Business Analyst, ISSN 0973-211X, 37(1) 217-230, © SRCC

AN EMPIRICAL STUDY ON FINANCIAL LITERACY LEVEL OF SALARIED FEMALES IN DIGITAL ERA

Jyoti Gupta[*] and Manish Madan[**]

ABSTRACT

Financial Literacy is a sum of financial attitude, financial behavior and financial knowledge. In the given study these three variables were analyzed to determine the level of financial literacy among working women in contemporary digital era. Females are more prone to get effected by variety of financial instruments as a consumer, if not enough Financial Literate. Multiple Regressions is used as a statistical technique for formulating a model based on three dimensions of Financial Literacy. Also the correlation between the three variables and Score of financial literacy is determined. The methodology used is similar to the methodology recommended by OECD INFE in their studies on Financial Literacy. The results concluded that there is an average level of financial literacy among the salaried females of Delhi, which is matter of concern.

KEYWORDS: *Financial Literacy, Financial Attitude, Financial Behavior and Financial Knowledge*

INTRODUCTION

In a complex environment where the role played by the governments and employers had shrunk and the responsibilities of managing personal finances are completely on the shoulders of an individual, it is mandatory for them to be financially literate and capable enough for sustaining. It is imperative on the part of an individual to analyze the situation and make right decisions for managing his finance. The global competition is high and economy is also offering plethora of financial instruments. Females are more prone to get affected by the variety of financial instruments as a consumer if they are not enough financially literate.

The levels of financial literacy among different sections of society and its influence are of immense need for employers, policy makers, educators, etc. Thus it is important to identify barriers and suggest solutions for its growth (Lusardi A. and Tufano P., 2009). The level of financial literacy is low among adults (Lusardi A., Olivia S. Mitchell and Curto V., 2010). Around the world, the researches have been conducted by researchers and PISA revealed that the financial literacy levels are low among individuals thus they are not making appropriate use of financial services and instruments available in the market. Individuals save less for their future, take unwise decisions and are loaded with the debt (Mitchell, O.S., 2011). Such sort of behavior is more prevalent amongst the youths and students (Lusardi A., Olivia S. Mitchell and Curto V., 2010).

[*] Assistant Professor, Rukmini Devi Institute of Advanced Studies, GGSIPU, Delhi. E-mail: jyotiguptanet@gmail.com

[**] Professor, Rukmini Devi Institute of Advanced Studies, GGSIPU, Delhi, E-mail: dr.manishmadan1978@gmail.com

The RBI and Indian Government, like any other countries take many-fold initiatives for promoting financial literacy but the scenario and results are not very fruitful. The RBI made it mandatory for the banks to promote financial literacy and also released draft for the same in the year 2012 (RBI, 2012). In India students are generally dependent on their parents and majority of Business men are still dependent on traditional sources of investments and managing funds. Salaried individuals have to wait till 1st of every month and then they budgets their month accordingly. The study focuses on salaried individuals specially females, whom the researcher felt in the utmost need of being financially literate.

Being financially literate doesn't mean only awareness about few financial concepts, rather it compose of financial behavior, attitude and knowledge (INFE OECD, 2011). Studies revealed that there are a few datasets available which delivers the information about financial literacy (Lusardi, A., 2009).

OBJECTIVES OF THE RESEARCH

- To determine the level of financial literacy among salaried females in Digital Era.
- To find the correlation between the three variables (Financial Behavior, Financial Attitude and Financial Knowledge) with the financial literacy score.
- To formulate a model based on Multiple Regression Analysis.

REVIEW OF LITERATURE

While there are several definitions of financial literacy exists, all of them are focused on the understanding and awareness of the financial concepts and then implementing these concepts in real life situations thus making right decisions, which promotes financial wellness.

The OECD INFE, 2011 has defined financial literacy as follows:

'A combination of awareness, knowledge, skill, attitude and behavior necessary to make sound financial decisions and ultimately achieve individual financial wellbeing.'

