

IJPSL

Volume 2, Issue 1

Assessment of Financial Cognizance of Women in India

Aayushi Tomar¹

Devanshi Agarwal²

Sajneet Kaur Bagga³

Sneha Kumari⁴

Disclaimer: Knowledge is ever changing. As new research and experiences broaden our knowledge, old concepts may be required to be looked into afresh. The Authors and editors of the material herein have consulted sources believed to be reliable in their efforts to provide information that is complete and in accord with the standards accepted at the time of publication. However, in view of the possibility of human error by the authors, editors, or publisher, nor any other who has been involved in the preparation of the work warrants that the information contained herein in every aspect accurate or complete, and they are not responsible for any errors or omissions or the results obtained from the use of such information. Readers are advised to confirm the information contained herein with other sources.

In any condition and due to any reason, if any Educational/Research Institution (College or University) denies accepting the research paper published in our Journals, it will not be the responsibility of the Editor, Publisher or the Management.

Read more scholarly articles at <https://ijpsl.in/>

¹ B.Sc. Hons. Mathematics, Miranda House, University of Delhi

² B.Sc. Hons. Mathematics, Miranda House, University of Delhi

³ B.A. Programme, Economics and Mathematics, Miranda House, University of Delhi

⁴ B.Sc. Hons. Mathematics, Miranda House, University of Delhi

Abstract

With the development of a more sophisticated financial system, it has become imperative to have financial literacy in order to make better decisions pertaining to investment and financial aspects. Despite its significance, the general level of financial knowledge in India is not satisfactory, especially in the case of Indian women. Although our country has made noteworthy progress in this area, still improvement is required. To assess the behaviour of Indian women in making financial decisions and their level of financial literacy, we conducted a study that consists of a questionnaire survey taken by 225 Indian women and the statistical analysis of the responses received. Results of the analysis revealed that the level of financial literacy and participation of women in financial matters is poor. It also indicates that financial knowledge highly depends on the occupation and region of residence, and there is a disparity in Indian families when it comes to taking finance and investment-related decisions. On the positive side, we see that the willingness of women in gaining financial knowledge and awareness of related policies and programs have taken a rise, but there is a need for implementing proper education and training programs in this field.

Keywords: *financial literacy, investment, behavioural finance, financial decisions, women's behaviour*

Acknowledgement

The presented research paper deals with the topic “Assessment of Financial Cognizance of Women in India”, and is based on a survey taken by 225 women residing in India. We would like to express our sincere gratitude to Dr Rekha Gupta for guiding and helping us in getting a better understanding of the paper. We are thankful to her for providing continuous support and valuable information needed to complete our study. A moment of appreciation for all the respondents who took our survey and helped to carry out the research. It was our pleasure to work in a team and we appreciate every member's contribution. In the end, we would also like to thank our family and friends for their constant support and encouragement.

1.0 Introduction

Individuals' responsibility in managing their own assets and protecting their economic prospects has increased in the contemporary setting due to the interlinked international financial system and growing financial expectations. Individuals are increasingly needed to have a deeper understanding of the world of financial management in order to make informed choices that are most suited to their economic aims and priorities. Personal financial measures also have a large impact on the country's social and economic progress. Financial planning is defined by the National Institute of Securities Markets (NISM) as "the process of meeting one's life goals through proper management of personal finances." The OECD/INFE (International Network on Financial Education) defined financial literacy as "a combination of awareness, knowledge, skill, attitude, and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being." It entails a person's understanding of financial services, market knowledge, financial information assets, and confidence in dealing with financial affairs in order to adapt to the changing environment and make suitable decisions in light of life events.

However, not everyone is equally capable of managing their monetary resources. Individuals lack financial understanding, according to researchers from all over the world, presenting significant issues about individuals' tendency to ensure their financial well-being. People's financial literacy is affected by a combination of elements, one of the most significant of which is 'gender.' According to reports, women perform poorer than men on financial literacy examinations and have much less confidence in their financial ability.

Various gender conversations have taken place in India over the years. Such debates typically centre on women's societal roles, such as academic attainment, welfare, financial standing, women's equality, and so on. Women were shown to be better small-scale managers of cash and saving costs than males, but many women, including working women, felt safe delegating long-term financial and retirement planning to their spouses and fathers. The primary reason for this is a lack of financial understanding and confidence among females. The primary reason for this is the lack of financial understanding and confidence among women. Despite the government's numerous efforts to help women gain financial awareness

and develop financial plans, there is still a major imbalance in India when it comes to financial and investment matters. The current study intends to investigate women's financial cognizance when it comes to making financial decisions, awareness of financial instruments, investment behaviour, and gender disparities.

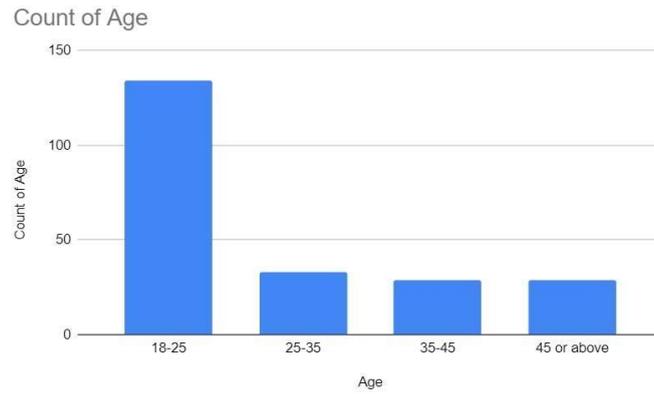
2.0 Objective

The primary objective of the study is to understand the aspects of behavioural finance in women- how any woman investor acts in the financial market in making her decision, with the knowledge she possesses, and her attitude towards matters of finance and investment. To assess this more specifically, the study has been divided into smaller structures to statistically analyse the financial behaviour of women on the basis of various factors like age, profession, et cetera, gender disparity in Indian families, and to investigate the challenges women experience in obtaining financial knowledge, as well as government initiatives and policies aimed at improving financial literacy among women in India. The research is based on a survey conducted over a sample size of 225 women of different age groups, regions of residence and professions.

