided into two sections. Section A focused on collecting demographic details of the respondent such as age, gender, marital status, number of children, type of occupation, income level and education level. Section B captured the respondents understanding of basic financial literacy concepts.

The basic financial literacy concepts were mainly adapted from the studies by Lusardi and Mitchell (2011) as well as Klapper and Panos (2011). The respondents were required to rate their understanding on each financial literacy aspect on a 5-point Likert scale for all items. Respondents indicated their level of understanding the highest level of understanding being 5, and the lowest being 1. The questionnaire was designed in a similar manner as the one used by Ainin, Noor Ismawati and Mohezar (2007).

In the interests of expediency and practicality, a convenience sampling method was used to obtain respondents from amongst individuals carrying out business activities either as individuals or those in the small and medium enterprises (SME) in Nairobi, specifically in Langata, Ongata Rongai and Kibera. This sampling method was also used in the study by Ainin et al (2007) in their study on mobile banking adoption in the urban community in Malaysia. As they noted, the limitations of this method is that one is unable to ascertain whether the information collected is representative of the population as a whole. However the research should bear this limitation in mind when we report the results (Ainin et al, 2007).

Questionnaires were presented to the respondents who were given enough time to complete. A total of 250 questionnaires were presented, however some of the respondents (18) failed to adequately answer the questions and the questionnaires were discarded. A total of 232 questionnaires were fully completed and were used for the analysis.

3.1 Retirement planning Question

The questionnaire also had a question that helped identify the individuals as either being a retirement “Planner” or “Non-planner”. The variable of primary interest to this study is related to retirement planning. It stems from a question that asked respondents: ‘*Have you started planning for your retirement?*’ Those who answered “Yes” are considered to be “Planners” while those who answered “No” are “Non-planners”. A similar question was used by Lusardi and Mitchell (2011) as well as Klapper and Panos (2011) to identify those who have made plans for their retirement in the studies in the US and Russia.

3.2 Financial Literacy Questions

The questionnaire in section B has four specific financial literacy questions designed to assess: (a) understanding of Time Value of money; (b) understanding of Risk and Return; (c) understanding of Diversification; and (d) understanding the operations of the Stock Market. Similar questions have been used in financial literacy studies, such as in Russia (Klapper and Panos, 2011), and America (Lusardi and Mitchell, 2011). The respondents rated their understanding of each of these financial concepts on a Likert scale of 1 to 5. Those with little or no knowledge indicated 1, while those with good knowledge indicated 5.

4.0 Data Analysis and results

Descriptive statistics obtained from SPSS version 17 on the variables responded to are as explained below. The demographic factors analyzed included Age, Gender, Marital status, Number of children, Occupation, Income level and Education level. Statistics showing the type of retirement arrangement which the “planners” belong is also given as well as the reasons advanced by the “non-planners” for failing to plan for retirement.

4.1 Profile of the respondents

Gender: Males accounted for 51.7% of the respondents while females were 48.3%. This is consistent with the ratio of males to females in the 2009 Kenya census report where the ratio is 51% to 49% respectively.

Age: Over 50% of the respondents are below 35 years while cumulatively 86% are below 45 years. Those older than 45 years account for 14% of the respondents. This is an indication that most of the participants in the informal sector are the youth, which is consistent with the Kenyan demographic distribution where larger population is the youth.

Marital Status: The marital status of the respondents was 41.4% being single, 46.6% married, 8.2% divorced while 3.9% were widows or widowers.

Education Level: The respondents can be classified into four different groups, based on their educational background, Primary (8.6%), Secondary (35.3), College (40.9%) and University (15.1%). Cumulatively, 85% of the respondents in the informal sector have college education. The rest (15%) have some university education. Many of the youth in Kenya attend post secondary education in local colleges after completing their “O” level exams mainly to study computer packages, accounts, mechanics and other technical courses in local colleges. Due to shortages of “white color” jobs, many university graduates are joining the informal sector after graduation and this is can be seen by the 15% level of university graduates.

Occupation: People in the informal sector either own the businesses, are employed or they are hired on temporary basis (unemployed). 36.2% were found to be owners, 36.6% employed, while 27.2% work on casual basis.

