

# FINANCIAL LITERACY AND INFLUENCE OF PSYCHOSOCIAL FACTORS

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## Abstract

Financial literacy is individual's ability to understand financial terms and instruments. In Pakistan, individuals simply know that they are depositing money in various institutions in order to get more wealth in name of profit. They don't know what exactly they are doing and they are ignorant about the functions and existence of financial markets. This scenario generates the need to study and measure financial literacy in Pakistan. The study used data from National Savings Centers of Pakistan which has been used first time for research purpose in Pakistan. Ordinary least square regression was used to analyze relationship of psychosocial factors with financial literacy. After assessing basic and advanced financial knowledge, individuals of Pakistan were found to be financially illiterate and there existed a positive relationship between financial literacy and other psychosocial factors which were hopelessness, religiosity, financial satisfaction, retirement plan intention and risk preference. Financial literacy was also positively related to age, qualification, marital status and occupation as older, highly qualified, married and business persons were more financially literate. Financial literacy had significant positive relationship with gender, hopelessness and retirement plan intention. This study has implications for researchers, academicians and policy makers.

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**Keywords:** Financial literacy, Psychosocial factors, National savings center, financial markets

## 1. Introduction

Financial markets are widely spread among the different countries of the world but contrarily individuals have less financial knowledge i.e. they are financially illiterate. According to Pakistan Access to Finance Survey

(A2FS), among the whole Pakistani population, only 12% are availing formal financial services. From remaining 88% population, only 32% receive informal services and 56% of the population does not use financial services either formal or informal. According to Access to Finance Survey Analysis, 40% of the population which is completely excluded from availing any kind of financial services reported lack of financial knowledge to be the main reason for not being able to avail financial services. It means financial illiteracy is causing their financial exclusion.

There are fewer chances for the individuals who have less financial knowledge to plan for their retirement (Lusardi and Mitchell, 2011; Rooij et al, 2011; Arrondel et al, 2013; Klapper & Panos, 2011; Agnew et al, 2013; Al-Tamimi & Husain, 2009). Women who have higher financial knowledge are more likely to plan for future (Lusardi and Mitchell, 2008). Investment in the stock market and financial literacy are related to each other, individuals who have less financial knowledge will not prefer to invest in stock market (Rooij et al, 2007). Economic health of a country is predicted by stock market performance of that country (Bashir, Ilyas and Farrukh, 2011). Financial literacy and wealth is positively related for individuals of Ukraine and financial literacy does not directly cause people for saving (Kharchenko & Olga, 2011). Wealth, higher levels of income and education are related to financial literacy and financial literacy has a positive relation with retirement saving decision (Koenon, 2008). Beckman, (2013) found a positive relationship between financial literacy and saving behavior in Romania.

Today's financial world is highly complicated as compared to past (Thilakam, 2012). For many individuals it is difficult to understand about financial instruments (Rasheed and Arshad, 2009). According to Akhter, (2007) the two training institutions which are Institute of Banking and Finance and the Institute of Bankers Pakistan are supporting Central bank of Pakistan for the implementation of financial literacy and improving the capacity of financial institutions. These institutions also help to promote competitive financial services.

For increase in financial knowledge many advanced countries i.e. Australia, USA, UK, Japan etc. have already regular programs. In Pakistan less understanding about financial products; therefore there is a need of financial literacy programs. South Asian Federation of Exchanges (SAFE) has started "*Financial Literacy Initiative in Pakistan*".

In this paper, financial literacy in Pakistan is measured using items which aimed to check both basic and advanced financial knowledge and were designed by Lusardi, Rooij and Alessie in 2007. In next section financial literacy's relationship has been checked with different psychosocial factors. Murphy (2013) checked the relation of financial literacy with three psychosocial factors i.e. hopelessness, religiosity and financial satisfaction.

Along with these three factors retirement plan intention of individuals and risk preference are also included.

### **1.1. Significance of Study**

The research aimed to study the behavior of investors from National Savings Centers of Pakistan. Outcomes of the study will be beneficial for investors in understanding the impact of different psychosocial factors on their financial knowledge. The outcomes of this study have also information for policy makers to know the proportion of financially illiterate people and to start new programs for enhancement of financial understanding.

