Is financial literacy a factor in shaping wellbeing of elderly?
Evidence from Urban India

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Amidst current evolutions in the financial market, the stability of the word economy has declined. Majority of the economies faced recession resulting in the decline in the world's output, rise in inflation and unemployment (Taft et al., 2013). It has also threatened the financial wellbeing and economic concerns of individuals which may further adversely affect their psychological and physical health (Godfrey, 2006; Van Praag et al., 2003). Further, the availability of wider range of financial products and services has made financial decisions multifaceted and more complicated. The changes in the financial market have, therefore, necessitated the need for individuals to be more knowledgeable and competent in administrating their finances (Mazdhan & Taibiani, 2013).

The world is also witnessing a shift in its demographic profile with a rapid increase in the proportion of elderly population. Despite the increase, this demographic group is relatively neglected in the field of economic research. Elderly often face unique financial challenges, for instance, till how long their savings will last or how can they ensure their needs are met as they get older; what government benefits they are entitled to or whom should they rely for managing financial affairs especially when their mental or physical health deteriorates and those in the 50s of their life may struggle in deciding the amount they should start savings so as to have a comfortable old age or what plans they can opt to ensure regular income in their sunset years (Financial Consumer Agency of Canada, 2014). Millions of people near retirement often lack funds needed for a comfortable life due to the inability to answer these questions efficiently (Prawitz et al., 2006). A huge proportion of older people live with preventable multi-morbidities and poor physical functioning due to inadequacy of resources to meet their increasing health needs. Depression, loneliness and isolation are quite common among this demographic group. All these factors are often held responsible for poor subjective wellbeing of elderly population though unhappiness in old age is not inevitable (Allen, 2008).

The situation is worse for developing countries where the socio-economic status of elderly is much lower than economically advanced countries (Bloom et al. 2010) and institutional arrangements catering to their needs are also fewer. The provision of regular pension in India is normally limited to those employed in organized sector comprising only a small proportion of elderly (10-15%). At the same time, with a trend towards nuclear family setup, the vulnerability of elderly is increasing considerably (Alam, 2004). Lack of adequate financial support is one of the major reasons for mental stress and poor subjective wellbeing. It can also adversely affect the physical health as it imposes restriction in accessing proper health care facilities.

One approach that can help in addressing the financial issues of the individual as well as in dealing with the complexity and recession of the economies is financial literacy. The literature suggests there exist strong relationship between financial literacy and household welfare. In the views of Gonyea (2007), it is a significant predictor of savings behavior, retirement planning and wealth accumulation. Household members with low levels of financial literacy tend not to plan for retirement (Lusardi and Mitchell, 2007a), borrow at higher interest rates (Lusardi and Tufano, 2008; Stango and Zinman, 2006), acquire fewer assets (Lusardi and Mitchell, 2007b), and participate less in the formal financial system relative to their more financially literate counterparts (Alessie, Lusardi and Rooij, 2007; Hogarth and Donnell, 1999). A financially literate person can invest his savings more efficiently and have better wealth accumulation. (Brown, 2011). Financial literacy is thus the ability to understand and analyze financial options, planning for the future and responding appropriately to the events (Taft et al., 2013). It allows an individual to make informed and effective decisions through their understanding of the finances (U.S. Government Accounting Office, 2006). Unfortunately, despite the importance of financial literacy, it has not received much attention in the field of research. Economists are investigating the causes and consequences of financial illiteracy to better understand the lack of retirement planning and why so many households arrive close to retirement with little or no wealth.

The acknowledgment of the importance of financial literacy has guided a few of the research work in this direction but is been largely confined to developed countries. There is virtual vacuum of studies focused on understanding the level of the financial literacy among elderly population of developing countries. Moreover, none of the available studies has tried to examine its linkages with subjective well being of elderly. Priority needs to be accorded to develop skills for financial literacy that can positively affect the wellbeing of individuals in older ages. In this background, the objectives of the present study are a) to assess the socioeconomic determinants of financial literacy and wellbeing; b) to explore the effect of financial literacy on wellbeing of elderly.