Income: In terms of monthly income, out of the 232 respondents, 35.3% earn below KShs25,000, 29.7% earn KShs25,000 to KShs50,000, 25.4% earn KShs50,000 to KShs75,000, 6% earn

KShs75,000 to KShs100,000 and only 3.4% earn more than KShs100,000. This shows that income levels of the people in the informal sector is quite low given that over 65% earn less than KShs50,000 per month and only 3.4% earn above KShs100,000.

Number of Children: 85.8% of the respondents have small families of three or less children and only 1.3% have more than 5 children. Kenya's Total Fertility Rate is 4.6; women have an average of four to five children during their lifetime.

Type of Retirement Arrangement: There are several forms of pension arrangements available for pension planners in Kenya. The respondents are members of the NSSF were 6.9%, 1.7% expect some benefit from the civil servants pension scheme, 6.5% have pension arrangements through their employers, 12.1% are members of the recently introduced Mbao pension scheme, while 10.8% have made pension arrangements through the individual pension schemes offered mainly by the insurance companies. A worrying 62.1% of the respondents have no pension arrangement.

Reasons why No Retirement Plan: The respondents advanced various reasons why they have not made any retirement planning yet. 37.9% of the respondents (not applicable) have made arrangements for pension. The balance of 62.1% has no pension for various reasons. 11.6% feel that they are still young, 9.5% think it is not important, 12.5% have little income, 30% plan to rely on their families upon retirement, and 15.5% have no knowledge on retirement planning.

4.2 Financial Literacy

A 5-point Likert scale was used for all the four key aspects of financial literacy. Respondents indicated their level of understanding of each aspect ranging from 1 for least to 5 for very good knowledge. The financial literacy level is evidently low in Kenya given that the mean score for all the responses on financial literacy are below average. The average score is 3 but the respondents scored between 2.22 and 2.34 on average as shown on Table 1.

This is consistent with findings by (Mwangi and Kihui, 2012) in their study carried out in Kenya on financial literacy and access to financial services where they found that financial literacy remains low in Kenya. This is also in congruence with the findings from research in other countries where financial literacy scores have been consistently low, (Klapper and Panos, 2011, Lusardi and Mitchell, 2011).

Table 1: Financial Literacy Mean scores

	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>
<i>Time Value</i>	232	1	5	2.22	.881
<i>Risk</i>	232	1	5	2.33	.938
<i>Diversification</i>	232	1	5	2.34	.940
<i>Stock Market</i>	232	1	5	2.22	.963
<i>Valid (listwise)</i>	<i>N</i> 232				

The distribution of responses to financial literacy questions are shown on Table 2. It details the frequency and percentages of responses of each aspect rated on the Likert score of 1 to 5 such that the level of knowledge on each area of finance is rated progressively, 1 being least knowledge while 5 being very good knowledge. It is evident that a large percentage of respondents scored 1 and 2 in all the aspects, while a disappointingly small percentage scored 5.

Table 2: Financial Literacy Summary Statistics

Score	Time Value		Risk		Diversification		Stock Market	
	Freq.	Percent	Freq.	Percent	Freq.	Percent	Freq.	Percent
1	45	19.4%	44	19%	46	19.8%	59	25.4%
2	113	48.7%	99	42.7%	88	37.9%	88	37.9%
3	54	23.3%	59	25.4%	71	30.6%	58	25.0%
4	17	7.3%	29	12.5%	25	10.8%	26	11.2%
5	3	1.3%	1	0.4%	2	0.9%	1	0.4%
Total	232	100%	232	100%	232	100%	232	100%

The correlation between the responses to each of the four aspects of financial literacy is significant at the 0.01 level as shown on Table 3. The correlations are particularly high. Although each question measures a different aspect of financial literacy, it is evident that people with a given level of financial literacy have similar level of understanding on each aspect.

