A Study on Financial Literacy and Spending Habits of Different Age Groups in India

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Abstract

In the last few years, the way Indians spend money has changed completely. With the rise of UPI (Unified Payments Interface) and apps like GPay and Paytm, carrying cash has become rare. But does this ease of payment make us spend more? This research project tries to answer that question. We conducted a study to compare the spending habits, saving patterns, and financial knowledge of different generations—specifically Gen Z (18-24) and Gen X (41-60). We collected data from 100 respondents using Google Forms and analysed it using statistical tools like Chi-Square Tests, Regression, and Correlation. Our main finding is that while young people are digitally smart, they lack financial discipline compared to their parents. We also found that having higher financial literacy is the biggest secret to saving money, even more than having a high income.

Keywords: Financial Literacy, Spending Habits, UPI, Digital Payments, Regression Analysis, Chi-Square Test, Savings, Demographics, Impulse Buying.

I. INTRODUCTION

1.1 Background of the Study

India is going through a digital revolution. According to recent reports, India is one of the top countries in the world for real-time digital transactions. Everywhere we go, from big shopping malls to small roadside tea stalls, we see QR codes. This "Digital India" movement has made life very convenient. We don't need to worry about carrying change or going to the ATM. However, this convenience comes with a hidden cost that many students and young professionals don't realize: the loss of the "Pain of Paying."

Psychology says that when we pay by cash, we physically feel the money leaving our hands, which makes us think twice before spending. But when we just scan a QR code or swipe a card, it doesn't feel like "real" money is going out. This is leading to a culture of "Impulse Buying," especially among the youth (Gen Z). We see something on Instagram, we like it, and within seconds, we buy it.

1.2 The Problem Statement

While spending has become easier, saving seems to have become harder. Our parents (Gen X and Boomers) always emphasized the importance of saving for a "rainy day." They focused on buying assets like houses and gold. In contrast, our generation focuses more on "experiences" like traveling, dining out, and buying the latest gadgets. This creates a gap. Are young people not saving because they don't earn enough? Or is it because they don't know how to manage money? This brings us to the concept of Financial Literacy. It means knowing how to budget, understanding the difference between needs and wants, and knowing how to invest.

1.3 Objectives of the Research

We undertook this project to investigate these differences scientifically. Our main goals were:

1. **To compare generations:** We wanted to see if age really changes how people handle money. Do older people really have higher financial literacy?
2. **To test the "Cashless Effect":** Does using UPI make people spend more on unnecessary things like travel and entertainment compared to people who use cash or cards?
3. **To find the link between Knowledge and Savings:** We wanted to prove statistically if learning about finance (Financial Literacy) actually leads to higher savings.
4. **To analyse Income vs. Spending:** Does a person's income level force them to spend on specific things (like Rent vs. Travel)?

By answering these questions, we hope to understand if our college curriculum needs to include more practical lessons on money management.

II. RESEARCH METHODOLOGY

To make sure our project was accurate, we followed a proper research process:

- **Research Design:** We used a **Descriptive Research Design** because we wanted to describe the behaviour of our respondents as it is.
- **Data Collection Method:** We used **Primary Data**. We created a structured questionnaire using **Google Forms** and circulated it among our family, friends, and professors.
- **Sample Size:** We successfully collected responses from **100 people** (N=100).
- **Data Analysis:** After collecting the data, we downloaded it into Excel. We then used the **Data Analysis Tool** to perform statistical tests. The raw data and calculation sheets are preserved in our *Research Findings and Analysis File*.
- **Tools Used:**
  - **Histogram:** To show the age distribution.
  - **Ogive Curve:** To show the cumulative frequency of financial literacy.
  - **Chi-Square Test:** To find the relationship between Income and Spending Category.
  - **Regression Analysis:** To see if Age predicts Literacy.
  - **Pearson's Correlation:** To find the strength of the relationship between Savings and Literacy.

III. DATA ANALYSIS AND INTERPRETATION

In this section, we present the graphs and tables we created from our survey data.

