Financial Literacy and Planning: A Study of Indian Households of Punjab State

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Abstract: *This study surveys 800 people from Indian households in the state of Punjab to examine the effect of demographic factors on the factors affecting financial literacy level. Seven factors were identified through exploratory factor analyses which help in assessing the financial literacy level of the people. The results indicated that there is a significant difference in the financial literacy level of the people based on educational qualification, occupation and monthly income. And women possessed lower financial literacy than men on the parameters of financial planning, financial advisory services, retirement planning, estate planning, insurance planning, legal services and budgeting and documentation.*

Index Terms: *Demographics, Financial Planning, Financial Literacy, Indian Households, Punjab*

I. INTRODUCTION

Financial literacy and Planning has become increasingly important over the past decades and it has gained the interest of various groups like governments, financial organizations, community groups, bankers, employers and others in the recent times especially in the developing countries. Financial literacy is a significant issue for the financial systems of any country as it is an important element for promoting financial inclusion and ultimately achieving financial stability. In India, financial literacy is recognized as an essential life skill by the policymakers. In order to be included, government is promoting financial literacy through financial education.

Various initiatives have also been taken to make people aware about the financial products and services. Financial literacy makes people informed and confident decision makers in all the aspects i.e. planning, spending, budgeting, saving and use of financial products and services, for their every borrowing, spending, planning, investing and their everyday banking as well Ray Morgan (2003a, 2003b, 2003c). The present study examines the effect of demographic factors on the financial literacy level, specifically age, gender, educational qualification, marital status, income level and occupation of the Indian households in the state of Punjab.

II. LITERATURE REVIEW

Most of the previous studies are conducted by practitioners in both developed and developing countries. In order to measure financial literacy level of their population, many private organizations and Government entities conducted surveys. OECD (2005) study assessed financial literacy in 12 countries including Australia, Japan, European countries, the USA and the UK. The study revealed that all the surveys conducted in those countries resulted that most of the respondents possess very low level of financial literacy.

Schagen and Lines (1996) performed a survey on 'Financial Literacy in Adult Life's on behalf of NatWest Group Charitable Trust for the population of U.K to analyse their financial literacy, of which target population was: people who are young (16 to 21 years), students who are living away from their homes for their higher education, families living in subsidized housing and single parents. The study was mainly questioned about the respondent's attitude towards savings and borrowings, money management in families, their confidence in dealing with financial issues and their use of financial information and institutions. The results indicated that students group were found least confident while taking decisions on financial matters, very few among them were maintain their financial records and single parents didn't focused themselves to savings. Rest of the respondents were confident in their financial dealings.

Chen and Volpe (1998) examined the personal financial literacy among 924 college students in USA. The study also examined the impact of literacy on student's opinions and decisions and lastly found the relationship between socio-demographic variables and their financial literacy level. Four major areas were identified: savings, general knowledge, borrowings, insurance and investments based on which financial literacy level of the respondents in U.S was examined. Results indicated that the decisions on financial issues were taken more effectively by people possessing better financial knowledge. Women tend to possess far less financial literacy than men.

The Adult Financial Literacy Advisory Group (2000) conducted a study on 'How to promote better access to financial education to young people and adults' for the population of U.K. The study concluded that there is a growing need of financial literacy for the population in order to be more self-reliant.

In addition to this, there were difficulties arising from less government involvement, increasing complex financial products, ageing population and changing work patterns. AdFLAG recommended that there is a need to build a short-term financial literacy education programme particularly focusing on the young people, older people, sole parents, people with disabilities, ethnic minorities and people living in social housing.

Volpe et al. (2002) conducted a study of 530 online investors to examine their investment literacy and their relationship between the literacy and online investor characteristics. The study resulted that each characteristics affected the financial literacy level. Men were found to be more financially literate than women, online traders possessed higher knowledge than others and younger participants don't possess much investment literacy than their counterpart's i.e. older population.

Lusardi and Mitchell (2008) conducted a study on 785 women respondents in US to assess their financial literacy and retirement planning. The study reveals that the large majority of older women possessed low level of financial literacy. Retirement planning was found less in the women possessing lower financial literacy and they were also found to be unsuccessful planners.

Al-Tamimi (2009) conducted a study on 290 individual investors of UAE who invest in local financial markets to examine their financial literacy level. In addition, study also examined the relationship between factors affecting investment decisions and financial literacy. The study revealed that the financial literacy level of the online investors was quite low. Women had lower financial literacy than men. There was a significant effect of income, workplace activity and education level on the financial literacy of the respondents. Study also showed that there was a significant relationship between financial literacy and investment decisions.

