

## Demographic Vs financial literacy: A study among earning women in Pondicherry

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### Abstract

Having financial knowledge and its effective and efficient execution in personal life is a necessity in the modern life and would help to overcome financial hardship. A survey was conducted among 800 women of Pondicherry to check the effect of demographic factors on financial literacy. Multiple linear regression was used and the result showed that number of years of completed education influence financial literacy; to highlight the fact that number of years of education and age of a person makes him/her to have knowledge to deal with finance.

**Keywords:** Demographic, financial literacy, Pondicherry

### 1. Introduction

Financial literacy is become integral part of everyone's life, an individual is forced to compete financially strong and seeks to have better financial well-being in order to have a thriving status in the society. According to experts (Noctor *et al.* 1992) financial literacy is the ability to make informed judgments and to take effective decisions regarding the management of money'. Personal financial literacy is the ability to read, analyze, manage and communicate about the personal financial conditions that affect material Wellbeing. It includes the ability to discern financial choices, discuss money and Financial issues without (or despite) discomfort, plan for the future and respond competently to life events that affect every day financial decisions, including events in the general economy' (Vitt *et al.* 2000). In India, Reserve Bank taking various step to create awareness about importance of financial literacy among the common people, RBI taking new initiative to launch basic financial education as part of curriculum from school level onwards.

People of yester years (old generation) did not have literacy; they were not aware of financial policies and plan; still they had managed their financial affairs successfully. It is also a fact that women of yester years had played very effective role in managing the financial system of a family efficiently through secret savings within the four walls of the house; by involving in chit fund operations and had courage to purchase the assets like utensils required for the family. Contrastingly, the women of today have financial income through salary but lack in financial knowledge. Women of yester years were without sources of income but created income and managed them successfully and uplifted the family whereas women of today have fixed sources of income but do not have knowledge to deal with money for their successful living. This has motivated the researchers to identify the financial status of women in terms of literacy.

This study conducted to test the influence of demographic factor on financial literacy; age, number of years of completed education and personal income of the respondents are used as independent variables and financial literacy as dependent variable.

### 2. Review of Literature

There are abundant research studies to measure the financial literacy in foreign countries but in India, only a few researches concentrate on financial literacy. Most of the researches focused on measuring financial literacy among gender, educational status, income etc., Majority of the research on financial literacy say, women have low level of financial literacy compared to men. However, very limited researches concentrated on financial literacy of women.

Many studies have been conducted to know the college student's financial literacy and bring forth the results, the college students are not knowledgeable about personal finance and the incapability will limit their ability to make informed financial decisions (Haiyang Chen and Ronald P. Volpe 1998) [8]. In general, the management students have a satisfactory level of knowledge and skills of financial literacy. For constraints of financial literacy, the students have a good perception of constraints for financial literacy (Deerajen Ramasawmy *et al.* 2013). Financial literacy is low; less than one-third of young adults possess basic knowledge of interest rates, inflation and risk diversification. The college educated male whose parents had stocks and retirement savings was about 45 percentage points, more likely to know about risk diversification than a female with less than a high school education whose parents were not wealthy (Annamaria Lusardi, *et al.* 2010) [2]. Financial literacy is lowest among financially poorer students, those with less English ability, and those with less academic ability. However, relative poverty and lower English ability were not related to the ability to apply financial knowledge (Michael P 2013) [10].

To test the objectives of this study there are three demographic factors used as independent variables; such as respondent's age, income and number of years education completed. Few researchers found that those three demographic factors influencing more in financial literacy of the respondents. (Mandell 2008, Lusardi *et al.* 2010) [2]. According to the previous researches age factor influencing more in financial matters; age has positive relationship with the financial literacy; respondents in the age group of 23 – 29 and 40 or older have greater financial knowledge than other age group (Ronald

P. Volpe 1998) [8]. A research found that, financial literacy level was low among teenagers (Michael P. Cameron 2013) [10]. Financial satisfaction is correlated with age, as older respondents tended to have higher financial satisfaction than younger ones (John L. Murphy 2013). Personal income of the respondents has direct impact on their financial decision; according to the previous research income of the respondents has positive impact on their savings behaviour (Nurul Shahnaz Mahdzan and Saleh Tabiani 2013) [12]. The greater the income, the greater the financial satisfaction (Davis & Helmick, 1985; Godwin, 1994; Mugenda *et al.*, 1990; Porter & Garman, 1993; Titus *et al.*, 1989; Walson & Fitzsimmons, 1993; Wilhelm *et al.*, 1993). Educational qualification of the respondents was positively related to financial literacy (Dr. Taqadus Bashir *et al.* 2013). The level of financial literacy is found to be very low even among respondents with high level of schooling (Carlo de Bassa Scheresberg 2013) [5]. Financial satisfaction was higher among persons with higher education and lower among those with less education (John L. Murphy 2013). It was found that education plays an important role in the financial literacy of women and education needs to start at home and continue through business courses at the university level (Martha Klatt 2009).

