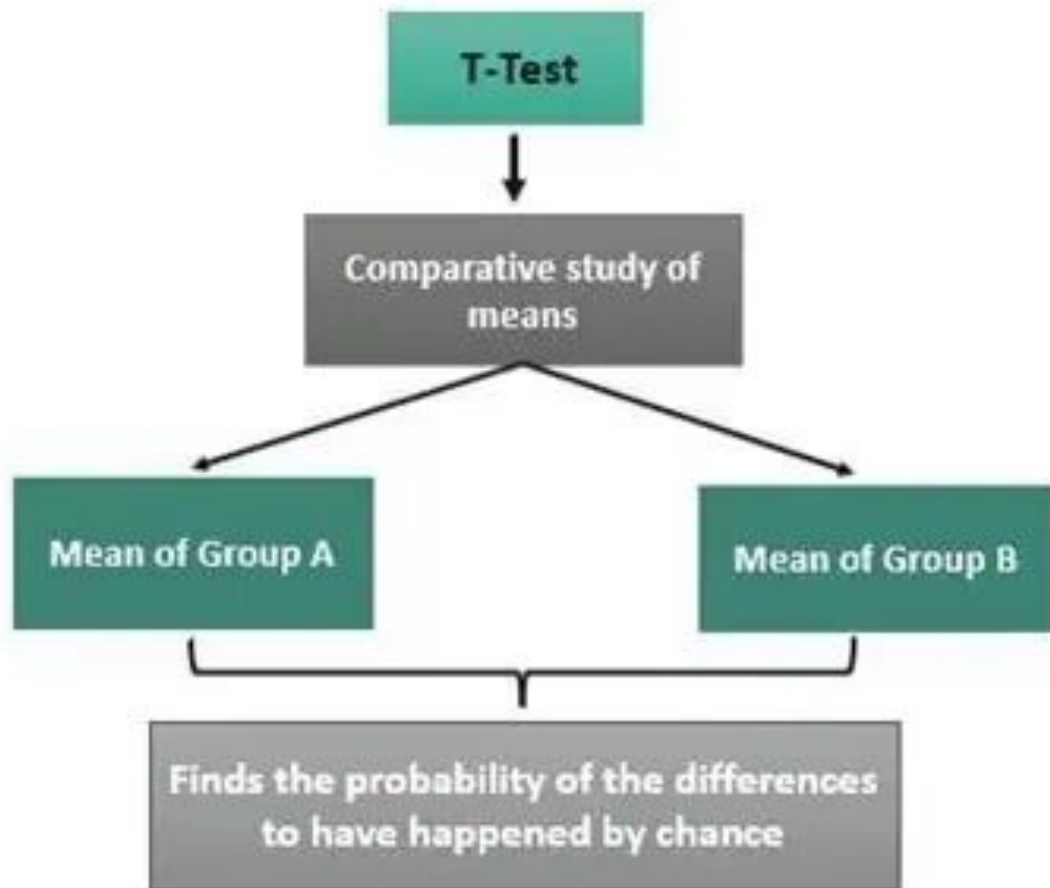


Research Paper Based on Hypothesis Testing

STUDENT T-TEST

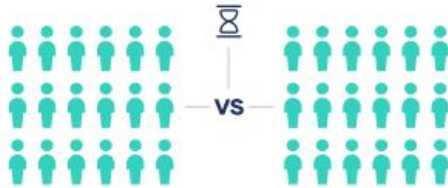
*Effect of Financial Literacy and Lifestyle
of Finance Student Behavior*

What is T-Test?



Types of t-test

Paired-samples t test



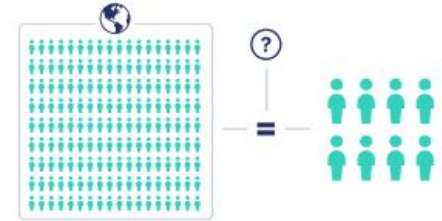
Investigate whether there's a difference within a group between two points in time (within-subjects).

Independent-samples t test



Investigate whether there's a difference between two groups (between-subjects).

One-sample t test



Investigate whether there's a difference between a group and a standard value or whether a subgroup belongs to a population.

T-Test Formula

The formula for the two-sample t test (a.k.a. the Student's t-test) is shown below.

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{s^2(\frac{1}{n_1} + \frac{1}{n_2})}}$$

In this formula, t is the t value, x1 and x2 are the means of the two groups being compared, s2 is the pooled standard deviation of the two groups, and n1 and n2 are the number of observations in each of the groups.

A larger t value shows that the difference between group means is greater than the pooled standard error, indicating a more significant difference between the groups.