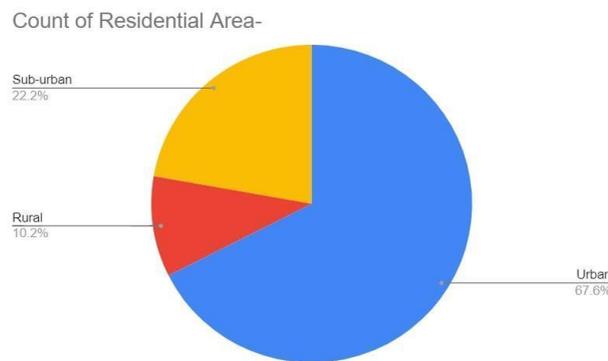
3.0 Research Methodology

1. **Research Design:** The research design employed in this study is a questionnaire survey method to know about the behaviour of women towards finance and investment decisions. Survey researchers have used a questionnaire tool as '**Google Form**' to collect responses from women. Then the collected data has been used for analysis and testing hypotheses.
2. **Sample Design & Size:** A Questionnaire Form was rolled out on social networking platforms like WhatsApp and LinkedIn for taking the survey of Indian women. The survey was conducted over a period of one month (June, 2021). A random sampling method was used and women belonging to different age groups, regions of residence and professions were targeted.

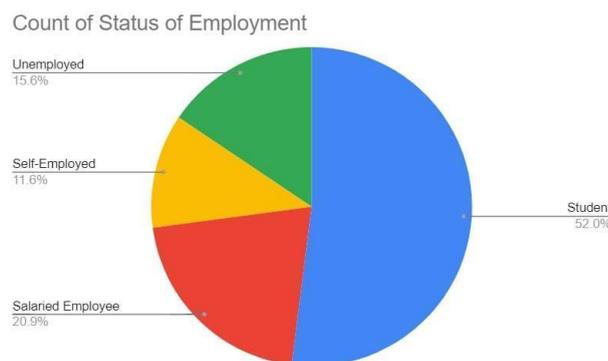
The *sample size* consists of **225 women in India**.



Graph 1: Age-Wise Classification of Respondents



Graph 2: Residential Area-Wise Classification of Respondents



Graph 3: Employment-Wise Classification of Respondents

3. **Questionnaire:** A **questionnaire** is a research instrument that consists of a set of questions that aims to collect information from a respondent which is used for the

study. The data collected from a questionnaire can be both qualitative as well as quantitative in nature.

The survey conducted for this research paper was designed to assess several aspects which would determine the behaviour of respondents in taking financial decisions, their attitude towards the gaining of financial literacy and awareness of policies aimed at improving financial literacy among people, and disparity faced in Indian households on the basis of gender. Here is the questionnaire we conducted to assess the behaviour of women in financial matters:

| Sr No. | Questions | Choice for Answers |
|---------------|---|---|
| 1. | On a scale of 5, rate the importance of financial literacy in your life. | 1, 2, 3, 4, 5 |
| 2. | Do you read financial news/articles/blogs frequently? | Yes, no |
| 3. | What are your savings in one month? | Less than Rs. 5000, Rs. 5000- Rs. 30000, Greater than Rs. 30000 |
| 4. | What portion of your income (in %) do you invest? (Choose NA if you don't) | Less than 10%, 10%-30%, 30%-60%, Greater than 60%, NA |
| 5. | Why do you invest your money? | For meeting a specific financial goal in future, Child's education, old age security, to cope up with uncertain emergencies, to protect the health, I do not invest |
| 6. | Do you think that there is a disparity in your family when it comes to financial matters? | Yes, No, Maybe |
| 7. | Are you dependent on your family/friends for managing your own finances? | Yes, No, Sometimes |
| 8. | Which among the following factors, you | Associated risk and return, Liquidity, Time |

| | | |
|-----|---|--|
| | consider most while investing? | Horizon (Short term or long term), Diversification (Asset Allocation), Emergency fund allocation, Tax minimization, I do not consider these factors |
| | | and randomly invest/ I don't invest |
| 9. | Rate your risk-taking appetite while choosing an investment plan. | 1, 2, 3, 4, 5 |
| 10. | How often do you invest or check your portfolio status? | Regularly, Sometimes, Never |
| 11. | Are you aware of the initiatives taken by the government to increase awareness regarding financial literacy among people? | Yes, No, No and I don't want to know them |
| 12. | Do you agree that financial literacy should be added as an additional subject in schools and universities? | Yes, No, Maybe |
| 13. | Do you generally find difficulty in understanding financial terminology and content? | Yes, No, Sometimes |
| 14. | If yes, do you want to learn them? | Yes, No, Not Sure |

Note: Some of the graphs showing the responses are in the Appendix

4. **Statistical Instruments:** Statistical tests like Chi-Square, ANOVA was applied on the data for performing question-wise analysis, testing of hypotheses using MS Excel and SPSS software, and results and interpretations have been stated.

The Chi-square test for independence is a statistical test applied on two categorical variables to determine whether or not there is a significant relationship between two qualitative variables.

Analysis of Variance (ANOVA) is a test that is used for finding whether an experiment result is statistically significant.

4.0 Limitations of Study

The **limitations of a study** are its flaws or drawbacks which is the result of the unavailability of data, flawed methodology, etc. Factors causing limitations in the research paper are:

1. *Characteristics of the Study:* The interest and knowledge of the authors and readers are not the same so the paper might be incomprehensible for some.
2. *Data Collection Methods:* The data collected might not be sufficient for the study. Different results can be expected depending on the kind of data collected, people taking the survey, etc.
3. *Time of Data Collection:* This is an important factor in which specific events might have affected the responses collected through surveys.

5.0 Analysis and Findings

5.1 Chi-Square Tests

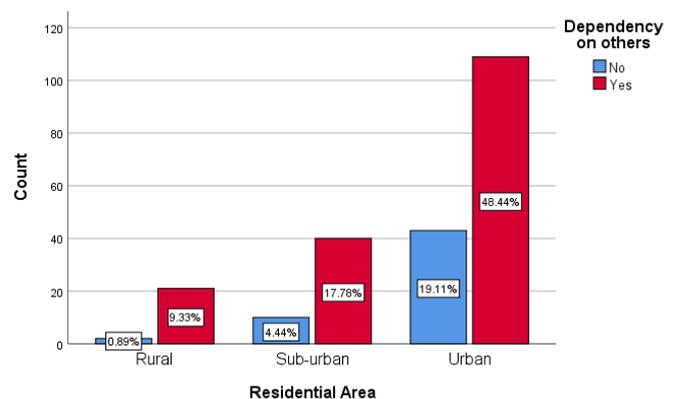
1. Residential area vs Dependency on family/friends for financial matters

H0: Residential Area and Dependency on others for finance management are independent of each other.

H1: Residential Area and Dependency on others for finance management are dependent on each other.

| | Value | df | Asymptotic Significance (2-sided) |
|--------------------|--------------------|----|-----------------------------------|
| Pearson Chi-Square | 4.840 ^a | 2 | .089 |
| Likelihood Ratio | 5.554 | 2 | .062 |
| N of Valid Cases | 225 | | |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.62.