### **1.2. Research contribution to existing literature**

The study investigated the investment patterns of individuals from National Saving Centers, the safest investment in Pakistan instead of data from surveys conducted by Government, so it is contributing to existing literature. Study is beneficial for academicians and researchers as it is bridging the gap in the area of behavioral finance under finance. Another contribution of the study is analysis of impact of psychosocial factors on financial literacy in Pakistan as this area is not much touched in developing countries especially in Pakistan. Murphy, (2013) analyzed the relation of three psychosocial factor i.e. hopelessness, religiosity & financial satisfaction in U.S.

### **1.3. Objectives**

This study aimed to attain following objectives:

- To measure financial literacy among Pakistani population
- To study the relation of financial literacy and hopelessness
- To investigate whether financial literacy and religiosity are related or not
- To analyze the impact of financial satisfaction on financial literacy
- To study effect of retirement plan intention on financial literacy
- To assess the relation of risk preference and financial literacy
- To investigate dependency of financial literacy on age, gender, occupation, marital status and qualification

### **1.4. Plan of study**

First section presents the purpose of the study and introduces the topic. Section 2 provides the review of the existing literature. Section 3 contains material (data type, period of study, tool of data collection, geographical region) and methods implemented for analysis. Section 4 discloses results and findings. Section 5 provides findings of the whole

study. Section 6 concludes the whole study. Next section presents recommendations and in last section some limitations are discussed.

### 1.5. Hypothesis

**Hypothesis # 1:** Individuals of Pakistan are financially illiterate

**Hypothesis # 2:** Hopelessness has impact on financial literacy in Pakistan

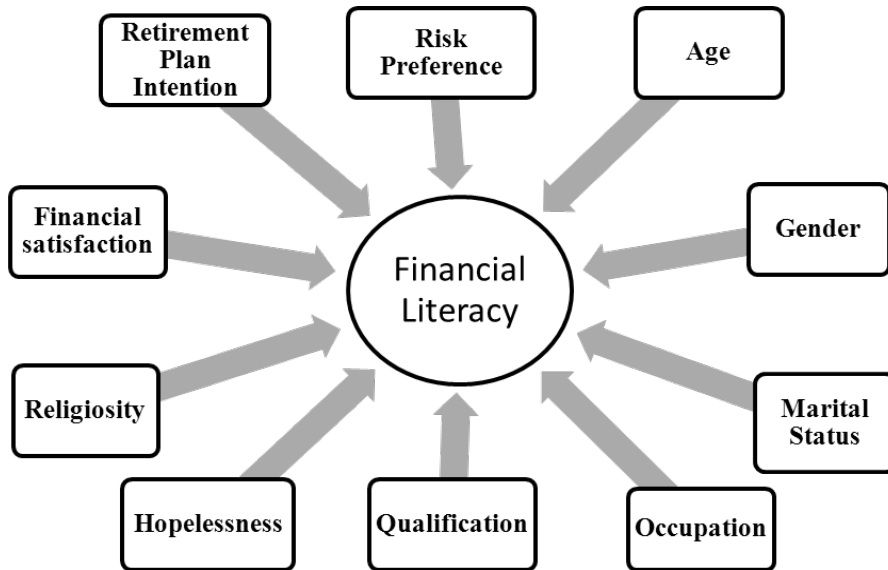
**Hypothesis # 3:** Religiosity has influence on financial literacy in Pakistan

**Hypothesis # 4:** Financial satisfaction has influence on financial literacy in Pakistan

**Hypothesis # 5:** Retirement plan intention has influence on financial literacy in Pakistan

**Hypothesis # 6:** Risk preference has influence on financial literacy in Pakistan

### 1.6. Theoretical framework



## 2. Literature review

### 2.1. Financial literacy

The financial literacy has been the most actively researched area around the world over the last few decades (Seth et al, 2010; Delavande et al, 2008; Song, 2011; Bhushan et al, 2013; Rooij et al, 2011; Arrondel et al, 2013; Behrman et al, 2010; Lusardi and Mitchell, 2006, 2007, 2008; Al-Tamimi & Hussain, 2009; Lusardi, 2011; Agnew et al. 2013). Different authors define financial literacy differently. Worthington, (2006) defined financial literacy as mathematical ability and the understanding of financial terms. Kharchenko & Olga, (2011) defined financial literacy as necessary

numerical skills and basic economic concepts required for educated, saving and borrowing decisions. Thilakam, (2012) stated that “financial literacy is the ability to understand finance. More specifically, it refers to the set of skills and knowledge that allows an individual to make informed and effective decisions through their understanding of finances.”

