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IMPACT OF FINANCIAL LITERACY ON FINANCIAL ATTITUDE AND FINANCIAL BEHAVIOR OF INDIVIDUAL IN INDIA

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ABSTRACT

The purpose of the study is to assess the awareness of individual about financial concepts such as money management, financial products, stock markets, numeracy, risk – return trade off, insurance, personal finance, budgeting and investment etc. Also the study aims at finding out whether there is any significant relationship between financial literacy level of the individual regarding their financial attitude and financial behavior of individuals. The authors find low level of financial literacy among individuals though all of them are financially included. As much as 60.80 percent individuals had poor financial literacy and 15.4 percent had fair financial literacy. Even in terms of different dimensions of financial literacy such as interest, compounding, inflation, time value of money or basic financial principles, individuals largely had poor or fair financial literacy. Study also shows that positive financial behavior's people shows their higher financial literacy and negative financial attitude's people shows their lower level of financial literacy.

Keywords: Financial Literacy, Financial Attitude, Financial Behavior.

INTRODUCTION:

The growth and development of the Indian economy and the expansion of financial markets through liberalization, privatization and globalization have given way to a plethora of financial products either as an investment alternative or a credit source. These changes have had an expansive effect and have helped India realize its tremendous development potential.

However people need an adequate level of financial literacy to comprehend and settle on educated choices in sparing and venture matters. Research shows that better financial education is necessary if individuals are to accomplish their financial objectives, and that financial literacy is necessary to making informed financial

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decisions (Arnone 2004).

Financial literacy has become increasingly important over the past decade. Coussens (2005) stated that "financial literacy represents the culmination of financial access, education, and understanding, as well as an individual's interest, attitude, and practices that directly benefits the financial efficiency and effectiveness of the individual, and directly and ultimately benefits that of society at large".

Low level of financial literacy keeps the people from settling on a sensible decision with respect to his/her budgetary choices. In fact lack of financial literacy has been broadly recognized as an exasperating element of monetary emergency of 2007.

"Financial literacy is knowledge of basic economic and financial ideas, and in addition the capacity to utilize that financial knowledge and other financial skills to manage financial resources efficiently for existence time prosperity (Angela *et al* 2009). Hogarth *et al* (2003) explained that there is an association between financial knowledge and behavior, although the administration of the agent is unclear. Figure 1 represents the logical connections among financial literacy components."

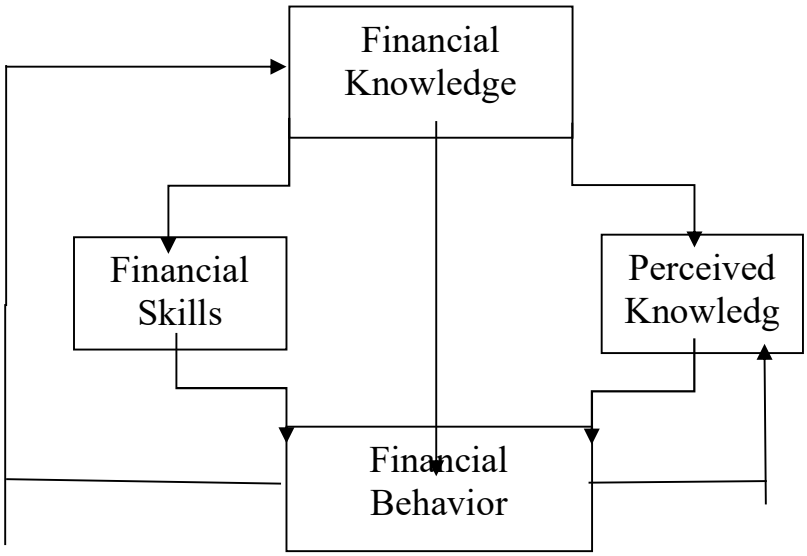

Figure1 Conceptual Model of Financial Literacy

"(Source: Angella A. Hung, Andrewn M. Parker and Joanne K. (2009). Defining and measuring financial literacy. Working Paper Series: WR 708. Department of Labor and the National Institute on Aging via the RAND Roybal Center for Financial Decision Making)."

Though a number of studies relating to financial literacy have been conducted (Huston 2010 provides a detailed review in this regard), larger part of them are confined to US context or other developed economies. Only a few studies, with a focus on developing economies like India, have been reported. However, there is hardly any study that explores the financial literacy levels across demographic cohorts, especially in the northern part of the country. In addition, impact of varying degree of financial literacy on individual or household financial

behavior too has remained largely unexplored. A study in this direction is strongly needed. Using OECD framework; this research aims to study the degree of financial literacy among individuals across cohorts. Impact of financial literacy on financial behavior and financial attitude has also been explored.

