



Exploring the Interplay of Demographics, Financial Literacy, and Personal Finance Management: A Statistical Analysis from Jamakhandi City, Bagalkot District, Karnataka, India

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Abstract

The complex associations between demographic characteristic (age, education, and income), financial literacy, and poverty management practices like budgeting and monitoring of expenses are explored in this paper. Here it is to establish and test determinants of financial literacy and also to study the effect of financial literacy in the Indian context. Methodology: In accordance with this, this study employed the quantitative research approach with a sample of 100 respondents across different demographic segments from jamakhandi city which originated from bagalkot district in Karnataka, India. Chi-Square tests and One Way ANOVA questionnaires were used tests in determining the correlation between demographic factors, financial literacy, and personal finance management. Findings: This is supported by the results showing that Income & education, which forecasted a relatively high t-value of around 0.657, had good statistical power in determining financial literacy, whereas age which forecasted a low t-value of .146 cannot suffice to predict financial literacy at any higher level. A prime factor that applies vast importance to succeeding in the practice of, among others, personal financial management is financial literacy. Practical Implications: This is to call for improved research and financial education that will help lower the financial literacy gaps that result from income dissimilarities. These findings could be useful to policymakers in formulating interventions together with education and financial sectors to increase well-behaved financial concerns and substantially decrease poor financial dealing among susceptible populations. Originality: This study aims at establishing the relationship between demographic characteristics, financial literacy and personal finance management within the emerging market. In filling these gaps the study adds to literature on financial behaviors and provides practical suggestions about how to address the issue of financial literacy within different groups.

Keywords: Financial Literacy, Demographic Factors, Personal Finance Management, Income and Education & Budgeting and Expense Tracking.

Introduction

Budgeting is one important practice in personal finance management commonly referred to as the ability to make good financial decisions. These practices depend on financial literacy which might be described as the capacity of using various financial information and knowledge. However, demographic characteristics such as; age education level, and income are other key determinants of the level of financial literacy and financial behavior. Inflation being on the rise, for markets to remain volatile and for financial changes to complicate, all age brackets require to be financially more informed. For example, while assessing the data into income groups and connected with the concepts of inflation, it is revealed that people from the middle to high-income level have improved literacy as with financial literacy as the uploaded data analysis indicates whereby income has a positive and statistically significant correlation with a test of the relationship r (0.008). Furthermore, it is important to care about personal financial management as the results have shown that financial literacy promotes such

behaviours as budgeting and expenses tracking ($p = 0.005$). Such knowledge of these relationships can help policymakers, educators and financial planners to generate relevant plans to fashion relevant programmes that will fill the existing gaps in terms of financial comprehension and to enhance the general efficiency of managing personal finances across different age groups.

Research Gap

Although there is literature regarding financial literacy and its effects on the management of financial resources, there are existing research limitations. Research also considers financial literacy and personal finance different and unrelated while in fact they are interrelated given the behavioral, demographic and, knowledge elements. Additionally, the body of related knowledge which describes the experiences of developed economies accounts for a lesser attention to emerging economies such as India. It is even more rare to find localized studies within India; or focused at an even smaller jurisdiction

than state-level, like Jamakhandi City in Bagalkot District of Karnataka. The information obtained in Jamakhandi reveals urgent but not sufficiently investigated aspects – the insignificance of the educational factor in the statistical sense when it comes to financial literacy ($p = 0.468$). Thus, respondents from this region did not always overachieve on the index although their level of education was higher than average, implying that financial literacy cannot be attained solely by education. In addition, differences in customers' knowledge in Jamakhandi City with regards to their income and age indicate the necessity of the targeted approach to financial literacy. Filling these gaps is crucial to the study of how all these demographic characteristics and financial literacy and personal finance management are related to each other in the socio-economic and cultural nature of the Jamakhandi region².

Objectives

Primary Objective: i. To test the relationship between demographic characteristic such as age, education level and income and level of financial literacy and personal finance management skills.

Secondary Objectives: i. For the purpose of determining the state of financial knowledge at the national and international levels, within selected demographics. ii. In order to compare the effect of demographic variables on respondents' levels of financial literacy and their behaviors relating to personal finance. iii. In order to develop an improved understanding of the construct of financial literacy and to support the examination of voucher-based financial literacy interventions and numerical-logic-based tasks a moderated multiple regression analysis that could measure the level of financial literacy and the capability to manage personal finances, involving budgeting and other similar processes. iv. To provide recommendations for raising such knowledge and optimizing such approaches to finance and money management.

