काशी हिन्दू विश्वविद्यालय BANARAS HINDU UNIVERSITY

SURVEY ON "ECONOMIC CONDITION OF STUDENTS AT BANARAS HINDU UNIVERSITY"

PRESENTED TO,

THE DEPARTMENT OF STATISTICS

INSTITUTE OF SCIENCE

BANARS HINDU UNIVERSITY, VARANASI

FOR THE PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD

OF THE BACHELOR's DEGREE IN STATISTICS 2023.

UNDER THE SUPERVISION OF

Dr Dinesh Kumar

ASSISTANT PROFESSOR

DEPARTMENT OF STATISTICS

BANARAS HINDU UNIVERSITY

SUBMITTED BY,

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Enrolment No.429979

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CERTIFICATE

This is to certify that the data given in this report has been collected, tabulated, analysed, and presented by **“Ankit Pandey”** a student of B.A.(Hons) VI Semester, Statistics.

The title of the project is **“Economic Condition of Students at Banaras Hindu University”**.

This project has been completed successfully under my supervision and guidance in the session 2022-2023.

Dr Dinesh Kumar

Department of Statistics

Institute of Science

Banaras Hindu University

ACKNOWLEDGMENT

I sincerely thank Dr Dinesh Kumar and all other professors in the Statistics Department of Banaras Hindu University for their constant encouragement and support throughout my project work.

The phenomenal support and style of advice from my guide have helped me a lot to exemplify the needs of the project and to cater to my inquiries as well.

I am responsible for expressing my sincere thanks to the respondents who participated in the questionnaire and generously devoted their valuable time.

At last, I would thank the Department of Statistics, B.H.U which gave me the opportunity for this project work and for which I am grateful.

Ankit Pandey

B.A (Hons) Statistics

Department of Statistics

Institute of Science

Banaras Hindu University

CONTENTS:

INTRODUCTION

India became the first most populated country in the world with 1.41 billion people and the population of India consists of people from all classes. With one of the fastest-growing economies in the world, India's GDP growth rate was 7% in Q4 2022-23(MOSPI).

The standard of living in India shows a large disparity with the majority of people living below the poverty line in rural areas. According to National Sample Survey (N.S.S), it was found that an estimated 27.5% of the population was living below the poverty line in 2004-2005, which was an improvement from 51.3% in 1977- 1978. This percentage further declined to 21.9% in 2011-2012. In 2022 almost 270 million Indians were estimated to earn less than rupees 200 per day.

Education is believed to play a powerful role in poverty reduction. The investment in education has had a significant impact on the poverty rate in India. Numerous schools and colleges have been set up around the country to ensure that children of all financial classes receive a proper education. The primary aim of this educational institution is to provide high-class education to all at an affordable cost so that no child is deprived of learning due to his/her financial status

Banaras Hindu University, which is one of the best universities in India contributes significantly towards providing quality education to students from all around India. The University provides equal chances to all students irrespective of their class, creed, religion, and sex. This project titled "Economic Condition of Students of Institute of Science" aims towards getting in-depth information regarding the financial condition of the students studying at the Institute of Science, B.H.U and find if all the students are satisfied with the efforts being made by B.H.U towards providing them quality education at nominal cost

METHODOLOGY OF SURVEY

A well-planned and systematic approach is crucial in ensuring the best possible results and successful completion of any survey while minimizing time and cost. The success of the survey is also heavily dependent on the surveyor's resources, timing, and integrity in compiling the primary data. Therefore, effectively managing all available resources is a critical task that can greatly impact the survey's overall quality.

(1) SURVEY PLANNING:

A well-designed plan is crucial to complete a statistical survey successfully and efficiently with minimum cost, labour and time. The planning process involves selecting a topic and creating a concise questionnaire that covers all relevant areas. After creating the questionnaire, relevant questions are selected based on their relevance to the chosen topic.

(2) SURVEY OBJECTIVE:

At the initial stage of any survey, it is essential to establish a clear and concise objective. In this case, the main objective of the survey was to gather information about the economic conditions of students studying at Banaras Hindu University.

(3) SURVEY AREA:

When conducting a survey, it is necessary to select a sample from the population of interest. In this case, the sample was collected from students studying at Banaras Hindu University. The survey covered a total of 400 respondents.

(4) SAMPLING TECHNIQUE:

The sampling technique used in this study was random sampling, chosen based on the convenience of the researcher. To gather data for analysis, a questionnaire was administered to various students.

(5) SAMPLE SIZE:

Due to the large population, the survey was conducted among 400 respondents, which is considered sufficient to represent the characteristics of the entire population.

(6) SAMPLE DESIGN:

To present the data, various visual aids such as bar diagrams and pie charts were utilized. Cross tabulation and CHI-SQUARE tests were also used to assess the association between certain attributes. Additionally, a large sample test was conducted.

(7) ANALYSIS AND REPORTING:

Once the raw data was collected, it was coded to facilitate easy analysis. MS Excel and MS Word were used to provide a structured framework for the analysis.

(8) Pictorial representation of Data:

Charts and diagrams can be used to represent statistical data. Charts are a general representation of data where symbols, such as bars in bar charts and slices in pie charts, are used. Charts are often used to understand large quantities of data and the relationships between data parts. Charts are easier to read than raw data. Raw data can be represented in a bar chart or bar diagram and a pie chart.

(1). Bar chart or Bar diagram: A bar chart or bar graph is a chart with rectangular bars whose length is proportional to the values that they represent. The bars can be plotted vertically or horizontally. A vertical bar chart is sometimes called a column bar chart. A bar graph is a chart that uses either horizontal or vertical bars to show comparisons among categories. Some bar graphs present bars clustered groups of more than one (grouped bar graphs), and others show the bars divided into sub-parts to show cumulative effect (stacked bar graphs).

(2) Pie chart: A pie chart is a circular chart divided into sectors illustrating numerical proportions. In a pie chart, they are the length of each sector (and consequently its central angle and area), is proportional to the quantity it represents, while it is named for its resemblance to a pie that has been sliced, there are variations in the way it can be presented. Pie charts are very widely used in the business world and the media. However, they have been criticized, and many experts recommend avoiding them, pointing out that research has shown it is difficult to compare different sections of a given pie chart or to compare data across different pie charts. Pie charts can be replaced in most cases by other plots such as the bar chart

Determination of Sample Size

Determining the appropriate sample size for a study is an important step in the research process. The sample size is the number of individuals or unit that will be included in the study. A larger sample size generally provides more accurate and representative results, but it can also be more expensive and time consuming to collect.

To determine the appropriate sample size, researchers typically consider several factors including the research questions, the population size, the level of precision desired, and the level of confidence desired.

One common method to determining sample size is to use a sample size calculator, which considers these factors and provide an estimate of the necessary sample size. Another approach is to use statistical power analysis to determine the sample size required to detect a significant effect or difference between groups.

It is important to ensure that the sample is representative of the population of interest to insure generalizability of the results. Additionally, researchers should consider potential biases in the sampling process and take steps to minimize these biases. Overall, determining the appropriate sample size is critical step in conducting research and ensuring the validity and reliability of study results.

We have the population size 3500, chance of error is 0.05, using the information we can calculate minimum required sample size

$$S = N/1+N+E^2$$

Where S sample size

N is the population size

E is the chance of error

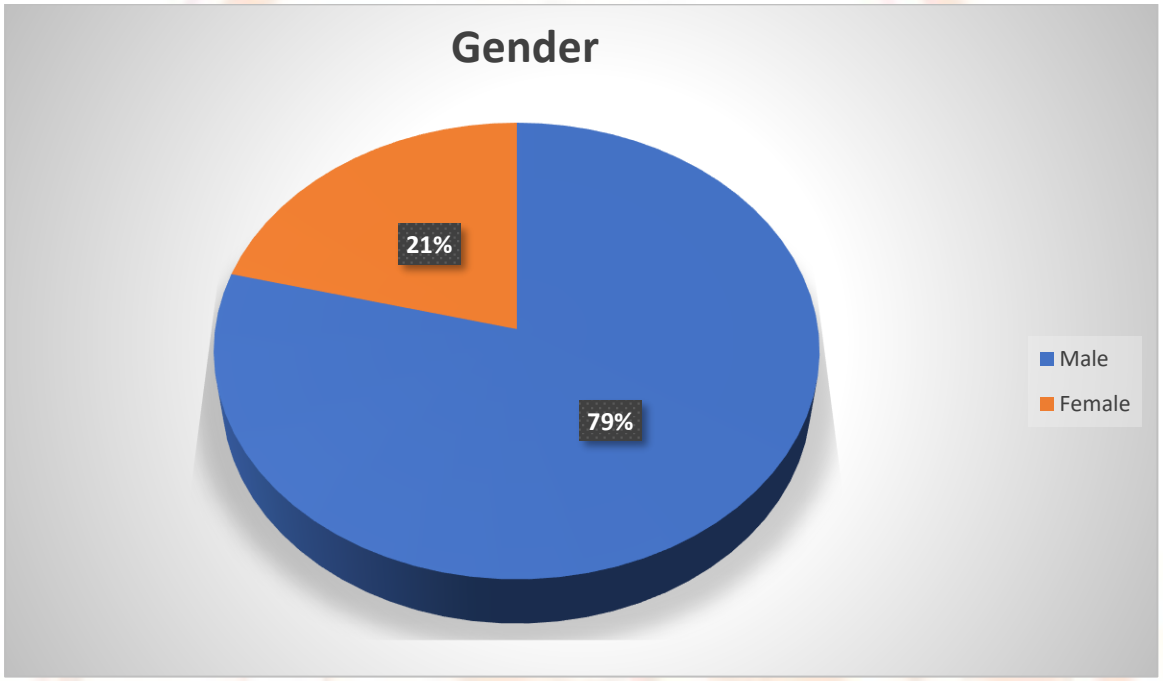
We found that minimum sample size 395.