Agarwalla et al. (2013) concluded that socio demographic factors influence the financial literacy of Individuals. The demographic factors which were studied and relationship determined were Gender, Age, Marital Status, Financial Decision Making Process, Budgeting of expenditure, Joint family (Family composition), Mother's education and Family financial situation. The results drawn were similar to other studies that socio demographic factors influence the financial literacy of Individuals. The demographic variables which were found to be relevant from the point of view of this study on financial literacy were gender, age, race, and marital status, number of children under 18 living in the household, monthly income, employment status, assets and debt. But as the information about the assets is difficult to obtain therefore the question asked was that whether respondent owns a house or not. An important variable included in the research was that whether the respondent filed an income tax return last year or not (Min Zhan et al.(2006). The study by Lusardi and Tufano (2009) revealed that males are more financial literate than females. Younger

section (below 30) answered the debt related questions wrongly hence debt literacy is also lower among this section. The research also conforms the finding of other researchers that there is a low level of financial literacy among younger section of the respondents (below 30) and older women (65 above). Financial literacy has been reported low among respondents who are divorced, widowed and separated (Lusardi and Tufano , 2009).

The study done by Aggarwalla et al. (2013) examined the relationship between three dimensions of Financial Literacy and found positive relationship between Financial Behavior and Financial Knowledge, however the study reflected negative relationship between Financial Attitude and Financial Behavior, which was contrasting and unexpected (Agarwalla et al., 2013). They found that financial knowledge and Financial Planning are closely related. It has been investigated that those individuals who displayed higher level of financial literacy are found to be in a habit of planning (Lusardi and Mitchell, 2008). Huston, 2010 in a study revealed that 4 common factors which are recurrently studied in 71 previous studies and found important form the point of view of financial literacy are personal finance, borrowings, saving/investing and protection(insurance or risk diversification. Also mentioned the basic concepts which are used in measuring financial literacy concept are TVM, Planning, Economy, Borrowing, Credit Cards, Loans, Mortgages, Savings/Investment, Stock, Bond, MF, Retirement Savings, Protection Concepts Are Insurance, Real Estate, Tax Planning, etc.

There was also a study which revealed that the respondents scored very low in literacy scales and financial numeracy. Moreover, less participation in stock market is observed from those respondents who are less financially literate (Christeli et al., 2010). The study by Puneet Bhushan, 2014 stated that there is a lack of awareness among individuals (salaried) about new financial products and services due to which they are deprived of their advantages. However they are relying on traditional financial products like fixed deposits, bank loans, etc.

RESEARCH METHODOLOGY, DATA ANALYSIS AND INTERPRETATION

Exploratory cum descriptive research design is followed in the given study. The target population under study is the salaried females in Delhi NCR. As reported by Statistical Abstract of Delhi issued by Government of India, there are 247794 working females in Delhi. By assuming the confidence level of 99% and confidence interval of 10, the sample size above 200 is sufficient (Lenth, R. V. (2001). The technique of convenience sampling was used for collecting data from the sample of 500 respondents, but only 213 was taken into consideration due to non responsiveness of few respondents and missing values.

According to Green(1991), there were two rules of thumb for selecting sample size while applying Regression Analysis i.e. to test the overall fit of the model the rule of 50 +8k (where k is number of predictors) can be applied however, to test the individual predictors the rule of 104 + k can be applied. In current study the k = 3, thus in both cases the size of 214 is acceptable.

Three variables were taken into consideration for determining the score of financial literacy of salaried females (OECD INFE, 2015). Socio demographic variables like education, marital status and family income was also studied along with two additional variables, which are “Process of financial decision making” & “Budgeting expenditures regularly”.

The questionnaire recommended by OECD INFE was used for data collection. OECD also provides a guideline for measuring financial literacy which suggests that Financial Literacy is the sum of Financial Knowledge, Financial Behavior and Financial Attitude.