Table 3: Correlation between the responses on the financial literacy aspects

		Time Value	Risk	Diversification	Stock Market
<i>Time Value</i>	Pearson Correlation	1			
	Sig. (1-tailed)				
	N	232			
<i>Risk</i>	Pearson Correlation	.720**	1		
	Sig. (1-tailed)	.000			
	N	232	232		
<i>Diversification</i>	Pearson Correlation	.659**	.686**	1	
	Sig. (1-tailed)	.000	.000		
	N	232	232	232	
<i>Stock Market</i>	Pearson Correlation	.632**	.779**	.733**	1
	Sig. (1-tailed)	.000	.000	.000	
	N	232	232	232	232

** . Correlation is significant at the 0.01 level (1-tailed).

Table 4: Financial Planners and Non Planners

	<i>Frequency</i>	<i>Percent</i>	<i>Cumulative Percent</i>
<i>Planner</i>	92	39.7	39.7
<i>Non Planner</i>	140	60.3	100.0
<i>Total</i>	232	100.0	

It can be seen from (Table 3) that out of 232 respondents, 92 (39.7%) are Planners while 140 (60.3%) are Non Planners. Planners are the respondents who answered yes to the question “Have you started planning for your retirement?”

4.3 Relationships between respondents’ demographic profiles and Retirement Planning

The results of the study on responses based on demographic profiles and their relationship to retirement planning are elaborated below in Table 4.

Table 5: Relationships between demographic profiles and retirement planning

		<i>Planner</i>		<i>Non Planner</i>		<i>Total</i>	
		<i>Freq</i>	<i>%age</i>	<i>Freq</i>	<i>%age</i>	<i>Freq</i>	<i>%age</i>
Gender	Male	49	40.8	71	59.2	120	51.7
	Female	43	38.4	69	61.6	112	48.3
Age	<25	9	18.8	39	81.3	4	20.7
	26 to 35	26	29.2	63	70.8	89	38.4
	36 to 45	35	54.7	29	45.3	64	27.6
	46 to 55	17	70.8	7	29.2	24	10.3
	>55	5	71.4	2	28.6	7	3
Marital	Single	22	22.9	74	77.1	96	41.4
	Married	54	50	54	50	108	46.6
	Divorced	11	57.9	8	42.1	19	8.2
	Widow(er)	5	55.6	4	44.4	9	3.9
Education	Primary	1	5	19	95	20	8.6
	Secondary	27	32.9	55	67.1	82	35.3
	College	44	46.3	51	53.7	95	40.9
	University	20	57.1	15	42.9	35	15.1
Occupation	Employed	40	47.1	45	52.9	85	36.6
	Owner	42	50	42	50	84	36.2
	Unemployed	10	15.9	53	84.4	63	27.2
Income	<25K	11	1.4	71	86.6	82	35.3
	25K-50K	32	46.4	37	53.6	69	29.7
	50K-75K	33	55.9	26	44.1	59	25.4
	75K-100K	8	57.1	6	42.9	14	6
	>100K	8	8.7	0	0	8	3.4
Children	None	11	19.6	45	80.4	56	24.1
	One	15	29.4	36	70.6	51	22

Two	26	49.1	27	50.9	53	22.8
Three	20	51.3	19	48.7	39	16.8
Four	15	65.2	8	34.8	23	9.9
Five	2	28.6	5	71.8	7	3
>Five	3	100	0	0	3	1.3

From the tabulated analysis above we find that males engage in retirement planning more than females, 40.8% and 38.4% respectively. When it comes to age, we see that retirement planning increases as people get older. Level of financial planning is low at 22.9% for single respondents as compared to the other categories who are above 50%.

Financial planning also seems to increase with the education level with only 5% of those with primary, 32.9% with Secondary, 46.3% with College and 57.1% with University education. This could be so because the awareness and ability to plan for retirement is generally expected with better education and higher incomes. Owners of businesses and those who are permanently employed have high level of planners as opposed to those with no permanent employment. Income levels also have a relationship with retirement planning as can be observed from the table. The higher the income the more the individual plan for retirement, ranging from 1.4% for those earning less than KShs25,000 to 100% for those earning KShs100,000 and over.

We do not observe a clear relationship between the number of children and retirement planning. From the table we can see retirement planning levels are 19.6% for those with no children, 29.4% for those with one, 49.1% for those with two, 51.3% for those with three, 65.2% for those with four, 28.6% with those with five and 100% for those with more than five children.

