CHAPTER-IV
ANALYSIS OF DATA

4.1.0. Introduction

The researcher discussed the methodology adopted for the present research work in the previous chapter. Now, in this chapter, the analyses and interpretations of collected data are discussed very systematically. The present work is undertaken to know and understand the level of academic achievement, social support, and achievement motivation of the Surjapuri students in relation to their background variables, i.e., area of residence (Rural and Urban), gender (Male and Female) and socio-economic status (APL and BPL). The investigator also intended to know the relationship between academic achievement, social support, and achievement motivation among Surjapuri students.

In this study, the researcher employed statistical techniques to analyze the data, such as percentages, means, standard deviations, independent samples t-test, and Pearson's correlation. The findings of this study are discussed and presented very systematically as per the objectives and related hypotheses of the study.

4.2.0. Preliminary analysis

At the initial stage, the test for the normality of the data distribution has been carried out before further analysis. This is done to ascertain which statistical tests are most suitable for the dataset (Best and Kahn, 2003). For the present study, Z-values, kurtosis, and skewness, as well as the Kolmogorov-Smirnov and Shapiro-Wilk tests, were computed and reported in table 4.1 in order to analyze the data and establish whether or not the data follow a normal distribution. Moreover, the Histogram and Normal Q-Q Plot of the data, respectively, provide a visual representation of the data distribution.

Table 4.1: Showing normal distribution of the data relating to academic achievement, social support, and achievement motivation

Test Results		Variables		
		Academic Achievement	**Social Support**	**Achievement Motivation**
Mean		254.25	151.45	147.69
SD		77.85	12.61	11.94
Median		250.00	150.00	147.00
Skewness		0.00	0.00	0.00
SEskewness		0.061	0.061	0.061
Zskewness		0	0	0
Kurtosis		-0.070	-0.074	-0.073
SEkurtosis		0.12	0.12	-0.073
Zkurtosis		-0.58	-0.61	-0.60
Kolmogorov-Smirnov	**Statistic**	0.012	0.021	.0021
	Sig.	0.20	0.10	0.09
Shapiro-Wilk	**Statistic**	1.00	0.99	0.99
	Sig.	1.00	0.70	0.64

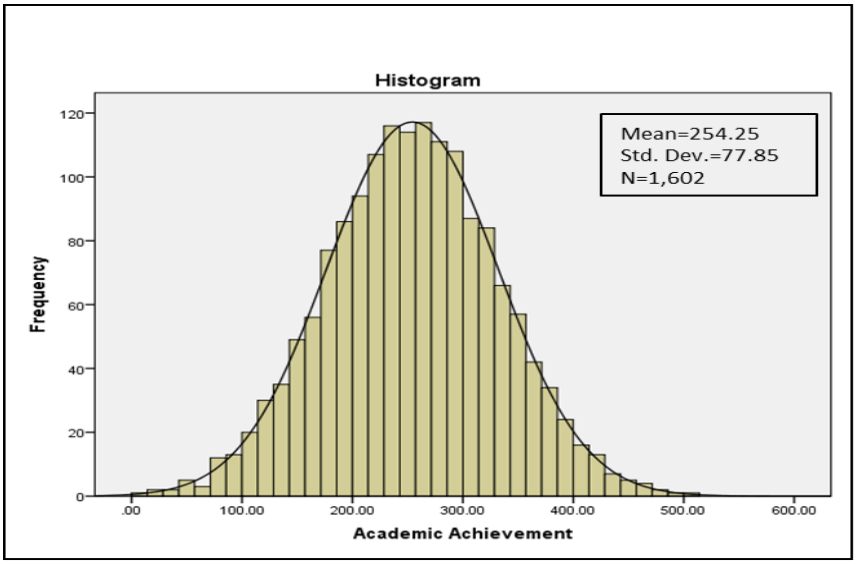

Fig. 4.1: Showing the normal distribution through histogram for scores of respondents on academic achievement

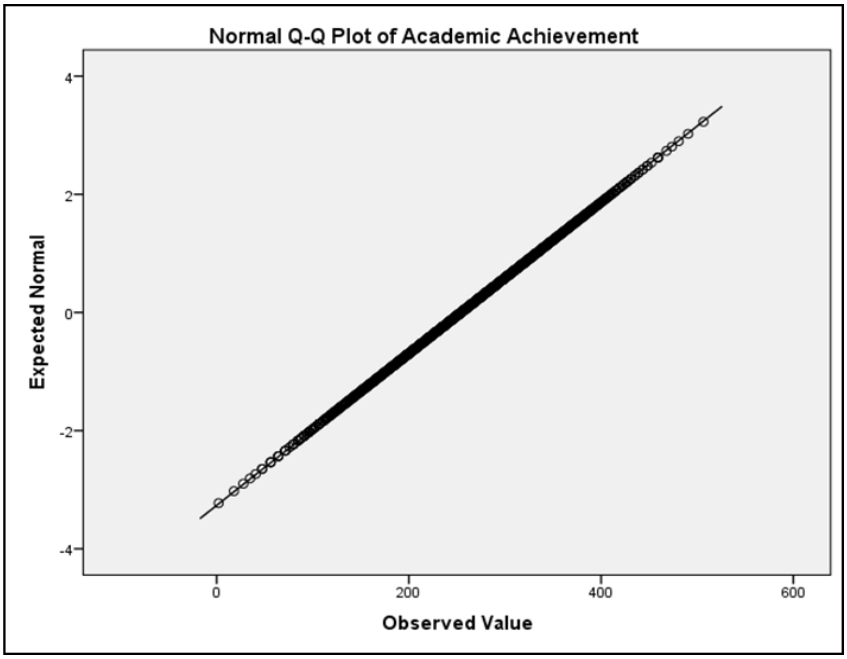

Fig. 4.2: Showing the normal distribution through Q-Q Plot for scores of respondents on academic achievement

