Financial Literacy Impact on Retirement Planning Among Various Age Group Individuals

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FINANCIAL LITERACY IMPACT ON RETIREMENT PLANNING AMONG VARIOUS AGE GROUP INDIVIDUALS

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Abstract

The paper presents the analysis of the study on the impact of financial literacy on retirement planning among various age groups till the age of 60. The effect of multiple factors such as financial literacy, savings pattern, and investment horizon was found to significantly impact the attitude towards retirement planning. The study aims to find the positive impact of various knowledge levels of financial literacy on retirement planning behaviour. The analysis of the empirical data strongly recommends that policies to be adopted for the improvement of financial literacy among youngsters before they choose a career path. The policies need not be limited to spreading financial awareness, policy makers are suggested to have a holistic approach to empower the individuals with the financial tools for leading a peaceful retirement life. The approach may include compulsory financial literacy part of the curriculum in the college level academics.

Keywords: Financial Literacy, retirement planning, investment

1. Introduction

Retirement planning is the most important step to secure a healthy & well-maintained life during the golden period of life. Individuals need not be masters in financial and economic jargon to design their retirement plans. Basic financial literacy will empower individuals to understand the dynamics of the financial & capital markets and it will enable individuals to design a customized retirement plan of their choice and to choose the level of exposure to various risks in the market.

It is evident from various developed countries such as the USA, Germany, Australia & European Union (EU), that the trend is shifting towards Defined Contribution (DC) from the Defined Benefit (DB) Pension schemes. Indian Government has also shifted to DC pension Scheme from the year 2004. The OASIS Report (2000) is the basis for this decision to shift to the DC pension scheme, highlights that increasing budget allocation on old age security has often been at the cost of expenditure on other important public goods and services, it also results in a serious drain on Government exchequer.

Now, the scenario has necessitated the individuals to manage their retirement wealth, as the responsibility of the employer/ government ends with the contribution. Even though the DC schemes provide a default option, where the individuals need not apply their knowledge, the returns on these schemes may not be lucrative, considering the inflation factor. The default schemes generally invest in very safe instruments such as Government securities, liquid funds, etc., hence the returns are lesser than the benchmark returns of the stock index.

Indian youth (in the age group of 15-29 years) represent 27.2% of the population (for the year 2021) and it is considered one of the highest young populated countries in the world (Youth In India, 2022). However, the gross enrolment ratio for higher education during 18-23 years is only 27.1%, whereas the gross enrolment ratio in the higher secondary level school education is 53.8%. These statistics provide us with the actual stage of adaption of financial literacy as part of the academic curriculum for the Indian youth. (Sridevi, G. (Ed.), 2020)

The Organization for Economic Co-operation & Development (OECD) defines Financial Literacy as a combination of financial awareness, knowledge, skills, attitude, and behavior necessary to make sound financial decisions and ultimately achieve individual financial well-being (OECD, 2013). These skill sets can be inculcated through formal education, preferably from higher secondary education in the context of India. Financial literacy will enable the individual to make informed decisions in life for the pursuit of well-being.

The Present study has made an attempt to establish the impact of financial literacy in retirement planning across the various age groups, who have started their earnings. The study also attempts to find the relevance of the individual age for creating retirement savings. It is also analyzed that across age groups changes in the highest priorities.

The following section discusses the relevant studies and literature on financial literacy and retirement planning. Section 3 discusses the research methodology and the sample data used for the study. Section 4 presents the study's analysis results, explaining the results of the regression analysis. It also discusses the relation between various factors and concludes the results in the section 5.

2. Literature Review

Financial literacy is all about the ability to make informed decisions. Even though it is very difficult to define this simple word, through their study Chen and Volpe (1998) defined financial literacy as the ability to understand and effectively use various financial skills, including personal finance management, budgeting, investing, and understanding financial products. The authors draw attention to the importance of personal financial literacy which involves individuals' capacity to read, analyse, manage, and communicate about their financial conditions, ultimately impacting their material well-being. Financial literacy empowers individuals to make an informed decision to avert financial risks in various aspects of life. The study throws light on the importance of possessing financial literacy and the need for improving it specifically from the student phase itself.