Data source and Methodology
Study Area
In recent times, there have been some attempts to understand the importance of financial literacy for savings and economic security in India (Reserve Bank of India, 2007; Clusters, 2011; Cole et al., 2009). However there is complete dearth of research studies that have tried to investigate the level of financial literacy in the context of ageing except a few studies related to financial wellbeing. Therefore, the present study collected data from urban parts of Jaipur, Rajasthan, India which is currently the largest state by area and eighth largest by population (Census 2011). Nearly, 21 % of total urban population of Rajasthan resides in urban Jaipur district i.e. 3,499,204 as per Census 2011. The literacy rate in Jaipur district is 76.44 with 83.48 in urban Jaipur which is higher than the average literacy at state level i.e. 67 and 87 in urban areas (Census 2011). The present research work is focused on the urban population of Jaipur district in the age group 50

and above which is 11.55 % of total urban population of Jaipur (Census 2001). Using the sample size estimation formula, we collected data from 400 elderly aged 50 and above.

Definition of variables

Financial literacy: In consistency with the previous studies (Reserve Bank of India, 2007; Clusters, 2011; Cole et al., 2009), the present study measured the financial literacy at two levels i.e. Basic financial literacy and sophisticated financial literacy. Also, for this study definition given by Reserve Bank of India is considered for exploring the level of financial literacy[1].

Basic financial literacy includes the following domains:
1. Understanding basic concepts
2. Awareness about financial plans and products
3. Understand benefits and liabilities associated with plans

Sophisticated Financial Literacy includes the following domains:
1. Understanding financial products
2. Preference for financial and non financial investment instruments
3. Ability to make informed decisions
4. Remedial Measures

Wellbeing: Wellbeing is a very difficult concept to define accurately. The concept of wellbeing is broadened from being focused on levels of income and consumption to be accepted as a multidimensional construct (Diener et.al. 1997). In recent years, two approaches have emerged to measure wellbeing i.e. objective and subjective wellbeing (Lawton and Brody, 1969; Kaneda et.al., 2011). For the present study the following definition is adopted based on the literature reviewed:

- Material well-being captures the extent to which the older population may be able to meet their needs for basic goods such as food and shelter.
- Physical well-being assesses the ability to perform basic activities of daily living (ADL) and instrumental activities of daily living (IADL) to live independently
- Social engagement measures involvement with family members, peers, community members, and local institutions to gauge the levels of social participation and the availability of social support.
- Emotional well-being measures mental and psychological outlook

Statistical Analysis

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[1] According to RBI, financial literacy can broadly be defined as "providing familiarity with and understanding of financial market products, especially rewards and risks, in order to make informed choices".

Computation of Indices: The study computed indices to measure the level of financial literacy and wellbeing. As mentioned above, financial literacy is measured at basic and sophisticated level; a composite index is then chalked out from basic and sophisticated financial literacy. Similarly the wellbeing is captured in four domains i.e. material, physical, social and emotional wellbeing and then a composite index of wellbeing is computed. The study has used **Principal Component Analysis** to construct the indices of financial literacy and **Polychoric Principal Component Analysis** for the indices of wellbeing. The choice of methods for calculating the indices is based on the data and the objectives. The Cronbach alpha values were calculated for each of the index to ensure statistical validity of the indices.

Mulivariate analyses: In order to assess the effect of socioeconomic characteristics on financial literacy, the study used **Ordinary least square**, **Generalized Ordered logistic regression** and **Ordered logistic regression** model according to the nature of the dependent variable.

1. **Generalized ordered logistic model**

To analyze the effect of financial literacy on each of the domains of wellbeing, the study used generalized ordered logistic (gologit) model which is one of the most appropriate tools for analyzing the association between ordinal dependent and independent variables. There are some special cases of gologit model which can be used under certain conditions. The parallel line model estimated by ologit **(Ordered logistic regression)** is also a special case of the gologit model. The formula used for parallel line and gologit model is same except that in parallel line model, the Betas are the same for all the values of j. This assumption of same values of Betas is often violated and in such cases, gologit model is used. The Brant and Omodel test are used to check for the violation of parallel line assumption.