**3. Methodology used in the study**

As per 2011 census there are 77,617 earning women in Pondicherry, out of which 1% was selected (776) from total population as sample but to strengthen the sample size efforts were taken to get 800 respondents from different walks of life. Respondent women are from different classes like salaried, daily wages earners, registered business owners, unregistered business owners and professionals. Sample was selected through convenient sampling to include sample from all categories. This study used primary data; which was collected through a comprehensive questionnaire covering major aspects of personal finance like, savings; investments, insurance, borrowing and expenditure were used. The survey questionnaire had four parts such as, 1) Personal details, 2)

Financial knowledge, 3) Financial Behaviour and 4) Financial Attitudes. The respondents were asked to answer for 42 questions out of which 8 questions related to respondent’s demographic details, 10 questions related to financial knowledge, 13 questions related to financial behaviours and 11 questions related to financial attitudes.

To bring financial literacy scores, correct and positive responses of each participant would be assigned 1 point and the total scores were determined for each part of financial literacy like; financial knowledge, financial behaviour, and financial attitudes (all three combined to get financial literacy score). Multiple linear regression model was built to test the significance of relationship between independent variables and financial literacy.

**4. Analysis and Interpretation**

Review of literature gives an impression that financial literacy level of women lower than men and therefore, efforts were made through the study to see the level of financial literacy. The respondents were classified into five groups based on their sources of earnings; a) Salaried women, b) Daily wage women, c) Registered business women, d) Unregistered business women and e) Professional women. 800 women from all these categories were part of the sample.

Multiple Linear Regression Analysis was used; to test the significance relationship between Independent Variables (3 IVs) and Dependent Variable (1 DV); as per the listed model.

$$Y = a + bX_1 + cX_2 + dX_3 + \dots + e$$

Where;

- Y* = Financial literacy scores
- A* = Constant;
- b, c, d,* = The slope of regression line,
- All *X* = Independent Variables.
- X<sub>1</sub>* = Age
- X<sub>2</sub>* = No. of years of completed education
- X<sub>3</sub>* = Income
- e* = Random term associated with each observation

**Table 1:** Results of Multiple linear Regression Analysis by considering financial literacy as a dependent variable and demographic variable as independent variables

Coefficients <sup>a</sup>							
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
		B	Std. Error	Beta			
1	(Constant)	8.845	1.136		7.783	.000	
	Age	.156	.022	.270	7.229	.000	
	No. of years of completed Education	.380	.053	.310	7.223	.000	
	Income	0.00001453	.000	.041	.968	.333	
2	R <sup>2</sup> value					0.143	
3	Adjusted R <sup>2</sup> value					0.139	

It is seen that the predictors of financial literacy are Age and Number of years of completed education. Coefficients show that number of years of completed education has the strongest impact on financial literacy than age factor. Whereas, personal income of the respondents has not influenced the financial literacy. The study supports the study done by Noor Azizah Shaari *et al.* 2013 [11]. According to them year of study has the strongest impact on financial literacy and it is the strongest predictor financial literacy among all the IVs (Noor Azizah Shaari *et al.* 2013) [11]. Educational level of the respondents

statistically significance with the borrowing habits of them (Mohamed E. Ibrahim & Fatima R. Alqaydi. 2013) [1]. The regression results indicate that age, education, race and gender were significant predictor of financial literacy (by John L. Murphy. 2013). Gender, Educational level and income have statistically significance with the financial literacy of the respondents (Ani caroline Grigion potrich. 2015) [15]. It is known fact educational level positively influence in everyone’s life, through more education a person may acquire practical knowledge and awareness on personal financial dealings. The

following if the model fit:

$$\text{Financial Literacy} = 8.845 + 0.156 (\text{Age}) + 0.380 (\text{Number of years of completed education}) + e$$

To predict the financial literacy (y value) two assumptions were made; assume if given age of the respondent is 40 and if number of years of completed education is nil or start from 10

years to 20 years. The second assumption is if age starting from 25 to 65 and number of years of completed education is at Under Graduation level (15 Years). The following two table describe about the changes in y value according to change is age and number of years of completed education.