Graph 4: Residential Area*Dependency on others

We observe that the Pearson Chi-square statistic (χ^2) is 4.840, degree of freedom(df) is 2, which corresponds to $p (=0.089) > \alpha (0.05)$. Hence, we accept the Null Hypothesis (H0)

with 95% confidence level and interpret that residential area and dependency on family/friends for managing personal finances are not statistically associated i.e., they are independent of each other. From the graph, we observe that approximately 76% of people found themselves to be dependent on others for managing their own finances irrespective of their residential area.

Residential Area * Dependency on family Crosstabulation

| | | | Dependency on family | | Total |
|------------------|-------------------------------|-------------------------------|----------------------|--------|--------|
| | | | No | Yes | |
| Residential Area | Rural | Count | 2 | 21 | 23 |
| | | Expected Count | 5.6 | 17.4 | 23.0 |
| | | % within Residential Area | 8.7% | 91.3% | 100.0% |
| | | % within Dependency on family | 3.6% | 12.4% | 10.2% |
| | Sub-urban | Count | 10 | 40 | 50 |
| | | Expected Count | 12.2 | 37.8 | 50.0 |
| | | % within Residential Area | 20.0% | 80.0% | 100.0% |
| | | % within Dependency on family | 18.2% | 23.5% | 22.2% |
| | Urban | Count | 43 | 109 | 152 |
| | | Expected Count | 37.2 | 114.8 | 152.0 |
| | | % within Residential Area | 28.3% | 71.7% | 100.0% |
| | | % within Dependency on family | 78.2% | 64.1% | 67.6% |
| Total | Count | 55 | 170 | 225 | |
| | Expected Count | 55.0 | 170.0 | 225.0 | |
| | % within Residential Area | 24.4% | 75.6% | 100.0% | |
| | % within Dependency on family | 100.0% | 100.0% | 100.0% | |

Table 2: Residential Area* Dependency on family Crosstabulation

Interpretation: *From the contingency table shown above, we see that the response count for ‘Yes’ is almost greater than the expected count in all residential areas. This implies that regardless of the demographic factors, women are dependent on others for managing their own finances. It indicates that women are less confident in making financial decisions. Lack of financial awareness is a major impediment to the foundation of an equitable world.*

2. Age Group vs Awareness towards government initiatives

H0: There is no association between the age of females and their awareness of government initiatives related to financial literacy.

Chi-Square Tests

| | Value | df | Asymptotic Significance (2-sided) |
|------------------------------|--------------------|----|-----------------------------------|
| Pearson Chi-Square | 8.067 ^a | 2 | .018 |
| Likelihood Ratio | 7.975 | 2 | .019 |
| Linear-by-Linear Association | 7.830 | 1 | .005 |
| N of Valid Cases | 225 | | |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.31.

Symmetric Measures

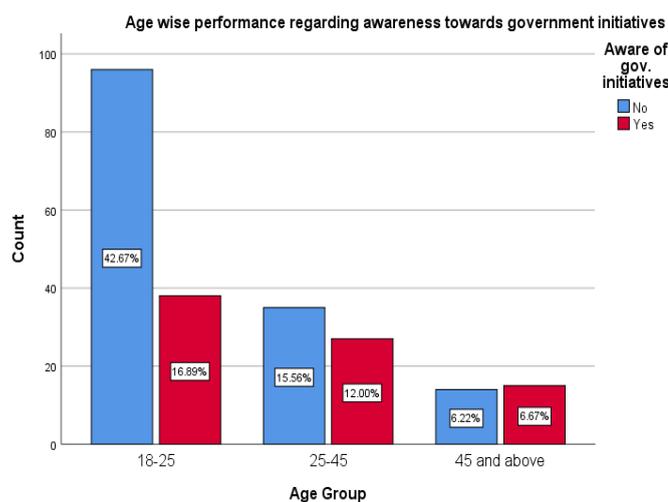
| | | Value | Approximate Significance |
|--------------------|------------|-------|--------------------------|
| Nominal by Nominal | Phi | .189 | .018 |
| | Cramer's V | .189 | .018 |
| N of Valid Cases | | 225 | |

H1: There is an association between the age of females and their awareness of government initiatives related to financial literacy.

Table 3: Chi Square Tests

Table 4: Phi and Cramer's V value

We observe that the Pearson Chi-square statistic (χ^2) is 8.067, degree of freedom(df) is 2, which corresponds to $p (=0.018) < \alpha (0.05)$. Hence, we reject the null Hypothesis (H0) with 95% confidence level and infer that there is a statistical association between the age of respondents and their awareness towards government initiatives in the field of financial literacy. Since our table is a 3 x 2 table, we observe from Cramer's V value that there is a weak association between the two variables.



Graph 5: Age Group * Aware of Government initiatives Crosstabulation

From the survey data graph, we interpret that approximately 65% person is not aware of the initiatives taken in the field of financial literacy and the unawareness is more apparent in younger age groups.

Age Group * Awareness towards Gov initiatives Crosstabulation

| | | | Aware of gov initiatives | | Total |
|-------------|-----------------------------------|-----------------------------------|--------------------------|--------|--------|
| | | | No | Yes | |
| Age Group-3 | 18-25 | Count | 96 | 38 | 134 |
| | | Expected Count | 86.4 | 47.6 | 134.0 |
| | | % within Age Group | 71.6% | 28.4% | 100.0% |
| | | % within Aware of gov initiatives | 66.2% | 47.5% | 59.6% |
| | 25-45 | Count | 35 | 27 | 62 |
| | | Expected Count | 40.0 | 22.0 | 62.0 |
| | | % within Age Group | 56.5% | 43.5% | 100.0% |
| | | % within Aware of gov initiatives | 24.1% | 33.8% | 27.6% |
| | 45 and above | Count | 14 | 15 | 29 |
| | | Expected Count | 18.7 | 10.3 | 29.0 |
| | | % within Age Group | 48.3% | 51.7% | 100.0% |
| | | % within Aware of gov initiatives | 9.7% | 18.8% | 12.9% |
| Total | Count | 145 | 80 | 225 | |
| | Expected Count | 145.0 | 80.0 | 225.0 | |
| | % within Age Group | 64.4% | 35.6% | 100.0% | |
| | % within Aware of gov initiatives | 100.0% | 100.0% | 100.0% | |

Table 5: Age Group* Awareness towards Government Initiatives

Interpretation: *From the contingency table, we interpret that more than half of the 18-25 age group respondents are unaware about the initiatives and a similar trend is followed with 25-45 age group respondents while it is opposite with 45+ age group respondents who tend to be more financially aware which indicates that awareness rises with age. Moreover, females among 18-25 age group tend to be least aware which indicates that female youths have the least financial literacy rate.*

Lack of financial apprehension at the grassroots level (schools and institutions) is a major source of concern as schools restrict imparting financial education to only an interested group of students leaving the rest financially uneducated. This is aggravating because the younger segment is the driving force of a country and if people are not financially educated there is an erosion of crucial human capital.