RESEARCH METHODOLOGY

Descriptive research design was used for this study. The study was has conducted in Ludhiana district of Punjab (India). Respondents belonged to the more than 18 years of age group. In order to select the sample, one hundred pages of BSNL telephone directory were selected using systematic random sampling procedure. From each of the selected pages, five subscribers from the top and five from the bottom were included in the initial sample, leading to an initial sample of 1000 respondents from which 500 were included in sample. In order to collect the data from respondents, a measure used by Atkinson and Messy (2012) was adapted to Indian conditions to capture the financial literacy of individuals. The data was collected by personally visiting the respondents and conducting face-to-face interviews.

The research instrument was divided into four sections. Out of which section A and section B comprised of performance test on objective type and true/false type questions (total 38 questions) based on basic financial literacy (8 questions) and advanced financial literacy (30 questions) respectively. The respondents' overall performance in these two sections generated results for financial literacy level possessed by him/her. To measure the literacy level, the score as a percentage of correct answers (Lyons 2007) was taken into consideration. (1) Basic Financial Literacy: To measure basic financial literacy level (skills, knowledge and understanding of basic financial concepts, principles and numeracy that individual should posses), 8 questions were asked to the respondents. These questions ranged from numeracy, interest compounding, inflation, time value of money, interest paid on loan, diversification, and risk-return relationship. (2) Advance financial literacy: To measure advanced financial literacy level (knowledge and understanding of the investment alternatives available to the individual in Indian Financial System), 10 questions (with thirty different statements) were framed. The alternatives Fixed deposit, National Saving Certificates, Public Provident Funds, Employee Provident Funds, Equity Shares, Preference Shares, Mutual Funds, Debentures and Bonds, Post office Monthly Income scheme, Insurance Plans.

In all, there were thirty eight statements –Each statement had three to five response categories: the correct answer, do not know, and wrong answer, In order to check for any association between demographic profile and financial literacy, information related to demographics of respondents such as age, income, family size, education etc. was also collected. In order to analyze the data, various response categories for financial literacy statements were assigned scores as follows:

Correct answer - 3

Do not know - 2

Wrong answer - 1

Deliberately, higher weight to *do not know* was given because it has been observed that individuals generally believe that they are far more financially literate than is really the case (OECD, 2009), they are more likely to commit financial mistakes. Therefore, admitting that I do not know something is definitely less dangerous than

not knowing something but still claiming the opposite.

Financial behavior and financial attitude were also included and 12 questions related to the financial behavior and attitude of the respondent were incorporated. The responses to these statements were captured using five point Likert type scale with scores ranging from 1 to 5 (1 for strongly disagree and 5 for strongly agree). The last section of the schedule related to socio-demographic factors which consisted of questions based on demographic and socioeconomic variables of the respondents.

Different data analysis techniques were used to get meaningful outcome from the data. The techniques included cross tabulation, chi-square tests, correlation and regression analysis.

Mean and Standard deviation were calculated for each of the statement used to capture financial behavior and financial attitude. Because financial literacy was measured in categorical form (high financial literacy, medium financial literacy and lower financial literacy) dummy regression was used to analyze the impact of financial literacy on financial attitude and financial behavior.

The following regression equation has been used to study impact of financial literacy on financial attitude

$$\textbf{Financial Attitude} = \beta_0 + \beta_1 \textbf{ Medium Financial Literacy} + \beta_2 \textbf{ Lower Financial Literacy} + \varepsilon$$

Where,

βo = Intercept + High financial literacy

$\beta 1MFL$ = Medium financial literacy

$\beta 2LFL$ = Lower financial literacy

βo - Expected financial attitude of individual with high financial literacy

β1 - Expected financial attitude of individual with Medium financial literacy

β2 - Expected financial attitude of individual with Lower financial literacy

The following regression equation has been used to study impact of financial literacy on financial behavior:

$$\textbf{Financial Behavior} = \beta_0 + \beta_1 \textbf{ Medium Financial Literacy} + \beta_2 \textbf{ Lower Financial Literacy} + \varepsilon$$

Where,

βo - Expected financial behavior of individual with high financial literacy

β1 - Expected financial behavior of individual with Medium financial literacy

β2 - Expected financial behavior of individual with Lower financial literacy

RESULTS AND DISCUSSION

The research instrument required each respondent to provide his/her demographic and socio-economic data that includes gender, age, level of education acquired, stage of family life cycle, employment structure, type of workplace activity, proportion of monthly expenditure to monthly income, proportion of monthly saving to monthly income.

