

# An Empirical Study on the Relationship between Demographic Variables and Financial Literacy with Specific Reference to Mumbai City

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## Abstract:

**F**inancial literacy is the ability of a person to make rational financial decisions. Financial knowledge helps to prepare individuals for tough financial times by encouraging strategies that mitigate risk such as retirement planning, health insurance, children education. The study was conducted in Mumbai city and a questionnaire was administered to collect data from the respondents. The research aimed to study the association between demographic profile (age, gender, education qualification and income) of the individuals and their financial literacy. To test the association between demographic profile and financial literacy of the respondents' Chi-Square test was performed. The study found that there was no significant association between gender, income and financial literacy. It was also found that there was significant association between age, educational qualification and financial literacy.

**Keywords:** Demographic Profile, Financial Decisions, Financial Knowledge, Financial Literacy, Chi Squarer.

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## I. INTRODUCTION

Financial literacy is the ability of a person to make rational financial decisions. It empowers the individuals to take decisions to improve their standard of living. Through financial literacy, an individual behavior towards financial matter can be taken in more desired manner. With the help of financial knowledge more favored decisions on areas such as saving, debt management and budgeting for future can be done. Financial literate individuals can choose the correct investment avenues for themselves and can also save themselves from the risk of fraud. As per the survey conducted by Standard & Poor's Financial Services LLC 76% of Indian adults do not adequately understand key financial concepts (S&P rating services survey 2016). An individual with sound financial knowledge can do better financial planning from an early age and improves their chances of attaining their financial goals. A financial illiterate individual might become a victim to the unprincipled sales person who can take advantage of his/her less knowledge and can sell wrong products to them. The chances of dropping victim to unprincipled sales people gets reduce by having more knowledge about financial products and services. Financially knowledgeable individuals tend to save more of money, they compare different financial products and services before investing and often discuss their financial matters with children. Financial Literacy helps to prepare individuals for tough financial times by encouraging strategies that mitigate risk such as retirement planning, health insurance, children education.

## II. REVIEW OF LITERATURE

**Puneet Bhushan & Yajulu Medury (2013)** examined the relationship between financial literacy and socio-demographic variables and also assessed the level of financial literacy among salaried individuals. It was found that financial literacy level gets affected by gender, education and income, nature of employment and place of work. Financial literacy level of respondents was found to be not very high. Study suggested that financial literacy of males was more as compared to females. There was a significant relationship between education level and financial literacy level. Results of the study also suggested that there was a direct relationship between income and level of financial literacy. It was also found that nature of employment influences financial literacy level.

**Saeed Karimi Meimouneh, Mahmoud Meimouneh, Shahnaz Nayebzadeh (2014)** examined the influence of demographic characteristics of students on their financial literacy. It was found that the level of financial literacy of students was affected by variables such as age, gender, marital status, employment status, education and financial independence. It was found that parents' education had not affected the level of students' financial literacy.

**Shobha T.S and Shalini S. (2015)** studied the perception of women towards the personal financial planning in the city of Bengaluru. The study highlighted that one of the main obstruction faced by women was lack of knowledge about financial planning and investments.

**Sekar M and Gowri M (2015)** studied financial literacy amongst Generation Y employees and also how well equipped they were to make financial decisions. Researcher concluded that gender, education, income and age impacts the level of financial literacy. The researcher found that financial literacy level depends on the income of a person.

**Dr. Monika Aggarwal and Dr. Meenu Gupta (2014)** discussed how gender and education level influenced the general financial awareness of college students and examined that whether holding a commerce degree promotes more financial awareness among students. It was found in the study that level of education and discipline/stream had a positive influence on financial literacy. It was also found that males were more aware about financial matters as compared to females.

The concept of financial literacy cannot be studied in isolation. The level of financial literacy varies from individual to individual and the effect and impact of socio demographic variables on financial literacy is also not same in every case.

### **III. NEED FOR THE STUDY**

Financial Literacy is the need of the hour today. Lack of financial availability increases the situation of isolation, depression and lower self- esteem and could be a reason for many problems. In India, 73% of men and 80% of women were not financially literate (S&P rating services survey 2016). Financial Literacy helps to avoid and solve financial problems that are important for leading a prosperous and healthy life. With the change in financial environment, individuals need to shoulder more of responsibilities and also need to plan for their future. It is very much important for individuals to be aware about the schemes and services offered in market. As per the survey conducted by Aviva Life Insurance Company—Aviva Plan India Plan Survey 2017 it was found that Indians are big dreamers, but poor financial planners. The present research has been conducted to see the association between demographic profile (age, gender, education qualification and income) of the individuals and their financial literacy level.