In the present study, where the assumption of parallel line model is violated which was tested using both the tests i.e. Omodel and Brant, gologit model is used and where the assumptions are not violated, ologit is used. The gologit model was used defined by the following equation:

$$P\,(Y_i{>}j) = g\,(X\beta_j) = \frac{\exp\left(\alpha_j + X_j\beta_j\right)}{1 + \exp\,\left(\alpha_j + X_j\beta_j\right)}\,, \; j{=}1,2,\ldots.M{-}1$$

Where Y=dependent variable (wellbeing)
M= number of categories of the ordinal dependent variable (three categories i.e. low, medium and high).
X= Financial literacy

The results of the gologit model are similar to the results of binary logistic model though their interpretation differs. The positive coefficients indicate that higher values on the explanatory variable make it more likely that the respondent will be in a higher category of Y than the current one, while negative coefficients indicate that higher values on the explanatory variable increase the likelihood of being in the current or a lower category.

2. **Ordinary Least square (OLS) model**:
This model is used when the dependent variable is continuous in nature to predict its value using explanatory variables. The OLS model also identifies the strength of the relationship between the variables. The Beta coefficients with a positive (negative) sign indicate positive (negative) association between the dependent variable and explanatory variable. The following equation explains the model:

$$Y=\sum X_i\beta_i+\varepsilon$$

Where Y= continuous dependent variable (household water consumption)
Xi= explanatory variables from i=1 to 7
E= error term

Results of Bi-variate analysis
Table 1 reveals positive association of education and mass media with financial literacy. There is an increase in the percentage of highly financially literate elderly (from zero percent to 59%) as we moved up from no formal education to post graduation and above. Sixty percent of elderly women had low level of financial literacy compared to 17% of elderly men. The age of the elderly, however, did not reveal any clear association with financial literacy. Further, three fourth of the economically unproductive elderly were at low level of financial literacy compared to one tenth of retired elderly. Fifty eight percent of the government employees and academicians were at high level; 45% of self employed at low level; and, nearly 50% of private employee and clerks were at medium level of financial literacy. Eighty six percent Muslims compared to 17% and 29% of Jains and Hindus and 63% of poor elderly (11% of rich elderly) have low level of financial literacy.

The analysis (table 2) further reflects that highly financially literate elderly have good material (57.89%), physical (49.62%) and emotional wellbeing (57.14%) as well as social engagement (51.13). Similarly elderly who have planned for their old age, 52% of them have good material wellbeing and social engagement, while only 18% and 14% reported good physical and emotional wellbeing respectively[2]. More than 80% of uneducated elderly reported poor social engagement, material and emotional wellbeing and 67% reported poor physical wellbeing. The study further reveals larger the family size, poorer is the wellbeing. Among the elderly with more than five children, 69% reported poor material wellbeing; 57% poor physical wellbeing; 68% poor social engagement and 61% had poor emotional wellbeing. Overall, having high level of financial literacy, planned old age, better socioeconomic status and a smaller family size leads to better physical, material, social and emotional wellbeing.

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[2] The reason for poor emotional wellbeing was revealed during personal interviews. Despite of old age planning they were largely dissatisfied with their families; a few of them also felt that what they anticipated for their future is actually not enough considering the inflation and out migration of their children.

The results for overall wellbeing find consistency with those of the individual wellbeing index across the background characteristics (table 3). Sixty percent of the highly financially literate elderly had good wellbeing. Similarly 52% of post graduate elderly had good wellbeing while 87% of illiterate elderly had poor wellbeing. The result further revealed that only 14% of elderly with planned old age has good overall wellbeing. This may be because the elderly who plan for their old age are often aware about the old age issues which may have a negative effect on their emotional wellbeing; while those with an unplanned old age are often ignored or less bothered about their future needs.

