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Title: **GENDER GAP IN FINANCIAL KNOWLEDGE AMONG TEACHING STAFF: A STUDY OF UNIVERSITY OF ALLAHABAD, PRAYAGRAJ, UTTAR PRADESH, INDIA**

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GENDER GAP IN FINANCIAL KNOWLEDGE AMONG TEACHING STAFF: A STUDY OF UNIVERSITY OF ALLAHABAD, PRAYAGRAJ, UTTAR PRADESH, INDIA

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Abstract—

The Complex of global financial markets makes the 21st century different from previous era. There are various varieties of financial products in the market from which to choose among with a wider array of features and burden of financial security has been shifted from employers to employees. Teaching staffs are those employees who receive regular salary, it divides salary into various subparts of their expenditure. A lot of financial decisions have to be taken at the time of fund divisions. In these, some are for routine expenditure nature and some are for investment for future uncertainties and gains. This study examines the gender gap in financial knowledge and further measured financial knowledge among teaching staff. The overall financial knowledge, female have mean score 46% (4.17 out of 9) and male have 57.93% (5.214 out of 9). From study results, Gender gaps were found; the female staff scores lower than male staff and knowledge among teaching staff; the average correct score on the basic financial knowledge questions was 70.83 % (2.125 out of 3) shows that medium level knowledge and on advance finance knowledge questions the score was 42.83 % (2.57 out of 6) suggest that low level knowledge. The average correct scores of overall financial knowledge was 52.17% (4.69 out of 9) indicated that financial knowledge among teaching staff is low. Results shows that teachings staff in India having medium levels of numeracy, were unable to transfer that knowledge to do financial computations and decisions. The study findings provide directions for future research and suggested policy to improve financial knowledge among women and teaching staff.

KEYWORDS: Gender, financial knowledge, teaching staff, numeracy, financial market

JEL Classification: C93, D12, D14, J16

INTRODUCTION

At present, the financial market is increasing gradually, the entire economy rests on financial market. Along with this, financial function is also expanding in the regular life of every human being, for all this it has become necessary for people to have financial knowledge so that they can manage their finances according to their need. Financial education helps to participants' effective budgeting behavior and home ownership preparedness (Shelton & Hill, 1995), (Hogarth, Financial Education and Economic Development, 2006). The financial products and services have reached at people' door more and easily than before, by these, the complexities are to increasing as steadily. The deregulation of financial market, technologies advancement and financial product is going to create doubt and confusing array of investing, decisions to be made with fearful. Global market has to grow rapidly with their reformation according to their new financial product inventions; in this the future market of financial product is to growing continuously and their impact

on modern society at large. World economy has to move through technological advancement and their affection to face by the most of developing country, it is reality and is not bended; it is a way that people have not any choices because it means of all things at present and future time.

Economy may provide monetary resources for human transact to parties and consume product and services easily, this all that human not produce fund by him in their own and their wish to make profit and earn money at large amount for better life in future time. For all these human make money investment in financial products & instruments, have responsibility to manage their personal finances in a better way and securing their financial future. In this it is not an easy to take rational financial decisions without knowledge. When making financial planning, it is important know about pros & cons, time of return and risk factors of financial products and instruments etc. Well financial knowledgeable people would know how to manage their fund, how financial institutions work and possess a range of analytical

skills, after this deep analysis people are able to handle their financial affairs (Beal & Delpachitra, 2003). Financial educated consumers should make better decisions for their families, increasing their economic security and wellbeing. Financial knowledge and information has become necessary to avoid and minimization of risks. Money play important role in human lives, people have fund sources as a form salary, profit, dividend etc. Teaching staffs are people who have salaried as monthly wise. The salaried person has a routine fund source is used on his necessities things. At each level of human life, the financial knowledge is important and through knowledge, they can manage their financial matter and system as efficiently. People who more financial literate are more likely to plan for retirement and accumulate wealth (Lusardi and Mitchell 2008, Bucher Koenen et al. 2011, Rooij et al. 2012).