So, I have decided to conduct my survey on a sample size of 400.

TABLE NO.1

Student's Gender ratio

Gender	Frequency	Percentage
Male	316	79
Female	84	21
Total	400	100



Interpretation:

From the above TABLE and PIE CHART:

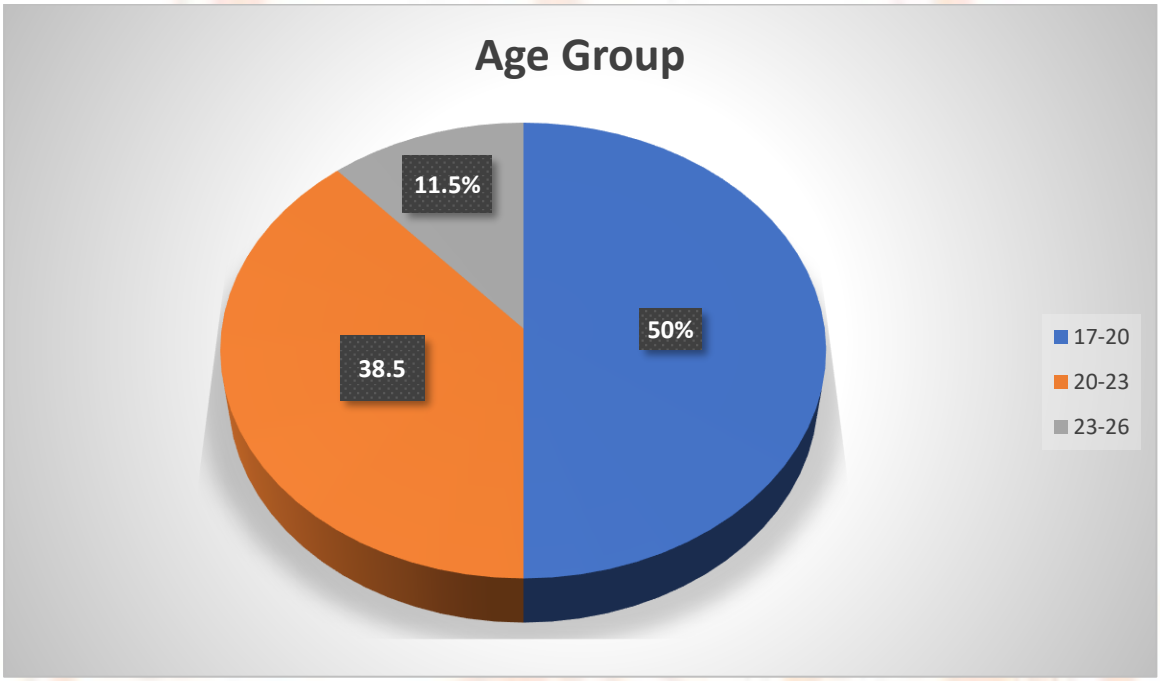
79% Students are Male.

21% Students are Female.

TABLE NO.2

Students age Groups:

Age	Frequency	Percentage
17-20	200	50
20-23	154	38.5
23-26	46	11.5



Interpretation:

From the above TABLE and PIE CHART:

50% Students are between age group 17-20

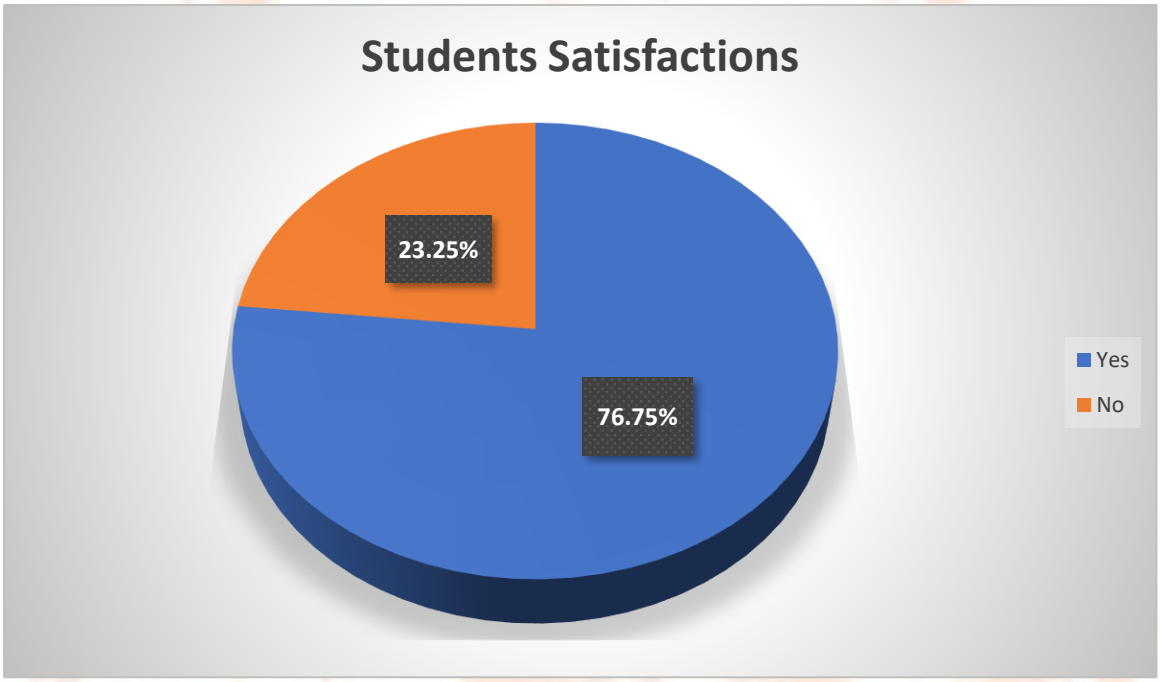
38.5% Students are between age group 20-23

11.5% Students are between age group 23-26

TABLE NO.3

Student's satisfaction with fee structure. Frequency

	Frequency	Percentage
Yes	307	76.75
No	93	23.25
Total	400	100



Interpretation:

From the above TABLE and PIE CHART:

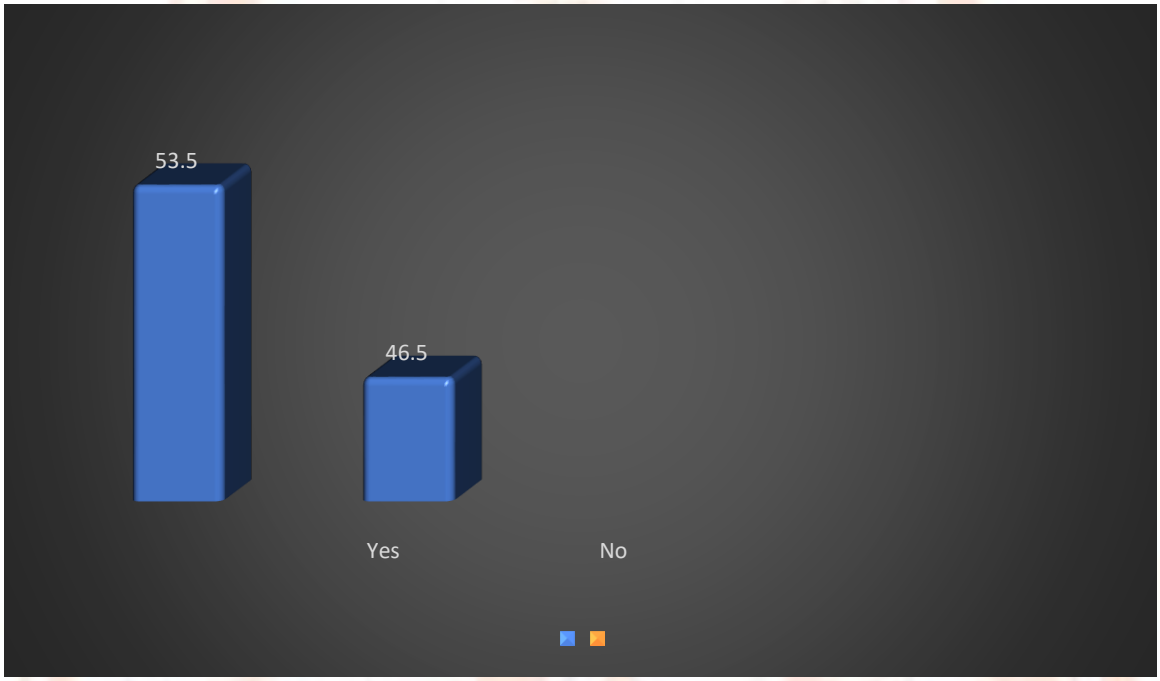
76.75% Students are satisfied with the fee structure of B.H.U.