#### **OBJECTIVE OF THE STUDY**

- To study the association between demographic variables and financial literacy.

#### **HYPOTHESIS**

Ho1: There is no significant association between gender and financial literacy.

Ha1: There is significant association between gender and financial literacy.

Ho2: There is no significant association between qualification and financial literacy.

Ha2: There is significant association between educational qualification and financial literacy. Ho3: There is no significant association between age and financial literacy.

Ha3: There is significant association between age and financial literacy.

Ho4: There is no significant association between annual income of house- hold and financial literacy.

Ha4: There is significant association between annual income of house- hold and financial literacy.

### **IV. RESEARCH METHODOLOGY**

The study was exploratory in nature.

#### **DATA COLLECTION**

The study was conducted in the city of Mumbai. As per 'How Households Save and Invest: Evidence from NCAER Household Survey', 2011 Mumbai holds 36.25% share of investors, which was highest as compared to other cities covered in the survey. The research was based on primary data. Purposive sampling technique was used for research purpose.

#### **SAMPLE SIZE**

A questionnaire was administered to 250 respondents out of which 31 responses were found inappropriate and were not considered for study. For analysis and interpretation 219 responses were considered.

#### **DATA ANALYSIS**

For the purpose of research, responses from respondents were coded and tabulated in SPSS 22. The questionnaire was divided into two sections. The first section covered the demographic profile of the respondents. In the second section questions to assess financial literacy of the respondents were framed based on the previous studies. Questions related to basic and advance financial literacy were asked to assess financial literacy of the respondents. Questions on mathematical calculation, Inflation, Interest on loan, Compounding interest, Mortgage, Function of the Stock Market, knowledge about mutual funds, knowledge of banking

transactions, knowledge of insurance ,relationship between interest rates and bond prices, risk diversification, long period returns, highest fluctuations were asked.

To assess the financial literacy of the respondents 36 questions were asked from each respondent. They were requested not to use calculator or any other aid so that a fair assessment could be done. Each correct answer was coded as 1 and incorrect as 0. Median was used as a tool to assess the level of financial literacy. The median of the score of correct answer was 14.

The median percentage of correct answers of the sample was considered to classify the group into two subgroups i.e. high financial knowledge and low financial knowledge. The respondents which scored above median were considered as respondents with high financial knowledge and the respondents which scored below or equal to median were classified as respondents with low financial knowledge.

It was found that out of 219 respondents, 114 respondents scored higher than the median and the rest i.e. 105 scored less than median and are considered low with regard to financial literacy.

To test the significance of association between demographic profile and financial literacy level's of the respondents' Chi- Square test was performed. This test helps to explain whether or not two attributes were associated.

The data regarding Gender and Financial Literacy of the respondents is given in Table 1.0.

Table 1.0 Cross Tabulation between Gender and Financial Literacy

Gender Financial Literacy	Male	Female	Total
Financial Literacy (High Score)	79 (82.24)	35 (31.75)	114
Financial Literacy (Low Score)	79 (75.75)	26 (29.25)	105
<b>Total</b>	158	61	219

Hypothesis for the data shown in **Table 1.0** for chi square test is as under:

Ho1: There is no significant association between gender and financial literacy.

Ha1: There is significant association between gender and financial literacy.

To test the significance of association between gender and financial literacy level of the respondents' chi square test was applied.

Table 1.1 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.815 <sup>a</sup>	17	.401
Likelihood Ratio	19.675	17	.291
Linear-by-Linear Association	.279	1	.597
N of Valid Cases	219		

a. 18 cells (50.0%) have expected count less than 5. The minimum expected count is .28.

The test was performed at 5% level of significance. The output of chi- square is presented in Table 1.1. From the table it can be seen that Pearson Chi- Square significance value is .401 and degree of freedom is 17. Therefore, null hypothesis is accepted as it has been found that there is no significant association between the gender of the respondent and their financial knowledge level. It can also be concluded that respondent's gender and their financial literacy level are independent of each other.

The data regarding educational qualification and financial literacy of the respondents is given in Table 2.0.

Table 2.0 Cross Tabulation between Educational Qualification and Financial Literacy

Educational Qualification Financial Literacy	Graduate	Post Graduate	Professional	Total
Financial Literacy (High Score)	16 (21.4)	46 (56.7)	52 (35.9)	114
Financial Literacy (Low Score)	25 (19.7)	63 (52.5)	17 (33.1)	105
<b>Total</b>	41	109	69	219

Hypothesis for the data shown in Table 2.0 for chi- square test is as under:

Ho2: There is no significant association between educational qualification and financial literacy. Ha2: There is significant association between educational qualification and financial literacy.

To test the significance of association between educational qualification and financial literacy level of the respondents' Chi- Square test was performed.