Table 1 shows profile of the respondents of this study. It can be seen that the sample has a gender distribution of approximately 63.20% males (n=316) and 36.80% females (n=184). The age distribution of sample respondents is heavily dominated by age group 18 - 25 years as its weight is 27.2% (n=136), in comparison with respondents who fall under the age group of 26 - 35 years who represent 22.8% (n=114), respondents belonging to the age group of 36-45 years who represent 21.6% (n=108), respondent in age between 46 – 55 (17.2% n=86) and respondents belonging to age group of 56-65 years and above 66 (11.6% n=58).

Table 1 also shows the highest level of education acquired by the respondents, where 34.6% are Graduates (n=173), 29.8% (n=149) respondents have completed Post Graduation and 23.6% have passed Higher secondary and Diploma (n=118) while 12% (n=60) are Primary education.

With respect to monthly income of respondents, it can be seen that the highest proportion of respondents i.e. 26.4% earn monthly income less than Rs. 10,000 (n=132), monthly income between Rs. 25,001-Rs. 40,000 was earned by 26.2% respondents (n=131). About 25.2% respondents earn monthly income between Rs. 10,001-Rs. 25,000 (n=126) and only 12.2 % respondents earn monthly income between 40,001-80,000 and more than Rs. 80,000 (n=62).

It is evident from Table 1 that sample is divided to the various stages of family life cycle. Out of total sample (n=500), 25.6% respondents are in the stage of middle age married with children (n=128). 18.40% respondents are younger married with children (n=104), 18.2% respondents are young single (n=91) and 17.2% respondents are in the stage of younger married with children (n=86). The respondents who are older married and middle age married without dependent children are 11% (n=55), 6.8% (n=34) respectively and the respondents who are and Older unmarried are 0.4% (n=2).

The distribution of sample respondents on the basis of employment structure is heavily dominated by full time salaried group as its weight is 42% (n=210) in comparison with respondents of self-employed who represent 23% (n=115), those belonging to part time salaried group and casual employment who represent 10% (n=50) and 7% (n=35) respectively. Respondents in the category of unemployed and others are 1.4% (n=7), respondents in category of retired and housewives are 9% (n=45) and 7.6% (n=38) respectively.

In terms of workplace activity, the respondents working in finance related industry (that is Bank, Chartered Accountant, Certified Financial Planner, Mutual Fund house, Insurance Company, Investment Company and/or any other financial institution) represent 39.2% (n=196), whereas respondents not working in finance related industry (other than mentioned above) represent 60.8% (n=304).

The distribution of sample according to number of years of investment experience compises 38.2% respondents who have been investing for 1-5 years (n=191), 33.6% respondents have been investing for 6 - 10 years (n=168). 15.4% respondents have been investing for more than 10 years, while 12.8% (n=64)

respondents have been investing for less than 1 year.

Similarly, for monthly savings to monthly income ratio, it can be seen that the highest proportion that is 25.6 % (n=128) of respondents' have monthly saving to monthly income ratios at 1% to 5%. In the same way, 21% (n=105) respondents' monthly saving to monthly income ratio is 5% to 10%. 18.4% (n=92) and 16.2% (n=81) respondents' monthly saving to monthly income ratio is 15% to 20% and 10% to 15% respectively. 15% (n=75) respondents' monthly saving to monthly income ratio is 20% to 25%. Only 3.8 % (n=19) respondents' monthly saving to monthly income ratio is more than 25%.With regard to regularity of income it can be seen that the highest proportion of 48.8% (n=244) comes from respondents who get regular income and their income is predictable. 35% (n=175) respondents' income varies from week to week, month to month or season to season while 12% (n=60) of total respondents do not receive their income on time. While 4.2% (n=21) respondents sometimes do not receive any money at all.

TABLE 1: DEMOGRAPHIC PROFILE OF RESPONDENT

Category		**Frequency (n=500)**	**Percent**
Area	Rural	264	52.8
	Urban	236	47.2
Gender	Male	316	63.2
	Female	184	36.8
Age (in years)	18-25	136	27.2
	26-35	114	22.8
	36-45	108	21.6
	46-55	86	17.2
	56-65 and 66 and above	56	11.6
Categories	General	298	59.6
	OBC	91	18.2
	SC	66	13.2
	ST	45	9
	Others	0	0
Education	Primary	10	2
	Secondary	50	10
	Higher Secondary	90	18
	Diploma	28	5.6
	Graduation	173	34.6
	Post Graduate	149	29.8
Monthly income	INR 10,000	132	26.4
	INR 10,001-25,000	126	25.2
	INR 25,001-40,000	131	26.2
	INR 40,001-80,000	86	17.2