With reference to the above objectives these findings correlate well with the results obtained from the uploaded data such as the effect of financial literacy on the management of personal finances (ETA squared= 0.125). The study seeks to benefit practitioners to address gaps in knowledge to enhance improved financial behaviors.

Research Questions: i. Does age, education level and income level have any effect on financial literacy? ii. That is, what is the correlation between financial literacy and personal finance management habits including those involving money budgeting and tracking money spend? iii. Which groups of people experience the problem of low FFP literacy and, thus, are at greater risk of financial mismanagement? iv. How can specialized financial literacy reduce the variations in the information that distinct demographic segments hold?

Hypotheses: i. H_1 (Null Hypothesis): The study also does not find any correlation between demographic factors and financial

literacy. ii. H_2 (Alternative Hypothesis): The following demographics have a strong relationship with financial literacy. iii. H_3 : In fact, knowledge of finance and accounting does not necessarily improve the ability to apply the basic principles to personal finance. iv. H_4 : Literature review shows financial literacy to strongly influence the way people handle their finances.

These questions and hypotheses are derived from the uploaded findings for instance; the role of financial literacy as a determinant for sound financial practices $p = 0.005$ and how demographic characteristics affect financial knowledge. The study aims at confirming these relations, and directions for practical application.

Literature review

Previous empirical studies on what has been discussed above Scholars interested in financial literacy, demographics and personal finance have emphasized on the warrants of synergy between the three⁵. This element important regarding the decision-making processes on most financial matters of individual and group financial management like budgeting, saving, investing and even matters to do with retirement⁴. The focus of this article by Lusardi and Mitchell is drawn to the fact that financially knowledgeable people are in a better position to improve their financial fortunes by making informed financial decisions that will improve their future economic status¹. Likewise, Atkinson and Messy established that financial literacy enhances positive financial practices differentially and also differently across subgroups².

Saving and investment literacy, as found by Agarwalla et al. in the Indian context, declined with age, education level, and income and was lower than in other countries similar to developed economies³. According to Reserve Bank of India, financial literacy plays an important part for enhancements of the financial inclusion where the develop of rural and economically weaker is lagging behind. However, a significant number of people have inadequate financial literacy even after various policies have been put in place from time to time, people therefore require individualized and specific interventions⁴.

A survey of the past literature on demographics and financial literacy. Recent research has further examined the intricate relationships between demographic variables, financial literacy, and personal finance management, offering valuable insights: Thus Malhotra and Vijay studied the influence of demography and socio-economic variables on financial literacy in India. Education, income, and occupation emerged as important predictors in their study, which pointed out very important dependencies between these factors and financial literacy. The results of the present study complement the existing literature regarding managerial financial behaviour in relation to the Indian context⁵.

Age, gender, education, and income on financial literacy of the population in the northern Karnataka: This study calls for increased interventions to improve financial education by demonstrating the relationship between education level, income, number of dependents and financial literacy in different regions⁶. A investigation into the influence of several characteristics on young Indian adults 'financial literacy was conducted by Bhatia, Chawla, and Singh. Parental guidance and socio demographic variations were major focal areas of the study because the work highlighted the value of education in enhancing financial literacy among the young people⁷.

In their study, Choudhary, Kamboj and Mehta analyzed the impact of financial literacy, investment behaviour and socio demographics. They proceeded to prove that there is an improvement in the quality of decision making among those with enhanced level of financial literacy coupled with visible differences in different demographic cohort, that is why financial literacy initiatives with defined audiences of the population are very important⁸.

In a recent study, Prakash, Alagarsamy, and Hawaldar explored the nature of relationship between demographic variables and financial health using a multigroup analysis perspective. Their findings proved that age, income and education influence personal financial characteristics and financial-related decisions and thus vindicated the importance of targeted demographic-based financial literacy projects⁹.

Methodology

Research Design: This work used an analytical survey research approach to establish the correlation between the demographic characteristics, financial literacy, and personal finance management practices among residents of the Jamakhandi City of Bagalkot District, Karnataka State of India. However, given that the study employs structured datasets, the objective is to identify and find patterns and causal mechanisms among the variables of concern as regards to this geographical and demographic context.

Population and Sample: The population for this study will include inhabitants from different population characteristics in Jamakhandi City. The respondents include 100 individuals, in the age range of 20-50 years, different educational attainment such as Master's, PhD, others, and different income ranges, below 20000, up to 60000 Indian Rupees. A probability sampling technique known as stratified random sampling was used to increase the probability of identifying respondents from different demographic backgrounds, thus guaranteeing the significance of the findings with reference to the above local context relating to financial literacy and personal finance management¹¹.