Table 2.1 Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	56.648 <sup>a</sup>	34	.009
Likelihood Ratio	57.511	34	.007
Linear-by-Linear Association	18.108	1	.000
N of Valid Cases	219		

a. 36 cells (66.7%) have expected count less than 5. The minimum expected count is .19.

The test was performed at 5% level of significance. The output of chi- square test is as presented in Table 2.1. The Pearson Chi- Square value is .009 and degree of freedom is 34. Therefore, alternative hypothesis is accepted and hence it is found that there is significant association between educational qualification and financial literacy level.

The data regarding educational qualification and financial literacy is given in Table 3.0.

Table 3.0 Cross Tabulation between Age and Financial Literacy

Age → Financial Literacy ↓	15-25	26-35	36-45	46-55	56-65	66 and above	Total
<b>Financial Literacy (High Score)</b>	12 (10.2)	43 (48.9)	16 (18.3)	21 (14.6)	15 (14)	7 (5.1)	114
<b>Financial Literacy (Low Score)</b>	13 (12.1)	51 (37)	19 (16.7)	7 (13.4)	12 (12.8)	3 (4.8)	105
<b>Total</b>	25	94	35	28	27	10	219

Hypothesis for the data shown in Table 3.0 for chi- square test is as under

Ho3: There is no significant association between age and financial literacy.

Ha3: There is significant association between age and financial literacy.

To test the significance of association between age and financial literacy of the respondents' Chi- Square test was performed.

Table 3.1 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	117.627 <sup>a</sup>	85	.011
Likelihood Ratio	117.270	85	.012
Linear-by-Linear Association	2.864	1	.091
N of Valid Cases	219		

a. 98 cells (90.7%) have expected count less than 5. The minimum expected count is .05.

The test was performed at 5% level of significance. The output of Chi- Square is presented in Table 3.1. From the table it can be seen that Pearson Chi- Square significance value is .011 and degree of freedom is 85. Therefore, alternative hypothesis is accepted and it has been found there is significant association between age and financial literacy level of the respondents.

#### **Association between Income and Financial Literacy**

The data regarding income and financial literacy is given in Table 4.0.

Table 4.0 Cross Tabulation between Income and Financial Literacy

Income → Financial Literacy ↓	Upto Rs.5,00,000	Rs.5,00,000- Rs. 10,00,000	Rs.10,00,000- Rs. 15,00,000	Rs. 15,00,000- Rs.20,00,000	Rs.20,00,000 and Above	Total
<b>Financial Literacy (High Score)</b>	31 (44.2)	24 (25.4)	21 (18.3)	12 (9.5)	26 (16.7)	114
<b>Financial Literacy (Low Score)</b>	54 (40.9)	25 (23.6)	14 (16.7)	6 (8.8)	6 (15.4)	105
<b>Total</b>	85	49	35	18	32	219

Hypothesis for the data shown in Table 4.0 for chi square test is as under:

Ho: There is no significant association between income and financial literacy.

H3: There is significant association between income and financial literacy.

To test the significance of association between income and financial literacy of the respondents' Chi- Square test was performed

Table 4.1 Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	62.594 <sup>a</sup>	68	.662
Likelihood Ratio	68.489	68	.461
Linear-by-Linear Association	15.886	1	.000
N of Valid Cases	219		

a. 79 cells (87.8%) have expected count less than 5. The minimum expected count is .08.

The test was performed at 5% level of significance. The output of Chi- Square is presented in Table 4.1. From the table it can be seen that Pearson Chi- Square significance value is .662 and degree of freedom is 68. Therefore, null hypothesis is accepted and it has been found there is no significant association between income and financial literacy level of the respondents.

## FINDINGS

- With regard to gender and financial literacy, it was observed that there is no significant association between the two variables.
- Analysis suggested significant association between educational qualification and financial literacy.
- Association between age and financial literacy level of the respondent was found significant.
- Study suggested that there was no significant association between income and financial literacy.

## LIMITATIONS OF THE STUDY

The study assumes that the respondents were truthful and honest while giving their responses but understands that there is an emotional issue often linked with money discussions that sometimes causes respondents to be guarded in their responses. The study covers narrow geographical sample of participants filling out the survey.

## V. CONCLUSION AND SUGGESTIONS

From the analysis of financial literacy questions, it is found that a large number of individuals were financially illiterate. Financial education should be imparted from the school level so that from the early age children learn the concept of financial knowledge and can become prudent investors in future.

Though some studies provide evidence of gender inequality with respect to financial knowledge but the present study indicates that there is no significant association between gender and financial literacy level. This could be due to more educated parents and societal changes towards women. Study also reveals that there is no direct relationship between income and financial literacy level.

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