The study of Lusardi and Mitchell (2007) reveals that many households are unfamiliar with the basic economic concepts for making investment decisions. It has resulted in a serious concern regarding decisions in respect of savings, retirement, mortgage, and other important investments in life. Authors opined that financial literacy cannot be acquired by attending a class or by attending retirement planning seminars. Financial knowledge should be gathered through various stimulus processes in life. The seminars or education may not provide the intended benefits as one-size-fits-all and will not yield the necessary benefits for the individuals. We have to empower the individuals with necessary financial tools to manage their monies and enable them to execute their retirement plans and savings. Since the percentage of old age dependency is increasing across the globe, it is necessary to equip individuals with financial tools so that they can customize better retirement plans.

Financial literacy has great importance to society since it is considered a core life skill for Individuals. The adoption and inculcation of it will result in the financial well-being of societies. The study-based evidence has laid a path to integrate some holistic financial literacy policies in governance (OECD, 2023). The present economic scenarios necessitate digital financial literacy for the safe use of digital financial products. It is pertinent to note that digital financial literacy is higher among countries with higher income and higher education. Digital financial literacy enables individuals to not fall into the trap of cyber fraud.

Retirement planning is not just a financial decision, it also reflects the individual's behavioral and psychological traits. Even though individuals discuss and think more about retirement when it comes to action, they are failing to devise such action plans for execution. Smruti & Swati's (2019) study suggests that Individuals may be made aware of the social, economic, and political factors along with their requirements while formulating a retirement plan.

Financial decisions are very complex for individuals who do not have financial literacy. Retirement planning, being an important financial decision in any individual's life, the employer shall provide a simplified and low-cost option to the employees. Beshears et al. (2013) have observed that the fewer pre-defined savings options available, then the participation of employees in workplace savings plans will improve. The authors concluded that the complexity of savings decisions discourages the employee's participation in employer-sponsored savings plans, intended for retirement and other terminal benefits. In certain situations, at a few age groups, it is not tenable for inculcation of financial literacy among employees. Hence, the employer may provide pre-defined beneficial schemes to the employees in the interest of the employee's old age social security.

3. Data & Empirical approach

In this section, we describe the methodology and data used to analyze the impact of financial literacy on retirement planning. The primary data is collected from 74 respondents. A Questionnaire is framed to collect various inputs for this study. The questionnaire was sent to 90 individuals through emails and WhatsApp mode in Google Forms for ease of sharing and simplifying the submission of data. Out of 90 individuals 74 had responded. The questionnaire is aimed to capture the information of the respondents such as financial literacy sources, level of knowledge, investment behavior, retirement plans, etc. As the sample size for the analysis is more than 50, the Chi-Square test of independence has been adopted on the various relevant factors to find out the impact of financial literacy on retirement planning. A regression model is used to find out the relationship between factors impacting retirement savings.

Hypothesis

H_0: Financial literacy has no impact on Retirement Planning.

H_1**:** Financial literacy has an impact on Retirement Planning.

Regression model equation:
$Y = \beta_0+\beta_1 FL + \beta_2 AG$

Y: Financial literacy impact on Retirement planning;

FL: Financial Literacy

AG: Age Group parameter;

β_0, β_1, β_2 are Coefficients

4. Findings & Discussions

4.1 Financial Literacy

This study investigated the relationship between financial literacy and retirement planning (RTP) behaviour. A chi-square test of independence was conducted to determine if there is a statistically significant association between these two variables.