There is limited literature available on the financial knowledge of teaching staff. Through this limitation, we review the available literature on financial knowledge and literacy level of staff and employees in the Indian context and in different part of the world. The measurement of financial knowledge, previous studies have applied different methods. There are eight questions multiple choice for test of financial knowledge in relation to basic concept such as simple and compound interest calculations, inflation and return, inflation and prices, risk and return, and the role of diversification in risk reductions (Atkinson & Messy, 2012), (Agarwalla, 2012, 2013). Some studies measure financial knowledge in two parts: basic and advance, three questions in basic and eight question include in advance, total eleven questions used for measurement of financial knowledge of individuals (Lusardi, 2008, 2015; Rooij et al. 2011; Jayaraman et al. 2018). Previous literature found that people have low financial knowledge, the response scores is very poor and they fail to make correct financial decisions because they have not awareness and educated in their personal finances (Volpe et al. 2002; ANZ, 2003; OECD, 2005; Lusardi et al. 2007, 2010, 2011, 2015; Agarwalla et al. 2012, 2013;). Women share a larger burden in comparison to men like responsibility of raising families, later start carrier, earn less fund due shortage of time. Due to all these women face more challenges in their money management (Anthes et al. 2000; Timmerman et al, 2000). We find in literature that women consistently achieve lower score than men (Volpe et al. 1998; 2002, Gold Smith et al. 1997, 2006; Bucher-Koenen, 2017). Women have lower debt literacy, engage in more high cost methods of borrowing and engage in

costly credit card behavior (Mottola, 2013; Lusardi et al. 2009).

In India, studies found same results to other countries findings that financial knowledge of Indian is inadequate and very low level. This finding significantly lower than the figure reported from many other (Agarwalla, 2012; 2013; Jayaraman et al. 2018). Numeracy knowledge and financial literacy is very poor among forest dependent communities of Andhra Pradesh (Balakrishna & Virmani, 2019). In gender, Indian women are more financial knowledgeable and achieve higher scores than men (Jayaraman & Jambunathan, 2018). This is the contrasting results to other developed countries. From the reviewing literature process there is no one study conduct on teaching staff in India. The main objectives of this study to measure the financial knowledge of teaching staff and examine the gender gap in staff's financial knowledge. The findings of this study enrich the literature and help to policy makers.

DATA SET AND METHODOLOGY

This study explored the level of financial knowledge among teaching staff. The teaching staff of University of Allahabad and its constituent colleges as considered as a population of the study. Total number of teaching staff is 282 during 2017 year. A total 260 paper questionnaires were distributed and 110 questionnaires were returned. However only 56 of them were complete and usable for this study, in this 56, there are fifty percent (28) of total sample size is male and fifty percent (28) is female respondents.

For this a survey questionnaire designed by researcher with help of Lusardi et al. 2008(a). The questionnaire was divided into two parts; first part is related to know about basic and numeracy knowledge of the respondents and second part is related to advance knowledge about financial market. The final questionnaire includes multiple choices questions and in this close ended questionnaire. Three questions related to basic financial knowledge, six questions related to advance financial knowledge and all these nine questions have in overall financial knowledge of all respondents. In basic, compound interest rate, inflation & percentage calculation type questions involved and in advance knowledge of stock market, stock, mutual fund and bond. The questionnaires were distributed and collected in 2017. Correct response was coded by 1 and incorrect response was coded by 0. The sum of score which is ranged from 0 to 9 provided a measure of total financial knowledge. The responses of each questions, sections and the total survey are measured by mean percentage of

correct scores. The mean of correct responses is grouped into three categories. First, mean is more than 80% of maximum score categorised under high level knowledge. The mean between 60% to 79% of maximum score represents a medium level knowledge. Mean below 60 % of maximum score are categorised under a low level financial knowledge.

Table 1 Sample Characteristics

Characteristics	Male	Female	Entire sample
	Frequency(%)	Frequency(%)	
Marital Status			
Married	44.64	37.50	82.14
Unmarried	5.35	12.50	17.86
Age			
25 - 35	7.14	5.35	12.5
35 - 45	12.5	16.07	28.57
45 - 55	10.71	19.64	30.35
55 - 65	19.64	89.28	28.57
Educations Levels			
Post - Graduate	1.78	0	1.78
Doctoral	48.21	50	98.21

Source: Field Survey, 2017; Note: Total sample size (n=56), Male (n)=28, Female(n)=28

RESULTS

Basic Financial Knowledge

The first part, measurement the basic financial knowledge and it defined by three questions like first question related to bank interest rate, second inflation rate and third related to percentage calculation. These three questions help evaluate whether staff display knowledge of fundamental economic concepts and basic numeracy. if all these three questions correctly solved and answered fully then respondents score is maximum three it is called literate in basic financial knowledge. The table 2 show that 75 percent of teaching staff correctly answered the compound interest rate calculation question, it means that major teaching staffs are good efficient in calculation of compound interest and their knowledge. In inflation question, the 68 percent of total respondents correctly answered. By this response we find that the respondents have less interested and lower knowledge in inflation related topic in comparison to interest rate. In percentage calculation the 70 percent of total teaching staff correctly answered. In third question responses we see that the teaching staff have good in percentage calculation but it is lesser in comparison to compound interest calculation. The study show that the overall 70 percent of teaching staff is correctly answered of basic knowledge questions and when we see the table as gender wise then we see that the female teaching staffs is less answered in comparisons to male teaching staff. According to answered the basic questions, the study shows that the basic financial knowledge is good because the questions are basics related to economic concept and numeracy and respondents are doctoral candidate then these questions are easy to respond correctly.