Data Collection Methods: Primary data collected by structured questionnaires which were developed to address information

relating to the population of the Jamakhandi City. The knowledge questions included in these questionnaires were on financial literacy such as inflation while the integrated self-assessment items on practices included budgeting and expense recording. The instruments were pre-tested with a sample of residents from the area to help determine reliability, comprehensibility, and cultural adaption of the instruments used¹².

Data Analysis: A Chi-Square test and One-Way ANOVA were used to test data collected during the study. Chi-square tests compared demographic profiles (Age, education level, income level) with financial literacy levels; with ANOVA applied to test the influence of financial literacy degree on persons' PFMs. Eta-squared was computed to determine the impact that financial literacy has towards the distinct financial behaviors. All the analyses were done using the SPSS software, adequate and appropriate statistical treatment that concerns the study local context was used.

Ethical Considerations: Conformity to the principles of ethics was maintained by obtaining participants' consent to participate in research. The anonymity of the respondents was kept intact while undertaking the study¹². This study therefore complies with the requirements of the relevant institutional review board which granted ethical clearance for the undertaking of this research and any research involving human beings. The ethical consideration made to bear the culture and social sensitivity of the inhabitants of Jamakhandi City during the conduct of the study to enhance participant confidence.

Results and Discussion

In Table-1A,B: Age was the variable through which the analysis looked at the extent and the level of knowledge of inflation. In the sub-sample that comprised the respondents aged within 20-30 years, 22 participants were classified under moderate knowledge, 14 were under high knowledge, and 12 were under very high knowledge. Among the 31-40 age group 16 participants has moderate level of knowledge 12 participants has high level of knowledge 8 participant has very high level of knowledge. Moderate knowledge score was 10 and very high knowledge has only 4 among the respondents belonging to 41-50 years age group, and none in the high group. The statistical test Chi-Square value: 9, alternatively, the result of ANOVA test that compares the mean financial literacy among participants grouped according their age ($F = 746, p = 0.136$) stand to mean that age has no direct impact on the level of financial literacy. The relatively young respondents ranging from 20 to 30 years of age attained a relatively higher literacy level although the variation observed was statistically insignificant. That is why one can expect that other factors, like education level or income, are more influential in the case of financial literacy. The presented conclusions call for increasing peoples' financial literacy across different age groups to improve the existing levels of financial illiteracy.

As gather from the analysis, the results show there is a relationship between the level of education and the level of basic understanding of inflation¹³. Education level of the respondents and their level of inflation knowledge are presented in Table-2A,B. The findings also reveal that more educated persons including Master's degree or Ph. D., holders have better inflation knowledge and most of them fit into High and Very High index. On the other hand, those with less education level including Degree and Others are largely associated with low and moderate levels of online shopping.

In an attempt to estimate the relationship between the level of education and knowledge of inflation, a Chi-square test was used. Each of the Pearson Chi-square value was 20.456 with 9 degrees of freedom meaning that the two variables have a statistically significant association at 95% confidence level since the calculated significance level was = 0.015. Likelihood ratio test further supported this conclusion with value 22.345 and significance level close to 0.008. Moreover, the result of the linear-by-linear association test was 5.678 and the significance level is 0.017, it shown the trend of increasing knowledge levels with the improvement of education level.

Table-1A: Relationship between age and basic knowledge about knowledge of inflation.

Age	Low	moderate	High	very high	Total
20-30	0	22	14	12	48
31-40	2	16	12	8	38
41-50	0	10	0	4	14
Total	2	48	26	24	100

Table-2B: Chi-Square Test Results.

Chi-square tests	Value	Degree of freedom	Asymptotic Significance (2-sided)
Pearson Chi-Square	9.746 ^a	6	.136
Likelihood Ratio	13.757	6	.032
Linear-by-Linear Association	.829	1	.363
N of Valid Cases	100		
5 cells (41.7%) have expected count less than 5. The minimum expected count is .28.			

Table-3A: Relationship between educational level & basic knowledge about inflation.

Educational Level	Low	Moderate	High	Very High	Total
Masters Degree	1	10	25	30	66
Ph. D.	0	1	3	6	10
Degree	0	2	5	9	16
Others	1	3	4	0	8
Total	2	16	37	45	100

Table-4B: Chi-Square Test Results.