Among various factors that were found significant in literature are age, gender, education and occupation. Few studies have found age as an important factor in explaining financial literacy (Lusardi & Mitchell, 2006; 2008; Worthington, 2006). Lusardi and Mitchell, (2011) found that middle aged are more financially literate than young and old. Worthington, (2006) found that Financial literacy is highest for persons aged between 50 and 60 years. Arrondel et al, (2013) and Beckmann, (2013) found that old persons are less financially literate whereas Bhushan et al, (2013) showed that financially literacy is not affected by age.

Several studies found that male performed financially better than females (Kharchenko & Olga, 2011; Al-Tamimi & Hussain, 2009; Arrondel et al, 2013; Koenen and Lusardi, 2011; Lusardi and Mitchell, 2006; 2008).

Few researchers relate educational level and financial literacy (Mandell, 2008; Agnew et al, 2013; Lusardi,2008). Al-Tamimi & Hussain, (2009) found that respondents who hold high educational degrees have higher financial literacy level than others.

Occupation is another important factor in measuring financial literacy. Bhushan et al, (2013) showed that financially literacy gets affected by level of employment. Worthington, (2006) found that business owners, professionals, farm owners and traders have high level of financial literacy.

## **2.2. Retirement Plan Intention**

Several worthwhile studies examined the relationship of financial literacy, retirement planning and saving decisions in developed countries include (Fornero & Monticone, 2011; Joo & grable, 2000; Rooij et al, 2011; Arrondel et al, 2013; Lusardi and Mitchell, 2006, 2007 & 2008; Al-Tamimi & Hussain, 2009; Lusardi, 2011; Agnew et al, 2013). It has been shown by Rooij et al, (2011) in Netherlands that financially knowledgeable people think more about retirement plan and also found strong relationship between financial knowledge and retirement planning.

Lusardi, (2011) examined financial literacy in Germany and used data from the SAVE survey. This study explored the link of causality between financial literacy and retirement planning and developed an instrumental variables strategy by use of regional variation in the financial knowledge of peers. Researcher used ordinary least square regression and found that women lived in East Germany lacked the knowledge and basic financial concepts. It is also found that there is no significant difference in

retirement planning between age group and no longer differences in education. Propensity to plan for retirement increased with income. Result of this study showed positive impact of financial knowledge on retirement planning.

Lusardi & Mitchell, (2011) examined that retirement planning can be traced back to financial literacy and showed that respondents those who can undertake simple calculations and have an understanding of inflation and those who have understanding of the concept of risk diversification are more to be expected to plan for their retirement.

Moreover several studies discovered positive relationship between financial literacy and retirement planning (Arrondel et al, 2013; Agnew et al. 2013; Al-Tamimi & Hussain 2009; Lusardi & Mitchell 2009). While studying the developing countries Klapper & Panos, (2011) examined the relationship of financial literacy and retirement planning in Russia. Researchers used data from second wave of a data set and found positive relationship between retirement planning and financial literacy.

A study by Mehdzan and Tabiani, (2013) in Malaysia examined the relationship between financial literacy and individual saving. Results of probit regression showed that higher level of financial literacy has a positive impact on saving of individuals.

Beckmann, (2013) presented new evidence used internationally comparable measures of financial literacy and analyzed relationship of financial literacy and household saving in Romania. Researcher used data from a Euro survey of Austrian central bank. Results of the survey showed that financial literacy in Romania is lowest in central, eastern and southeastern European countries as compared to other countries studied in financial literacy around the world. Ordinary least square regression applied and results showed positive relationship between saving and financial literacy.