23.25% Students are not satisfied with the fee structure.

TABLE NO.4

Opinion on how many students think that he could have been study in better educational place than B.H.U if his financial condition had better.

	Frequency	Percentage
Yes	202	53.5
No	198	46.5
Total	400	100



Interpretation:

From above TABLE and DIAGRAM:

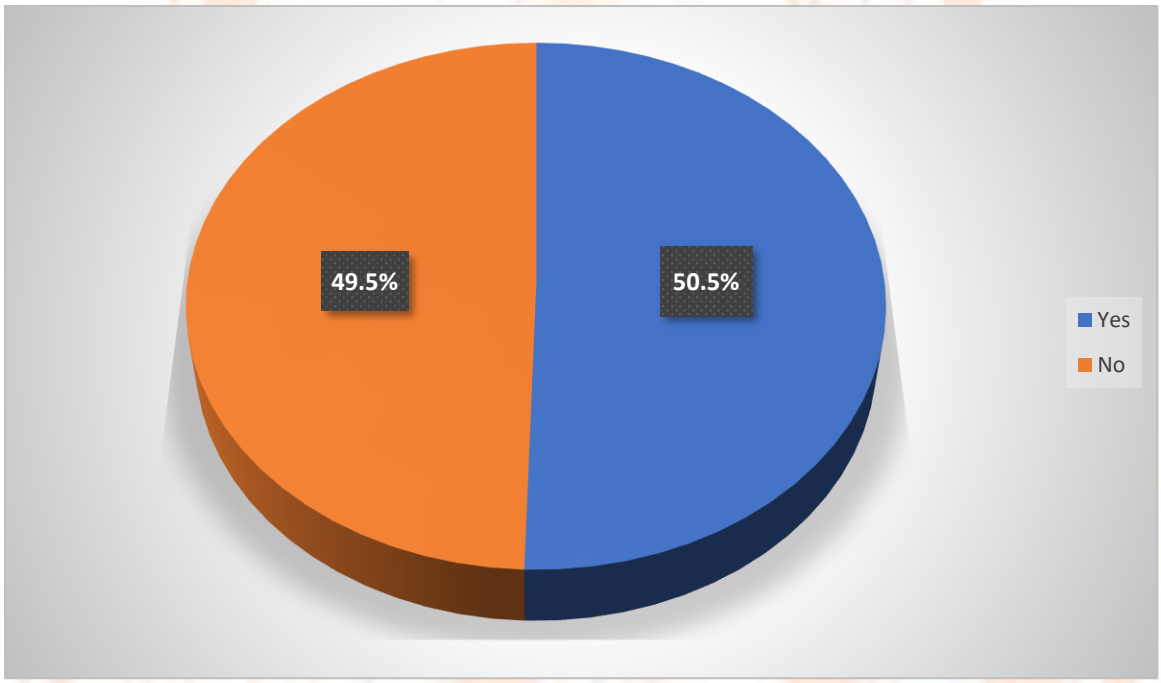
53.5% Students think that they would have been at a better place than B.H.U.

46.5% students do not think that they would have been at a better place than B.H.U

TABLE NO.5

Student's satisfaction with facilities.

	Frequency	Percentage
Yes	202	50.5
No	198	49.5
Total	400	100



Interpretation:

From above TABLE and PIE CHART:

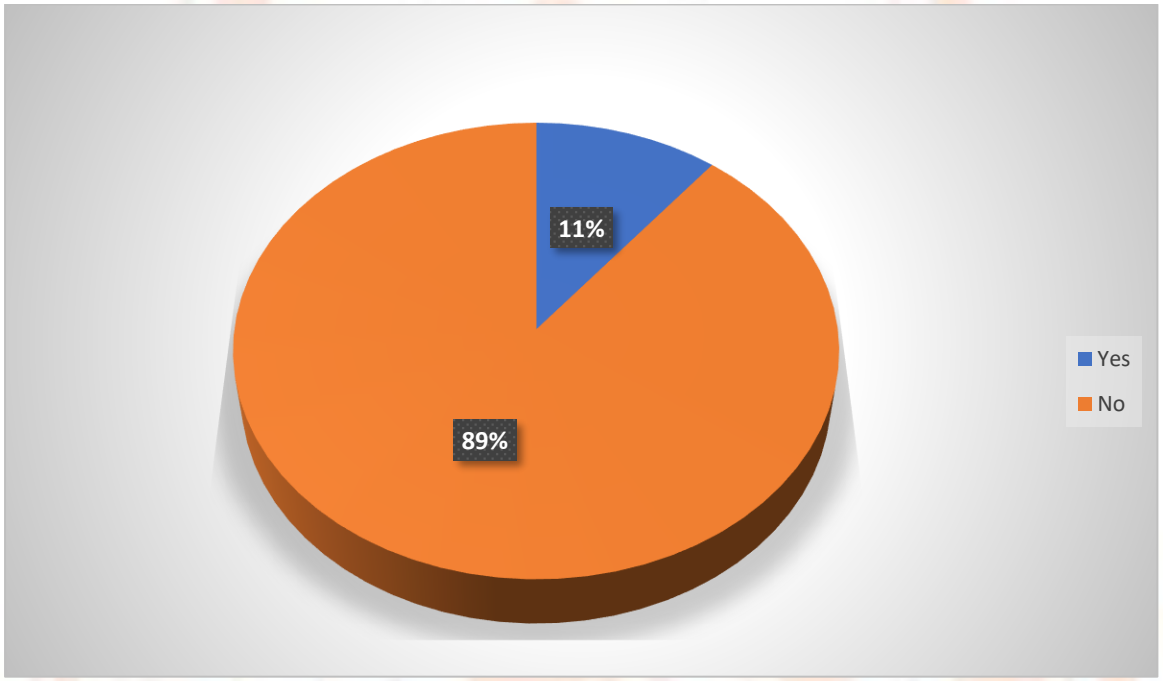
50.5% Students are satisfied with the facilities.

49.5% Students are not satisfied with the facilities.

TABLE NO.6

Opinion on part time job.

	Frequency	Percentage
Yes	43	10.75
No	357	89.25
Total	400	100



Interpretation:

From the above TABLE and PIE CHART:

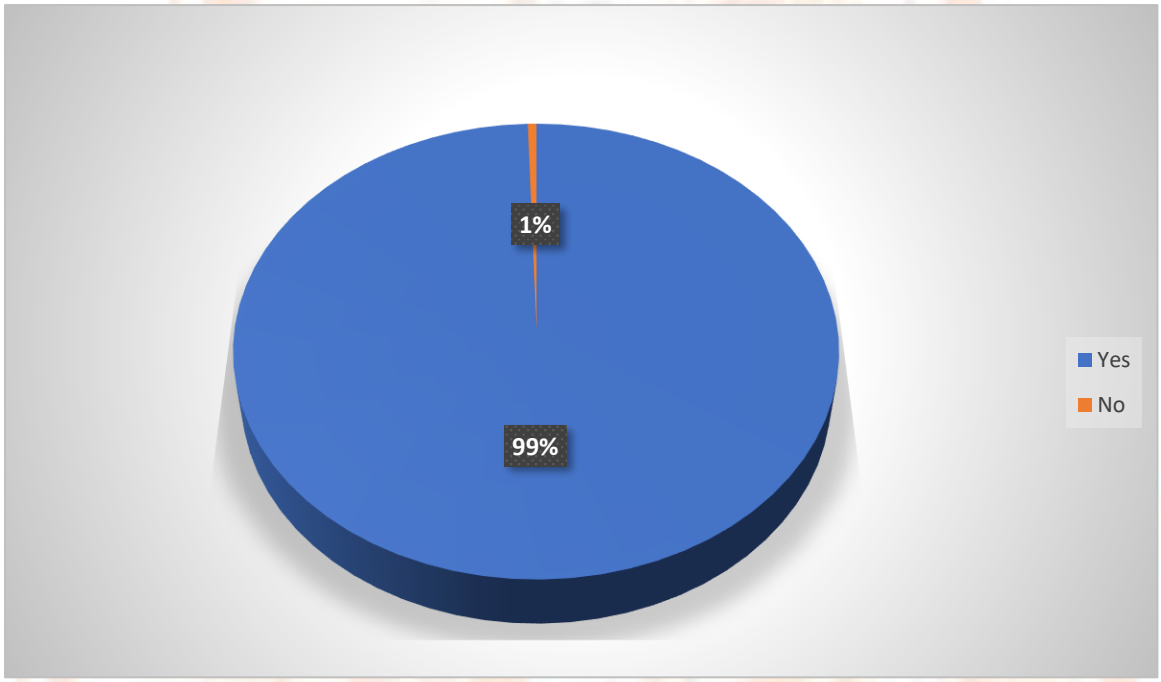
89.25% students do not have part time job.