Table 1

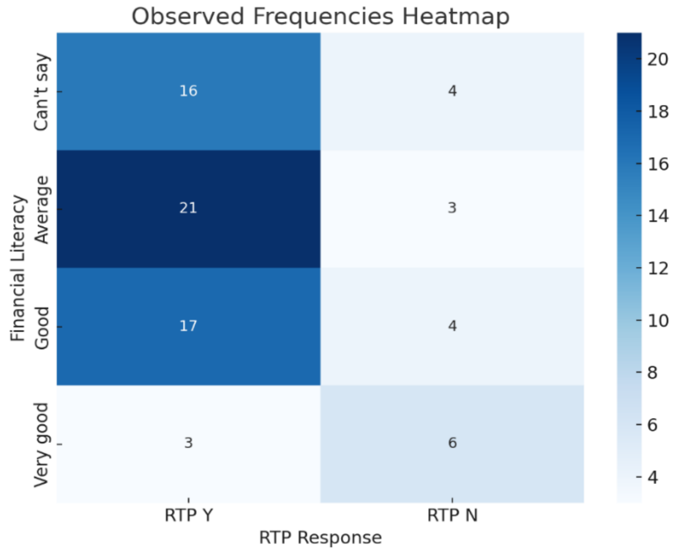
Observed Frequencies

Fin. Literacy	RTP (Y)	RTP (N)	TOTAL
Can't say	16	4	20
average	21	3	24
good	17	4	21
very good	3	6	9
TOTAL	57	17	74

Note: The responses are drawn from the questionnaire regarding the level of financial literacy. (Y), (N) denotes Yes and No on retirement plan.

Figure 1:

Financial literacy levels and Retirement planning Observed frequencies heat map



Note: Chi – square observation table drawn from the questionnaire

Based on the inputs received from the respondents, the above data is drawn regarding individuals with Financial Literacy with different levels of knowledge and their choice of Retirement Plan. Some of the prima facie observations reveal from the above data, that people not having any idea of financial literacy concepts are also having some retirement plan for their elder age. However, the overall study reveals that individuals with better financial literacy levels are executing their retirement plans in a better way. The observations are portrayed in the above heat map.

Table 2

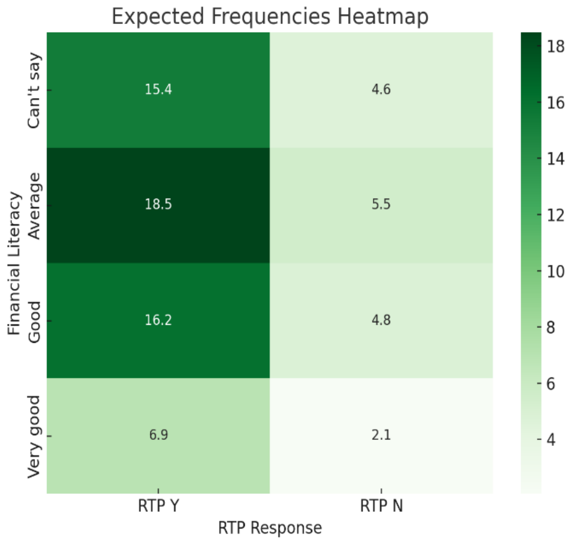
Expected Frequencies

Fin. Literacy	RTP Y	RTP N
Can't say	15.41	4.59
average	18.49	5.51
good	16.18	4.82
very good	6.93	2.07

Note: Expected frequencies are calculated based on Chi – Square test.

Figure 2:

Financial literacy levels and Retirement planning Expected frequencies heat map



Note: Heat map denotes the expected frequencies of the Chi–Square test of independence.

The results of the chi-square test revealed **a statistically significant association between financial literacy and retirement planning behaviour.**

χ^2 (df = 3, N = 74) = 11.45, $p < 0.05$.

It is clear from the analysis, that the individuals with a better financial literacy havE a better idea to prepare & execute a retirement plan.

4.2 Comparison Across Age Groups for Retirement Savings

Descriptive Statistics and Dataset Summary

A summary of the dataset is provided in Table 1. Age groups were encoded numerically for logistic regression analysis. The logistic regression model was fitted using the log-odds of choosing "Yes" as the dependent variable and age group as the independent variable.