Lusardi et al. (2010) conducted a study by collecting the data through National Longitudinal Survey of Youth in 2007-08, to analyse the financial literacy of the U.S. population. The research questions were related to determinants of financial literacy among the youth, young population's preparedness towards making sound financial decisions and developing policy to improve young population financial literacy. The study reported that the financial literacy among youth is quite low and only 27% of the young adults were having a basic knowledge regarding finances.

Disney and Gatherhood (2011) conducted a study in UK on 'Financial Literacy and Indebtedness: New Evidence from UK customers' examined the relationship between consumer credit use and over-indebtedness, individual responses to debt literacy questions and household net worth. The study revealed that households have lower net worth, have difficulty in paying their debts, are more likely to report credit arrears and use higher cost credit.

Sherraden et al. (2011) performed a study to analyse the financial capability of children in U.S. The study examined an innovative four-year school-based financial education and savings program, called "I Can Save" (ICS). The study showed that the scores of students participating in ICS were quite high on a financial literacy test than the students group who did not participated. Results suggested that access to financial education increased children's financial capability and helped them in participating in meaningful financial services.

Klapper et al. (2012) conducted a research study in Russia to examine the consequences of lower financial literacy. The study resulted that only 46% of the people answered a simple question about inflation and only 41% of respondents knew about interest compounding working, though it seems that consumer borrowing is increasing very rapidly in Russia. People who participated in the financial markets had a higher financial literacy level and they reported unspent income and spending. Respondents who had borrowings from informal sources tend to have lower financial literacy. Individuals with higher financial literacy were more likely to report unspent income and levels of spending.

Nural Shanaz Mahdzanand Saleh Tabiani (2013) conducted a study on 200 individuals of Klang valley, Malaysia to examine the influence of financial literacy on individual savings. The results indicated that individuals were not having much knowledge of basic financial literacy. Higher financial literacy had a positive effect on individual savings as it would help in planning their finances in a better way.

Taofik Hidajat (2015) conducted a study on 258 fisherman of Indonesia to examine their personal financial literacy and the relationship between household savings and financial literacy. The study was conducted for the age group of people between 25-50 years. The study resulted that around 85 percent of the fisherman were found illiterate and were not even holding a savings account. Due to low level of financial knowledge and literacy, they were not able to save and invest further their earnings.

Potrich et al. (2016) conducted a research to assess the financial literacy of 534 university students (both of private and public university) of Southern Brazil by building and comparing models on financial literacy. Amongst all the developed models, the best model indicated that financial attitude and financial knowledge have the positive impact on financial behaviour.

Bosclair et al. (2017) examined the financial literacy level and retirement planning practices of the people in Canada. The study revealed that only 42 percent of Canadians were able to answer correctly on the questions measuring their knowledge of inflation, risk diversification and compounding interest. People, who answered correctly on the above three financial literacy questions, were found to have 10 percent more savings for retirement.

None of the previous studies have examined the effect of demographic variables on financial literacy level of the Indian households in the state of Punjab.

III. RESEARCH METHODOLOGY

A. *Questionnaire Design*

To understand the user's perspective research questionnaire was designed. The questionnaire comprises of 32 questions of which first part consist 6 questions of demographic information and second part consist 26 questions that assess respondents' understanding of financial literacy which was measured through five-point likert scale. The questionnaire is divided into two parts.

B. *Sampling and Data Collection*

In total 1,000 questionnaires were distributed to the people living in rural, urban and semi-urban areas of Punjab using random sampling technique.

The respondents were educated, housewives, unemployed, students, professionals, business persons and to the farmers. From 1,000 questionnaires distributed, 800 responses were received from the Indian households.

Variables covered in questionnaire were analysed using Reliability analysis, Principal component analysis, Factor analysis, Independent-Samples T Test and ANOVA.

IV. DATA ANALYSIS AND RESULTS

A. *Profile of the Respondent's*

First part of the questionnaire was designed in such a way that respondent's need to mention their demographic details which included age, gender, marital status, income, education and occupation. Demographic statistics depicts that about 28.8 percent of the respondents were 18-25 years old, 29.3 percent were 26-30, 23.3 percent were 31-35 and 18.8 percent were above 36 years. With respect to gender, 64.9 percent were males and 35.1 percent were females. About 52.8 percent were married, 29.3 percent were unmarried and 0.4 percent was separated. In terms of educational qualification, 23.5 percent were up to intermediate, 20.4 percent were graduate, 32.9 percent were post graduate and 23.3 percent were doctorate.