10.25% students have a part time job to support their expenses.

TABLE NO.7

Student's distribution on own home.

	Frequency	Percentage
Yes	398	99.5
No	2	0.5
Total	400	100



Interpretation:

Froom the TABLE and PIE CHART:

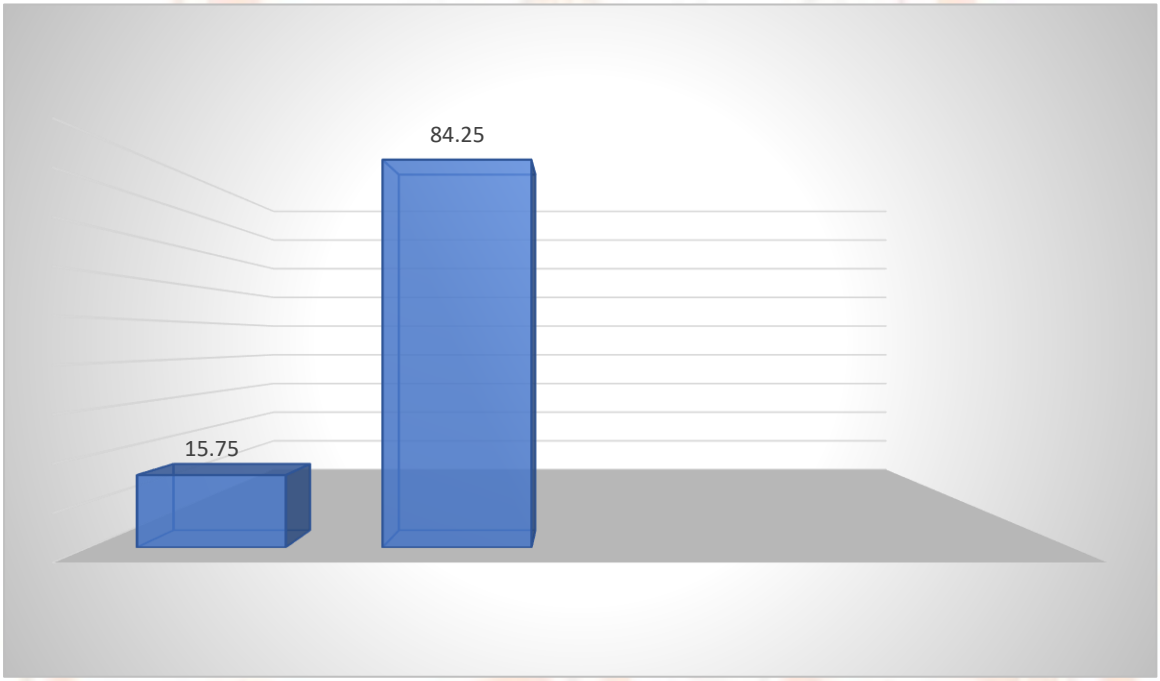
99.5% Students have their own home.

0.5% Students have not their own home.

TABLE NO.8

Opinion on scholarship.

	Frequency	Percentage
Yes	63	15.75
No	337	84.25
Total	400	100



Interpretation:

From the above TABLE and DIAGRAM;

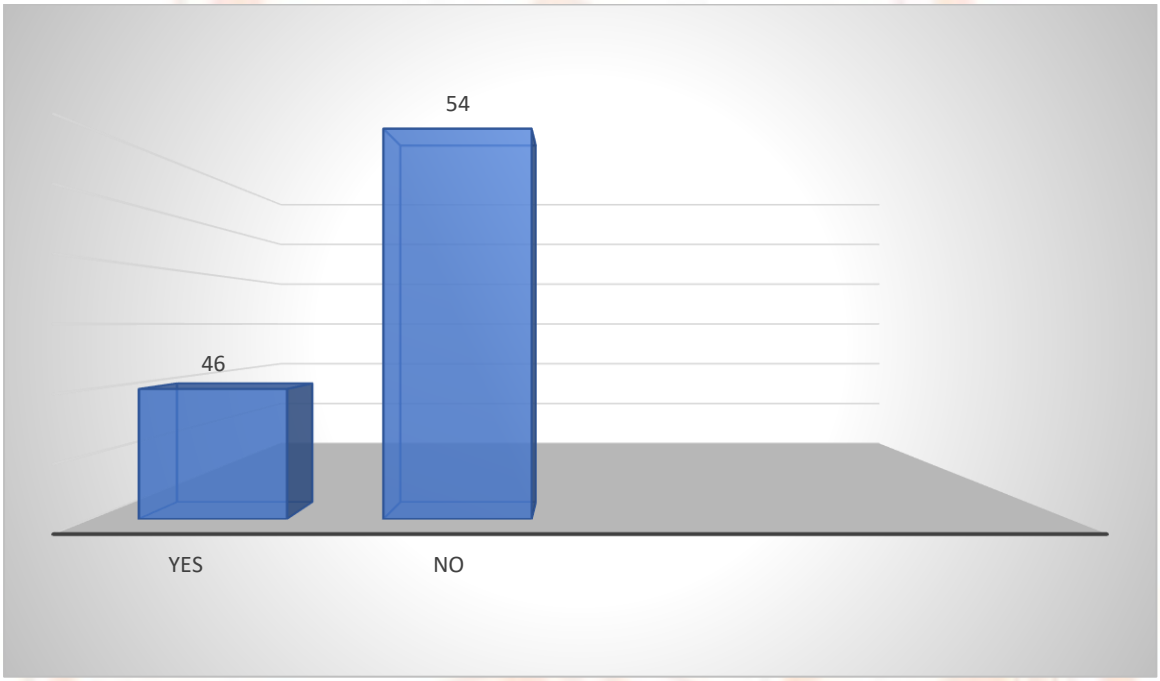
15.75% Students get scholarship.

84.25% Students do not get scholarship.

TABLE NO.9

Residential area of the students.

	Frequency	Percentage
Yes	184	46
No	216	54
Total	400	100



Interpretation:

From the above TABLE and DIAGRAM:

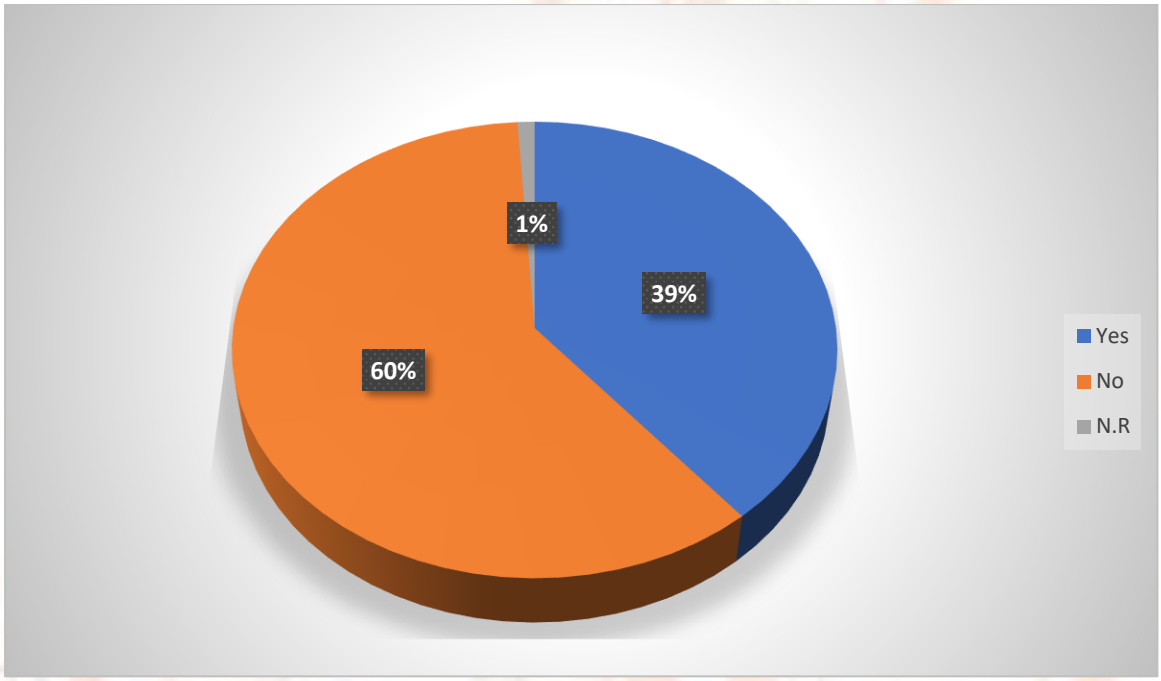
46% Students are coming from the urban area.

54% Students are coming from the rural area.

TABLE NO.10

Standing loan on student's family.