The model equation is:

$Y = \ln(p/1-p) = \beta 0+\beta 1 \cdot \text{Age Group}$

Table 3

Logistic Regression Results for Retirement Savings Choices

Age Group	Age Range (years)	Proportion Choosing "Yes"	Log-Odds (ln(Odds))	Predicted Probability of Choosing "Yes" (%)
1	<35	0.875	1.946	51%
2	35–50	0.56	0.239	58%
3	50–55	0.917	2.398	71%
4	>55	0.75	1.099	77%

Note: The logistic regression for the likelihood to choose yes is analyzed for the four age groups.

Based on the logistic regression analysis, the estimated coefficients were:

a) Intercept (β0): 0.0748
b) Slope (β1): 0.2794

The log-likelihood value for the model was -47.047, with a pseudo-R^2 of 0.005981. This indicates a very weak relationship between age groups and the likelihood of choosing "Yes."

Prediction by Age Group: Predicted probabilities for choosing "Yes" were calculated as follows:

$P(y=1) = 1/1+e^{-(\beta 0+\beta 1.\text{Age Group})}$

The logistic regression equation is

$$P(y=1) = \frac{1}{1+e^{-(0.0748+0.2794x)}}$$

For Age Group 1 (<35): P(*y=1*) ≈ 0.51 (51% chance of choosing "Yes")

For Age Group 2 (35-50): P(*y=1*) ≈ 0.58 (58% chance of choosing "Yes")

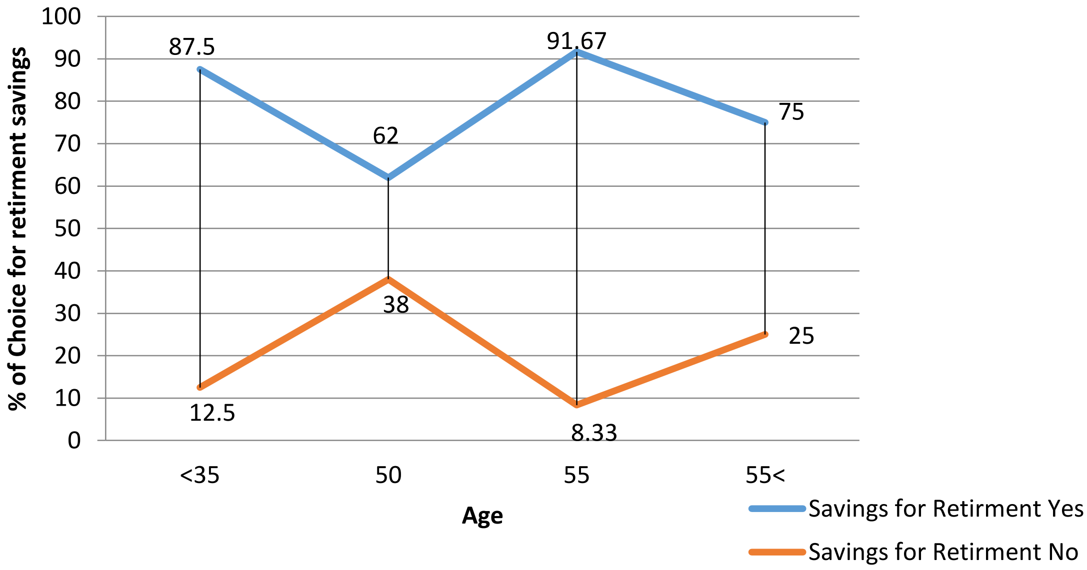
For Age Group 3 (50-55): P(*y=1*) ≈ 0.71 (71% chance of choosing "Yes")

For Age Group 4 (55<): P(*y=1*) ≈ 0.77 (77% chance of choosing "Yes")

The p-value for the age group variable was 0.459, indicating that the effect of age group on the decision to choose "Yes" was not statistically significant ($p>0.05$).