	Above INR 80,000	25	5
Family life cycle	Young single	91	18.2
	Young married without children	86	17.2
	Young married with children	104	20.8
	Middle-aged married with children	128	25.6
	Older married,	55	11
	Middle age married without dependent children	34	6.8
	Older unmarried and if other	2	0.4
Employment structure	Full Time Salaried	210	42
	Part Time Salaried	50	10
	Casual	35	7
	Self employed	115	23
	Housewife	45	9
	Retired	38	7.6
	Unemployed	3	0.6
	Others	4	0.8
Workplace activity	Working in finance related industry	196	39.2
	Not Working in finance related Industry	304	60.8
Monthly saving	Upto 5%	128	25.6
	5% - 10%	105	21
	10% - 15%	81	16.2
	15% - 20%	92	18.4
	20% - 25%	75	15
	More than 25%	19	3.8
Investment period	Less than 1 year	64	12.8
	1 – 5 years	191	38.2
	6 – 10 years and	168	33.6
	more than 10 years	77	15.4
Regularity In Your Income	My income varies from week to week, month to month, or season to season	175	35
	Sometimes I do not receive my income on time	60	12
	Sometimes I do not receive any money at all	21	4.2
	My income is regular and predictable	244	48.8

To measure show the financial literacy of respondents, individual/respondent‘s total score was calculated as

the percentage of correct answers (Lyons, 2007), by attempting the total 18 questions. Out of these, basic financial literacy consisted of 8 questions and advanced financial literacy consisted of 10 questions. The score percentage of answers of the sample was considered to frame financial literacy level. The respondents with scores above 83 percent are considered as respondents with higher financial literacy and hence classified as higher financially literate, respondents with scores between 67 percent to 82 percent are considered as fair/medium financial literate and respondents with below 67 percent are considered as respondents with relatively lower level of financial literacy and hence classified as lower financially literate.

Table 2 shows the level of financial literacy among individuals. The level of financial literacy considered here on the basis of scoring scheme method used by (Aggarwal and Gupta 2014).The respondents with scores above 95 (i.e. 83 per cent) are considered as respondents with higher financial literacy and hence classified in the first category, i.e. individuals with relatively higher level of financial literacy, those with scores ranging from 76 to 94 (approximately 67 per cent to 83 percent) were considered to have fair/medium financial literacy and respondents with lower than 76 (i.e. 67 per cent) are considered as respondents with relatively lower level of financial literacy and hence classified into second category, i.e. individuals with relatively lower level of financial literacy

TABLE 2 FINANCIAL LITERACY LEVELS OF RESPONDENTS

Financial Literacy Level	Frequency	Percentage
High level	77	15.4
Fair/Medium level	119	23.8
Lower level	304	60.8
Total	500	100

The scenario was rather dismal as at an overall level, only 15.4 per cent respondents enjoyed sound financial literacy, 23.8 per cent had fair/medium financial literacy, and 60.8 per cent had poor financial literacy. On breaking up financial literacy into different categories of statements, it was seen that respondents were not comfortable with any of the four categories of the statements as less than 15.4 per cent respondents had sound literacy with respect to interest and compounding, inflation, and time value of money etc. In fact, for all the categories of statements, the individuals either had fair financial literacy or poor financial literacy with greater tendencies towards poor financial literacy.

The overall performance of the respondents towards 8 questions of basic financial literacy is presented in Table 2. The second column of the same table represents the percentage of total respondents who answered each question correctly. From Table 2, it can be seen that the respondents earned highest score on the question of numeracy, suggesting that individuals know this concept very well. These subjects include interest compounding, relationship between investment time and diversification, inflation, risk-return. On the other hand, the subject questions on which the respondents scored less are those related to the concept of investment, financial worth, risk, relationship between investment time horizon and asset growth, personal finance, time value of money.