### **2.3. Risk Preference**

Agnew et al, (2007) examined that women are more risk averse than men. Risk tolerance assessment has made important in recent years. Harris, (2005) investigate risk indicators like risk capacity, risk knowledge and risk propensity to take the responses of people on high and low risk. Michailova, (2010) analyzed the effect of risk tolerance on financial decision. Researcher found that in the complete sample traders are more risk averse but in the reduced sample traders are less risk averse. Kourtidis et al, (2011) showed that Professionals are more risk tolerance than others and high profile investors are those who have high risk tolerance. Researcher also found that investors trading behavior affected by risk tolerance. Rooij et al, (2011) examined the relationship of risk tolerance and retirement planning.

Researcher found that self-assessed and measured risk have significant effect on behavior of people towards retirement saving. Hallahan et al, (2004) analyze the relationship of risk tolerance and demographic information. Researcher found that gender, age, number of dependents and income are significantly related to risk tolerance.

#### **2.4. Religiosity**

Smith, (2007) studied the relationship of religiosity and decision making. Researcher found that religiosity is the dependency of direction of an absolute power who teaches right and wrong and God has the absolute power. Researcher also found that religiosity has strong influence on moral supervisory of the both gender. Weaver & Agle, (2002) examined the relationship between religiosity and ethical behavior. Researcher found that religiosity has an effect on the moral performance of people.

Renneboog & Spaenjers, (2009) examined the relationship of religion and financial decision making. Researchers found that, those who have religious believe are more likely to save and have low investment in risky assets. Hilary et al, (2008) found positive relation between individual religiosity and risk aversion. Researcher also found that firm located countries with higher level of religiosity have low risk experience.

Shu et al, (2010) examined that religious group are more risk averse. Researcher found that religious beliefs affect the risk taking behavior and investment decisions of professional fund managers. Hess, (2010) examined the impact of religiosity on financial decision. It is found that religious individuals have significantly higher credit scores and religion have strong influence on their financial decisions.

#### **2.5. Financial satisfaction**

Falahati et al, (2012) showed that financial status enhanced personal satisfaction. Researcher examined the relationship of financial behavior and financial satisfaction. It is also found that financial attitude, financial literacy, financial behavior and financial strain contribute towards financial satisfaction. Joo & Grable, (2004) investigate the determinants of financial satisfaction. Researcher determined that financial satisfaction related with financial behavior, financial knowledge and financial solvency directly and indirectly.

Bell et al, (2009) found that individuals financial planning enhanced their overall satisfaction with retirement.

#### **2.6. Hopelessness**

Brown, (2011) examined the possibility of holding negative net worth over a high level of net worth among individuals near retirement. Research

used data from HRS (health and retirement study) and a sample of 3745 individuals. Researcher found that individuals feeling hopelessness and with depression hold more debts and less wealth at the time of retirement.

Lamberg et al, (2010) examined the relationship of depressiveness and disability retirement among employed and unemployed individuals. Researcher used data from HeSSup study and results of this study showed that individuals with high level of unemployment early exit from workforce due to disability retirement.

Murphy, (2013) examined the relationship of hopelessness and financial literacy. Researcher used data from HRS (health and retirement survey). Results of this study showed that hopelessness is negatively correlated with financial literacy.

### 3. Material & Method

#### 3.1. Sample & Tool of data collection

The population of the study is the investors of Pakistan. Sample was selected to collect data and the sample contained the individuals who had financial dealings with National Savings Centre of Pakistan. 27.5% of respondents belonged to age group 20-30, 31.7% belonged to 31-40 age group, 25% belonged to 41-50 age group, 25% belonged to age group 41-50 and 15.8% belonged to 51-60 group. 46.7% respondents were male and female respondents were 53.3%. 54.2% respondents were married and remaining 45.8% respondents were single. 23.3% respondents had Matric qualification, 20.8% were intermediate, 30% were graduate and 25.8% were post graduate. 20% of the respondents were government employees, 21.7% belonged to private sector, 13.3 % were running their own businesses and 45% respondents had other occupation. The primary data was gathered through questionnaire which contained 11 items to test financial literacy. 4 items used to measure hopelessness, 4 items measured religiosity, 3 items measured financial satisfaction, 2 items measured retirement plan intention and 3 items measured risk preferences.