From the foregoing we establish that retirement planning is low among the youth, women, and the less educated. This is consistent with findings from the American and Russian studies, (Klapper and Panos, 2011), Lusardi and Mitchell, 2011).

Table 6: Relationships between financial literacy scores and retirement planning

		<i>Planner</i>		<i>Non Planner</i>		<i>Total</i>	
		Freq	%age	Freq	%age	Freq	%age
Time Value	1	3	6.7	42	93.3	45	19.4
	2	48	42.1	66	57.9	114	49.1
	3	28	51.9	26	48.1	54	23.3
	4	10	62.5	6	37.5	16	6.9
	5	3	100	0	0	3	1.3
Risk	1	6	13.6	38	38	44	19
	2	37	37.8	61	61	98	42.2
	3	31	51.7	29	29	60	25.9
	4	17	58.6	12	12	29	12.5
	5	1	100	0	0	1	0.4
Diversification	1	3	6.5	43	93.5	46	19.8
	2	37	41.6	52	58.4	89	38.4
	3	37	52.1	34	47.9	71	30.6
	4	14	58.3	10	41.7	24	10.3
	5	1	50	1	50	2	0.9
Stock Market	1	8	13.6	51	86.4	59	25.4

2	37	41.6	52	58.4	89	38.4
3	29	50	29	50	58	25
4	17	68	8	32	25	10.8
5	1	100	0	0	1	0.4

Table 14 helps us confirm that retirement planning and financial literacy have a strong positive association. This may suggest that lack of planning may be due to lack of financial knowledge. From the table we see that for all financial aspects, there is an increase in the percentage of planners as the scores increase from 1 to 5, and a decrease in non-planners as the scores increase. In their studies, Klapper and Panos (2011), Lusardi and Mitchell (2011) observed the same trend that financial planners tend to have higher financial knowledge as compared to non-planners.

4.4 Tests for the relationships

In their study, Ainin et al (2007) applied the Pearson's Chi-square statistic to test the relationship between mobile banking adopters and demographic variables. The data being analyzed in their study was scored on a Likert scale similar to this study. This study will adopt a similar statistical method to test the relationship between retirement planning and demographic variables as well as with financial literacy aspects.

The Chi-square as a test for independence is used in situations where you have categorical variables. It tells us if the observed pattern is statistically different from the pattern expected due to chance. Conducting the Chi-square test is useful in testing the hypothesis that there is no relationship between two variables. This will enable the testing of the null hypotheses formulated above.

Relationship between retirement planning and the demographic and other variables is summarized in Table 7 below. The outputs shown from the Pearson's Chi-square tests provide a statistical hypothesis test for each of the hypotheses formulated in this study.

We can confirm from the test that financial literacy as measured by knowledge in Time Value, Risk, Diversification and Stock Market has a strong relationship with retirement planning. We also note that Age and Income have a very strong impact on retirement planning. Interestingly, Education does not have as much impact on retirement planning as might be expected.

Table 7: Pearson's Chi-square tests outputs summary

<i>Relationship</i>	<i>Value</i>	<i>Asymp Sig.</i>	<i>Significant</i>
<i>Gender and Retirement Planning</i>	0.144	0.704	No
<i>Age and Retirement Planning</i>	31.567	0.000	Yes
<i>Marital Status and Retirement Planning</i>	19.662	0.000	Yes
<i>Education and Retirement Planning</i>	17.823	0.000	Yes
<i>Occupation and Retirement Planning</i>	20.594	0.000	Yes
<i>Income and Retirement Planning</i>	45.393	0.000	Yes

<i>Children and Retirement Planning</i>	26.974	0.000	Yes
<i>Time Value for Money and Retirement Planning</i>	32.162	0.000	Yes
<i>Risk and Retirement Planning</i>	22.094	0.000	Yes
<i>Diversification and Retirement Planning</i>	29.433	0.000	Yes
<i>Stock Market and Retirement Planning</i>	29.436	0.000	Yes

4.5 Hypothesis Tests

The relationships above, tested using the Pearson's Chi-square test indicate that all variables except Gender were found to be significantly associated with retirement planning. This implies that we do not reject the null hypothesis H01 that gender has no influence on retirement planning. We therefore conclude that there is no relationship between a person's gender and retirement planning.