You can compare your calculated t value against the values in a critical value chart (e.g., Student's t table) to determine whether your t value is greater than what would be expected by chance. If so, you can reject the null hypothesis and conclude that the two groups are in fact different.



Effect of Financial Literacy and Lifestyle of Student Behavior

Introduction

This study aims to examine the relationship between financial literacy and financial behavior of the lifestyle of the student and determine differences in financial literacy, lifestyle & expenditure, education and behavior of students of Goa Business school. This research is quantitative data collection techniques using questionnaires.

Sample used were of 30 students consisting of students of various faculties of Goa Business School, Goa University. This study uses random sampling.

Data were analyzed basic Exploratory Data Analysis(EDA).

Financial Literacy is the process by which individuals gain an understanding of their financial situation and learn how to strengthen it over a period of time by inculcating the financial habits of savings, budgeting, planning and hence making the right financial decisions.

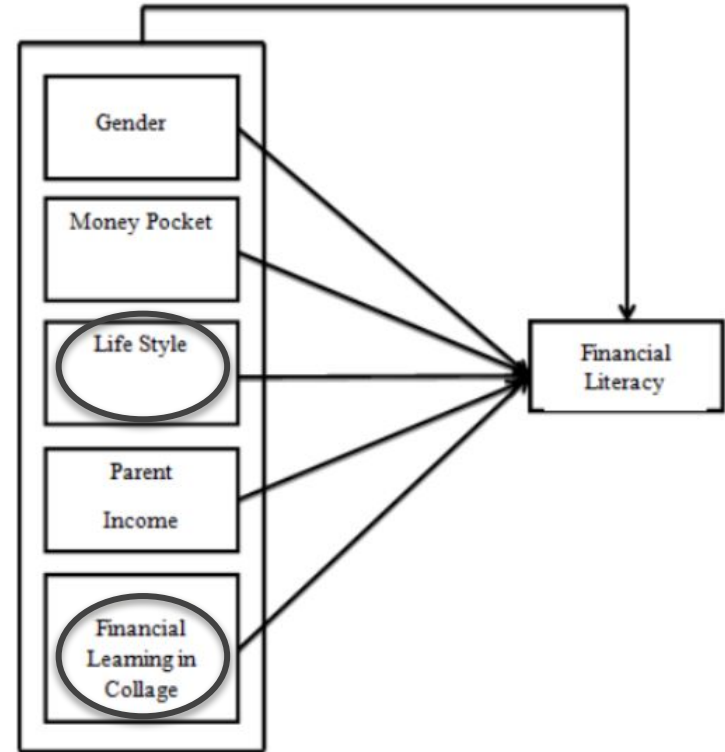
Literature Study

Financial Literacy / Behaviour

Financial literacy is a basic need to avoid financial problems.

Financial Literacy shows the ability of individuals to utilize their resources to achieve and improve welfare.

Personal financial literacy is the ability to read, analyze, manage and communicate about personal financial conditions that affect material well-being. This includes the ability to make financial choices, discuss money and financial issues without any inconvenience, plan for the future and respond competently to life events that affect financial decisions on a daily basis, including the general economy.



Literature Study

Financial Learning

Financial literacy has a profound impact on students, influencing various aspects of their academic journey, personal development, and future prospects.

Understanding budgeting, saving, and investing prepares them for academic expenses, reduces financial stress, and fosters responsible financial behaviors as they transition into adulthood and navigate post-education challenges.

Financial knowledge enhances student finance by promoting budgeting, reducing debt, maximizing scholarships, and making informed borrowing decisions.

Literature Study

Lifestyle and Expenditure

Financial literacy plays a critical role in shaping lifestyle choices, opportunities, and overall financial well-being. By acquiring knowledge and skills in areas like budgeting, debt management, investing, and risk management, individuals can make informed decisions that support their desired lifestyle and long-term financial goals.

If someone spends without understanding or tracking their expenses, they may not realize how it impacts their overall financial health. On the other hand, being aware of and managing expenditure helps improve financial literacy by teaching individuals to budget, prioritize spending, and make informed decisions about money.

RESEARCH METHODS

This research is a quantitative and nature explanatory research, which is a notch research explaining each variable studied and the relationship between the variables.

This research was conducted at Goa Business School.

The population is the target of students of the who are of both finance and non finance domain.

Sample used were 34students consisting of students from the institution.

The researcher conducted a survey to see the phenomenon of student financial behavior.

Data is collected using a questionnaire.