Tavakol and Dennick (2011) suggested in an editorial that the researchers should use chronbach's alpha for increasing the accuracy and validity of their results. Also for testing the internal consistency and reliability of the scales (Likert), cronbach's alpha is recommended. The value above 0.7 is considered as a good value to carry forward (Joseph A. and Rosemary R., 2003). Martin and Altman, 2002 also recommended that for testing the content validity the cronbach's alpha is the best summary measure. The value of cronbach’s alpha in the given research is 0.778 which is greater than 0.7 hence the questionnaire can be considered as the reliable (Table 1).

Table 1: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.778	.692	20

Table 2: Average Score of FK, FB and FA

	N	Minimum	Maximum	**Mean**	Std. Deviation
FK	213	1.00	7.00	**4.4082**	1.70297
FB	213	1.00	7.00	**4.2160**	1.16997
FA	213	3.00	15.00	**8.8510**	4.31967
Valid N (list-wise)	213				

Financial Knowledge

The Variable naming ‘Financial Knowledge’ comprises of seven questions, which are used for assessing the numerical aptitude and conceptual knowledge of the respondents. Questions about interest rates, numeracy, and compounding, risk, return and risk diversification were included under the head of ‘Financial Knowledge’.

For each correct answer the score of 1 and for incorrect answer the score of zero was assigned. Thus the total score of 7 was the maximum score which can be obtained in ‘Financial Knowledge’. There are few respondents whose score is of 7 reflecting the high level of financial

knowledge but there are also a few respondents whose score is only one 1 out of 7 which reflects the poor level of financial knowledge.

Hypothesis: 1

Null: The average financial knowledge level of respondents is equal to 5.
Alternate: The average financial knowledge level of respondents is less than 5.
The average score of respondents out of 7 is 4.4082 (Table 2). This is lower than the assumed and acceptable level of 5. The p value (obtained from one- tail t-test) is .000 which is less than 0.05 thus we there is enough evidence to reject the null hypothesis in favor of alternate hypothesis (Table: 3). Therefore it can be concluded that the average level of financial knowledge is significantly different and less than 5. However for further analysis respondent's score was categorized into 3 categories and points were assigned accordingly. Respondents who scored 1,2 or 3 were given the lowest score of 1 only, respondents who scored 4 or 5 were given the score of 2 and the respondents who were considered as the acquirer of good financial knowledge and scored 6 or 7 were given the score of 3.

Table 3: T –test for Financial Knowledge

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
FK	55.699	212	.000	4.40821	4.2527	4.5637

Financial Behavior

Variable Financial Behavior comprises of eight questions which were asked from the respondents to assess their behavior towards financial matters.

Q-1 Are they responsible enough and makes household budget? ,
Q-2 Are they saving actively? ,
Q-3 Do they consider before buying anything? ,
Q-4 Do they pay all their bills on time? ,
Q-5 Are they keeping a close watch on their financial affairs?,
Q-6 Do they have any long term financial goal? ,
Q-7 Do they evaluate all financial alternatives before investing? &
Q-8 Do they prefer to borrow when stacked in a debt trap?

For each desirable response score of 1 is given and for undesirable responses the score of zero is assigned. It is a matter of concern that no female scored the maximum of 8 however the lowest

score is 1 only similar to the lowest score of financial knowledge. The average financial behavior score is 4.21 out of 8, which is approximately half way of the Behavioral score(Table 4).

Hypothesis: 2

Null: The average level of financial behavior score is equal to 6.
Alternate: The average level of financial behavior score is less than 6.

Table 4: t- Test for Financial Behavior

	Test Value = 0					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
FB	77.538	212	.000	4.21598	4.1091	4.3228

As stated above that the average level of financial behavior score of respondents is below 6 which are assumed and desirable score. After running one tail t-test analysis, the p-vales comes out to be 0.000 which is lower than the alpha value of 0.05 thus there is enough evidence to reject null hypothesis in favor of alternate hypothesis(Table: 4). Therefore the average financial behavior score of financial behavior is significantly different from and less than 6. This shows the low level of desirable financial behavior.