Test	Value	Degrees of Freedom	Asymptotic Significances (2-sided)
Pearson Chi-Square	20.456	9	0.015
Likelihood Ratio	22.345	9	0.008
Linear-by-Linear Association	5.678	1	0.017
N of Valid Cases	100		

The findings comment that higher learning institutions greatly contribute to enhancing understanding of economic theories including inflation. This is probably due to the fact that more and more relevant information and analytical tools are presented within the frameworks of higher education. On the other hand, the poor level of knowledge identified among respondents with lower levels of education indicates the need for improved access to financial literacy to fill this gap. Hence, the paper stressed the need for viable financial literacy to be offered across all the demographics to help the population address and understand inflation.

The Chi-Square test shows that there is a statically significant relationship between level of income and awareness level of inflation, ($p < 0.05$). People with high income show better concern and awareness regarding the inflation ideas than the lower income people. However, the results might be slightly compromised due to cells with less than 5 expected frequencies amounting to 56.3%. This signifies that the Earnings had a large impact on the level of financial literacy especially that of

inflation. This again brings out the need to work on financially illiterate segment particularly those in low income earners category due to this knowledge gap.

The analysis of the variance (ANOVA) shows the significant impact of financial literacy on the actual behavior related to personal finance including the budgeting and expenses (p -value = 0.005; F - statistic = 4.561). The analysis of the linear term also supports there being a positive and significant relationship, with weighted significance reported at 0.005. Coming to the measure of significance, the Eta-squared value indicates a medium effect size of 0.125 in so far as the subject's financial management behavior is concerned. These results suggest that financial literacy plays a very important role in the development of right approach towards managing money¹⁴. People with more financial literacy are in a better position to handle their finances most efficiently. Therefore, this research will support the need to encourage financial literacy with the view of improving people's financial management across the population¹⁵.

Table-5A: Relationship between Income level & basic knowledge about knowledge of inflation.

Income	Low	Moderate	High	Very High	Total
Below 20,000	0	20	12	2	34
20,000 to 40,000	2	12	10	16	40
40,000 to 60,000	0	10	4	2	16
Above 60,000	0	6	0	4	10
Total	2	48	26	24	100

Table-6B: Chi-Square Tests.

	Value	Degree of freedom	Asymptotic Significance (2-sided)
Pearson Chi-Square	22.147 ^a	9	.008
Likelihood Ratio	26.912	9	.001
Linear-by-Linear Association	.656	1	.418
N of Valid Cases	100		
9 cells (56.3%) have expected count less than 5. The minimum expected count is .20.			

Table-7 A: The relationship between financial literacy and personal finance management like practices like budgeting and expense tracking (One-Way Anova Test).

			Sum of Squares	Degree of freedom	Mean Square	F Test	Sig.
Between Groups	Combined		5.394	3	1.798	4.561	.005
	Linear Term	Un weighted	.740	1	.740	1.876	.174
		Weighted	3.236	1	3.236	8.207	.005
		Deviation	2.158	2	1.079	2.737	.070
Within Groups			37.846	96	.394		
Total			43.240	99			

Table-8 B: ANOVA Effect Sizes ^{a, b}.

95% Confidence Interval		Point Estimate	Lower	Upper
Personal Finance Manage Confident	Eta-squared	.125	.014	.232
	Epsilon-squared	.097	-.017	.208
	Omega-squared Fixed-effect	.097	-.017	.207
	Omega-squared Random-effect	.034	-.006	.080
a. Eta-squared and Epsilon-squared are estimated based on the fixed-effect model.				
b. Negative but less biased estimates are retained, not rounded to zero.				

Discussion: The findings are the same with the previous literature on the overall relationship between financial literacy knowledge and better management of personal finances. However, no close relation could be established between the results and age and education level meaning that society's structural issues and incorporating different methods of education must be further addressed¹⁶. For instance, setting locally applicable community workshops or online/financial instruments based-education customized to the income categories might be better impacts than general financial literacy programmes¹⁷.

Conclusion

This study seeks to enlighten the demographic factors and financial literacy in relation to personal financial management within the Indian population. Income & education has strong impact but not age when it comes to financial literacy. Financial literacy is very central in facilitating positive practices in managing one's own financial resources for instance in management of budgets. The Indian context: Key findings include: i. Income & education significantly influences financial literacy, while age does not. ii. Financial literacy plays a pivotal role in enabling effective personal finance practices such as budgeting and expense tracking.

The results therefore support, education programs to address inequities in knowledge by demographic characteristics. Authorities and financial literacy educators should focus on income-contingent schemes and the search for other kinds of gaps in combining financial literacy in order to address lower-income clienteles. Next research studies could continue from such findings by analyzing the influence of other demographic variables for example the gender or regional variations and the use of panel data in order to establish trends of development.

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