	Frequency	Percentage
Yes	156	39
No	240	60
No Response	4	1
Total	400	100



Interpretation:

From the above TABLE and PIE CHART:

39% Student's family have loan.

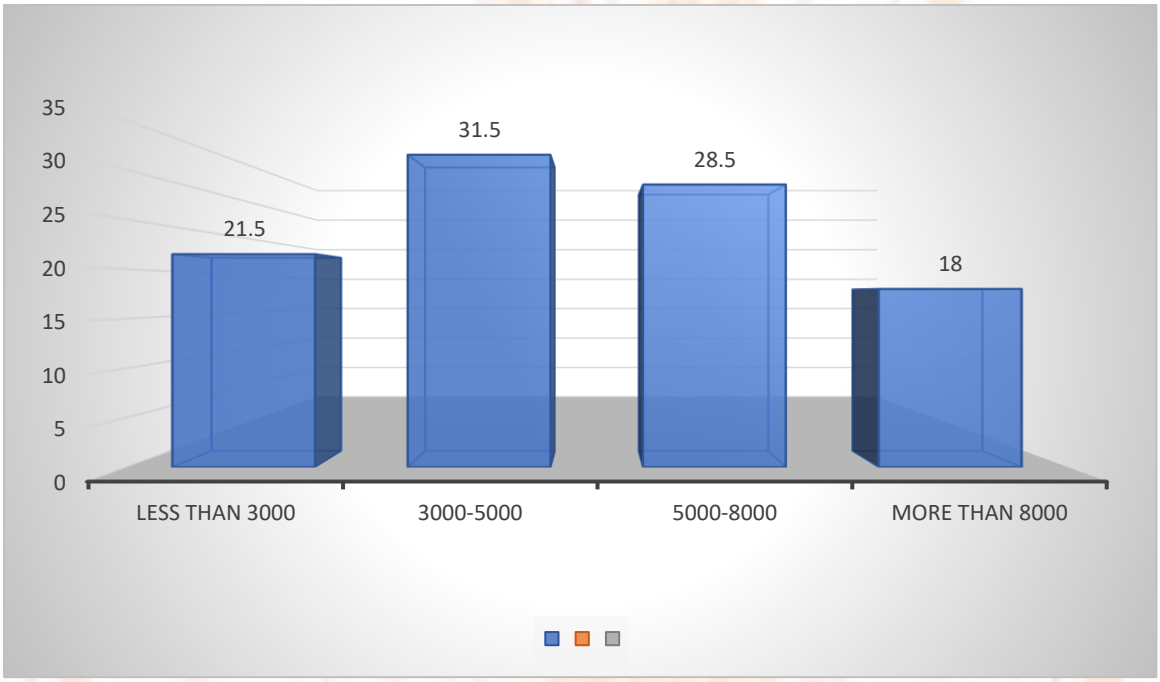
60% Student's family don't have any type of loan.

1% Students have not given any response.

TABLE NO.11

Opinion on monthly expenditure:

	Frequency	Percentage
Less than 3000	87	21.75
3000 – 5000	127	31.75
5000 – 8000	114	28.5
More than 8000	72	18
Total	400	100



Interpretation:

From the above TABLE and BAR GRAPH:

21.5% Students said that they spend less than 3000 per month.

31.5% Students said that they spend between 3000 to 5000 per month

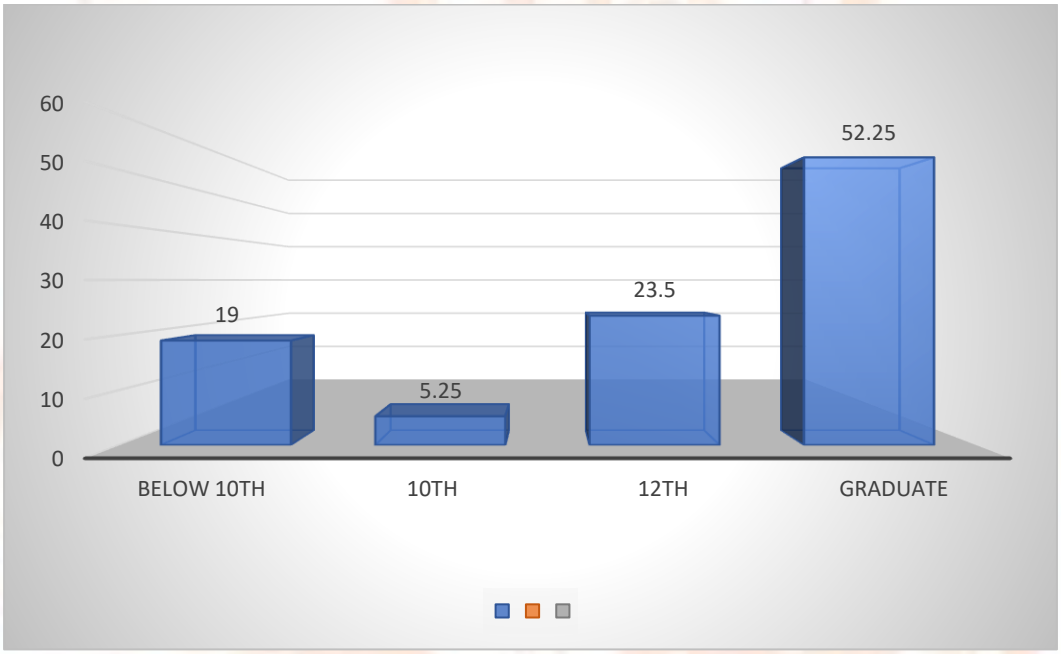
28.5% Students said that they spend between 5000 to 8000 per month.

18% Students said that they spend more than 8000 per month.

TABLE NO.12

Father's qualification of the students.

Qualification	Frequency	Percentage
Below 10th	76	19
10th	21	5.25
12th	94	23.5
Graduate	209	52.25



Interpretation:

From the above TABLE and BAR GRAPH:

19% Student's father have education below 10th.

5.25% Student's father are 10th pass.

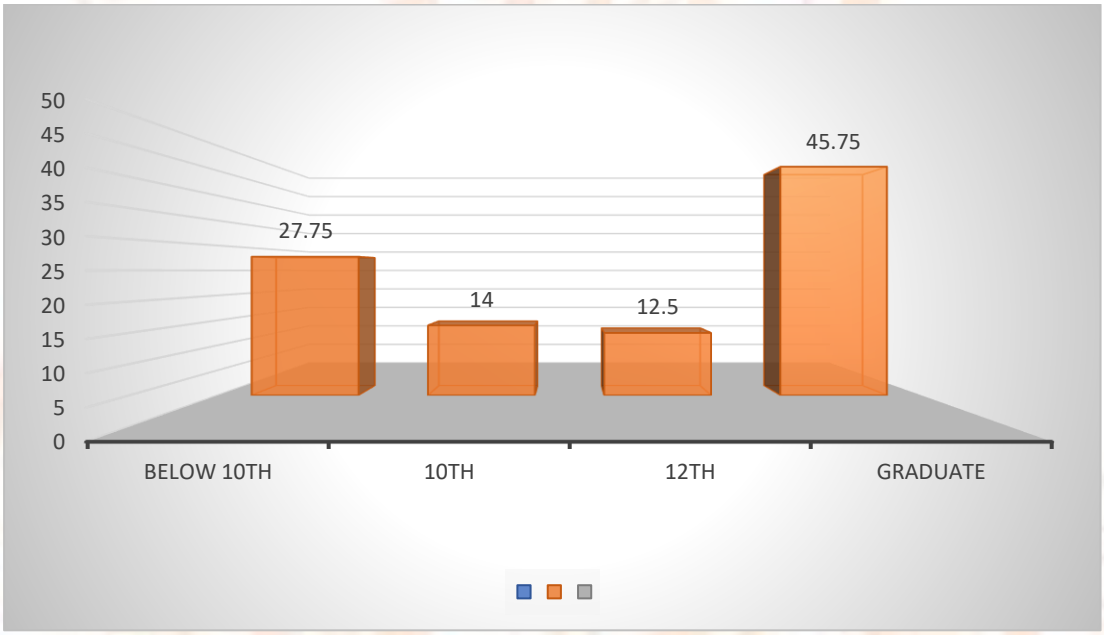
23.5% Student's father have studied up to 12th.

52.25% Student's father have successfully graduate.

TABLE NO.13

Mother's qualification of the students.

Qualification	Frequency	Percentage
Below 10th	111	27.75
10th	56	14
12th	50	12.5
Graduate	183	45.75



Interpretation:

From above TABLE and DIAGRAM:

27.75% Student's mother have education below 10th.

14% Student's mother are 10th pass.