Figure 3:

Changes in Retirement savings behaviour along with age



Note: choice of Retirement savings across the various age groups i.e., less than 35 years to above 55 years of age

The logical regression equation was not able to show the Age impact on retirement planning. However, the trends of retirement savings as shown in the **Figure 3** establish a fact that

a) Individuals up to the age of 35 are keen on accumulation of retirement savings, as the individuals have lot of surplus funds for investment without many family responsibilities.

b) In the age group 35 to 50 years, due to various responsibilities the savings towards retirement are declined. The age group of 35 – 50 years has other higher priorities as discussed in the Section 4.3.

c) Once the individual attains the age of 50, the interest towards retirement savings is significantly increasing up to the age of 55 years.

d) In the age group of above 55years, the behavioural changes towards retirement savings are clear and other individual priorities outdo the retirement savings as they would have already accumulated the desired retirement wealth and now left with the choice of retirement plan execution. In the next section, it reveals that for the individuals above the 55 years of age, retirement planning is a niche concern.

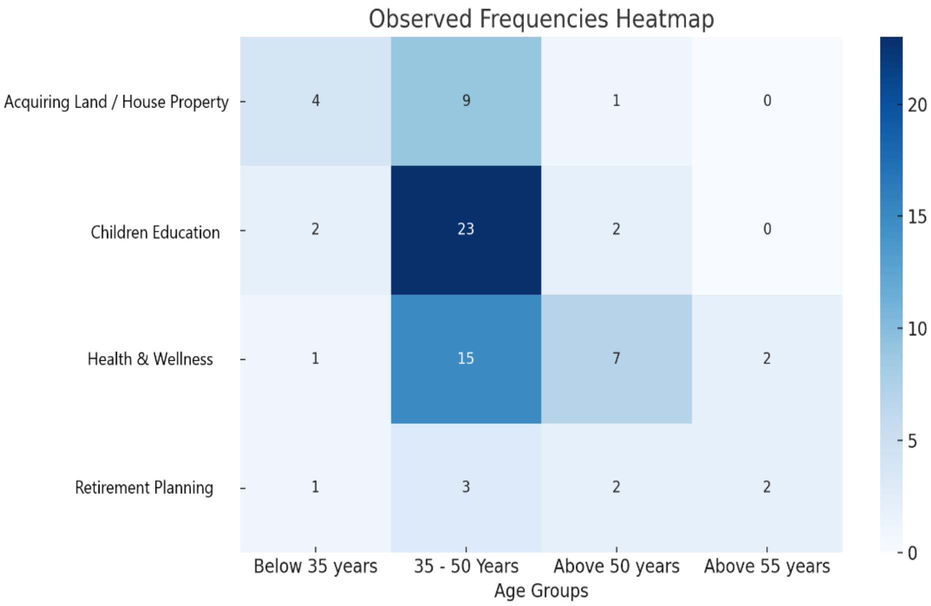
4.3 Highest priority of choice among various age groups

The dataset consisted of four priority categories (Acquiring Land/House Property, Children Education, Health & Wellness, and Retirement Planning) distributed across four age groups (Below 35 Years, 35–50 Years, Above 50 Years, and 55 Years).

The total sample size was N=74.