Questionnaire

Effect of Financial Literacy and Lifestyle of Student Behavior

This survey is conducted to understand the phenomenon of student financial behavior particular to Goa University. We decide how the various factors including lifestyle and financial literacy affects an individuals expenditure.

msds.2312@unigoa.ac.in [Switch account](#)



Not shared

* Indicates required question

Formal Education in *

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Next

Page 1 of 5

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Google Forms

Dataset

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	
1	Timestamp	Formal Education	Gender	Age	Education Level	Region (current)	Who do you usually live with	Number of Members in household	How many members in household are under 18	Do you contribute to household expenses	How much do you contribute to household expenses	Your source of income	Do you make decisions about household expenses	I tend to live for myself	I find it more satisfying to live for myself	I pay my bills on time	I am prepared to help others	I keep a close relationship with family	I set limits on my relationship with family
2	11/27/2023 14:4	Other	Male	21-30 yrs	Bachelors	City	With Family	4	3	No	I don't work	I don't work	Yes		4		4	3	3
3	11/27/2023 14:4	Other	Male	21-30 yrs	Masters	Town	With Family	3	2	No	I don't work	Pocket money	No		5		5	1	1
4	11/27/2023 14:4	Other	Female	15-20 yrs	Masters	Village	With Family	4	2	No	I don't work	Pocket money	No		3		4	1	3
5	11/27/2023 14:5	Finance related	Male	21-30 yrs	Masters	Village	With Family	16	6	No	I don't work	I don't work	Yes		5		5	3	1
6	11/27/2023 14:5	Other	Female	21-30 yrs	Masters	Village	With Family	3	2	No	I don't work	Pocket money	No		1		4	1	1
7	11/27/2023 14:5	Finance related	Male	21-30 yrs	Masters	Town	With Family	5	2	No	I don't work	Pocket money	Yes		1		3	3	2
8	11/27/2023 14:5	Finance related	Male	21-30 yrs	PhD/Doctorate	City	With Family	4	2	No	I don't work	I don't work	No		5		3	4	4
9	11/27/2023 14:5	Other	Male	21-30 yrs	Bachelors	Town	With Family	2	1	Yes	I don't work	I don't work	Yes		3		1	2	4
10	11/27/2023 15:4	Other	Female	21-30 yrs	Masters	Town	With Family	5	3	No	I don't work	Pocket money	Yes		5		4	5	3
11	11/27/2023 16:0	Other	Female	21-30 yrs	Bachelors	Village	With Family	5	5	No	I don't work	I don't work	Yes		3		3	1	2
12	11/29/2023 10:3	Finance related	Female	21-30 yrs	Masters	Village	With Family	5	2	No	I don't work	I don't work	Yes		4		4	2	3
13	11/29/2023 11:1	Other	Female	21-30 yrs	Bachelors	Village	With Family	6	1	No	I don't work	Pocket money	Yes		4		5	5	4
14	11/29/2023 11:2	Finance related	Female	21-30 yrs	Masters	Town	With Family	7	5	No	I don't work	I don't work	Yes		3		3	5	1
15	11/29/2023 11:2	Other	Male	21-30 yrs	Masters	Town	With Family	3	1	No	I don't work	I don't work	Yes		1		4	1	1
16	11/29/2023 11:2	Other	Female	21-30 yrs	Masters	Town	With Family	3	1	No	I don't work	I don't work	Yes		4		5	1	1
17	11/29/2023 11:3	Other	Male	15-20 yrs	Bachelors	Village	With Family	3	3	Yes	25-60k	I don't work	Yes		4		5	1	1
18	11/29/2023 11:4	Other	Male	21-30 yrs	Masters	Town	With Family	3	2	No	I don't work	I don't work	No		5		5	1	1
19	11/29/2023 11:5	Other	Male	21-30 yrs	Bachelors	Town	With Family	4	1	No	I don't work	I don't work	No		1		2	3	1
20	11/29/2023 12:5	Finance related	Female	21-30 yrs	Bachelors	City	With Family	2	1	No	I don't work	I don't work	Yes		3		4	2	2
21	11/29/2023 13:1	Finance related	Male	21-30 yrs	Masters	Town	With Family	5	1	No	I don't work	Pocket money	Yes		2		3	2	2
22	11/29/2023 13:1	Other	Female	21-30 yrs	Masters	City	With Family	4	1	Yes	below 25k	Part time	Yes		1		2	1	3
23	11/29/2023 13:3	Other	Male	21-30 yrs	Masters	Village	With Family	5	2	No	below 25k	Part time	Yes		3		4	2	3
24	11/29/2023 16:2	Finance related	Male	21-30 yrs	Masters	Village	With Family	5	1	No	I don't work	I don't work	Yes		3		3	2	2
25	11/29/2023 18:3	Other	Male	21-30 yrs	Bachelors	Village	With Family	4	1	No	I don't work	I don't work	Yes		5		5	2	1
26	11/29/2023 19:5	Finance related	Male	21-30 yrs	Masters	Town	With Family	4	1	No	I don't work	I don't work	No		5		1	1	1
27	11/29/2023 20:3	Finance related	Female	21-30 yrs	Bachelors	City	With Family	6	4	No	below 25k	Part time	Yes		5		5	1	1
28	11/29/2023 23:0	Other	Male	15-20 yrs	Masters	Town	With Family	3	1	Yes	I don't work	Pocket money	Yes		4		5	2	1
29	12-02-2023 18:5	Other	Female	21-30 yrs	Masters	City	With Family	4	1	No	I don't work	I don't work	Yes		5		5	1	1
30	12-04-2023 13:4	Finance related	Male	21-30 yrs	Masters	Village	With Family	7	5	Yes	25-60k	Part time	Yes		5		5	1	1
31	12-04-2023 13:5	Other	Female	21-30 yrs	Bachelors	Village	With Family	4	2	No	I don't work	I don't work	No		4		3	1	