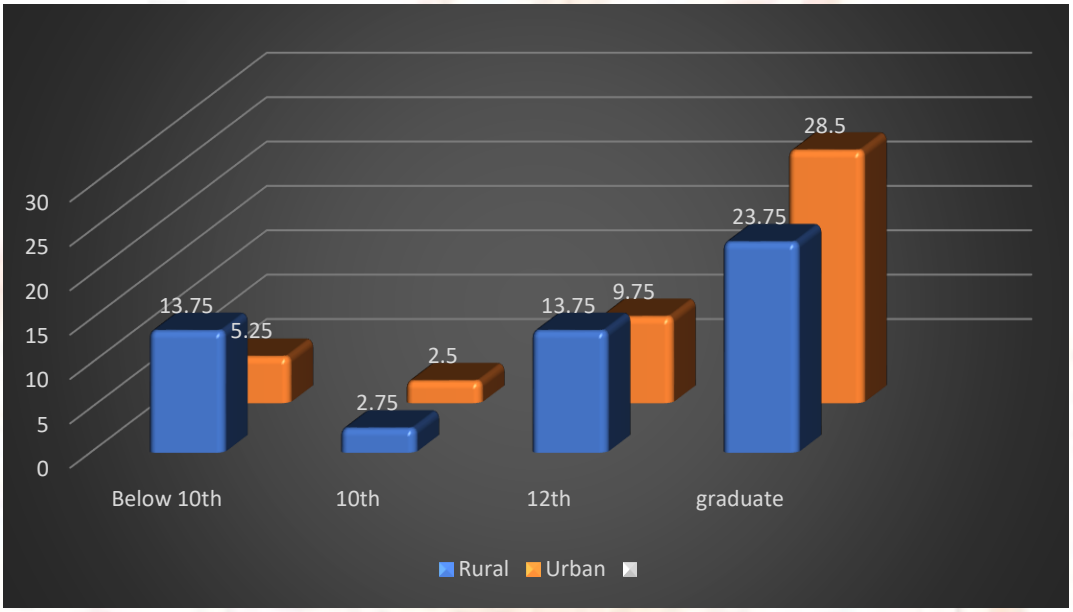
12.5% Student's mother are 12th pass.

45.75% Student's mother have successfully graduate.

TABLE NO.14

Father's qualification of the students based on residence:

	Residence		
Qualification	Rural	Urban	**Total**
Below 10th	13.75	5.25	**19**
10th	2.75	2.5	**5.25**
12th	13.75	9.75	**23.5**
Graduate	23.75	28.5	**52.25**
Total	54	46	**100**



Interpretation:

From the above TABLE and BAR DIAGRAM:

Qualification Below 10th.

13.75% Rural.

5.25% Urban.

Qualification 10th.

2.75% Rural.

2.5% Urban.

Qualification 12th.

13.75% Rural.

9.75% Urban.

Qualification Graduate.

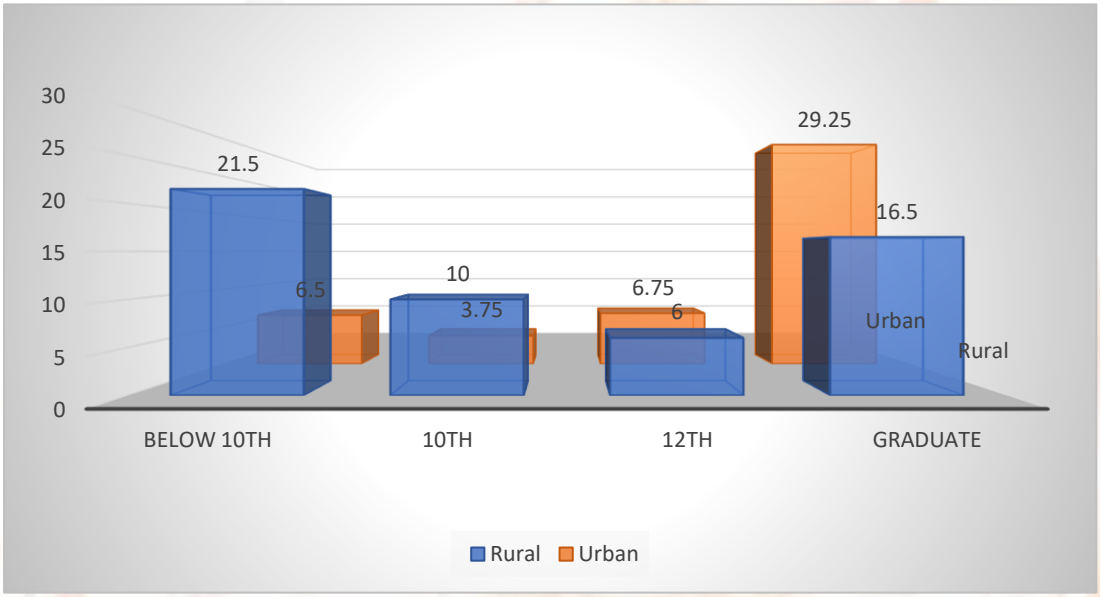
23.75% Rural.

28.5% Urban.

TABLE NO.15

Mother's qualification of the students -based residence.

	Residence		
Qualification	Rural	Urban	Total
Below 10th	21.5	6.5	27.75
10th	10	3.75	13.75
12th	6	6.75	12.75
Graduate	16.5	29.25	45.75
Total	53.75	46.25	100



Interpretation:

From the above TABLE and BAR DIAGRAM:

Qualification Below 10th.

21.5% Rural.

6.5% Urban.

Qualification 10th.

10% Rural.

3.75% Urban.

Qualification 12th.

6% Rural.

6.75% Urban.

Qualification Graduate.

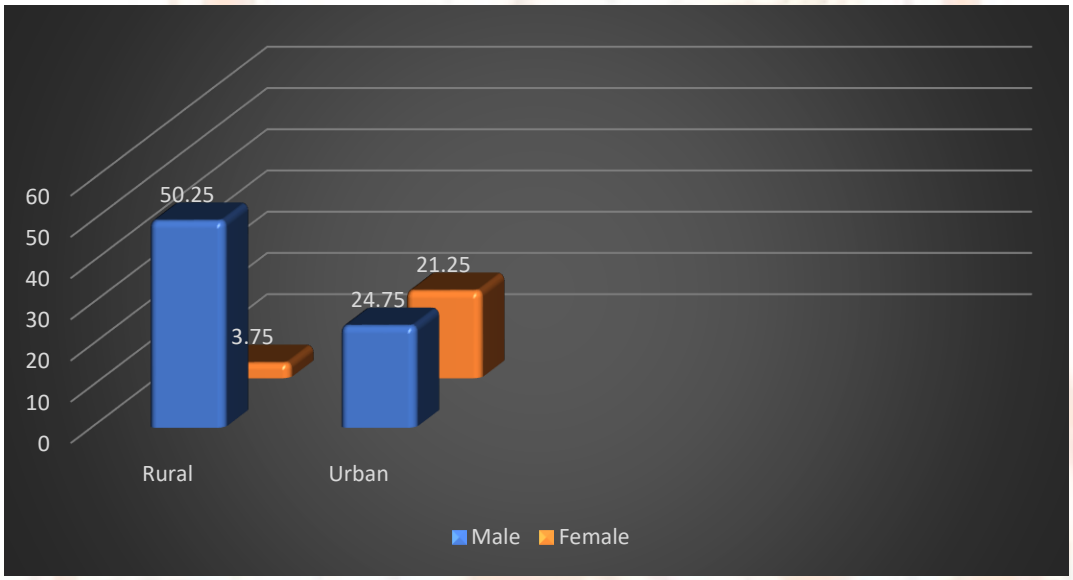
16.5% Rural.

29.25% Urban.

TABLE NO.16

Student's distribution based on residence.

Residence	Male	Female	Total
Rural	50.25	3.75	54
Urban	24.75	21.25	46
Total	75	25	100



INTERPRETATION:

FROM ABOVE TABLE AND BAR DIAGRAM.

3.75% female students come from rural area.

50.25% female students come from urban area.

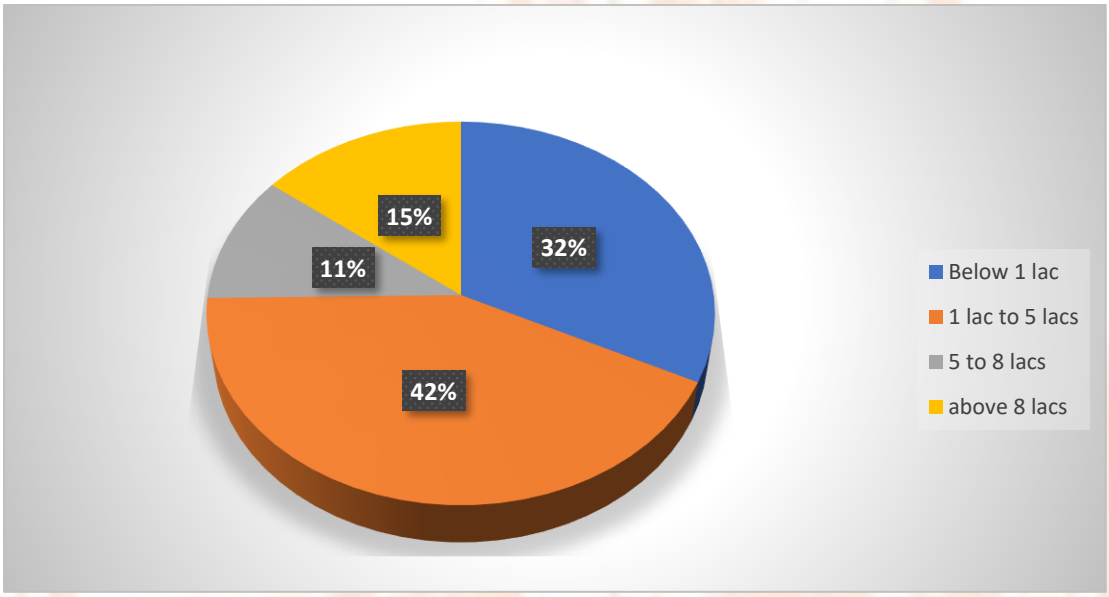
21.25% male students come from rural area.