Financial Attitude

Variable financial attitude involves only 3 statements only which were scaled on 5 point Likert. The maximum ascore which can be obtained by the respondents is 15 and the minimum score is found to be 3, after analysis. The average score is 8.85 with the variance of 16.5 which can be considered as an average attitude of respondents towards financial matters (Table 2).

Hypothesis: 3

Null: The average level of financial attitude score is equal to 12.
Alternate: The average level of financial attitude score is less than 12.

Table 5: T- test for Financial Attitude

	Test Value = 0					
	T	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
FA	44.089	212	.000	8.85097	8.4565	9.2455

The p-value is 0.000 which is less than 0.05 thus rejecting the null hypothesis in favor of alternate hypothesis, hence the average level of financial attitude score is significantly different from and less than 12. Here 12 is the desirable level of financial attitude (Table: 5).

Financial Literacy Score

Above mentioned three variables were summed up for calculating the score of financial literacy. For reaching to the score all the variables were scaled down to 3 and the maximum score of 9 was considered for financial literacy. The average score of financial literacy is 5.24, which is less than 6 (Table 6). In this study the score of 6 assumed as the benchmark thus the score of 6 or above is considered as good and the score of 4 or below is considered as poor. The value determined is 5.24 which is an average financial literacy score of salaried females in Delhi NCR.

Hypothesis: 4

Null: The average level of Financial Literacy score is equal to 6.
Alternate: The average level of Financial Literacy score is less than 6

Table 6: Financial Literacy Score of Salaried Females in Delhi

	N	Minimum	Maximum	**Mean**	Std. Deviation
FL	213	1.78	7.82	**5.2404**	1.39702
Valid N (listwise)	213				

Table 7: T-test for Financial Literacy

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
FL	80.715	212	.000	5.24042	5.1128	5.3680

The one tail t-test p-value 0.000 from SPSS output states that the average financial literacy score of salaried females is significantly different from and less than 6 (Table: 7). Therefore it can be concluded that the salaried females in Delhi are not enough financially literate.

Hypothesis 5:
There is no significant relationship between Financial Behaviour and Financial Literacy Score

Hypothesis 6:
There is no significant relationship between financial attitude and financial literacy score

Hypothesis 7:

There is no significant relationship between financial knowledge and financial literacy score.
An established correlation between the three variables and the score of financial literacy is presented in Table 8. There is a positive correlation of .373 between the Financial Behavior and the level of financial literacy score reflects that the positive financial behavior can lead to increase in financial literacy level. Since the significance value is .000 in this case thus null hypothesis is rejected and it can be interpreted that there is a significant relationship between Financial Behavior and Financial Literacy Score.

The second and third hypothesis is also rejected in favor of significant correlation between financial knowledge and financial literacy score as well as significant correlation between Financial Attitude and Financial Literacy level of the respondents.

Table 8: Correlations

		Financial Behavior Scale to 3	Financial Knowledge Scale to 3	Financial Attitude Scale to 3	Financial Literacy
Financial Behavior Scale to 3	Pearson Correlation	1	-.075	.158**	**.373****
	Sig. (2-tailed)		.008	.001	**.000**
	N	213	213	213	213
Financial Knowledge Scale to 3	Pearson Correlation	-.075	1	.324**	**.699****
	Sig. (2-tailed)	.108		.000	**.000**
	N	213	213	213	213
Financial Attitude Scale to 3	Pearson Correlation	.158**	.324**	1	**.837****
	Sig. (2-tailed)	.001	.000		**.000**
	N	213	213	213	213
Financial Literacy	Pearson Correlation	.373**	.699**	.837**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	213	213	213	213

**. Correlation is significant at the 0.01 level (2-tailed).

For formulating a regression model of Financial Literacy following Hypothesis has been tested.