Dataset

Considerin	Have your	Do you ha	Please can	Now can y	In the last	Which of t	While Purc	How do y	Some peop	In the past	How much	How much	How much	How much	FinancialLi	Education!	Count_fin	Count_fin	Count_fin	Financialk	LifestyleScore
Yes	Yes	Youtube vi	A pension	A current/	A current/	I consider	Informatic	Social mec	Yes	Paying money into a savings/current account	3	2	11	3	3	2	3				
Yes	Yes	Paid cours	A pension	A current/	A current/	I don't con	Recomm	Social mec	Yes	Paying money into a savings/current account	1	3	8	1	1	3	1				
Yes	Yes	Free cours	A pension	An investr	An investr	I consider	Informatic	Social mec	Yes	Paying money into a savings/current account	1	3	8	4	4	2	3				
No	Yes	None	A credit ca	A Microfin	A credit ca	I am loyal	People like	People like	Yes	None of the above	3	6	3	2	2	1	1				
Yes	Yes	Free cours	A pension	A credit ca	A current/	I consider	Informatic	Discussion	No	Paying money into a savings/current account	1	3	10	3	1	2	3				
Yes	No	Youtube vi	An investr	A current/	A current/	I consider	Informatic	News	Yes	Saving cash at home or in your wallet	3	6	10	2	1	2	3				
Yes	Yes	Youtube vi	A pension	A credit ca	A credit ca	I don't con	Informatic	Social mec	Yes	Saving cash at home or in your wallet	1	4	12	4	3	2	1				
No	Yes	Youtube vi	A pension	A current/	A current/	I consider	Informatic	Social mec	No	Paying money into a savings/current account	3	2	7	1	1	2	3				
Yes	No	None	A pension	An unsecur	An unsecur	I don't con		Social mec	Yes	Saving cash at home or in your wallet	3	3	8	5	3	1	1				
		None	An investr	An investr	A current/	I consider	Recomm	Social mec	No	Saving cash at home or in your wallet	3	2	6	2	1	1	3				
Yes	Yes	None	A pension	An investr	An investr	I consider	Tables in fi	News	Yes	Giving money to family to save on your behalf	3	6	12	3	3	1	3				
Yes	Yes	None	An investr	A current/	A current/	I consider	Informatic	Discussion	Yes	Saving cash at home or in your wallet	3	2	6	1	1	1	3				
Yes	Yes	None	A pension	A bank loa	An investr	I don't con	Recomm	Social mec	Yes	Saving cash at home or in your wallet	3	6	10	1	1	1	1				
No	Yes	Youtube vi	A pension	A current/	A current/	I am loyal	Informatic	News	Yes	Investing in stocks and shares	3	3	10	2	2	2	1				
Yes	No	None	An investr	A credit ca	A credit ca	I consider	Informatic	Social mec	No	Paying money into a savings/current account	3	3	9	3	3	1	3				
Yes	Yes	Youtube vi	A pension	An investr	An investr	I consider	Specialist r	News	Yes	Investing in stocks and shares	3	2	11	2	2	2	3				
Yes	No	None	A pension	A current/	A current/	I don't con	Informatic	Social mec	Yes	Giving money to family to save on your behalf	1	3	9	1	1	1	1				
Yes	Yes	Youtube vi	A mortgag	A current/	A current/	I consider	Tables in fi	Social mec	Yes	Paying money into a savings/current account	1	2	6	1	1	2	3				
Yes	Yes	Free cours	A pension	A current/	A current/	I consider	Informatic	Social mec	Yes	Paying money into a savings/current account	3	5	11	1	1	2	3				
Yes	No	Youtube vi	An investr	A current/	A current/	I consider	Informatic	News	Yes	Saving cash at home or in your wallet	3	6	8	1	1	2	3				
Yes	Yes	None	A pension	A pension	A pension	I am loyal	Informatic	Social mec	Yes	Paying money into a savings/current account	3	3	8	4	3	1	1				
No	Yes	None	A credit ca	A current/	A current/	I don't con	Informatic	Discussion	Yes	Paying money into a savings/current account	3	3	4	1	2	1	1				
No	No	Youtube vi	A pension	A current/	A current/	I consider	Informatic	All of the e	Yes	Saving cash at home or in your wallet	3	6	5	1	1	2	3				
Yes	No	Free cours	A pension	A current/	Stocks and	I don't con	Specialist r	News	Yes	Investing in stocks and shares	3	2	10	4	1	2	1				