3. Employment status vs Share of income invested

H0: Employment status and share of income invested in financial instruments are independent of each other.

H1: Employment status and share of income invested in financial instruments are dependent of each other.

Chi-Square Tests

| | Value | df | Asymptotic Significance (2-sided) |
|--------------------|---------------------|----|-----------------------------------|
| Pearson Chi-Square | 88.501 ^a | 9 | .000 |
| Likelihood Ratio | 96.105 | 9 | .000 |
| N of Valid Cases | 224 | | |

a. 3 cells (18.8%) have expected count less than 5. The minimum expected count is 2.79.

Table 6: Chi Square Tests

Symmetric Measures

| | | Value | Approximate Significance |
|--------------------|------------|-------|--------------------------|
| Nominal by Nominal | Phi | .629 | .000 |
| | Cramer's V | .363 | .000 |
| N of Valid Cases | | 224 | |

Table 7: Phi and Cramer's V Value

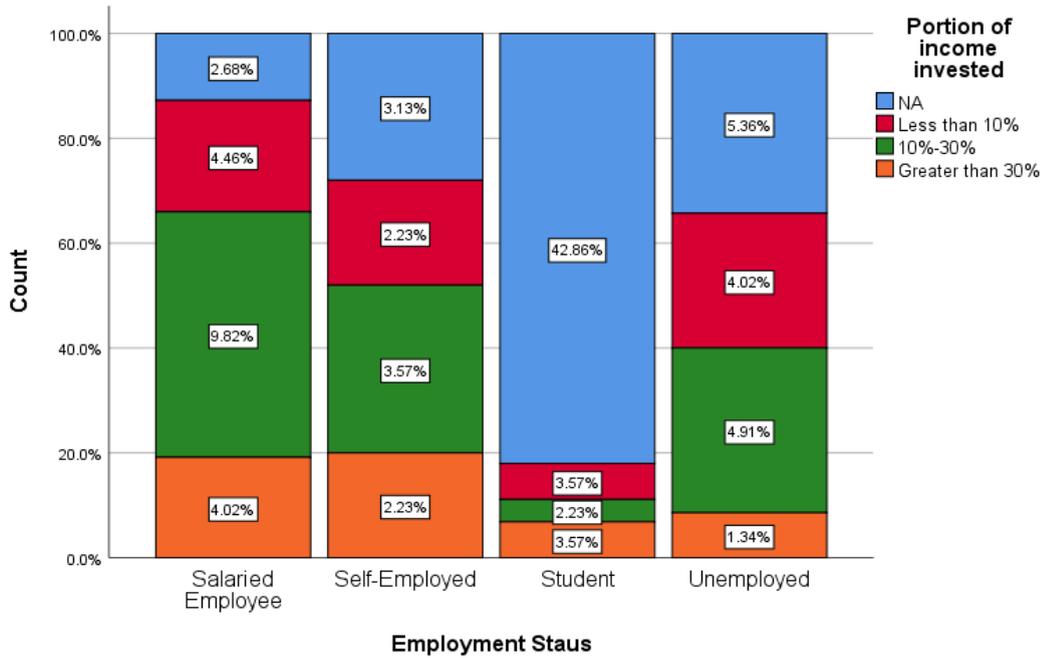
The Pearson Chi-Square statistic (χ^2) corresponds to 88.501 having a degree of freedom (df) 9 resulting in p-value (0.000) < $\alpha(0.05)$. Hence, we reject our null hypothesis and conclude that there is a statistically significant association between the employment status of females and the portion of the income they invest in financial instruments. Since our contingency table is of size 4 x 4, we look at Cramer's V value and interpret that there is a very strong association between the two variables.

Employment Staus * Portion of income invested Crosstabulation

| | | | Portion of income invested | | | | |
|------------------|-------------------------------------|-------------------------------------|----------------------------|---------------|---------|------------------|--------|
| | | | NA | Less than 10% | 10%-30% | Greater than 30% | Total |
| Employment Staus | Salaried Employee | Count | 6 | 10 | 22 | 9 | 47 |
| | | Expected Count | 25.4 | 6.7 | 9.7 | 5.2 | 47.0 |
| | | % within Employment Staus | 12.8% | 21.3% | 46.8% | 19.1% | 100.0% |
| | | % within Portion of income invested | 5.0% | 31.3% | 47.8% | 36.0% | 21.0% |
| | Self-Employed | Count | 7 | 5 | 8 | 5 | 25 |
| | | Expected Count | 13.5 | 3.6 | 5.1 | 2.8 | 25.0 |
| | | % within Employment Staus | 28.0% | 20.0% | 32.0% | 20.0% | 100.0% |
| | | % within Portion of income invested | 5.8% | 15.6% | 17.4% | 20.0% | 11.2% |
| | Student | Count | 96 | 8 | 5 | 8 | 117 |
| | | Expected Count | 63.2 | 16.7 | 24.0 | 13.1 | 117.0 |
| | | % within Employment Staus | 82.1% | 6.8% | 4.3% | 6.8% | 100.0% |
| | | % within Portion of income invested | 79.3% | 25.0% | 10.9% | 32.0% | 52.2% |
| | Unemployed | Count | 12 | 9 | 11 | 3 | 35 |
| | | Expected Count | 18.9 | 5.0 | 7.2 | 3.9 | 35.0 |
| | | % within Employment Staus | 34.3% | 25.7% | 31.4% | 8.6% | 100.0% |
| | | % within Portion of income invested | 9.9% | 28.1% | 23.9% | 12.0% | 15.6% |
| Total | Count | 121 | 32 | 46 | 25 | 224 | |
| | Expected Count | 121.0 | 32.0 | 46.0 | 25.0 | 224.0 | |
| | % within Employment Staus | 54.0% | 14.3% | 20.5% | 11.2% | 100.0% | |
| | % within Portion of income invested | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | |

Table 8: Employment Status*Portion of Income Invested

From the contingency table, we see that 82.1% of female students do not invest in any of the financial instruments. It is inclusive of the fact that most of the students do not have a fixed income and are generally assisted by an adult of the family for managing their finances. While it may be favourable to have an experienced adult steward financial decisions, it limits the risk-taking abilities of these young adults in financial matters. It can also be noted that 54% of the respondents do not invest in any financial instrument and only 11.2% of the females invest greater than 30% of their total income.