Figure 4

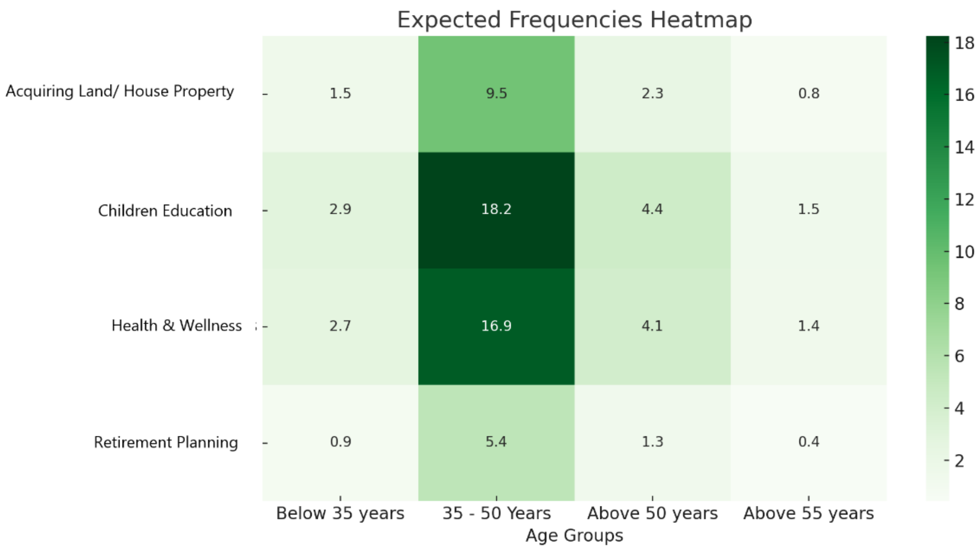
Observed Frequencies Across Priorities and Age Groups



Note: Observed frequencies are drawn from the Table 4.

Figure 5

Expected Frequencies Across Priorities and Age Groups



Note: Expected frequencies as per Chi – Square test of Independence.

To determine if there is a statistically significant relationship between age groups and priorities, a chi-square test of independence was conducted. The observed and expected frequencies are visualized in Figure 4 and Figure 5.

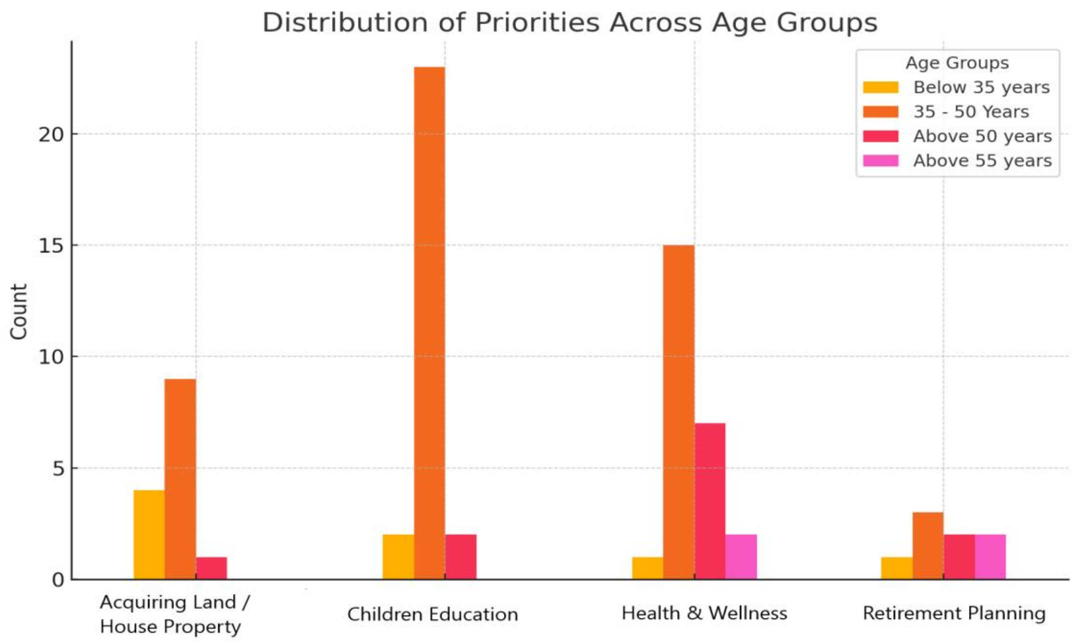
<u>Chi-Square Test of Independence</u>

i) Chi-Square Statistic (χ^2): 20.75
ii) Degrees of Freedom (df): 9
iii) p-value: 0.014

At α = 0.05, the p-value was less than 0.05, indicating a **statistically significant relationship between age groups and priorities**.

Figure 6

Distribution of priorities across age groups



Note: The Individuals priorities are captured from the questionnaire for the 4 age groups.