Hypothesis 8:
Coefficient of Financial Knowledge is equal to zero ($b_1=0$)

Hypothesis 9:
Coefficient of Financial Attitude is equal to zero ($b_2=0$)

Hypothesis 10:

Coefficient of Financial Behavior is equal to zero (b_3=0)

The correlation matrix (Table 8) output of SPSS is also presented to take a check on presence of multicollinearity assumption. Table 8 provides an idea of no multicollinearity in the data. Since for substantial presence of multicollinearity, the value of r should be greater than or equal to 0.9 (Andy Field, 2009), however in the given results none of the correlation value is greater than or equal to 0.9.

While conducting Multiple Regression two models were considered. In Model 1 Financial Knowledge is independent variable and Financial Literacy is dependent Variable. Model 1 is considered only for the reference and creating a base for the second model in the research. In Model 2 Financial Literacy is dependent Variable and Financial Knowledge (b_1) FKSCALETO3, Financial Attitude (b_2) FASCALETO3 and Financial Behavior (b_3) FBSCALETO3 are independent variables.

Hypothesis 11:

R square =0 (Variation explained by three independent variables in Financial Literacy is equal to zero).

Table 9: Model Summary[d]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.699[a]	.489	.488	.99994	.489	440.786	1	211	.000	
2	.952[b]	.906	.905	.43021	.417	2030.49	1	210	.000	1.742

a. Predictors: (Constant), FKSCALETO3

b. Predictors: (Constant), FKSCALETO3, FASCALETO3, FBSCALETO3

In Table 9, model 1 the value of R is .699 which represents correlation between Financial Knowledge and Financial Literacy, but the model of our reference is Model 2 which represents the multiple correlation between all three predictors and the outcome i.e. .952 and the value of R square is .906 which infers that 90.6% variance in Financial Literacy is explained by three predictors presented in the model.

The adjusted R square give the value of .905 which close to the R square, hence the model is well generalized. This means that if the model were derived from the population instead of the sample even then it would account only for .01% variation, which is a fairly good value.

The significance of R square is tested by using the F ratio. The change in the amount of variance that can be explained results into F ratio of 2030.4 which is fairly high and also significant ($p < 0.001$).

The Durbin Watson statistic's value of 1.7 is also a very good indicator of our assumption of whether the independent errors are tenable or not. As per the conservative rule suggested by Field A., 2009 that the value less than 1 or greater than 3 are reasons for alarming situations but in our case the value is 1.7; hence the assumption of independent errors is tenable.

Table 10: ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	440.729	1	440.729	440.786	.000[a]
	Residual	460.941	211	1.000		
	Total	901.669	212			
2	Regression	816.533	2	408.266	2205.894	.000[b]
	Residual	85.137	210	.185		
	Total	901.669	212			

a. Predictors: (Constant), FKSCALETO3
b. Predictors: (Constant), FKSCALETO3, FASCALETO3, FBSCALETO3
c. Dependent Variable: FL

For both of the models (Table 10) the value of F ratio is significantly high as 440.786 and 2205.89 which are also highly significant ($p<0.001$) These results can be predicted as that the first model improved our ability to determine the value of Financial Literacy but the second model of three predictors FK, FA and FB was even better.

Table 11: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t-ratios	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.712	.129		21.012	.000
	FKSCALETO3	1.338	.064	.699	20.995	.000
2	(Constant)	1.558	.061		25.471	.000
	FKSCALETO3	**.915**	.029	.478	**31.584**	**.000**
	FASCALETO3	**1.103**	.024	.682	**45.061**	**.000**
	FBSCALETO3	**1.209**	.030	.314	**46.031.**	**.000**

a. Dependent Variable: FL

In Model 2 (Table 11) Financial Knowledge (b_1) FKSCALETO3 has a coefficient of .915 which is also significant thus reject the null hypothesis ($b_1=0$), Financial Attitude (b_2) FASCALETO3 has a

coefficient of 1.103 which is also significant thus reject the null hypothesis (b_2=0) and Financial Behavior (b_3) FBSCALETO3 has a coefficient of 1.209 which is also significant thus reject the null hypothesis (b_3=0).