Graph 6: Employment status of women * Amount invested in financial instruments

It is clear that students and unemployed females constitute a major portion of the NA category while salaried employees are the ones who invest the most out of all other categories.

Interpretation: *We can infer that most of the females are reluctant about investing and invest only 10% -30% of their earnings. Since a majority of them tend to accumulate cash at home and thus its value never increases. Salaried females are more confident in investing, and are more aware of financial instruments in the market, as compared to unemployed females.*

4. Employment status vs Disparity in the family regarding financial matters

H0: Employment status and disparity in the family regarding financial matters are independent of each other.

H1: Employment status and disparity in the family regarding financial matters are dependent on each other.

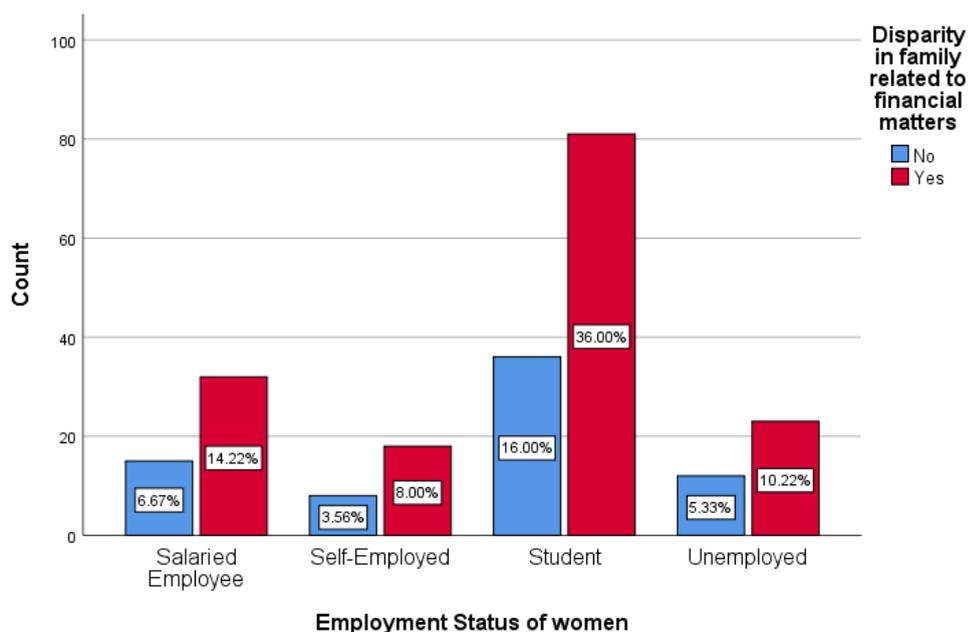
Chi-Square Tests

| | Value | df | Asymptotic Significance (2-sided) |
|--------------------|-------------------|----|-----------------------------------|
| Pearson Chi-Square | .165 ^a | 3 | .983 |
| Likelihood Ratio | .163 | 3 | .983 |
| N of Valid Cases | 225 | | |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.20.

Table 9: Chi Square Tests

The Pearson Chi-Square statistic (χ^2) corresponds to 0.165 having a degree of freedom (df) equal 3 resulting in p-value ($=0.983$) $>$ $\alpha(=0.05)$. Hence, we accept our null hypothesis and conclude that there is no statistical association between the employment status of females and disparity in the family regarding financial matters.



Graph 7: Employment status of women * Gender-based disparity in the family for financial matters

Interpretation: From the graph above, we can interpret that there is a disparity in families on the basis of gender when it comes to financial matters but this disparity is the same for all irrespective of the employment status of women. This is because major financial decisions are

usually taken in consensus, considering the benefits for the whole family. These decisions are not taken on their merit but are based on social responsibilities. Culture, inequality and gender discrimination are also contributing factors in hindering women’s participation in financial matters. As observed, even the employed women are seen as an extra source of income to the family, which is rarely invested in accumulating wealth for self.

5. Residential area vs Difficulty in understanding financial terminology

H0: Residential area of females does not affect their ease in understanding financial terminology.

H1: Residential area of females affect their ease in understanding financial terminology.

Chi-Square Tests

| | Value | df | Asymptotic Significance (2-sided) |
|--------------------|--------------------|----|-----------------------------------|
| Pearson Chi-Square | 8.326 ^a | 2 | .016 |
| Likelihood Ratio | 9.947 | 2 | .007 |
| N of Valid Cases | 224 | | |

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 3.18.

Table 10: Chi Square Tests

Symmetric Measures

| | | Value | Approximate Significance |
|--------------------|------------|-------|--------------------------|
| Nominal by Nominal | Phi | .193 | .016 |
| | Cramer's V | .193 | .016 |
| N of Valid Cases | | 224 | |

Table 11: Phi and Cramer's V Value

We observe that the Pearson Chi-square statistic (χ^2) is 8.326, degree of freedom(df) is 2, which corresponds to $p (=0.016) < \alpha (0.05)$. Hence, we reject the null Hypothesis (H0) with 95% confidence level and infer that there is a statistical association between the residential area of females and whether it is difficult to understand the financial terminology and content.

Since our table is a 3 x 2 table, we will look at Cramer’s V values and infer that there is a weak association between the two variables.

Residential Area * Difficulty in fin terms Crosstabulation

| | | | Difficulty in fin terms | | Total |
|------------------|----------------------------------|----------------------------------|-------------------------|--------|--------|
| | | | No | Yes | |
| Residential Area | Rural | Count | 1 | 22 | 23 |
| | | Expected Count | 3.2 | 19.8 | 23.0 |
| | | % within Residential Area | 4.3% | 95.7% | 100.0% |
| | | % within Difficulty in fin terms | 3.2% | 11.4% | 10.3% |
| | Sub-urban | Count | 2 | 47 | 49 |
| | | Expected Count | 6.8 | 42.2 | 49.0 |
| | | % within Residential Area | 4.1% | 95.9% | 100.0% |
| | | % within Difficulty in fin terms | 6.5% | 24.4% | 21.9% |
| | Urban | Count | 28 | 124 | 152 |
| | | Expected Count | 21.0 | 131.0 | 152.0 |
| | | % within Residential Area | 18.4% | 81.6% | 100.0% |
| | | % within Difficulty in fin terms | 90.3% | 64.2% | 67.9% |
| Total | Count | 31 | 193 | 224 | |
| | Expected Count | 31.0 | 193.0 | 224.0 | |
| | % within Residential Area | 13.8% | 86.2% | 100.0% | |
| | % within Difficulty in fin terms | 100.0% | 100.0% | 100.0% | |

Table 12: Residential Area* Difficulty in understanding financial content

Interpretation: From the above table, we infer that a majority of females belonging to rural or suburban areas struggle more while understanding financial terms and 90.3% out of total respondents who don't find difficulty in understanding the same belong to urban areas. Since educational resources in rural areas are scarce and there is a lack of awareness, people are more ignorant when it comes to financial matters.