**Equation; 1.**  $\text{Financial Literacy} = 8.845 + 0.156 (40) + 0.380 (\text{No. of years of completed education}) + e$

**Table 2:** Financial Literacy scores obtained through regression Model fit, for the same age level but with different Number of years of education”

S. No.	Constant	Age		No. of years of completed Education		Y Estimated financial literacy scores	Changes from previous financial literacy
1	8.845	(0.156 * 40)	6.4	(0.380 * 0)	0	15.245	-
2	8.845	(0.156 * 40)	6.4	(0.380 * 10)	3.80	19.045	3.80
3	8.845	(0.156 * 40)	6.4	(0.380 * 12)	4.56	19.805	0.76
4	8.845	(0.156 * 40)	6.4	(0.380 * 15)	5.70	20.945	1.14
5	8.845	(0.156 * 40)	6.4	(0.380 * 16)	6.08	21.325	0.38
6	8.845	(0.156 * 40)	6.4	(0.380 * 17)	6.46	21.705	0.38
7	8.845	(0.156 * 40)	6.4	(0.380 * 18)	6.84	22.085	0.38
8	8.845	(0.156 * 40)	6.4	(0.380 * 19)	7.22	22.465	0.38
9	8.845	(0.156 * 40)	6.4	(0.380 * 20)	7.60	22.845	0.38

The reason for considering Number of years of education is 10, 12, 15 is to indicate Indian education system in schools and college. 15 years indicate Graduation; 17 years indicate completion of Post-Graduation. After the 17 years of education people may do their certificate course, professional degree like doctoral programme etc. Moreover, a person can concentrate towards education up to 20 years in their life. The above table

reports the equation one financial literacy is changing with consecutively; it means every year of completed education will influence in financial literacy level at 0.380 if the given age of the respondents is 40.

**Equation; 2.**  $\text{Financial Literacy} = 8.845 + 0.156 (\text{age}) + 0.380 (15 \text{ years under graduation level}) + e$

**Table 3:** Financial literacy scores obtained through regression model fit, for the same Number of years of education but with different Ages.

S. No.	Constant	Age		No. of years of completed Education		Y Estimated Financial literacy scores	Changes from previous financial literacy
1	8.845	(0.156 * 25)	3.9	(0.380 * 15)	5.7	18.445	-
2	8.845	(0.156 * 30)	4.68	(0.380 * 15)	5.7	19.225	0.78
3	8.845	(0.156 * 35)	5.46	(0.380 * 15)	5.7	20.005	0.78
4	8.845	(0.156 * 40)	6.24	(0.380 * 15)	5.7	20.785	0.78
5	8.845	(0.156 * 45)	7.02	(0.380 * 15)	5.7	21.565	0.78
6	8.845	(0.156 * 50)	7.8	(0.380 * 15)	5.7	22.345	0.78
7	8.845	(0.156 * 55)	8.58	(0.380 * 15)	5.7	23.125	0.78
8	8.845	(0.156 * 60)	9.36	(0.380 * 15)	5.7	23.905	0.78
9	8.845	(0.156 * 65)	10.14	(0.380 * 15)	5.7	24.685	0.78

Results obtained in above table is after assuming same number of years of education lie degree (15 years) but with different age of respondents. It is seen that financial literacy score is increasing every 5 years with the age of the respondents. It means every five years of age increase will lead to increase the financial literacy at 0.78 (0.78/5 = 0.156) if average number of years of completed education is at under graduation level. 0.156 Score would be increase for every year of Age.

It is derived through regression model that increase in level of education and increase in age of person, would increase the financial literacy score of person. Age factor will give maturity in everyone’s life and the maturity will help the people to take strong financial decision. If the number of years of completed education is increase a person will get awareness about the various financial concepts like savings, insurance, investment, lending and borrowing etc.

The finding of this study also has support from earlier literature. High financial literacy level was found when

education level is increasing from elementary school to high school, from higher education to specialization or MBA, and from this level to Masters’/Ph.D. It indicates a strong relationship between education and financial literacy (Ani caroline Grigion potrich. 2015) [15]. The average age from 30 – 40 years is associated with higher financial literacy levels and it is low among young and elderly individuals (Agarwal *et al.* 2009).

**5. Conclusion**

This survey conducted among 800 earning women in Pondicherry to test the influence of demographic factor on financial literacy; age, number of years of education completed and personal income of the respondents are used as independent variables and financial literacy as dependent variable. The quality and consistency of the survey was assessed by using Cronbach's alpha and the reliability score was 0.799. Multiple linear regression model was built to test

the significance relationship between Independent Variables and Dependent Variable. As per the results independent variables are significantly accountable for variations in the financial literacy up to 14.3 percent. Number of years of completed education and age influence on financial literacy but personal income of the respondents is not influence on financial literacy of the respondents. The model it was tested with two assumption and they showed that with increase in age and number of years of completed education financial literacy of that person increases, but there is an intriguing question, whether mere increase in age would help a person to acquire financial literacy without any other factors like education is for further researches to find out.

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