Table 2 Distribution of teaching staff's responses to Basic Financial Knowledge questions

Basic Financial Knowledge questions	Correct Answer N(%)		
	Male N(%)	Female N(%)	Total N(%)
Suppose you had deposit 1000 rupees in your saving account and the compound Interest was 8% per year. After 2 years, How much you think have in the account?	21(75)	21(75)	21(75)
Imagine that interest rate on year saving account was 6% per year and inflation was 7% per year. After 1 year, how much would you be able to buy with the money in this account?	20(71)	18(64)	38(68)
If your monthly income is 30000 rupees and you save 25% in bank account, 10% on children education and rest of your income you send on monthly house expenditure. Then how much rupee you spent on education?	21(75)	18(64)	39(70)

Sources: Field Survey 2017

Advance Financial Knowledge

The second part, measurement of advance knowledge of teaching staff in financial market knowledge. If all these six questions correctly solved and answered, then respondent score is maximum six, it is called literate in advance financial knowledge. Table 3 show that responses of stock market questions only 48 percent of teaching staff correctly answered. Return of assets question responses is weakest in correct responses among all responses. Only 27 % staff answered correctly and more than 70 percent have not knowledge about return concept. It means that the teaching staff is very low level knowledge about return of financial assets and liabilities. Checking of risk point through two (share & bond) sources of fund, in this questions teaching staff respond 59 percent correctly and 41 percent incorrectly but correctly respondent's frequency is good in comparisons to other questions of advance financial knowledge but it is not satisfactory. As per gender wise analysis we observed that the female teaching staff is less answered in comparisons to male. In other word result show that the average score of female teaching staff is very poor in comparison to male score.

According to correct response rate in the advance questions, the study shows that the advance financial knowledge is not good. The questions of advance knowledge were not toughed for teaching staff; it is just a common advance knowledge which is shown in daily newspapers etc. Finally, we say that the status of advance financial knowledge of teaching staff is poor and categorised under low level knowledge.

Table 3 Distribution of teaching staff's responses to Advance Financial Knowledge

Advance Financial Knowledge questions	Correct Answer N(%)		
	Male	Female	Total
	N(%)	N(%)	N(%)
Which of the following statements describes the main function of the stock market?	17(61)	10(36)	27(48)
Which of the following statement is correct? If somebody buys the stock of B Ltd in the stock market?	15(54)	10(36)	25(44)
Which of the following statement is correct about mutual fund?	15(54)	9(32)	24(43)
Which of the following statement is correct? If somebody buys the bonds of B Ltd in the stock market?	11(39)	9(32)	20(35)
Considering a long time period (for ex.10 or 20 years) which assets normally gives the highest return?	8(29)	7(25)	15(27)
Stocks are normally riskier than bonds.	18(64)	15(53)	33(59)

Data Source: Field Survey 2017

Over all Financial Knowledge

To measure the overall financial knowledge of respondents, respondent's total score was calculated as the percentage of correct responses of all nine questions. Out of these, basic financial knowledge consisted of three questions and advanced financial knowledge consisted of six questions. The overall total financial knowledge scores are obtained from the summation of score of the basis and advance financial knowledge. Summarizes the average and standard deviation of participant's answers are given below in table 3.

Table 4 Over All Financial Knowledge

Financial Knowledge		N	Range	Min	Max	Mean	Std. Dev.
Basic Financial Knowledge	Male	28	3	0	3	2.214	1.286
	Female	28	3	0	3	2.03	1.29
	Total sample	56	3	0	3	2.125	1.28
Advance Financial Knowledge	Male	28	6	0	6	3.00	2.21
	Female	28	6	0	6	2.14	2.20
	Total sample	56	6	0	6	2.57	2.23
Total Financial Knowledge	Male	28	9	0	9	5.214	3.178
	Female	28	9	0	9	4.17	2.90
	Total sample	56	9	0	9	4.696	3.062

Source: Computed by Author

As per table 4 the average of basic financial knowledge is relatively high (2.12 out of 3), which indicates that the overall basic financial knowledge of teaching staff is good and it categorized as medium level of financial knowledge. This suggests that the respondents have a good understanding of compound interest, inflation, and percentage calculation possibly because the respondents are in teaching job and have doctoral degree. In basic finance knowledge male teaching staffs are have correct responses mean is 2.21 out of 3 (70%) and Female teaching staffs are having correct responses mean is 2.03 out of 3(67.66%), according to both results we observed that the male teaching staffs are in good position to understand about numeracy knowledge in comparisons to female.