In terms of occupation, 18.3 percent of the respondents were students, 7.5 percent were unemployed, 41.1 percent were private employees and 33.1 percent were businessperson. About 8.3 percent received less than INR 7000 monthly income, 3.3 percent received INR 7,000-15,000, 8.8 percent received 15,000-25,000, 19.6 percent received 25,000-45,000, 36.3 percent received above 45,000 and 23.9 percent had no source of income.

B. *Factor Analysis*

Respondents were asked to rate the influence of 26 variables (on the five point Likert scale) on their financial literacy level. Factor analysis was performed on the 26 variables and the component matrix reduced the dimensions to 7.

Items reduction was done using principle component analysis. Table 1 depicts that KMO measure of sampling adequacy comes out to be .731, which means that's sampling is adequate. Cronbach's Alpha for 26 variables comes out to be .858, indicating high reliability of the variables used.

Table 1: KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.731
Bartlett's Test of Sphericity	Approx. Chi-Square	11345.246
	Df	325
	Sig.	.000

Table 2: Communalities

	Initial	Extraction
Should an individual stock have preferred over a mutual fund in view of return?	1.000	.589
Diversified investing helps in higher returns during retirement time	1.000	.576
One should save money today for meeting needs of tomorrow	1.000	.700
You have been well versed with budgeting, recording and documentation of transactions and usage of technology in money management	1.000	.760
Are you well prepare for- Retirement Planning	1.000	.640
Income tax planning	1.000	.590
Liquidity	1.000	.714
Risk management (taken adequate insurance for health, life, etc.)	1.000	.676
Estate planning	1.000	.698
I have started planning for retirement?	1.000	.543
Diversified investing is a good way to plan for retirement?	1.000	.608
I am aware of retirement planning calculators to help me know how much to save, where and how?	1.000	.723
I feel that regular savings will give you happy retirement?	1.000	.720
I would take help of financial advisor for a fee for - Investment planning	1.000	.772
Retirement planning	1.000	.830
Tax planning	1.000	.744
Insurance planning	1.000	.816
Estate planning	1.000	.633
Insurance is meant for earning a decent return	1.000	.776
While buying insurance policy the key aspects are income tax benefits and low premium	1.000	.665
Everyone should do a will at earliest age possible	1.000	.737
Once made, will can be changed	1.000	.678
Will can be made only with the help of a lawyer	1.000	.750
I am confident to serve as trustee/custodian of assets of other person	1.000	.701
I am very well aware of all provisions related to estate planning	1.000	.713
I am aware of legal and social implications if a will is not done	1.000	.736

Extraction Method: Principal Component Analysis.

Table 3: Rotated Component Matrix

	Component 1	2	3	4	5	6	7
Should an individual stock preferred over a mutual fund in view of return?					.686		
Diversified investing helps in higher returns during retirement time			.600				
One should save money today for meeting needs of tomorrow			.656				
You have been well versed with budgeting, recording and documentation of transactions and usage of technology in money management							.798
Are you well prepare for- Retirement Planning	.744						
Income tax planning	.633						
Liquidity			.783				
Risk management (taken adequate insurance for health, life, etc.)			.580				
Estate planning	.682						
I have started planning for retirement?	.713						
Diversified investing is a good way to plan for retirement?			.756				
I am aware of retirement planning calculators to help me know how much to save, where and how?	.785						
I feel that regular savings will give you happy retirement?			.822				
I would take help of financial advisor for a fee for - Investment planning		.790					
Retirement planning		.884					
Tax planning		.826					
Insurance planning		.865					
Estate planning		.734					
Insurance is meant for earning a decent return					.759		
While buying insurance policy the key aspects are income tax benefits and low premium					.758		
Everyone should do a will at earliest age possible	.687						
Once made, will can be changed	.511						
Will can be made only with the help of a lawyer						.790	
I am confident to serve as trustee/custodian of assets of other person						.772	
I am very well aware of all provisions related to estate planning						.825	
I am aware of legal and social implications if a will is not done						.823	

Table 3 depicts that 7 factors extracted were used to determine the financial literacy level of the people based on their demographics namely age, gender, income level, occupation, educational qualification and marital status. The factors were named as below:

Factor 1: Financial Planning
Factor 2: Financial Advisory Services
Factor 3: Retirement Planning
Factor 4: Estate Planning
Factor 5: Insurance Planning
Factor 6: Legal Services
Factor 7: Budgeting & Documentation