The level of education, working status, exposure to mass media, religion and household economic status revealed significant association with financial literacy (table 4). The likelihood of being financially literate (basic, sophisticated and composite) increased with the advancement in the level of education and economic status. Similarly, the respondents with media exposure were more likely to be aware about various financial instruments, plans and policies and thereby, improving the level of financial literacy. The respondents who haven't contributed directly to the economy were less likely to be financially literate (-0.20) as compared to those who were currently working. The religion wise differentials were quite expected as a few of the respondents considered investment of money against their religious beliefs and so they didn't respond to various questions of financial literacy. Apart from the Jain community, the other two religious groups were significantly less likely to have the literacy. A few of the predictor variables, such as, age, gender, marital status and living arrangement, have not shown any significant association with any kind of financial literacy.

Overall, the value of R square suggested that the selected predictors explained 53%; 73% and 72% of the variations in levels of basic, sophisticated and composite financial literacy.

Table 5 reveals significant association of financial literacy with material, physical and emotional wellbeing of elderly aged 50 and above. Financially literate elderly were 1.56 times, 1.22 times and 1.43 times more likely to have moderate or good material, physical and emotional wellbeing rather than poor wellbeing respectively. The gender differentials were clearly visible for material and emotional wellbeing as females were 0.42 and 0.18 times less likely to have good material wellbeing, and; moderate and good emotional wellbeing respectively as compared to males[3]. With the improvement in the economic status, the likelihood of experiencing moderate or good material and emotional wellbeing increased for non poor section as compared to poor section of the society. Elderly belonging to rich wealth quintile were 6.80 times more likely to have good or moderate material and emotional wellbeing rather poor wellbeing compared to elderly belonging to poor wealth quintile. A pro-saving behavior has a significant positive effect on the physical wellbeing. The elderly with a pro-savings behavior were 1.94 times more likely to have good or moderate physical wellbeing rather than poor wellbeing as compared to the elderly with a pro-

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[3] This could be explained by patriarchal nature of Indian society

expenditure behavior. Elderly who have planned for their old age were 3 times more likely to have moderate or good emotional wellbeing in old age rather than experiencing poor wellbeing compared to those who have not planned for their old age.

Table 6 reflects significant association of financial literacy, age, group membership and wealth status of elderly with social wellbeing. With the increase in the level of financial literacy, the social wellbeing would also increase. Similarly having the membership of any social group positively affects the social wellbeing; however, with increasing age, social wellbeing reflected a negative association.

Table 7 reveals significant association of financial literacy, old age planning, gender; working status and economic status with moderate or good wellbeing rather than poor wellbeing for elderly aged 50 and above. The financially literate elderly were 1.46 times more likely to have moderate or good wellbeing rather than poor wellbeing as compared to those who have lesser financial literacy. Similarly, the elderly who have planned for their old age were 3 times more likely to have moderate or good wellbeing in old age rather than experiencing poor wellbeing compared to those who have not planned for their old age. The gender differentials were clearly visible as females were less likely to have moderate or good wellbeing compared to males. With the improvement in the economic status, the likelihood of experiencing moderate or good wellbeing increased for non-poor as compared to poor section of the society.

Conclusion

As the world witness an unprecedented rise in the longevity, there is an increase in the number of years to be spent in dis-saving stage. Elderly need to depend on their accumulated savings to meet their daily expenses and maintain a basic lifestyle (Garmen, 1997). In the year 1997, Arokiasamy pointed out that increased longevity implies vulnerability to diseases and disabilities, with consequent increased costs of health care and greater burden of elderly care on individual, family and society. This increases the risk of elderly being caught in the vicious circle of financial crisis. The lack of financial literacy, defined as sufficient knowledge for successful personal financial management (Garman & Leech, 1997), is the main cause of personal financial problems. It is a significant predictor of wealth accumulation, saving behavior and retirement planning, can thus help an individual to prepare for future contingencies to avoid financial stress (Sporakowski 1979). It increases their economic space and plays a significant role in the efficient allocation of household savings and also empowers the poor (Hung et al., 2010). Proper planning for retirement leads to accumulation of wealth, generating economic security and thus helps in retiring rich (Millar et al., 2009).