In advance knowledge table shows that the average score is 2.57 out of 6 (42.83%) which indicates that the overall teaching staffs have not good

understanding in advance knowledge. In advance financial knowledge the female teaching staffs average correct respond is 2.14 out of 6 (35.66%) and male teaching staff have correct respond average is 3 out of 6 (50%), through this position again we see that the female teaching staff have low financial knowledge score in comparison to male but in comparison to basic knowledge, women achieve more less scores in advance literacy knowledge. It means that women have face more difficulty in advance level questions.

In total financial knowledge results show that the overall financial knowledge has average score is 4.70 out of 9 (52.22%) which means around fifty percent of respondents have to knowledge of financial knowledge but study also infer that the total financial knowledge average score is 4.70 for total financial knowledge is partly due to high average of basic knowledge score. Here female teaching staff's average score is 4.17 out of 9 (46.33%) and male staff's average score is 5.21 out of 9 (57.88%), again this data shows that in overall financial knowledge, the female staffs have relatively less knowledge to male.

Discussion, Limitations and Scope for Future Research

The present study used close-ended questionnaire to solicit primary data from field survey. Based on the correct responses of teaching staff, we compare the levels of financial knowledge between men and women and further measured financial knowledge among teaching staff. Based on study result, we say that gender gap is found in financial knowledge. The scoring gap among men and women score is around 12%, this results suggest that men have higher financial knowledgeable than women. This outcome is to consistent found by previous studies (Gold Smith et al.2006; Chen & Volpe 1998, 2002; Lusardi, 2009, 2011; Bucher-Koenen et al. 2017). From the study findings we see that financial knowledge among staff have low level. Results of this finding is; lack of financial knowledge employees engage in poor financial decisions, high tax mistakes, fails to saving and retirement planning etc. Why financial knowledge is important in India? because I India, burden of financial security of employees in later life has shifted from employer to employees with the decrease in pension benefits. There are very few studies in India based on this issues but in developed countries have a large study on this issues, are found that in absence of financial knowledge various dangerous problems can be happen for example, high level of consumer debt, growth in various loan and bankruptcy etc. and also

various researchers find in study that people who take financial education in their study time were more likely to have saving rates and higher net worth (Bernheim et al. 2001). Higher Individual's financial knowledge are having more positive financial management behaviors, used more efficiently financial product and services, makes better decisions for their families, increasing their economic security and well beings (Hogarth, 2002). Through this study results we can say that the Indian are very weak in their financial knowledge, due to this India suffer very big problem of financial market crisis, because all funds are invested in idle investment and there is no any capital formation in absence of financial education. This study makes a contribution to the overall stakeholders; teaching staff, women, public etc. Study suggests that there is a need to increase financial knowledge because role of financial knowledge is going to be more for individual and community economic development as well as improving quality for their families. Financial education programme will be more effective for employees, state should provide education program from time to time. There should be arrangements of financial counselor in institutions, organize time to time seminars, conference need to take effective measures to improve people's knowledge about finance for enhance their knowledge. The financial industry should initiate for improving financial knowledge of consumers and policy makers should make policies about financial education at school level and college level. This paper present interesting opportunities for policy discussion and provides a place for examine these consequences of low level financial knowledge of individuals. Lastly future studies should focus on how to improve teaching staff 's financial knowledge and their ability to handle financial decision. This issue is relatively a new in India; hence further research should be conducted in this area and should focus on the followings questions: how financial knowledge can increase people involvement in investing in financial market; How individual financial knowledge affect their income and savings; How socio-economic variables of individual affects financial knowledge of individuals.

Limitations and Scope for Future Research

This research study has its own limitations. These limitations will be discussed in conjunction with future research directions.

1. The data for the study were collected from teaching staffs of university of Allahabad, Prayagraj, only. However, in future research the others professions, service employees can be considering and may produce different results.

2. The sample of respondents was just 56 due to time constraints; further study can be by taking a larger sample.
3. Further a study conduct among employees to find out determinants of their financial knowledge score.
4. A comparative study of teaching staff belongings to different academic disciplines, namely, commerce, science, arts, etc. can be conducted to find out the difference in their financial knowledge scores.
5. Further, a comparative study among teaching and Non-teaching employees can be conducted to find out the differences their financial knowledge levels.

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