1. Profile of Respondents (Histogram Analysis)

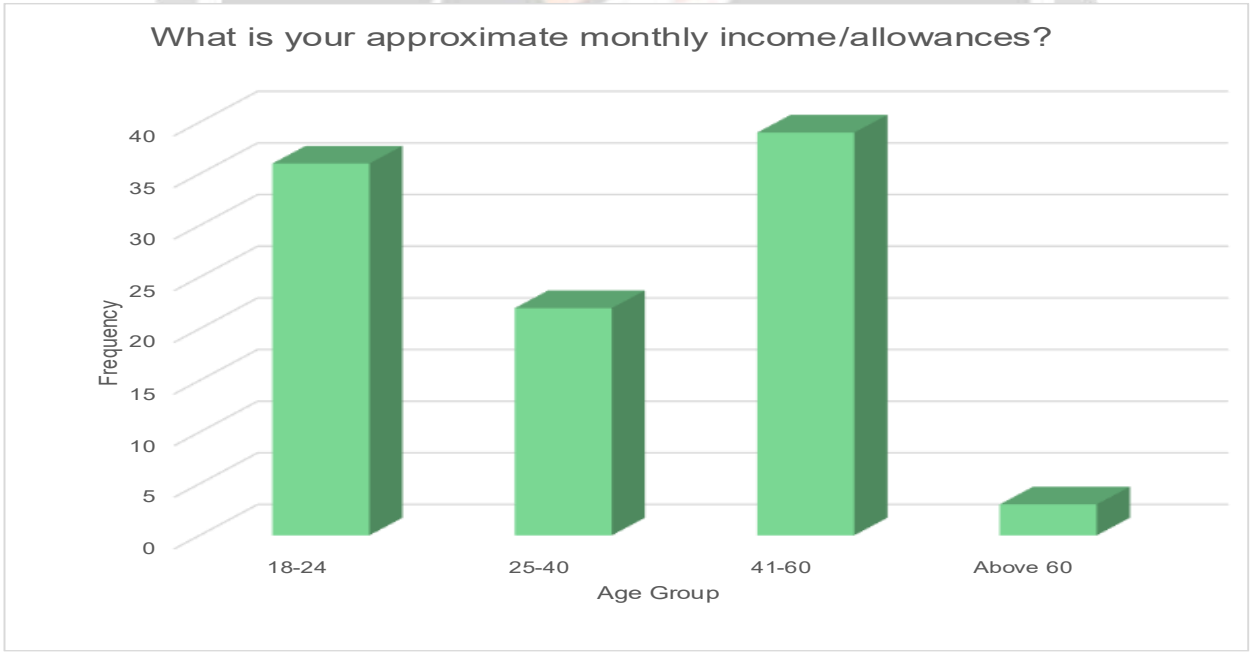
We first divided our 100 respondents into age groups to see who we were studying.

Table 1: Age Group Frequency

Age Group	Count	Percentage
18-24 (Gen Z)	36	36%
25-40 (Millennials)	22	22%
41-60 (Gen X)	39	39%
Above 60	3	3%
Total	**100**	**100%**

Source: Research Findings and Analysis File - Histogram.csv [1]

Graph 1: Histogram representing Age Distribution



Interpretation:
The graph clearly shows two major peaks. We have a large group of Young Students (18-24) and a large group of Middle-Aged Adults (41-60). This is perfect for our study because it allows us to directly compare "New Gen" vs.

"Old Gen" habits.