24.75% male student come from urban area

TABLE NO.17

Annual income of the family.

Annual Income	Frequency	Percentage
Below 1 lac	129	32.25
1 lac to 5 lacs	170	42.5
5 lacs to 8 lacs	43	10.75
Above 8 lacs	58	14.5
Total	400	100



Interpretation:

From the above TABLE and PIE CHART:

32.25% Student's family income is below 1 lac.

42.5% Student's family income is between 1 lac to 5 lac.

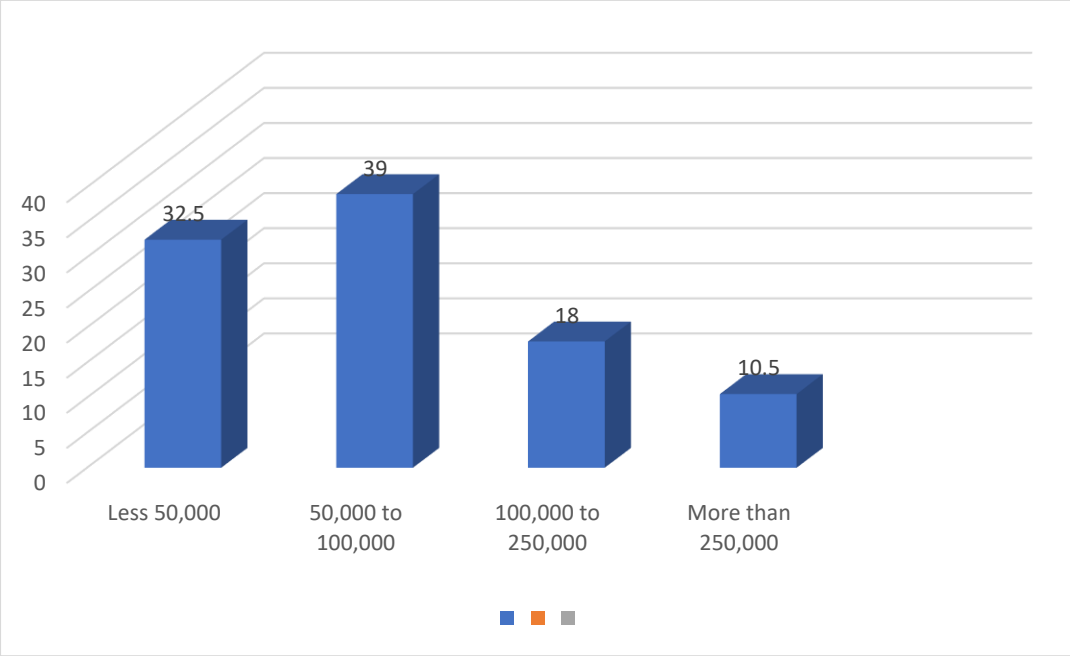
10.75% Student's family income is between 5 lac to 8 lac.

14.5% Student's family income is more than 8 lacs.

TABLE NO.18

Annual expenditure on education.

Money	Frequency	Percentage
Less 50,000	130	32.5
50,000 to 100,000	156	39
100,000 to 250,000	72	18
More than 250,000	42	10.5
Total	400	100



Interpretation:

From the above TABLE and DIAGRAM:

32.5% student's family spend less than 50,000 Money on education.

39% student's family expense on education lies btw 50,000 to 100,000.

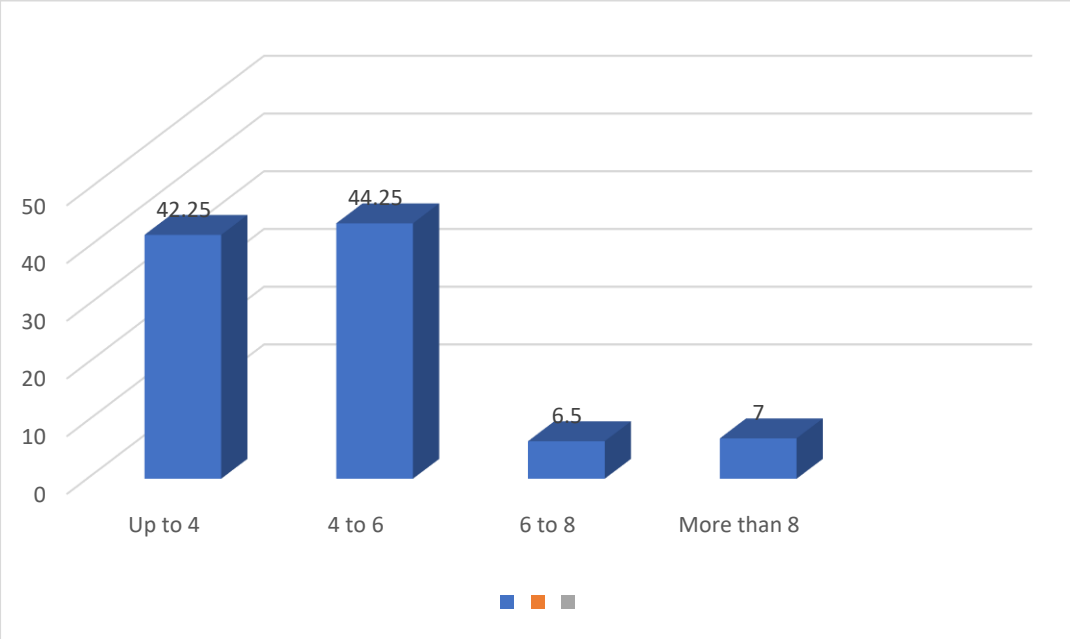
18% student's family spend btw 100,000 to 250,000 on education.

10.5% student's family spend more than 250,000 on education.

TABLE NO.19

Opinion on family size.

Members	Frequency	Percentage
Up to 4	169	42.25
4 to 6	177	44.25
6 to 8	26	6.5
More than 8	28	7



Interpretation:

From the above TABLE and DIAGRAM:

42.25% student's family size is up to 4

44.25% student's family size is between 4 to 6.

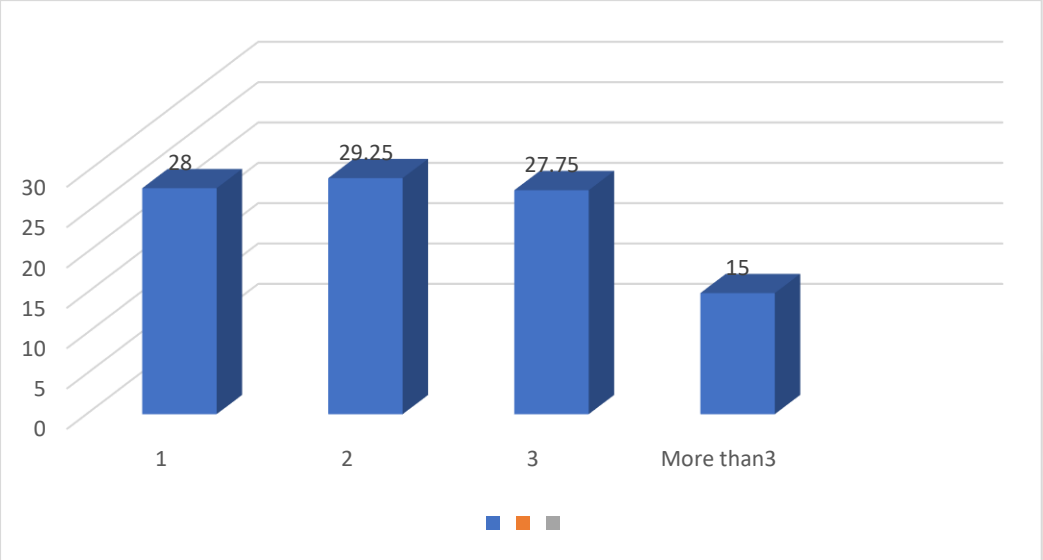
6.5% student's family size is 6 to 8.

7% student's family size is more than 8.

TABLE NO.20

Earning members in the family.

Member	Frequency	Percentage
1	112	28
2	117	29.25
3	111	27.75
More than 3	60	15



Interpretation:

From the above TABLE and DIAGRAM:

28% student's family have 1 earning members.

29.25% student's family have 2 earning members.

27.75% student's family have 3 earning members.