Much of the documentation of the financial literacy and its implications on the life cycle needs is been focused on the developed countries (Lusardi and Mitchell, 2006; 2007a;b;c). This, however, does not undermine the need of financial literacy for the developing countries which are largely

in the midst of demographic transition[4]. The insufficient social support for elderly in developing countries prioritizes the need of financial literacy. India being in the middle of demographic transition is also experiencing the epidemiological transition where the disease profile has witnessed a phenomenal change with chronic diseases taking the center stage. The shift in the disease pattern coupled with population aging occurring in the strong presence of infectious and parasitic diseases has resulted in the dual burden of diseases on the country (Boutayeb, 2006; Quigley, 2006) which has adverse implications for the wellbeing of elderly. The country is also witnessing the breakdown of the familial support system of elderly. The question of old age security and wellbeing has, thus emerged as prominent policy matter which will take time to get resolve. Therefore, it becomes important to make an individual responsible for own wellbeing. The present study revealed financial literacy as an important predictor of material, physical, social and emotional wellbeing; hence, overall wellbeing of elderly aged 50 years above. Further, the study also emphasized on improving the basic construct of the Indian society. The positive association of education, employment status, mass media and economic status with the probability of being financially literate strengthens the need of improving the educational level, generating employment opportunities, access to media and thereby economic status.

The Commission on the Measurement of Economic Performance and Social Progress also argues that measures of economic performance are insufficient as indicators of the progress of society and self-reported well-being should also be taken into account. The positive effect of financial literacy on wellbeing of elderly gives enough reasons to justify the need of financial literacy for developed as well as developing countries in the present century.

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[4] The developing countries are facing a steady rise in the proportion of elderly population (United Nations, 2012)

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Table 1: Percentage of elderly according to level of financial literacy by background characteristics, 2012

	Background Characteristics	Low FL	Medium FL	High FL
Individual Characteristics	**Age*****			
	50-59	29.65	40.20	30.15
	60 and above	37.31	26.37	36.32
	Sex***			
	Male	17.00	38.87	44.13
	Female	60.13	24.18	15.69
	Education***			
	No education	98.18	-	0.00
	Up to higher secondary	60.19	30.10	9.71
	Graduation	9.42	45.65	44.93
	Post graduation or above	-	36.54	58.65
	Marital status***			
	Married	29.34	35.03	35.63
	Others[#]	54.55	24.24	21.21
	Exposure to mass media***			
	No	97.56	-	0.00
	Yes	26.18	36.77	37.05
Economic Characteristics	**Working status*****			
	Currently working	21.46	40.00	38.54
	Retired	10.23	32.95	56.82
	Not working[@@]	75.70	20.56	-
	Type of Employment***			
	Govt employee	6.92	34.62	58.46
	Institute	-	42.11	55.26
	Private employee	-	48.72	41.03
	Self employed	45.35	36.05	18.60
	Level of Employment***			
	Academicians	0.00	41.18	58.82
	Officer level	-	28.13	68.75
	Clerical level	-	50.00	-
	Self employed	26.09	39.13	34.78
	Others^	36.49	44.59	18.92
Household Characteristics	**Caste*****			
	SC/ST/OBC	52.42	25.00	22.58
	Others	25.00	36.96	38.04
	Religion***			
	Hindu	29.30	38.10	32.60
	Muslim	86.96	-	-
	Jain	17.24	31.03	51.72
	Others	-	-	47.83
	Living arrangement***			
	Living alone or with spouse	33.73	28.92	37.35
	Living in joint family	29.93	36.50	33.58
	Joint family without spouse	55.81	20.93	23.26
	Wealth status***			
	Poor	63.43	26.87	9.70
	Middle	25.56	33.83	40.60
	Rich	11.28	39.10	49.62