Each of these beta (b-values) has an associated standard error indicating to what extent these values would vary across different samples and these standard errors are used to determine whether or not the b-values differs significantly from zero. A t-statistics can be derived which tests whether a b-value is significantly different from zero. Therefore if the t-test associated with b-value is significant then the predictor is making significant contribution to the model. For this model, the Financial Knowledge (b_1) FKSCALETO3 has a b-value (b_1) .915(t= 31.58, p<0.001 i.e. p-value=0.000), Financial Attitude (b_2) FASCALETO3 has a b-value(b_2) 1.103 (t=45.061, p<0.001 i.e. p-value=0.000)and Financial Behavior (b_3) FBSCALETO3 has a b-value(b_3) of 1.209 (t-46.031, p<0.001 i.e. p-value= 0.000). Hence all are significant predictors of Financial Literacy. Also from the value of t-statistics we can see that the Financial Behavior and Financial Attitude have similar impact, whereas the Financial Attitude has less impact.

As per the t-test values and p-values (p< 0.001) all the coefficients of predictors are highly significant.

The relevant model for the research takes the form of:

FL= constant + b_1. FK + b_2.FA + b_3. FB

Financial Literacy = 1.558 + .915 Financial Knowledge + 1.103 Financial Attitude + 1.209 Financial Behavior.

The b-values explain the relationship between predictors and dependent variable, Financial Literacy. For one point change in Financial Knowledge the score of Financial Literacy would increase by .915 points by keeping other two variables constant. Similarly for one point change in Financial Attitude and Financial Behavior, the Financial Literacy score will increase by 1.103 and 1.209 points respectively, by keeping other two variables constant at a time. Thus all the three variables are having positive impact on financial literacy of salaried females however the t-value of financial behaviour is highest (Table: 11) thus it has a maximum impact on the financial Literacy Level. Table 12 can be referred for the Multiple Regression Model of Financial Literacy.

Table 12: Reporting Multiple Regression Model

	B	**SE b**	**β**
Constant	1.55	.061	
FKSCALETO3	.915	.029	.478
FASCALETO3	1.103	.024	.682
FBSCALETO3	1.209	.030	.314

Limitations and Implications of the study

The study has been conducted in a limited time frame which can be considered less for this kind of influential study. Also some kind of biasness can be there while collecting the data. The study is focused on working females in Delhi, however the questionnaire were mailed to 600 females randomly, hence data from some non-Delhi females also might have been included.

The model proves that the financial behavior, knowledge and attitude of working females towards their money matters affect their financial literacy level. It seems that there is an urgent need for improvement of the financial literacy level of the salaried females. This can be made possible by implementing valuable financial education programs and policies, which can help the ones who need it the most.

In our society, still women are considered as the ones who are less interested in dealing in their money matters, thus it is required to break these chains and design policies and programs which can make them independent in handling their financial matters. While designing any program the policy makers should keep in mind the level of knowledge of salaried females in Delhi, the attitude and behavior of females should also be improved and directed towards the financial management.

CONCLUSION

Indian economy is rapidly growing with digitization of financial markets. Varieties of financial instruments are available in the contemporary economy and their awareness is essential on the part of working females. Females comprise of major portion of workforce and potential consumers, therefore it is essential for them to be financially literate. As per the recommendations given by OECD, Financial literacy is a composition of financial attitude, financial behavior and financial knowledge of an individual. These three variables are significantly positively correlated with the financial literacy score of an individual, as concluded by this study.