15% student's family have more than 3 members.

CONCEPT OF THE CHI SQUARE TEST:

Chi-square test is applied to find out whether the two variables in a bivariate contingency table under the study are dependent or independent.

Our two hypotheses

null hypothesis H0 and

alternate hypothesisH1.

H0: The attributes are independent

H1: The attributes are dependent

Computation is done using the formula:

$\boldsymbol{\chi^2 = \Sigma[(O-E)^2] \sim \chi^2(r-1)*(s-1)}$ **Where r and s are the no. of rows and columns of the contingency table. And O is the observed frequency and E is the expected frequency.**

Where n and n are marginal totals and N is the total number of observations. The test statistic follows, under H0 a chi-square distribution with (r-1) (s- 1) degrees of freedom. The null hypothesis can be tested either at 5% or 1% level of significance, if χ2cal < χ2tab

then we may be accepted H0 which shows that the two variables are independent of each other otherwise we may be reject the H0 which shows that the two variables are not independent i.e. dependent of each other. Also, when the observed frequency is less than five, pooling is done to apply the test.

CHI-SQUARE TEST:

We apply chi square test to check the independency btw family income and monthly expenditure of the students of Banaras Hindu University.

Null Hypothesis: family income and monthly expenditure are independent to each other.

Alternate Hypothesis: monthly expenditure depends on family income

4×4 CONTINGENCY TABLE:

INCOME/EXPENDITURE	3000	3000 TO 5000	5000 TO 8000	Above 8000	Total
Below 1 lac	**50**	**43**	**23**	**9**	**125**
1 lac to 5 lac	**24**	**31**	**27**	**11**	**93**
5 lacs to 8 lacs	**12**	**25**	**34**	**25**	**96**
Above 8 lacs	**7**	**21**	**24**	**34**	**86**
Total	**93**	**120**	**108**	**79**	**400**

Expected table:

INCOME/EXPENDITURE	3000	3000 TO 5000	5000 TO 8000	Above 8000	Total
Below 1 lac	**29.0625**	**37.5**	**33.75**	**24.6875**	**125**
1 lac to 5 lac	**21.6225**	**27.9**	**25.11**	**18.3675**	**93**
5 lacs to 8 lacs	**22.32**	**28.8**	**25.92**	**18.96**	**96**
Above 8 lacs	**19.995**	**25.8**	**23.22**	**16.985**	**86**
Total	**93**	**120**	**108**	**79**	**400**

The calculated value of chi-square is **69.1123947**

The tabulated value of the chi-square test with 9 degrees of freedom for a 0.05% level of significance is **16.919**

CONCLUSION:

Since the p-value is greater than the significance level 0.05, we can reject the null hypothesis and accept the alternate hypothesis.

It means monthly expenditure depends on family income

CONCLUSIONS:

Most of the student's are satisfied with the fee structure of B.H.U.

About 2/3rd of the students is of the opinion that even if they have more finances, they would still be at B.H.U

Majority of students do not get any scholarship.

Most of the student's father are graduate.

In a good proportion, the student's family has no loan.

In a good proportion, the student's family income is 1 lac to 5 lac.

Majority of student's family size is less than 6.

Monthly expenditure of most students is 3000-5000 (approx.31.75%).

Majority of female students come from urban area.

Majority of male students come from rural area.

Student's coming from government school are less than 50%.

Standing loans of student's family does not depend on residential area.

Monthly expenditure of students depends upon the annual income of the family.

Based on the conclusions, here are some suggestions that may help students in the future:

Apply for scholarships: Since a majority of students do not receive scholarships, it is important for students to research and apply for scholarships that they may be eligible for. This can help alleviate the financial burden of education.

Explore other sources of funding: Even if students are satisfied with the fee structure at their institution, it is always a good idea to explore other sources of funding such as student loans, grants, and work-study programs.

Encourage higher education: The fact that a majority of student's fathers are graduates suggests that higher education is valued in their families. Encouraging higher education and investing in it can lead to better career prospects and opportunities.

Be mindful of monthly expenses: Understanding the monthly expenses of students and their families can help them budget accordingly and avoid financial strain.

Improve access to education in rural areas: Since a majority of male students come from rural areas, it is important to improve access to education in these areas to provide equal opportunities to all.

Support government schools: While less than 50% of students come from government schools, it is important to support and improve the quality of education in these schools to provide access to quality education for all.

Seek financial advising: Since monthly expenditure of students depends upon the annual income of the family, seeking financial supporting can help students and their families better manage their finances and plan for the future.

OVERALL SURVEY RESPONSE REPORT:

Question No.	Response	No Response
Q1	**400**	**0**
Q2	**400**	**0**
Q3	**400**	**0**
Q4	**400**	**0**
Q5	**400**	**0**
Q6	**400**	**0**
Q7	**400**	**0**
Q8	**400**	**0**
Q9	**400**	**0**
Q10	**400**	**0**
Q11	**400**	**0**
Q12	**400**	**0**
Q13	**400**	**0**
Q14	**400**	**0**
Q15	**400**	**0**
Q16	**400**	**0**
Q17	**400**	**0**
Q18	**400**	**0**
Q19	**400**	**0**

FIELD EXPERIENCE AND DIFFICULTIES:

No task can ever be executed successfully without encountering certain difficulties, and these difficulties give a positive impact on our curiosity and learning attitude. During working on this project, I experienced the same.

After the selection of topic for the survey, defining its objective clearly and ambiguously and to plan it accordingly plays an important role. To define the geographical area and associated target population is another crucial factor. I decided to have a survey solely based upon the opinion of the sample individuals, and to accomplish this need, I opted for the questionnaire to be filled and getting collected as per convenience of the respondent, either immediately or after a short span of time.

My experience while working on this project was mostly good with limited negatives. Every difficulty that I faced during the work period was dealt by me efficiently and with the help of my peers. After getting the responses the next difficulty was to express the data in a concise and compact form, for easy understanding of the sample information and to reach at a conclusion.

For this purpose, I have used MS-EXCEL and word. Since both of these ways are reliable and time efficient.

Some of the major difficulties can be mentioned as follows:

- Selecting the appropriate topic for the project was the first difficulty, as the feasibility of collecting the data and its reallife importance both were to be considered.
- Some of the respondents were uninterested and reluctant in devoting their valuable time for filling up the questionnaire.
- Besides mentioning the title of the survey, we had to elaborate our objective to each of the respondent and convince them to respond to the questionnaire.
- Some of the respondents who didn't provide their instant responses remained indulged in their routine and we had to trace them back for collecting the questionnaires.
- The sample which I took was insufficient as compared to the target population, but the man-power and time constraint also had to be kept in mind.
- The unavailability of the sampling frame and accessibility to certain regions, forced me to use mixed sampling techniques.
- I used MS-EXCEL for the analysis of the data.

With all these difficulties my project work became a challenging task to me and overcoming all these situations and getting the project completed was a great experience for me. During the survey, I met several kinds of people and got a chance to get familiar with real life problems. And in my view to work with real life data and to get a conclusion about the whole population based on a sample selected by myself was an amazing experience for me.

QUESTIONAIRE:

Economic Condition of Students at Banaras Hindu University.

Name - _____
Year-_____

Course Name-_____
Age-_____

Sex - _____

1.What is the qualification of your father?

(1) below 10^{th} (2)10^{th} (3) 12^{th} (4) graduate

3.How many members are there in your family?

(1) up to 4 (2) 4 to 6 (3) 6 to 8 (4) more than 8

4.How many people earn in your family?

(1) up to 4 (2) 4 to 6 (3) 6 to 8 (4) more than 8

4.How many people earn in your family?

(1) 1 (2) 2 (3) 3 (4) more than 3.

5.What is annual income of your family? (

1) below 1 lac (2) 1 lac to 5 lac (3)5 lac to 8 lac (4) above 8 lac

6. Do you have B.P.L card?

(1) Yes (2)NO

7. Is there is any standing loan on your family?

(1) Yes (2) NO

8.Do you have your own home?

(1) Yes (2) No

9.What is your area of residence?

(1) Rural (2) Urban

10. Do you get any scholarship?

(1) Yes (2) No

11.Which category do you belong to?

(1) Gen (2) OBC (3) Sc (4) St

12.Type of Institution from which you received primary education?

(1) governments (2)private

13.How many of your siblings are currently pursuing education?

(1) 1 to 2 (2) 3 to 4 (3) 4 to 5 (4) more than 5

14 How much money is spent by your family on education(yearly)?

(1) less50,000 (2) 50,000 to 100,000 (3)100,000 to 250,000 (4) more than 250,000

15.What is your monthly expenditure?

(1) 3000 (2) 3000 to 5000 (3) 5000 to 8000 (4) more than 8000

16.Do you have a part time job for your financial support?

(1) Yes (2) No

17Are you satisfied with the fee structure of BHU?

(1) Yes (2) NO

18.Are you satisfied with the facilities that you receive from BHU?

(1) Yes (2) No

19.Do you think that you could have been at a better place than BHU, if you had better financial condition?

(1) Yes (2) No


Thank You!