Note: # others include not married, separated/divorced/ deserted respondents; @@ includes homemakers & unable to work; ^ includes other categories of private & cooperative sector &armed forces; ***significant at 1% level of significance ($p<0.01$); **significant at 5% level of significance ($p<0.05$); *significant at 10% level of significance ($p<0.10$)

Table 2: Percentage of elderly according to material, physical, social and emotional wellbeing 2012

Variables		Material Wellbeing			Physical wellbeing			Social Engagement			Emotional wellbeing		
		Good	Moderate	Poor	Good	Moderate	Poor	Good	Moderate	Poor	Good	Moderate	Poor
Financial literacy	Low	9.70	22.39	67.91	17.16	24.63	58.21	#	31.34	64.18	8.96	21.64	69.4
	Medium	34.59	52.63	12.78	33.83	41.35	24.81	46.62	29.32	24.06	34.59	42.11	23.31
	High	57.89	39.10	#	49.62	33.83	16.54	51.13	37.59	11.28	57.14	36.09	6.77
Saving behavior	Pro-expenditure	26.32	28.95	44.74	24.56	28.07	47.37	26.32	28.95	44.74	21.05	31.58	47.37
	Pro-saving	37.06	34.27	28.67	37.06	35.31	27.62	37.06	34.27	28.67	38.46	33.92	27.62
Old age planning	Planned	51.78	35.03	13.20	18.23	30.54	51.23	51.78	35.03	13.20	13.79	29.06	57.14
	Unplanned	16.75	30.54	52.71	49.24	36.04	14.72	16.75	30.54	52.71	53.81	37.56	8.63
Age	50-59	30.65	39.70	29.65	45.73	37.69	16.58	44.22	32.66	23.12	41.71	34.67	23.62
	60+	37.31	36.32	26.37	21.39	28.86	49.75	23.88	32.84	43.28	25.37	31.84	42.79
Sex	Male	40.08	40.49	19.43	41.70	35.63	22.67	39.27	37.25	23.48	40.89	41.30	17.81
	Female	24.18	33.99	41.83	20.26	29.41	50.33	25.49	25.49	49.02	21.57	20.26	58.17
Education	No education	#	#	87.27	#	23.64	67.27	0.00	16.36	83.64	#	#	87.27
	Up to Higher Secondary	21.36	34.95	43.69	25.24	28.16	46.6	13.59	37.86	48.54	18.45	32.04	49.51
	Graduation	45.65	45.65	8.70	45.65	37.68	16.67	45.65	38.41	15.94	45.65	42.03	12.32
	Post Graduation and above	45.19	48.08	#	38.46	37.50	24.04	56.73	28.85	14.42	48.08	35.58	16.35
Working status	Currently Working	31.02	42.25	26.74	49.20	37.97	12.83	43.85	35.83	20.32	43.32	36.90	19.79
	Retired	50.00	39.62	10.38	29.25	28.30	42.45	33.02	35.85	31.13	35.85	36.79	27.36
	Not Working	23.36	28.97	47.66	10.28	29.91	59.81	17.76	24.30	57.94	14.02	23.36	62.62
Group member	Not a member	18.86	30.29	50.86	32.00	26.86	41.14	-	-	-	-	-	-
	Member	45.78	44.00	10.22	34.67	38.22	27.11	-	-	-	-	-	-
No of children	1-2 children	38.86	46.86	14.29	46.86	29.71	23.43	44.57	36.57	18.86	45.71	32.00	22.29
	3-4 children	38.51	37.84	23.65	26.35	41.22	32.43	35.81	33.78	30.41	29.05	40.54	30.41
	5+ children	14.81	16.67	68.52	#	31.48	57.41	#	25.93	66.67	14.81	24.07	61.11
Family type	Nuclear	42.17	32.53	25.30	42.17	24.10	33.73	33.73	30.12	36.14	31.33	32.53	36.14
	Non-nuclear	31.86	39.43	28.71	31.23	35.65	33.12	34.07	33.44	32.49	34.07	33.44	32.49
Wealth	Poor	7.46	29.10	63.43	29.10	25.37	45.52	15.67	29.85	54.48	13.43	26.87	59.70
	Middle	40.60	45.11	14.29	39.85	30.83	29.32	36.09	34.59	29.32	42.86	31.58	25.56
	Rich	54.14	39.85	6.02	31.58	43.61	24.81	50.38	33.83	15.79	44.36	41.35	14.29