Table 4: Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.676	21.831	21.831	3.816	14.676	14.676
2	3.492	13.431	35.262	3.742	14.394	29.070
3	2.835	10.905	46.167	3.317	12.758	41.828
4	2.242	8.624	54.791	2.329	8.959	50.787
5	1.565	6.021	60.812	2.063	7.935	58.722
6	1.240	4.768	65.580	1.461	5.620	64.342
7	1.038	3.994	69.573	1.360	5.232	69.573
8	.895	3.444	73.017			
9	.827	3.182	76.199			
10	.748	2.878	79.077			

11	.679	2.610	81.688
12	.590	2.268	83.956
13	.534	2.055	86.011
14	.467	1.795	87.806
15	.420	1.617	89.422
16	.406	1.561	90.983
17	.368	1.416	92.398
18	.341	1.311	93.710
19	.312	1.200	94.910
20	.274	1.054	95.964
21	.253	.972	96.936
22	.221	.850	97.785
23	.171	.656	98.442
24	.168	.646	99.087
25	.129	.496	99.583
26	.108	.417	100.000

Table 5: Component Transformation Matrix

Component	1	2	3	4	5	6	7
1	.637	.614	-.107	.126	.359	.214	.126
2	.067	.031	.930	.304	-.091	.056	.161
3	-.665	.700	.078	-.060	.153	-.181	-.047
4	-.246	-.149	-.265	.884	.221	.083	.094
5	-.096	-.303	.107	-.268	.751	-.170	.473
6	.255	-.034	.085	.164	.213	-.770	-.511
7	-.113	-.133	.169	-.088	.427	.538	-.680

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

C. *Differences of Financial Literacy Level based on demographic variables*

In order to determine if there is a significant difference in the respondent's financial literacy level according to their demographic variables, One-way ANOVA was ran.

Table 6: Independent-Samples T Test- Gender and factors affecting Financial Literacy level

Gender

Factors Affecting Financial Literacy Level		Levene's Test for Equality of Variances	
		F	Sig.
Financial Planning	Equal variances assumed	1.411	.235
	Equal variances not assumed		
Financial Advisory Services	Equal variances assumed	2.840	.092
	Equal variances not assumed		
Retirement Planning	Equal variances assumed	34.459	.000
	Equal variances not assumed		
Estate Planning	Equal variances assumed	49.509	.000
	Equal variances not assumed		
Insurance Planning	Equal variances assumed	18.594	.000
	Equal variances not assumed		
Legal Services	Equal variances assumed	10.134	.002
	Equal variances not assumed		
Budgeting & Documentation	Equal variances assumed	18.135	.000
	Equal variances not assumed		

Table 6 depicts that there is a significant difference in retirement planning, estate planning, insurance planning, legal services, budgeting and documentation based on gender as the p value is less than .05. Unexpectedly, insignificant difference was found in financial planning and financial advisory services.

Table 7: One-way ANOVA test- Age and factors affecting Financial Literacy level

Age					
Between Groups	Sum of Squares	df	Mean Square	F	Sig.
Financial Planning	19.760	3	6.587	8.516	.000
Financial Advisory Services	64.700	3	21.567	20.960	.000
Retirement Planning	76.871	3	25.624	61.795	.000
Estate Planning	30.671	3	10.224	11.511	.000
Insurance Planning	8.883	3	2.961	4.189	.006
Legal Services	7.776	3	2.592	1.582	.192
Budgeting & Documentation	84.841	3	28.280	28.025	.000

Table 7 depicts that there is a significant difference in the financial planning, financial advisory services, retirement planning, estate planning, insurance planning, legal services and budgeting and documentation of people of different age groups as the p value for all the factors affecting financial literacy level is less than .05.

Table 8: One-way ANOVA test- Marital Status and factors affecting Financial Literacy level

Marital Status					
Between Groups	Sum of Squares	df	Mean Square	F	Sig.
Financial Planning	7.321	2	3.661	4.645	.010
Financial Advisory Services	7.702	2	3.851	3.503	.031
Retirement Planning	43.473	2	21.736	47.664	.000
Estate Planning	5.819	2	2.909	3.168	.043
Insurance Planning	3.432	2	1.716	2.408	.091
Legal Services	23.255	2	11.628	7.191	.001
Budgeting & Documentation	3.223	2	1.611	1.451	.235

Table 8 depicts that there is a significant difference in financial planning, financial advisory services, retirement planning, and estate planning and legal services based on the respondent's marital status. On the other hand, it was found that there is no significant difference in the respondent's estate planning and budgeting and documentation as the p value was greater than .05.