As per an article published by The Hindu, girls in rural areas are oblivious to the basic banking services and transactions. Financial knowledge is well understood among the urban section because of more financial freedom and exposure. Although from the findings, the overall obscurity in women related to financial content is very high (86.2% of total).

5.2 ANOVA tests

Two ANOVA tests were run to determine whether there are any statistically significant differences between the means of a categorical and a numeric variable.

No outliers in the dataset were found, as assessed by examining the boxplot. The risk-taking ability for each age group was normally distributed, verified using the Shapiro-Wilks Test. Homogeneity of variances was verified using Levene's test for homogeneity of variances.

1. Age group vs Risk-taking ability of women while choosing an investment plan

H0: There is no significant difference in the risk-taking ability of women while choosing an investment plan with respect to different age groups.

H1: There is a significant difference in the risk-taking ability of women while choosing an investment plan with respect to different age groups.

Descriptives

Rate your risk taking appetite while choosing an investment plan.

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-------------|-----|------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| 18-25 | 134 | 2.84 | .908 | .078 | 2.69 | 3.00 | 1 | 5 |
| 25-35 | 33 | 2.30 | .984 | .171 | 1.95 | 2.65 | 1 | 4 |
| 35-45 | 29 | 3.00 | 1.035 | .192 | 2.61 | 3.39 | 1 | 5 |
| 45 or above | 29 | 2.45 | 1.088 | .202 | 2.03 | 2.86 | 1 | 5 |
| Total | 225 | 2.73 | .982 | .065 | 2.60 | 2.86 | 1 | 5 |

Table 13: Descriptive Statistics Table

The descriptive table (above) provides some very useful descriptive statistics, including the mean, standard deviation and 95% confidence intervals for the dependent variable (risk-taking ability of women) for each separate age group, as well as when all groups are combined.

ANOVA

Rate your risk taking appetite while choosing an investment plan.

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|-------|------|
| Between Groups | 12.149 | 3 | 4.050 | 4.390 | .005 |
| Within Groups | 203.851 | 221 | .922 | | |
| Total | 216.000 | 224 | | | |

Table 14: Anova Test

We interpret that there is a considerable difference between the two Mean Squares (4.050 and 0.922) which resulted in a statistically significant difference between the groups was determined by one-way ANOVA ($F(3,221) = 4.390, p = .005$). Thus, we reject the null hypothesis and accept the alternative hypothesis. This implies that the average risk-taking ability of women while choosing an investment plan of people across different age groups are not the same. But the rejection of null hypotheses doesn't indicate that the average means of the total population is different. So, to find out which of the specific groups differed, we use the **Multiple Comparisons** table which contains the results of the Bonferroni post hoc test.

Multiple Comparisons

Dependent Variable: Rate your risk taking appetite while choosing an investment plan.

Bonferroni

| (I) Age | (J) Age | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval | |
|-------------|-------------|-----------------------|------------|-------|-------------------------|-------------|
| | | | | | Lower Bound | Upper Bound |
| 18-25 | 25-35 | .540* | .187 | .025 | .04 | 1.04 |
| | 35-45 | -.157 | .197 | 1.000 | -.68 | .37 |
| | 45 or above | .395 | .197 | .275 | -.13 | .92 |
| 25-35 | 18-25 | -.540* | .187 | .025 | -1.04 | -.04 |
| | 35-45 | -.697* | .244 | .029 | -1.35 | -.05 |
| | 45 or above | -.145 | .244 | 1.000 | -.80 | .51 |
| 35-45 | 18-25 | .157 | .197 | 1.000 | -.37 | .68 |
| | 25-35 | .697* | .244 | .029 | .05 | 1.35 |
| | 45 or above | .552 | .252 | .179 | -.12 | 1.22 |
| 45 or above | 18-25 | -.395 | .197 | .275 | -.92 | .13 |
| | 25-35 | .145 | .244 | 1.000 | -.51 | .80 |
| | 35-45 | -.552 | .252 | .179 | -1.22 | .12 |

*. The mean difference is significant at the 0.05 level.

Table 15: Post Hoc Tests (Bonferroni Tests)

A Bonferroni post hoc test finding indicates that there is a significant difference in risk-taking abilities of (18-25) and (25-35) age group respondents (Sig = 0.025 < 0.05). Similar is the case with (25-35) and (35-45) since their significance level is 0.029 which is quite less than 0.05.

Interpretation: *Above tests indicate that the age group of respondents have a significant impact on the risk-taking ability of women while choosing an investment plan.*

2. Residential area vs Rating the importance of financial literacy

H0: There is no significant difference in rating the importance of financial literacy in one’s life with respect to the residential area they belong to.

H1: There is a significant difference in rating the importance of financial literacy in one’s life with respect to the residential area they belong to.

Descriptives

On the scale of 5, rate the importance of financial literacy in your life

| | N | Mean | Std. Deviation | Std. Error | 95% Confidence Interval for Mean | | Minimum | Maximum |
|-----------|-----|------|----------------|------------|----------------------------------|-------------|---------|---------|
| | | | | | Lower Bound | Upper Bound | | |
| Rural | 23 | 4.04 | 1.224 | .255 | 3.51 | 4.57 | 2 | 5 |
| Urban | 152 | 4.34 | 1.004 | .081 | 4.18 | 4.50 | 1 | 5 |
| Sub-urban | 50 | 4.24 | 1.021 | .144 | 3.95 | 4.53 | 1 | 5 |
| Total | 225 | 4.29 | 1.031 | .069 | 4.15 | 4.42 | 1 | 5 |

Table 16: Descriptive Statistics Table

The descriptive table provides some useful descriptive statistics, including the mean, standard deviation and 95% confidence intervals for the dependent variable (rating the importance of financial literacy) for separate residential areas, as well as when all groups are combined.

ANOVA

On the scale of 5, rate the importance of financial literacy in your life

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|----------------|-----|-------------|------|------|
| Between Groups | 1.935 | 2 | .968 | .909 | .404 |
| Within Groups | 236.287 | 222 | 1.064 | | |
| Total | 238.222 | 224 | | | |

Table 17: Anova Test

We found that there was not much difference between the two Mean Squares (0.968 and 1.064) which resulted in no statistically significant difference between groups was determined by one-way ANOVA ($F(3,221) = 4.390, p = .005$). Thus, we fail to reject the null hypotheses. This suggests that the rating of the importance of financial literacy in people's lives in different residential areas is almost equal.