Table 3: Percentage of elderly according to overall wellbeing, 2012

Variables	Good	Moderate	Poor
		Wellbeing	
Financial Literacy			
Low	8.96	18.66	72.39
Medium	36.84	43.61	19.55
High	59.40	34.59	6.02
Saving Behavior			
Pro-expenditure	24.56	28.07	47.37
Pro-saving	39.16	33.92	26.92
Old age planning			
Planned	13.79	29.06	57.14
Unplanned	56.85	35.53	7.61
Individual characteristics			
Age			
50-59	44.72	31.66	23.62
60+	25.37	32.84	41.79
Sex			
Male	42.91	38.46	18.62
Female	22.22	22.22	55.56
Education			
No education	#	#	87.27
Up to Higher Secondary	18.45	32.04	49.51
Graduation	47.10	41.30	11.59
Post Graduation and above	51.92	32.69	15.38
Working Status			
Currently Working	45.45	35.29	19.25
Retired	37.74	34.91	27.36
Not Working	14.02	24.30	61.68
No of children			
1-2 children	48.57	31.43	20.00
3-4 children	29.73	40.54	29.73
5+ children	14.81	20.37	64.81
Household Characteristics			
Family type			
Nuclear	34.94	34.94	30.12
Non-nuclear	35.02	31.55	33.44
Wealth			
Poor	14.93	23.13	61.94
Middle	42.86	33.83	23.31
Rich	47.37	39.85	12.78

Table 4: Standardized OLS estimates for financial literacy across the background characteristics, 2012

Background Characteristics	BFL		SFL		CFL	
	Beta	P> |t|	Beta	P> |t|	Beta	P> |t|
Age						
50-59 years®						
60 years and above	-0.004	0.926	-0.068	0.040	-0.046	0.172
Sex						
Male®						
Female	-0.012	0.829	-0.064	0.139	-0.047	0.291
Education						
No education®						
Up to higher secondary	0.128	0.041	0.230	0.000	0.205	0.000
Graduation	0.360	0.000	0.543	0.000	0.500	0.000
Post graduation or above	0.419	0.000	0.587	0.000	0.548	0.000
Marital Status						
Married®						
Others[#]	0.071	0.250	-0.030	0.523	0.011	0.819
Working status						
Currently working®						
Retired	0.067	0.138	0.038	0.259	0.052	0.141
Not working[@@]	-0.204	0.000	-0.151	0.001	-0.181	0.000
Exposure to mass media						
No®						
Yes	0.138	0.003	0.094	0.000	0.117	0.001
Caste						
SC/ST/OBC®						
Others[##]	-0.063	0.119	-0.094	0.002	-0.088	0.005
Religion						
Hindu®						
Muslim	-0.095	0.024	-0.102	0.001	-0.106	0.001
Jain	0.071	0.063	0.092	0.001	0.086	0.004
Others[^^]	-0.005	0.889	0.064	0.020	0.039	0.165
Living arrangement						
Living alone or with spouse®						
Living in joint family	-0.030	0.524	-0.068	0.056	-0.058	0.117
Joint family without spouse	-0.075	0.174	-0.024	0.561	-0.050	0.241
Wealth status						
Poor®						
Middle	0.107	0.028	0.131	0.000	0.125	0.001
Rich	0.149	0.004	0.162	0.000	0.163	0.000
R-squared	0.536		0.738		0.722	
Adj R-squared	0.515		0.726		0.710	
N	400		400		400	

Note: BFL: Basic Financial Literacy; SFL: Sophisticated Financial Literacy: CFL: Composite Financial Literacy; # others include not married, separated or divorced or deserted respondents; @@ includes homemakers and unable to work; ## includes general, Jain and other caste community; ^^ includes other religion as Sikh, Christian and other category.