Table 9: One-way ANOVA test- Educational Qualification and factors affecting Financial Literacy level

Educational Qualification					
Between Groups	Sum of Squares	df	Mean Square	F	Sig.
Financial Planning	98.571	3	32.857	48.718	.000
Financial Advisory Services	57.410	3	19.137	18.434	.000
Retirement Planning	6.865	3	2.288	4.553	.004
Estate Planning	92.223	3	30.741	37.912	.000
Insurance Planning	21.243	3	7.081	10.243	.000
Legal Services	68.137	3	22.712	14.535	.000
Budgeting & Documentation	175.886	3	58.629	65.526	.000

Table 9 depicts that a significant difference was found in respondent's financial planning, financial advisory services, retirement planning, estate planning, insurance planning, legal services and budgeting and documentation based on their educational qualification as the p value is less than .05.

Table 10: One-way ANOVA test- Occupation and factors affecting Financial Literacy level

Occupation					
Between Groups	Sum of Squares	df	Mean Square	F	Sig.
Financial Planning	73.384	3	24.461	34.644	.000
Financial Advisory Services	83.520	3	27.840	27.693	.000
Retirement Planning	39.826	3	13.275	28.784	.000
Estate Planning	64.303	3	21.434	25.338	.000
Insurance Planning	24.788	3	8.263	12.030	.000
Legal Services	45.972	3	15.324	9.635	.000
Budgeting & Documentation	53.093	3	17.698	16.871	.000

Table 10 depicts that there is a significant difference in financial planning, financial advisory services, retirement planning, estate planning, insurance planning, legal services and budgeting and documentation based on the respondent's occupation as the p value is less than .05.

Table 11: One-way ANOVA test- Monthly Income and factors affecting Financial Literacy level

Monthly Income					
	Sum of Squares	df	Mean Square	F	Sig.
Financial Planning	83.392	5	16.678	23.989	.000
Financial Advisory Services	68.080	5	13.616	13.254	.000
Retirement Planning	68.104	5	13.621	31.918	.000
Estate Planning	56.521	5	11.304	13.177	.000
Insurance Planning	49.146	5	9.829	14.940	.000
Legal Services	101.138	5	20.228	13.264	.000
Budgeting & Documentation	139.429	5	27.886	29.574	.000

Table 11 depicts that a significant difference was found in respondent's financial planning, financial advisory services, retirement planning, estate planning, insurance planning, legal services and budgeting and documentation based on their monthly income as the p value is less than .05.

Table 12: Cross tabulation of factors affecting Financial Literacy Level and Gender

Gender	Factors Affecting Financial Literacy Level							Total
	Financial Planning	Financial Advisory Services	Retirement Planning	Estate Planning	Insurance Planning	Legal Services	Budgeting & Documentation	
Men	107	80	75	26	67	37	124	519
Women	65	31	54	15	43	13	60	281
Total	172	111	129	41	110	50	184	800

Table 12 shows the cross tabulation of factors affecting financial literacy level and gender. It is considered that men do more financial planning, retirement planning, estate planning, insurance planning, budgeting and documentation than women. Financial advisory services and legal services are also more taken by men than their counterparts. So, in totality it inferred that men are more financially literate than women in the state of Punjab.
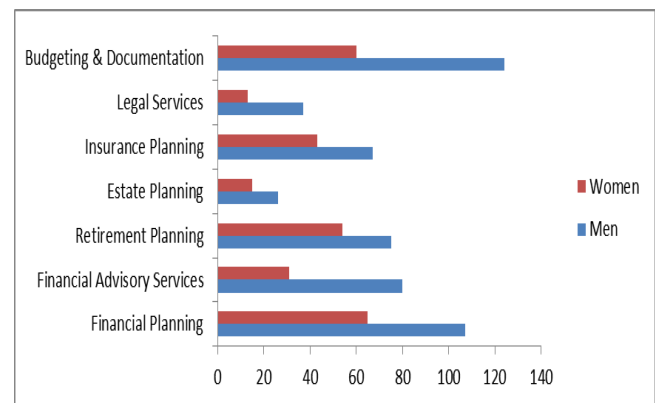

Fig. 1: Bar Chart of Factors affecting Financial Literacy Level and Gender

Figure 1 shows graphically distribution of the financial literacy level of men and women. Men have more financial literacy level than women on the parameters of financial planning, financial advisory services, retirement planning, estate planning, insurance planning, legal services and budgeting and documentation.

V. CONCLUSION

The present study examined financial literacy level of Indian households in the state of Punjab based on their demographic variables. The study concluded that income level, educational qualification and occupation had a significant effect on financial literacy level of the people. And women possessed lower financial literacy than men. The present study will help the government, financial education providers, banks and other organizations to work upon the parameters which are not properly tapped and are leading to financial illiteracy. In order to increase the financial literacy in Punjab, various measures can be taken by the policy makers and government to impart financial education in India.

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