#### 3.2. Methodology

Following model was used for analysis

$$F.L = \alpha + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \beta_4(X_4) + \beta_5(X_5) + \beta_6(X_6) + \beta_7(X_7) + \beta_8(X_8) + \beta_9(X_9) + \beta_{10}(X_{10})$$

$$F.L = \alpha + \beta_1(\text{age}) + \beta_2(\text{gender}) + \beta_3(\text{maritalstatus}) + \beta_4(\text{qualification}) + \beta_5(\text{occupation}) + \beta_6(\text{hopelessness}) + \beta_7(\text{religiosity}) + \beta_8(\text{fin satisfaction}) + \beta_9(\text{retirement plan intention}) + \beta_{10}(\text{risk preference})$$

Ordinary least square regression (OLS) was used for analysis.



## 4. Data Analysis

### 4.1. Results

The results are presented in two sections. In first section results of financial literacy measurement are discussed and in the second section, results of relationship of financial literacy with psychosocial factors are disclosed. The study aimed to measure financial literacy in Pakistan and used the tool designed by Rooij et al, (2007).

#### 4.1.1. Reliability of data

Table 1: Cronbach's Alpha of independent variables

Variables	Cronbach's Alpha
Hopelessness	0.599
Religiosity	0.501
Financial satisfaction	0.300
Retirement intention plan	0.523
Risk preference	0.358

Cronbach's Alpha, a measure of internal consistency is used to check reliability of questions, tools, indicators or variables. The acceptable value of Cronbach's Alpha is equal or greater than 0.50. Table 1 depicts that Cronbach's Alpha of religiosity, hopelessness and retirement plan intention were greater than 0.50. So these variables were reliable. On the other hand financial satisfaction and risk preference were less significant as their Cronbach's Alpha value was lower.

#### 4.1.2. Financial Literacy measurement

11 items were designed to measure financial literacy at two levels that were basic and advanced financial knowledge.

##### 4.1.2.1. Basic financial knowledge

Basic literacy items were designed to measure basic financial knowledge like the concept of numeracy, interest calculations, inflation, time value of money and money illusion.

Table 2: Results of basic financial knowledge:

Items	Correct Answer	Do not Know
<i>Numeracy</i>	75%	13.3%
<i>Interest calculation</i>	42.5%	21.7%
<i>Inflation</i>	51.7%	23.3%
<i>Time Value of Money</i>	40%	20.8%
<i>Money Illusion</i>	42.5%	1.7%

Table 2 demonstrates that 75% respondents correctly answered the numeracy item and 13.3% respondents did not know the concept. Compound

Interest calculation item received 42.5% correct responses and the 21.7% said that they didn't know the correct answer. The correct answer percentage for inflation item was relatively high to 51.7% and 23.3% of the respondents didn't know its correct answer. As far as time value of money was concerned, 40.0% of the respondents gave correct responses and 20.8% individuals had no knowledge about correct answer. The last item was about money illusion and it received 42.5% correct responses and 1.7% respondents had no idea about the concept. Although respondents answered correctly to the individual 5 items but only 5.3% respondents were able to answer all the basic literacy items correctly. Respondents had knowledge about some financial concepts but basic financial literacy was not extensive.

#### 4.1.2.2. Advanced financial knowledge

The items presented in second section were more complex than those of the previous set. The purpose of the items was to measure the advanced knowledge of financial terms, instruments, and functions of financial markets. They tend to know the understanding of individuals about the function of stock market and mutual fund, bond pricing & its relation to interest rates, risk diversification and riskiness of different assets.

Table 3: Results of advanced financial knowledge:

<b>Items</b>	<b>Correct answers</b>	<b>Do not know</b>
<i>Stock Market Function</i>	25%	35%
<i>Mutual Fund</i>	26.7%	40.8%
<i>Bond pricing</i>	32.5%	16.7%
<i>Company Stock</i>	28.3%	31.7%
<i>Long term returns</i>	29.2%	15.8%
<i>Riskiness of assets in portfolio</i>	50%	15%

Table 3 demonstrates the results of advanced financial knowledge. These results indicate that 25% respondents gave correct response to the item which was designed to check understanding about stock market function and 35% didn't know the answer. 26.7% respondents answered correctly about mutual fund and in this case 40.8% respondents didn't seem to know about the concept and chosen "do not know". Item that was designed to measure bond pricing concept, received 32.5% correct response and 16.7% responses were "do not know". 28.3% respondents had understanding about company stock and those respondents who didn't know the correct answer were 31.7%. 29.2% respondents gave correct response to the item intended to measure understanding about long term returns among different assets and 15.8% respondents didn't know the answer. 50.0% respondents had

knowledge about the riskiness of assets in portfolio, so they gave correct responses and 15.0% respondents didn't know the answer. None of the respondents were able to answer all the six items of advanced financial literacy correctly.