For all the other variables, we reject the null hypotheses H02 to H012, and conclude that there is a relationship between Retirement Planning and demographic factors such Age, Marital Status, Education Level, Occupation, Income Level and Number of Children. A relationship also exists with financial literacy factors such as the understanding of Time Values for Money, Risk, Diversification and the operations of the Stock Market.

5.0 Discussion of Findings, Conclusions and Recommendations

Kenya is a country with a relatively young and rapidly growing population with relatively low levels of literacy and low per capita incomes. The findings from this study paint a troubling picture of the current state of financial knowledge given the low scores on financial literacy. Although this low financial literacy in Kenya is collaborated with similar studies in other countries, policy makers should advocate for increased spending on programs targeting financial education and retirement awareness. Knowledge of financial concepts is important. It enables people to consciously develop and implement retirement plans which is key to retirement security and the eventual reduction of old age dependency which currently stands at 56%.

The study finds that financial literacy is significantly positively related to retirement planning among the individuals in the informal sector. Scores on financial literacy aspects were consistently high for the financial planners. The study finds a particularly strong relationship between income and retirement planning, which means that many individuals plan or fail to plan for retirement on the basis of income. It is interesting to also note that the findings confirm that age is also an important factor in retirement planning since the older individuals are more conscious of the importance of planning for retirement as opposed to the younger generation who think they are still too young to worry about retirement.

The results of this study can guide policy implementation towards creating awareness and encourage the growth of the individual retirement plans as well as new innovative retirement plans such as the newly introduced Mbao Pension Plan which is yet to attract large numbers. The study recommends the development of a curriculum on financial education and pension education in

middle level and higher learning institutions as well as community pension awareness programs such as road shows and advertisements.

Since income greatly affects retirement planning with low income earners feeling that they do not have sufficient income to save, it would be interesting to carry further research and establish why the Mbao Pension Plan which only requires minimum twenty shillings savings per day has not attracted as many individuals of those targeted mainly from the informal sector as was envisaged by the Government.

References

- Agnew, J., and L. Szykman (2005). *Asset allocation and information overload: The influence of information display, asset choice and investor experience*, Journal of Behavioral Finance, 6, 57- 70.
- Ainin, S., Noor Ismawati, J. and Mohezar, S. (2007) 'An overview of mobile banking adoption among the urban community', Int. J. Mobile Communications, Vol. 5, No. 2, pp.157–168.
- Gitari, J. N. (2012). *The relationship between financial literacy and retirement planning in Nairobi, Kenya*. <http://erepository.uonbi.ac.ke:8080/xmlui/handle/123456789/9182>
- Greenspan, A. 2002. *Financial Literacy: A Tool for Economic Progress*. The Futurist, 36, (4): 37-41.
- IOPS, (2008b). *Supervisory Oversight of Pension Fund Governance*. IOPS. Working Paper 8.
- Klapper, L. and Panos, G.A. (2011). *Financial literacy and retirement planning: the Russian case*. Journal of Pension Economics and Finance, 10, pp 599-618
- Lusardi, A. and Mitchell, O. S. (2011) *Financial literacy and retirement planning in the United States*. Journal of Pension Economics and Finance, 10, pp 509-525
- Mwangi, I. W. and Kihui, E. N.(2012). *Impact of Financial Literacy on Access to Financial Services in Kenya*. International Journal of Business and Social Science Vol. 3 No. 19; October 2012
- Njuguna, A.(2010). *Strategies to improve pension fund efficiency in Kenya*. Nelson Mandela Metropolitan University in Port Elizabeth, S.A.
- Organization for Economic Co-operation and Development (2005). *Improving Financial Literacy: Analysis of Issues and Policies*. Paris, France: OECD
- RBA ACT, 2000. Government Printers. Nairobi.
- RBA Quarterly Reports 2006, 2007, 2008, and 2009. Available: <http://www.rba.go.ke>
- Sze M. (2008). *Funding of Private Funds: Technical Assistance for Policy Reforms*. World Bank.