Individual Priorities about Investment Planning is summarized as below:

a. "Acquiring Land/House Property" is a primary goal for younger individuals (below 35 years) due to a surplus of salary/professional income. This can be co-related with the FICCI & Anarock Survey (2023). The survey found that 66% of millennials/ Gen Y individuals (present age group 26-41 years) in India are keen on investing in home ownership.

b. "Children Education" dominates the 35–50 age group as the individuals feel that quality of education is very important for their kids. Hence it is obviously the highest priority for the individuals in the age group of 35-50 years. The fee for a master's degree or any professional courses even in premier government organizations is very high. Hence the individuals keep savings towards these goals.

c. "Health & Wellness" has gained a lot of importance for those above 50 years. The recent COVID–19 pandemic has brought a lot of changes in the lifestyle of individuals. They are aware of the importance of health and well-being. Unfortunately, in this age group, the occurrences of chronic health conditions such as diabetes, and blood pressure issues are more prevalent. Hence individuals opted for health & wellness as the highest priority.

d. "Retirement Planning" is a niche concern, mainly for those above 55 years.Even though it is very late to think about retirement planning, in reality, individuals in different age groups are opting for other higher priorities over retirement planning. The study provides more relevance to the financial literature on retirement planning, hence individuals may give importance to retirement planning along with their other highest priorities. The analysis shows the gaps in planning for retirement across the age groups. At the same time, it gives a lot of scope for improvement in the policies towards encouraging retirement planning.

5. Conclusion

5.1 The coverage of the study is specifically in the lines of "traveling between recruitment to retirement age" of the employee, and investment in-between period i.e. starting from the mid of 20's to retirement age. At the time of recruitment, the young age thought process, and attitude are different. However, as time goes on the responsibilities automatically are one by one completed, and the mind will think about retirement and life after retirement. This is a common phenomenon for every employee. At the edges of retirement, planning for investment/ investment after retirement may not yield the results or may not fulfil the dreams. Hence we attempted to write a paper on retirement planning and how the financial literacy and age of employees influence retirement planning.

5.2 The preceding chapters of the paper enlighten about the age of employees, knowledge of financial literacy, and how these influence retirement planning. And also explained and carried comparative analysis of retirement planning from different age groups of different people having financial literacy/not knowing financial literacy. The study reveals that at the age of 35 to 50 years, most of the respondents felt about the fulfilment of present responsibilities like children's education, construction of a house for comfortable living and the entire thought process is about giving the best life to their children/ kids. Once the responsibilities are completed then they will think about life after retirement, it is observed that while attaining the age of 50 years the entire thought process, behaviour attitude about investment for the future/after retirement, the same analysis is carried out preceding chapters and explained with pictorial graphs with the comprehensive study.

5.3 This study primarily focussed on the relationship between financial literacy and retirement planning (RTP) behaviour. A chi-square test of independence was conducted to determine if there is a statistically significant association between these two variables. The overall study reveals that individuals with better financial literacy levels are executing their retirement plans in a better way when compared to others who do not have financial literacy.

5.4 This study primarily focussed on the relationship between financial literacy and retirement planning (RTP) behaviour. A chi-square test of independence was conducted to determine if there is a statistically significant association between these two variables. The overall study reveals that individuals with better financial literacy levels are executing their retirment plans in a better way when compared to others who are not having financial literacy.

5.5 Secondly, the study is trying to establish the relationships between age group and investment behaviour. The same is explained and revealed, that the result from the logistical regression equation has not been able to show the Age impact on retirement planning. The same is explained with the logistical regression model.

5.6 Thirdly the study finds about high priority of investment and influence on investment and retirement planning. To determine this the study is conducted with suitable data. It is established that there is a statistically significant relationship between age groups and priorities, and a chi-square test of independence was conducted. The respondents have given their responses and derived the results from the responses. Accordingly, the study has been carried out and it is established that a statistically significant relationship is established between age groups and priorities of investment.

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