Pakistan is a developing country and literacy rate is considerably low. Pakistan Social and Living Standard Measurement (PSLM) survey 2011-12 revealed that the literacy rate for the population (10 years and above) was 58% during 2011-12. Pakistan's more population is residing in rural areas. According to Pakistan economic survey 2012-13, urban population was 69.87 million while rural population was 114.4 million for year 2012-13 and literacy rate was much higher for urban areas as compared to that of rural areas. Political instability also prevails in the country so we assumed a respondent financially literate if he gave 55% correct answers of the items (basic & advanced) examined by the present study. From the sample of 120 respondents only 33.33% respondents correctly answered 55% items. People of Pakistan didn't have sufficient understanding about financial instruments and markets. These results supported first hypothesis which presented that individuals of Pakistan are financially illiterate.

### 4.1.3. Correlation of Psychosocial factors:

Table 4: Results of correlation

Items	<i>Financial literacy</i>	<i>Age</i>	<i>Gender</i>	<i>Marital Status</i>	<i>Qualification</i>	<i>Occupation</i>	<i>Hopelessness</i>	<i>Religiosity</i>	<i>Fin Satisfaction</i>	<i>Retirement plan intention</i>	<i>Risk preference</i>
<b>Financial literacy</b>	1.00	0.145	.306	.197	.020	.214	.523	.390	.392	.551	.374
<b>Age</b>	---	---	-.029	-.352	-.190	.059	.058	.057	.159	.105	.007
<b>Gender</b>	---	---	---	.203	.222	.243	.155	.201	.150	.330	.137
<b>Marital status</b>	---	---	---	---	.177	-.049	.232	.091	.077	.221	.224
<b>Qualification</b>	---	---	---	---	---	.044	.060	.120	.017	.185	.149
<b>Occupation</b>	---	---	---	---	---	---	.243	.453	.399	.285	.368
<b>Hopelessness</b>	---	---	---	---	---	---	---	.267	.307	.296	.228
<b>Religiosity</b>	---	---	---	---	---	---	---	---	.484	.480	.643
<b>Fin satisfaction</b>	---	---	---	---	---	---	---	---	---	.345	.429
<b>Retirement plan Intention</b>	---	---	---	---	---	---	---	---	---	---	.523
<b>Risk preference</b>	---	---	---	---	---	---	---	---	---	---	1.00

Table 4 presents the results of correlation test applied to investigate the relationship of financial literacy with psychosocial and demographic factors.

Results indicate that financial literacy had highest correlation with retirement plan intention. If an individual had intention to devise a retirement plan he would strive to know about different financial instruments for investment and will choose the one with highest returns, in this way retirement plan intention caused financial literacy of an individual to increase. The fifth hypothesis which predicted that retirement plan intention has influence on financial literacy in Pakistan was accepted.

Followed by retirement intention plan, hopelessness was also found to be highly correlated with financial literacy ( $r= 0.523$ ). An individual, hopeless about his future would be more likely to do his best to be financially in a better position in future. Therefore he would increase his knowledge about different investment opportunities which would result in his increased level of financial literacy. The results had supported second hypothesis which presented that hopelessness has impact on financial literacy in Pakistan.

Results also illustrated positive relationship of financial satisfaction with financial literacy. An individual satisfied with his investment returns and financial position, would tend to invest the surplus or more money to explore various opportunities and would gather knowledge about more opportunities and financial instruments. In this regard level of his financial literacy would be raised. It supported 4<sup>th</sup> hypothesis of the study which predicted that financial satisfaction has influence on financial literacy in Pakistan.