Interpretation: *The above tests indicate that we have come a long way since women from different residential areas feel that financial literacy is important but there is much more that is to be achieved. People have become more skewed towards financial literacy but there is a lack of knowledge among people with respect to this subject. It is imperative to emphasise educating people about finance and related aspects.*

6.0 Suggestions

- **Training** –Training related to finance and investment would be beneficial to women who are from low-income families and have gained little education. Due to a lack of training, women are hesitant when it comes to dealing with financial issues. Therefore, training programmes would be an effective measure to help women more adept in financial management and boost their confidence.
- **Financial Education** - Women should have budgetary skills that are intertwined with their lives, wellbeing, and ventures, such as accounting, debt financing, negotiating abilities, and investment opportunities. It is imperative that they gain complete knowledge about finance, its terminologies, etc. Over the years, various initiatives have been taken by government and finance sector regulators but there is a lack of implementation. The focus should be made on teaching finance and investment in educational institutions.
- **Improved Connectivity** - Information and communication technology (ICTs) can help women become more financially literate. Financial information and news can be disseminated across the country by using media channels such as television, newspapers, e-learning and social media. In rural regions, communication in regional, or local languages may make it easier for women to grasp financial information.

- ***Social Transformation*** - The male-dominated society is one of the major issues that women in India confront. Societal modification is necessary to promote more financial awareness among women. Women must instil the practice of money management and be clear about their long-term financial plans and retirement life.
- ***Additional Incentives for Women*** - If banking services with more profitable incentives such as low-interest rates on loans, tax relief, and so on are given to women, they will be more enticed to engage in financial activities. The government must make additional efforts to provide women with more chances to become financially educated.
- ***Increased Programme Reach:*** The government should make sure that their promotional initiatives, such as the “Jan Dhan Yojna,” reach women, particularly those living in the remote areas of the country, in order to meet the goal of conducting these programmes.
- ***Formation of Self-Help Groups:*** The government can establish a women-only team to assist females in places where they are unable to leave so that they are aware of financial education, their significance, and how these might benefit their personal as well as their family’s financial situation.

7.0 Conclusion

Results of the study reflect that most of the women in India have financial security and have a willingness to learn about finance and investment tools, still, their level of financial literacy and awareness of news and policies related to finance policies remains poor. The age, occupation and demographics of women significantly affect their financial behaviour. A majority of women, irrespective of their education, employment status, and region of residence are dependent on others for managing their finances. Women belonging to the rural and suburban areas struggle in understanding financial terms while those belonging to urban areas find it comparatively easier to do so. Financial awareness depends on age. With the increase in age, women tend to become more aware of financial matters, and policies relating to them. The risk-taking ability of women in relation to investment tools also depends on their age group. Despite being employed, women in India are still hesitant when

it comes to investing and they invest a low portion of their income. Also, there is no significant relation of this gender bias on the employment status of women. Majority of the women, irrespective of their demographic background understand the importance of financial literacy and have the willingness to learn about it.

References

Arora, A., (2016). “*Assessment of Financial Literacy among Working Indian women*”, ResearchGate,

https://www.researchgate.net/publication/298790053_Assessment_of_Financial_Literacy_among_working_Indian_Women

Baluja, G., (2016). “*Financial Literacy Among Women in India: A Review*”, Pacific Business Review International,

http://www.pbr.co.in/2016/2016_month/October/11.pdf

Women and Financial Literacy, The Hindu (2020). Retrieved from -

<https://www.thehindu.com/opinion/open-page/women-and-financial-literacy/article32990046.ece>

Chijwani, M et al., (2014). “*A Study of Financial Literacy among Working Women in Pune*”, Academia,

https://www.academia.edu/6903898/A_Study_of_Financial_Literacy_among_Working_Women_in_Pune

D’Silva et al., (2012). “*Assessing the Financial Literacy Level Among Women in India: An Empirical Study*”, Journal of Entrepreneurship and Management,

<http://www.publishingindia.com/GetBrochure.aspx?query=UERGOnJvY2h1cmVzfC8xMjAxLnBkZnwvMTIwMS5wZGY=>

Here’s to Embracing Financial Literacy in 2021, Feminism in India (2021). Retrieved from -

<https://feminisminindia.com/2021/01/20/financial-literacy-women-in-finance/#:~:text=Or%20so%20we%20hope!,limited%20access%20to%20banking%20services>

Klatt, M., (2009). “*An Assessment of Women's Financial Literacy*”, The Graduate School, University of Wisconsin-Stout,

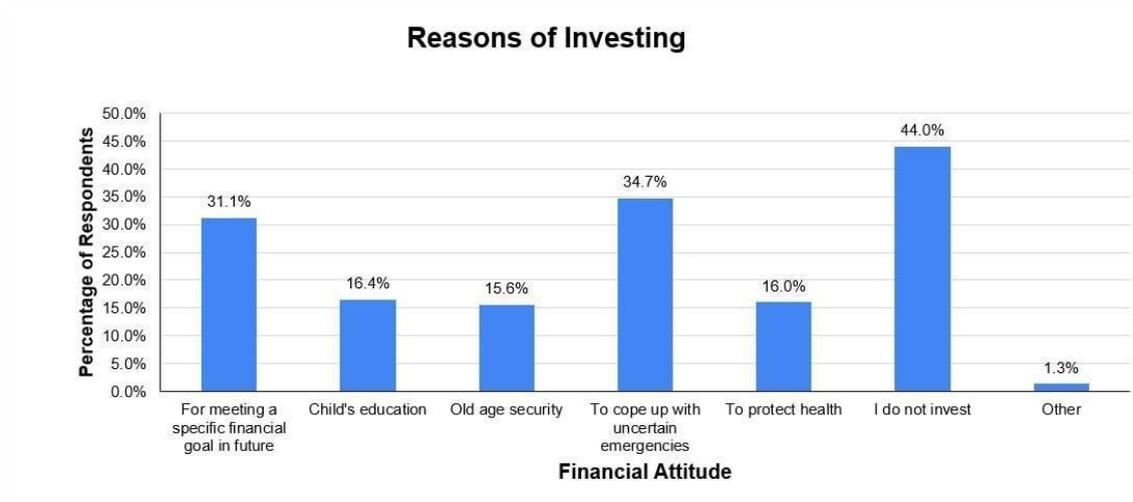
<http://www2.uwstout.edu/content/lib/thesis/2009/2009klattm.pdf>