®: reference group

Table 5: Generalized ordered regression estimates for predicting the effect of predictors on material, physical and emotional wellbeing of elderly, 2012

Variables		Material wellbeing		Physical wellbeing		Emotional wellbeing	
		Poor	Moderate	Poor	Moderate	Poor	Moderate
Financial Literacy		1.56***	1.35***	1.22***	1.20***	1.43***	1.26***
Old Age Planning	**Not Planned®**						
	Planned	NA	NA	1.96*	1.98*	3.01***	2.54***
Saving behavior	**Pro - expenditure®**						
	Pro-savings	1.49	0.78	1.94**	1.92**	1.15	1.45
Pension Cover	**No®**						
	Yes	2.55**	1.23	NA	NA	NA	NA
Age	**50-59 years®**						
	60+	1.72	0.90	0.33***	0.32***	0.59	0.57*
Sex	Male®						
	Female	0.63	0.42**	0.63	1.25	0.18***	1.04
Working status	**Currently working®**						
	Retired	1.17	1.40	0.18***	0.76	1.17	1.40
	Not working	2.17	5.49***	0.32***	0.18***	2.17	5.49***
Family type	**Nuclear®**						
	Non-nuclear	0.65	0.59	0.74	0.34***	0.65	0.59
Group Membership	**No®**						
	Yes	2.04**	1.56	0.68	0.42***	2.04**	1.56
Wealth	**Poor®**						
	Middle	3.99***	4.54***	1.17	0.90	3.99***	4.54***
	Rich	6.80***	7.02***	1.34	0.59	6.80***	7.02***

***p<.01; p<.05; p<0.10

Notes: ®: reference group

Table 6: Odds ratio from Ordered Logistic Regression Analysis showing the effect of selected predictors on social wellbeing of elderly

Variables		Odds Ratio	Confidence Interval	
			Lower	Upper
Financial Literacy		1.36***	1.23	1.51
Saving behavior	**Pro - expenditure®**			
	Pro-savings	0.90	0.56	1.44
Old Age Planning	**Not Planned®**			
	Planned	1.34	0.78	2.32
Age	**50-59 years®**			
	60+	0.28***	0.18	0.44
Sex	**Male®**			
	Female	1.19	0.72	1.98
Family type	**Nuclear®**			
	Non-nuclear	0.80	0.47	1.34
Group membership	**No®**			
	Yes	2.23***	1.38	3.60
Wealth	**Poor®**			
	Middle	1.05	0.61	1.84
	Rich	1.94**	1.08	3.50

***p<.01; p<.05; p<0.10
Notes: ®: reference group

Table 7: Generalized ordered regression estimates for predicting the effect of predictors on wellbeing of elderly

Variables		Poor	Moderate
Financial Literacy		1.46***	1.24***
Old Age Planning	**Not planned®**		
	Planned	3.01***	2.41**
Saving behavior	**Pro - expenditure®**		
	Pro-savings	1.26	1.31
Age	**50-59 years®**		
	60+	0.65	0.55
Sex	**Male®**		
	Female	0.18***	1.04
Working status	**Currently working®**		
	Retired	0.30***	0.76
	Not working	1.79	0.96
Group Membership	**No®**		
	Yes	0.65	1.40
Family type	**Nuclear®**		
	Non-nuclear	0.86	0.89
Wealth	**Poor®**		
	Middle	2.16**	1.93*
	Rich	3.25***	1.82

***p<.01; p<.05; p<0.10
Notes: ®: reference group