Table 4 demonstrates that religiosity was positively related with financial literacy. Individuals who had strong belief that God has the absolute power mostly believed that they will have positive and fair rewards. Strong religious believers were more inclined to invest in various financial instruments which caused them to update their financial knowledge which was a reason to raise their financial literacy. This result proved 3<sup>rd</sup> hypothesis which presented that religiosity has influence on financial literacy in Pakistan.

Results depict a positive relation of risk preference with financial literacy. It implied that if an individual was more willing to take risk he would tend to be more knowledgeable about different markets and instruments. In this regard there will be growth in his financial literacy. These results supported 6<sup>th</sup> hypothesis which presented that risk preference has influence on financial literacy in Pakistan.

Table 4 disclosed that marital status had also effect on financial literacy. Male members had more knowledge about markets and financial instruments so they would help their wives to increase their financial knowledge. In similar way, wives could also be helpful to increase financial knowledge of their husbands. Financial literacy also increased with age.

With the passage of time individuals got more knowledge and experience of investing. Qualification was positively related to financial literacy but its correlation was low. Many individuals instead of being qualified didn't have basic financial concepts and hence they were not able to respond financial literacy items correctly.

Age had positive relation with religiosity and hopelessness because as the time passed, there was a trend that individuals became more hopeless and devoted their most time towards religion. Financial satisfaction was positively related to retirement plan intention. Financial satisfaction and retirement plan intention were also positively related to risk preference.

#### 4.1.4. Descriptive Statistics

Table 5: Descriptive statistics

	Mean	Std. Deviation	N
Age	1.6417	.92397	120
Gender	1.4750	.50147	120
Marital status	1.5250	.50147	120
Qualification	3.1167	1.00573	120
Occupation	2.8333	1.20457	120
Hopelessness	10.3333	4.11665	120
Religiosity	15.4333	3.61075	120
Fin satisfaction	6.1667	1.83950	120
Retirement plan Intention	9.6333	2.88995	120
Risk preference	10.9500	2.55642	120

Table 5 shows the mean and standard deviation of dependent and all independent variables. Values of means were positive for all the items included in the questionnaire which showed those items had effect on financial literacy.

### 4.1.5. Results of Regression Analysis

Table 6: Summary of regression analysis, financial literacy being taken as dependent variable

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	3.008	3.584		.839	.403
Age	.557	.658	.065	.846	.399
Gender	2.304	1.201	.146	1.918	.058
Marital status	.336	1.274	.021	.264	.793
Qualification	-.781	.570	-.099	-1.371	.173
Occupation	-.590	.539	-.089	-1.094	.276
Hopelessness	.688	.146	.357	4.720	.000
Religiosity	.139	.215	.063	.646	.520
Financial satisfaction	.521	.360	.121	1.447	.151
Retirement plan intention	.905	.242	.329	3.737	.000
Risk preference	.156	.303	.050	.516	.607

$$F.L = \alpha + \beta_1(X1) + \beta_2(X2) + \beta_3(X3) + \beta_4(X4) + \beta_5(X5) + \beta_6(X6) + \beta_7(X7) + \beta_8(X8) + \beta_9(X9) + \beta_{10}(X10)$$

$$F.L = \alpha + \beta_1(\text{age}) + \beta_2(\text{gender}) + \beta_3(\text{maritalstatus}) + \beta_4(\text{qualification}) + \beta_5(\text{occupation}) + \beta_6(\text{hopelessness}) + \beta_7(\text{religiosity}) + \beta_8(\text{fin satisfaction}) + \beta_9(\text{retirement plan intention}) + \beta_{10}(\text{risk preference})$$

The results of table 6 showed that hopelessness, retirement plan intention and gender were significant variables for financial literacy. That’s why there standard error was lower and their t values were equal to or more than 2.

### 4.1.6. Coefficient of Determination

Table 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.704	.496	.449	5.88938	.496	10.713	10	109	.000

Table 7 presented that value of R square was about 0.50. It showed that independent variables explained 50% variations in dependent variables. It might be due to biasness in the selection of the sample or missing of other important variables.