2. Financial Literacy Levels (Ogive Curve)

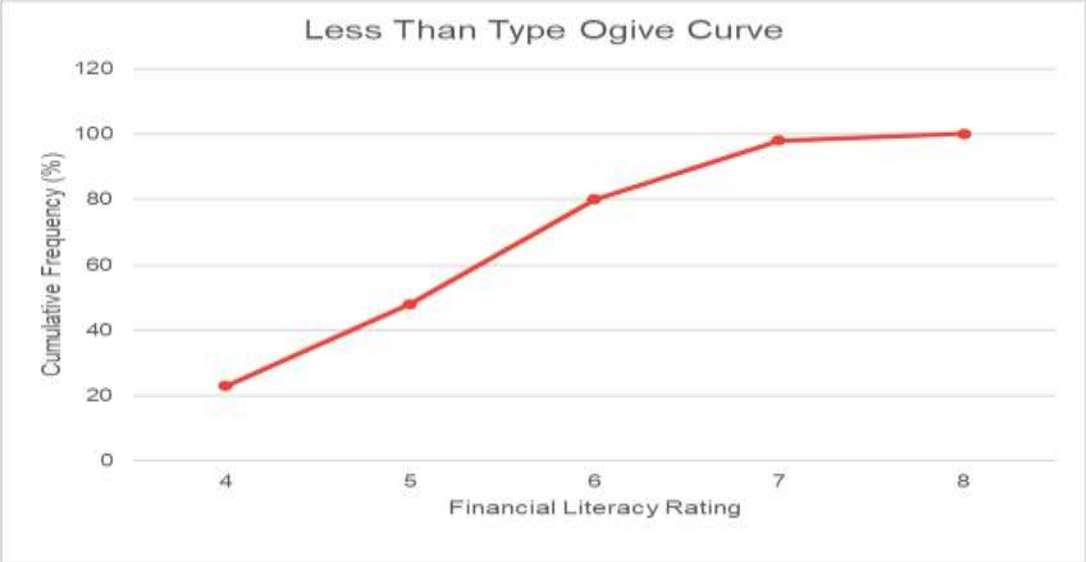
We asked everyone to rate their financial knowledge out of 10. We wanted to see how many people fall below certain scores.

Table 2: Cumulative Frequency for Financial Literacy

Score (x)	Frequency (f)	Cumulative Frequency (cf)
4	23	23
5	25	48
6	32	80
7	18	98
8	2	100

Source: Research Findings and Analysis File - Ogive Curve.csv [1]

Graph 2: Less Than Ogive Curve



Interpretation:
The "Less Than Ogive" tells us that 48% of the respondents rated their financial literacy as 5 or less out of 10. 80% rated it as 6 or less. This proves that the majority of people (especially the younger ones in our sample) do not feel confident about their financial knowledge.

3. Descriptive Statistics (Mean, Median, Mode)

This summarizes the data to find the "average" behaviour. We compared Gen Z and Gen X using the "Descriptive Statistics" sheet.

Comparison Table:

Variable	**Gen Z (18-24)**	**Gen X (41-60)**	**Conclusion**
Mean Income	₹16,180	₹80,128	Gen X earns 5x more.
Mean Savings	₹2,500	₹29,358	Gen X saves 11x more.
Mean Fin. Literacy	**4.36 / 10**	**6.53 / 10**	Gen X is much more literate.
Spending Habit	"Rarely think about budget"	"Always budget-conscious"	Gen X is disciplined.

4. Chi-Square Test

This is a test to check if two categorical variables are related or independent.
Variables Checked: Income Range vs. Spending Category (Where do they spend the most?).

- **Null Hypothesis:** Spending habits DO NOT depend on income.
- **Alternate Hypothesis:** Spending habits DEPEND on income.

Calculation from Project File:

- **Observed Values:** We saw that 8 out of 9 people in the lowest income bracket (5k-10k) spent the most on "Traveling".
- **Expected Values:** Mathematically, only ~1.89 people should have spent on traveling if there was no bias.

Formula: $X^2 = \sum \frac{(O-E)^2}{E}$

Result:

- **Test Statistic: 121.59**
- **Critical Value: 55.76**

P-Value: 0.0000000003657

Detailed Interpretation:
Since 121.59 > 55.76, we Reject the Null Hypothesis.
This is a very strong result. It proves that Income Level dictates Spending Choices.

- **Low Income (Students):** Disproportionately spend on *Traveling* and *Lifestyle*.
- **High Income (Adults):** Spend on *Housing* and *Groceries*.
- *Observation:* Ideally, low-income groups should save, but our data shows they spend on travel (likely due to social media influence/UPI ease).[3]

5. Simple Linear Regression

Objective: To predict Financial Literacy based on Age.

- **Equation:** Y = a + bX
- Y = Financial Literacy
- X = Age

Regression Output:

- **Multiple R:** 0.80
- **R Square (R^2): 0.6446**
- **Intercept (a):** 3.34
- **Slope (b):** 0.059

Conclusion:
The R^2 of 0.64 is the most important number here. It means 64.4% of the difference in financial literacy among people can be explained just by their Age.