Also the average financial literacy score of females who are salaried in Delhi is only 5.24, in fact some reported the lowest score below 2. It is a matter of concern for the economy that in a capital region, the females who are considered confident and educated, are scoring below 6 out of the score of 9 in financial literacy assessment. It can be concluded that government should initiate few more steps in this direction, so that the maximum and efficient use of financial markets and its instruments will be possible.

BIBLIOGRAPHIC REFERENCES:

Agarwalla, S. K., Barua, S. K., Jacob, J., & Varma, J. R. (2013).Financial Literacy among Working Young in Urban India, *Indian Institute of Management Ahmedabad, WP*, (2013-10), 02.

Bland, J. M., & Altman, D. G. (2002).Validating scales and indexes.Bmj, 324(7337), 606-607.

Field, A. (2009), *Discovering statistics using SPSS*.Sage publications.

Bhushan, P. (2014). An empirical study of financial and tax literacy of salaried individuals.

Christelis, D., Jappelli, T., & Padula, M. (2010). Cognitive abilities and portfolio choice, *European Economic Review*, 54(1), 18-38.

Field, A. (2009). Discovering statistics using *SPSS*, Sage publications.

GoI (2014). Statistical Abstract of Delhi-2014. Downloaded from http://www.delhi.gov.in/wps/wcm/connect/f508bc8046667b0e9cf6bcf5a4ed47e7/Stattistical+Abstract+of+Delhi+2014.pdf?MOD=AJPERES&lmod=66436406&CACHEID=f508bc8046667b0e9cf6bcf5a4ed47e7 on March 2016.

Gliem, R. R., &Gliem, J. A. (2003). Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales, *Midwest Research-to-Practice Conference* in Adult, Continuing, and Community Education, 80-88.

Green, S. B. (1991). How many subjects does it take to do a regression analysis, *Multivariate behavioral research*, *26*(3), 499-510.

Huston, S. J. (2010). Measuring financial literacy. *Journal of Consumer Affairs*, 44(2), 296-316.

INFE, O. (2011). Measuring financial literacy: core questionnaire in measuring financial literacy: questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy, *Pariz: OECD.*

INFE, O. (2012). Supplementary Questions: Optional Survey Questions for the OECD INFE Financial Literacy Core Questionnaire, *Retrieved March*, *10*, 2015.

Keskin, H. K. (2014). Programme for International Student Assessment (PISA) Reading Competencies: A Study of the Factors in Academic Reading, *Anthropologist*, 18(1), 171-181.

Lenth, R. V. (2001). Some practical guidelines for effective sample size determination, *The American Statistician*, *55*(3), 187-193.

Lusardi, A., & Mitchell, O. S. (2008).Planning and financial literacy: How do women fare? (No. w13750), *National Bureau of Economic Research*.

Lusardi, A., & Tufano, P. (2009). Debt literacy, financial experiences, and over indebtedness (No. w14808). *National Bureau of Economic Research*.

Lusardi, A. (2009). The importance of financial literacy. *NBER Reporter*, *2*, 13-16.

Lusardi, A., Mitchell, O. S., & Curto, V. (2010). Financial literacy among the young, *Journal of Consumer Affairs*, *44*(2), 358-380.

Mitchell, O. S. (2011). Managing Risks in Defined Contribution Plans: What Does the Future Hold?, *Growing Old: Paying for Retirement and Institutional Money Management After the Financial Crisis*, 1-27.

OECD INFE, O. (2011). Measuring financial literacy: core questionnaire in measuring financial literacy: questionnaire and guidance notes for conducting an internationally comparable survey of financial literacy, *Paris: OECD*.

RBI (2012). National strategy for financial education.Reserve Bank of India. Downloaded from https://rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/NSFE016072012.pdf on March 2016.

Tavakol, M., & Dennick, R. (2011).Making sense of Cronbach' salpha, *International journal of medical education*, 2, 53.

Zhan, M., Anderson, S. G., & Scott, J. (2006). Financial knowledge of the low-income population: Effects of a financial education program, *J. Soc. & Soc. Welfare*, 33, 53.