Lusardi, A., and Mitchell, O. (2008). “Panning and Financial Literacy: How do Women Fare?”, National Bureau of Economic Research,

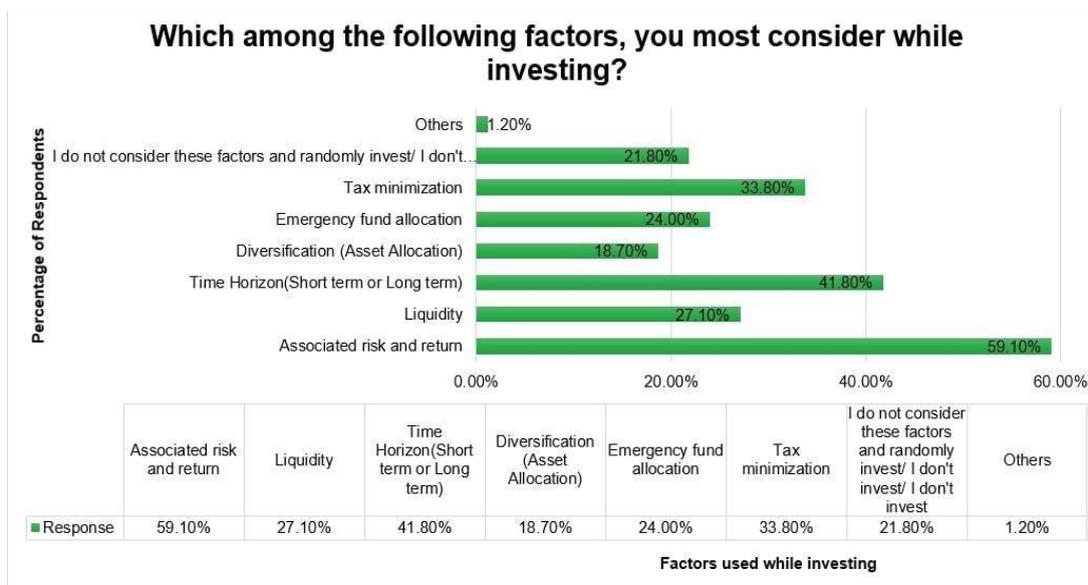
https://www.nber.org/system/files/working_papers/w13750/w13750.pdf

Lusardi et al., (2010). “Financial Literacy among the Young”, The Journal of Consumer Affairs, <https://www.jstor.org/stable/23859796>

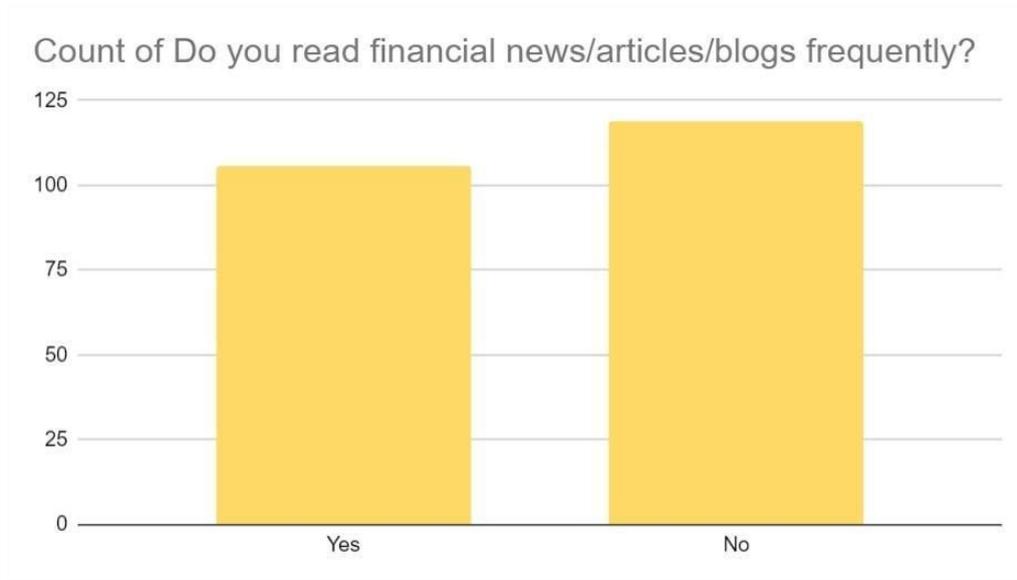
Appendix



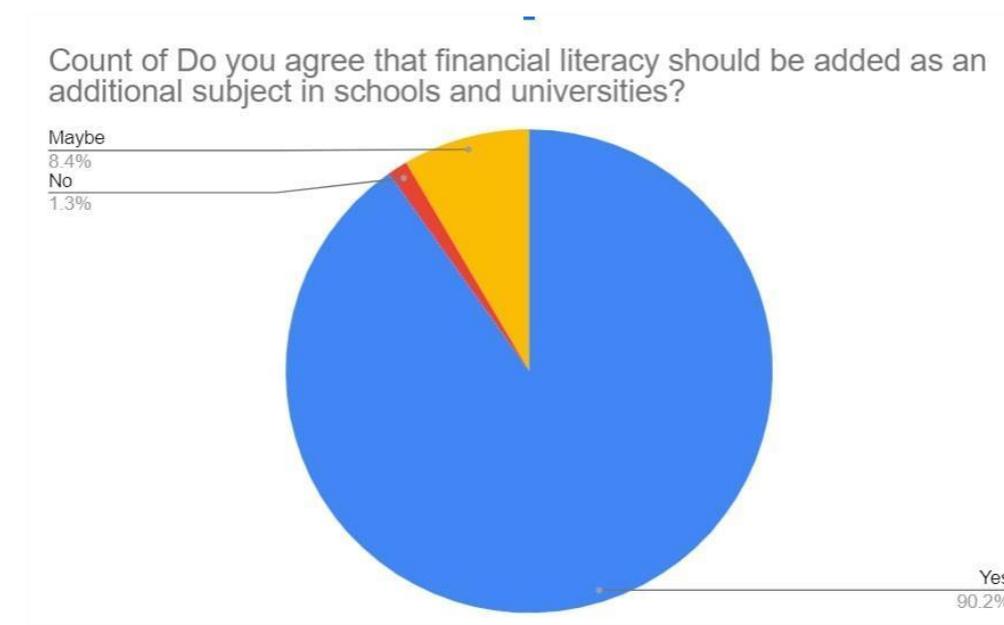
Graph 8: Reasons behind Investing- of the respondents



Graph 9: Factors considered while Investing- by the respondents



Graph 10: Interest of respondents in reading financial information



Graph 11: Opinion of respondents regarding inculcating financial literacy as a subject in schools