#### 4.1.7. Analysis of variance

Table 8: Results of ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	3715.719	10	371.572	10.713	.000 <sup>a</sup>
Residual	3780.648	109	34.685		
Total	7496.367	119			

a. Dependent Variable: Fin literacy

Analysis of variance (ANOVA), a statistical test was used to assess that whether all the members of the sample respond in a same manner to different factors. In ANOVA test, F is the ratio of variance of group means and mean of within group variances. The value of F must be positive. Table 8 demonstrates positive F value and its significance is 0.000 which means all the respondents of the sample responded in same manner.

## 5. Findings

The study aimed to measure the financial literacy in Pakistan and to assess relationship of financial literacy with different psychosocial factors which were hopelessness, religiosity, financial satisfaction, retirement plan intention and risk preference.

From the results it was found that people of Pakistan were financially illiterate, only one third respondents were able to correctly answer 55.5% items of the questionnaire. It was due to low literacy rate of the country, the larger portion of population residing in rural areas that are deprived of basic education facilities. Political instability was also the reason of less financial knowledge due to less implementation of the policies to enhance financial literacy.

Financial literacy was affected by all dependent variables in the present study. Findings of the current study were in line with that of Worthington, (2006) who suggested that age was positively related to financial literacy. The findings of the study contradicted with Arrondel et al, (2013) and Beckmann, (2013) who showed that old persons were less financially literate and also with Bhushan et al, (2013) who found that financially literacy was not affected by age.



The current study found that males perform better than females in answering the items of financial literacy which confirmed the findings of Kharchenko & Olga, (2011), Al-Tamimi & Hussain, (2009), Arrondel et al, (2013), Koenen and Lusardi, (2011), Lusardi and Mitchell, (2006; 2008). The study found that qualification was positively related to financial literacy which supported the findings of Al-Tamimi & Hussain, (2009) who proposed that respondents who hold high educational degrees had higher financial literacy level than others.

Study found that occupation and financial literacy was positively related which was in line with findings of Bhushan et al, (2013) that financially literacy got affected by level of employment.

Hopelessness was positively and significantly related to financial knowledge which contradicts findings of Murphy, (2013) who showed that hopelessness was not significantly related to financial literacy.

The study found that religiosity was positively related to financial literacy which was not in line with findings of Murphy, (2013). Retirement plan intention and financial literacy was also positively related which was consistent with findings of Arrondel et al, (2013), Agnew et al, (2013), Al-Tamimi & Hussain, (2009), Lusardi & Mitchell, (2009), Klapper & Panos, (2011), Lusardi, (2011), Lusardi & Mitchell, (2011), Rooij et al, (2011). They showed that retirement planning and financial literacy were positively related. Financial satisfaction had positive relation with financial literacy which was consistent with findings of Murphy, (2013). The current study found a positive influence of risk preference on financial literacy.

## **6. Conclusion**

Financial literacy is ability to understand financial instruments and terms. The study aimed to know financial literacy of investors of Pakistan and also analyzed the relationship of psychosocial and demographic factors with financial literacy in context of Pakistan. Respondents had better understanding about basic financial concepts but they had less knowledge about advanced financial concepts. Education programmers must focus on advanced financial knowledge. It is concluded that individuals of Pakistan were financially illiterate. In Pakistan; individuals simply know that they are depositing money in various institutions in order to get more wealth in name of profit but they don't know what exactly they are doing and they are ignorant about the functions and existence of financial markets.

Relationship of financial literacy was investigated with demographic factors which were age, gender, marital status, qualification and occupation. Older, married, highly qualified and males were more financially literate. As far as occupation was concerned business persons had more financial knowledge than others. It is concluded that financial literacy is positively

related with psychosocial factors that are hopelessness, religiosity, financial satisfaction, retirement plan intention and risk preference.

## **7. Recommendations**

Investors of Pakistan are not financially literate so Government should start and promote various financial education programs so that the individuals will be able to get basic and advanced financial knowledge. In this way they will be able to make effective decisions and will have understanding of financial market instruments and their working. Several seminars and workshops must be conducted to promote the need of financial knowledge.

There should be more research on financial literacy in Pakistan as there has been very little work done on this topic.

## **8. Limitations**

There were few limitations regarding the study. First of all the sample may not be generalized to the whole population, so more comprehensive study may be done in future having large sample size. Some respondents were not very knowledgeable and many of them were also afraid of giving responses especially about demographic questions.

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