TABLE 3 OVERALL MEAN AND SD OF FINANCIAL ATTITUDE

Sr. No.	Financial Attitude's Statements	Mean	Std. Deviation
1	I find it more satisfying to spend money than to save it for the long time	3.00	1.222
2	I tend to live for today and let tomorrow take care of itself	2.92	1.260
3	I am prepared to risk some of my own money when saving or making an investment	3.23	1.160
4	Money is there to be spent	3.07	1.158
Total score of financial attitude		**12.22**	**2.972**

IMPACT OF FINANCIAL LITERACY ON FINANCIAL ATTITUDE

TABLE 4 DUMMY REGRESSIONS BETWEEN FINANCIAL ATTITUDE AND FINANCIAL LITERACY

R Square		0.52		
Adjusted R Square		0.48		
F-value		69.54		
p-value		0.001		
Variable	**B**	**Std. Error**	**t**	**p-value**
Medium financial literacy	5.29	0.430	1.231	0.009
Lower financial literacy	7.40	0.318	2.328	0.020
Constant	12.588	0.269	46.752	0.000

The adjusted R-square figures indicate that approximately 48% of variance in financial attitude is explained by financial literacy of the respondents.

The B values for medium financial literacy level indicate the direction and number of units of change in the financial attitude due to a one unit change in financial literacy.

We should also note that because high financial literacy is the same reference group for each of the other financial literacy level dummies, we can directly compare each of the financial literacy levels to one another.

From the information in the regression output we can write the following regression equation:

Financial attitude = 12.588 + 5.29 Medium Financial Literacy + 7.40 Lower Financial Literacy

Which can be interpreted as follows:

- A person with high financial literacy is likely to have a financial attitude of 12.588.
- A person with medium financial literacy is likely to have a financial attitude of 12.588 + 5.29
- A person with low financial literacy is likely to have a financial attitude of 12.588 + 7.40

TABLE 5 OVERALL MEAN AND SD OF FINANCIAL BEHAVIOR

Sr. No.	Financial Behavior	Questions	Mean	St. Deviation
1	Considers purchase	Before I buy something I carefully consider whether I can afford it	3.75	1.097
2	Timely bill payment	I pay my bills on time	3.84	1.072
3	Keeping watch of financial affairs	I keep a close personal watch on my financial affairs	3.49	1.270
4	Long term financial goal setting	I set long term financial goals and strive to achieve them	3.26	1.238
5	Responsible and has a household budget	I have a budget that I manage regularly	3.41	1.248
6	Active saving	Actively saving or buying investment in the past 12 months	3.11	1.248
7	Choosing products	You generally feel well informed when making financial decisions	3.10	1.257
8	Borrowing to make ends meet	You borrow money to make ends meet	2.50	1.290
Score for financial behavior			**26.44**	**4.927**

IMPACT OF FINANCIAL LITERACY ON FINANCIAL BEHAVIOR

The following regression equation has been used to study impact of financial literacy on financial attitude:

$$\textit{Financial Behavior} = \beta_0 + \beta_1 \textit{ Medium Financial Literacy} + \beta_2 \textit{ Lower Financial Literacy} + \varepsilon$$

Where,

FB = Financial behavior

βo - Expected financial behavior of individual with high financial literacy βo

β1 - Expected financial behavior of individual with Medium financial literacy βo ± β1

β2 - Expected financial behavior of individual with Lower financial literacy βo ± β2

Table 7. Impact of financial behavior on financial literacy

R Square	0.63			
Adjusted R Square	0.58			
F	61.971			
p-value	0.000			
Variable	**B**	**Std. Error**	**t**	**p-value**
Medium financial literacy	-3.961	0.646	-6.132	0.000
Lower financial literacy	-6.165	0.563	-10.940	0.000
Constant	21.753	0.503	43.218	0.000

The adjusted R-square figures indicate that approximately 58% of variance in financial behavior is explained by financial literacy of the respondents.

The B values for medium financial literacy level indicate the direction and number of units of change in the financial behavior due to a one unit change in financial literacy.

We should also note that because high financial literacy is the same reference group for each of the other financial literacy level dummies, we can directly compare each of the financial literacy levels to one another:

Financial behavior = 21.753 – 3.961 Medium Financial Literacy -6.165 Lower Financial Literacy

Which can be interpreted as follows

- A person with high financial literacy is likely to have a financial behavior of 21.753.
- A person with medium financial literacy is likely to have a financial behavior of 21.753 – 3.961
- A person with low financial literacy is likely to have a financial behavior of 21.753 – 6.165

CONCLUSION

All the respondents (individuals) have parked their savings in various investment alternatives, though majority of the respondents (individuals) possess lower level of financial literacy. This shows that all the individuals do not understand the basics of investments and its calculation. From the analysis of financial literacy questions, it is also found that the majority individuals are less financially literate on some of subjects of basic financial literacy and advanced financial literacy and even some of them do not understand the important concepts at all. With regard to the relationship between financial literacy and financial behavior, it was found that financial literacy leads to controlled spending behavior and encouraged saving behavior and also have a significant impact on investment decision of individuals.

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