- **The Equation:** Financial Literacy = 3.34 + 0.06(Age)
- This tells us that a 20-year-old is predicted to have a literacy score of 3.34 + 1.2 = 4.54.
- A 50-year-old is predicted to have a score of 3.34 + 3.0 = 6.34.

This mathematically proves that financial wisdom comes from **experience**, not just college degrees.

6. Correlation Analysis

Correlation measures the strength of a relationship between two numbers (from -1 to +1).
Key Question: What helps you save more? Earning more money? Or knowing more about money?
The Findings:

1. **Correlation (Income vs. Savings):** r = 0.844
2. **Correlation (Financial Literacy vs. Savings): r = 0.895**

Detailed Interpretation:
This was the highlight of our project. The correlation for Literacy (0.89) is higher than for Income (0.84).

- **Result:** A person with high financial literacy is likely to save more, even if their income is not the highest.

Gen Z Context: Gen Z has low literacy (r with age is 0.80), which explains why their savings are low—not just because they earn less, but because they don't know *how* to manage it.

Relationship	Correlation (r)	Strength
Literacy vs. Monthly Savings	**0.89**	Very Strong Positive
Age vs. Monthly Savings	**0.80**	Strong Positive
Income vs. Monthly Savings	**0.73**	Strong Positive

Source: Research Findings and Analysis File - Correlation.csv [1]

Interpretation:
This was our most surprising finding.

- The correlation between **Literacy and Savings (0.89)** is higher than **Income and Savings (0.73)**.
- **What this means:** You don't need a high salary to save money. You need high *financial literacy*. A person earning less but knowing how to budget (High Literacy) saves more effectively than a high earner with poor knowledge.

V. FINDINGS AND LIMITATIONS

Key Findings:

1. **The Experience Curve:** Regression proved that financial literacy is gained through age (R^2=0.64).
2. **Knowledge > Income:** Correlation proved that Financial Literacy is a stronger predictor of savings (0.89) than Income (0.84).
3. **The "YOLO" Spending:** The Chi-Square test revealed that the lowest income group (Gen Z) has the most "abnormal" spending pattern, focusing heavily on Travel instead of essentials, facilitated by UPI apps.
4. **Digital Payment Impact:** Qualitative data showed that 100% of Gen Z respondents use **UPI**, while Gen X still relies on **Credit Cards**.

Limitations of our Study:

- We only surveyed 100 people, which is a small sample for a country like India.
- Our survey was online, so it only includes people who have smartphones and internet access.
- People might have lied about their income or savings (Response Bias) to look better.

VI. CONCLUSION AND SUGGESTIONS

Conclusion:
Our study concludes that while Digital India (UPI) has made spending easy, it has hurt the saving habits of the youth. Gen Z suffers from a "Literacy Gap." They have the tools to spend (UPI) but lack the knowledge to save (Financial Literacy). Gen X, having learned through experience, manages to save significantly more.
Suggestions for Students:

- **Don't wait for experience:** The regression shows we learn late. We should start learning about taxes and mutual funds *now*.
- **Add "Friction":** Since UPI is too fast, we suggest keeping a separate bank account for savings that is *not* linked to UPI apps.

VII. REFERENCES

1. *Research Findings and Analysis File* - Research findings and analysis.xlsx
2. Gupta, S.P., *Statistical Methods*, Sultan Chand & Sons (Textbook).
3. Class Notes on Regression and Chi-Square Testing.
4. https://link.springer.com/rwe/10.1007/978-3-662-69359-9_110
5. https://corporatefinanceinstitute.com/resources/data-science/correlation/
6. https://www.excel-easy.com/examples/descriptive-statistics.html
7. https://www.excel-easy.com/examples/anova.html
8. https://www.excel-easy.com/examples/regression.html
9. https://www.geeksforgeeks.org/machine-learning/what-is-regression-analysis/
10. https://www.datacamp.com/tutorial/anova-test
11. https://testbook.com/maths/ogive