METHODOLOGY

Research Variable

1. Financial Literacy/ Behaviour(Y)

Financial literacy in this study is individual knowledge about finance and the ability of individuals to make effective financial decisions.

2. Lifestyle (X1)

The lifestyle in this study is a daily lifestyle that is run by a student during his education with technology and trends that are growing rapidly.

3. Financial Knowledge (X2)

Financial knowledge is the other sources from which we have gained knowledge on finance. Example through social media, news, etc.

4. Education (X3)

Financial learning in higher education in this study can be seen from several courses taught to accounting students such as financial management courses and company budgets

Data Analysis Method

Here basic Exploratory Data Analysis(EDA) was used to analyze the data.

Hypothesis Test

In the classic assumption test, hypothesis testing can be done using Hypothesis tests. t-test was conducted to determine the effect of each independent variable on the dependent variable.

Hypothesis t-test results

In [13]:

```
1 from scipy.stats import ttest_rel
2
3 test_statistic, p_value = ttest_rel(df_score['FinancialLiteracyScore'], df_score['EducationScore'], alternative='less')
4
5 print(p_value)
6
7 if p_value < 0.05:
8     print("\nWe Reject Null Hypothesis")
9 else:
10    print("\nWe Accept Null Hypothesis")
```

0.00010106296517453298

We Reject Null Hypothesis

In [11]:

```
1 from scipy.stats import ttest_rel
2
3 test_statistic, p_value = ttest_rel(df_score['FinancialLiteracyScore'], df_score['LifestyleScore'], alternative='less')
4
5 print(p_value)
6
7 if p_value < 0.05:
8     print("\nWe Reject Null Hypothesis")
9 else:
10    print("\nWe Accept Null Hypothesis")
```

0.8232856735633596

We Accept Null Hypothesis

In [15]:

```
1 from scipy.stats import ttest_rel
2
3 test_statistic, p_value = ttest_rel(df_score['FinancialLiteracyScore'], df_score['Financialknowledge'], alternative='less')
4
5 print(p_value)
6
7 if p_value < 0.05:
8     print("\nWe Reject Null Hypothesis")
9 else:
10    print("\nWe Accept Null Hypothesis")
```

0.9996809489001864

We Accept Null Hypothesis

Conclusion

The results of the analysis discussed above, it can be deduced as follows:

1. There is the effect of variable **X1** (Financial Literacy) to variable **Y** (Behavioral Finance). These relationships contained the sense that the higher / better **X1** (Financial Literacy), the higher the development of variable **Y** (Behavioral Finance)
2. There is an effect **X2** (Lifestyle) to variable **Y** (Behavioral Finance). These relationships contained the sense that the higher / better **X2** (Lifestyle), the higher the development of variable **Y** (Behavioral Finance)
3. There is an effect **X1** (Literacy Finance) and **X2** (Lifestyle) to variable **Y** (Behavioral Finance). These relationships contained the sense that the higher / better **X1** (Financial Literacy) and **X2** (Lifestyle).

There are some suggestions that should be considered in research on financial literacy, lifestyle and behavioral finance, which are as follows:

POSITIVE & NEGATIVES

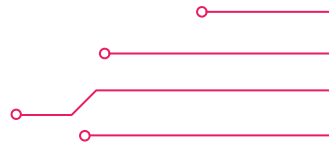
Positive

Gives a representation of relation between financial literacy vs other factors among students thus giving awareness on the need of having knowledge on how to handle financial assets and have knowledge to avoid financial risks

Negative

Biasness : Bias in data is an error that occurs when certain elements of a dataset are overweight or overrepresented

Small Dataset: Due a small dataset we cannot apply the results to everyone



References

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THANK YOU