4.2.1. Normality test for academic Achievement of Surjapuri students

Table 4.1 displays the descriptive statistics and results of the normality test for the variable academic achievement. The skewness value is zero, indicating no skew in the data and suggesting a symmetric distribution (Kim, 2013). On the other hand, the value of kurtosis (Academic achievement = -0.070) is less than zero, ensuring that the

data distribution is somewhat platykurtic (Brown, 2011). The z-values of Skewness and Kurtosis fall within the range of ± 1.96 at a significance level of 0.05 (Hair, Black, Babin, and Anderson, 2010), indicating that the data follows a normal distribution. A further indication of the normal distribution is provided by the non-significant results of the Kolmogorov-Smirnov and Shapiro-Wilk tests, as the *p*-value is above 0.05 (Academic Achievement: K-S Sig. = 0.20, S-W Sig. = 1.00). A visual representation of the Histogram and Q-Q plot in figure 4.1 and figure 4.2 respectively indicates that the respondents' academic achievement score is normally distributed. This result confirms the appropriateness of using parametric statistical analysis for this variable.

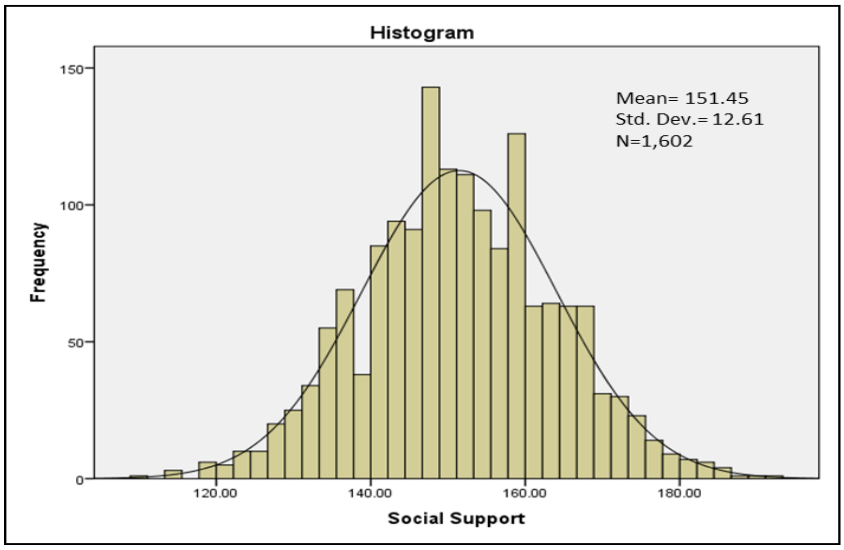

Fig. 4.3: Showing the normal distribution through histogram for scores of respondents on social support

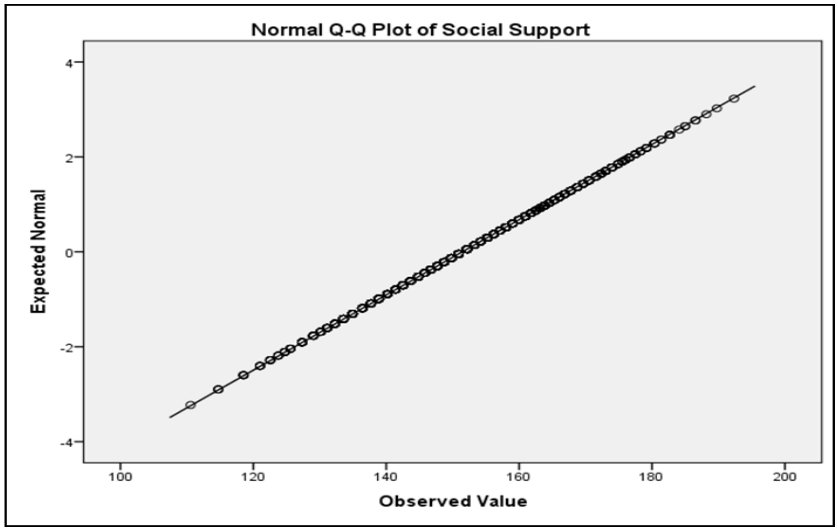

Fig. 4.4: Showing the normal distribution through Q-Q Plot for scores of respondents on social support

4.2.2. Normality test for social support of Surjapuri students

Table 4.1 displays the descriptive statistics and results of the normality test for the variable social support. The skewness value is zero, indicating no skew in the data and suggesting a symmetric distribution (Kim, 2013). On the other hand, the value of kurtosis (Social Support = -0.070) is less than zero, ensuring that the data distribution is somewhat platykurtic (Brown, 2011). The z-values of Skewness and Kurtosis fall within the range of ± 1.96 at a significance level of 0.05 (Hair, Black, Babin, and Anderson, 2010), indicating that the data follow a normal distribution. A further indication of the normal distribution is provided by the non-significant results of the Kolmogorov-Smirnov and Shapiro-Wilk tests as the *p*-value is above 0.05 (Social Support: K-S Sig. = 0.20, S-W Sig. = 1.00). A visual representation of the Histogram and Q-Q plot in figure 4.3 and figure 4.4 respectively indicates that the respondents' score in social support is normally distributed. This result confirms the appropriateness of using parametric statistical analysis for this variable.

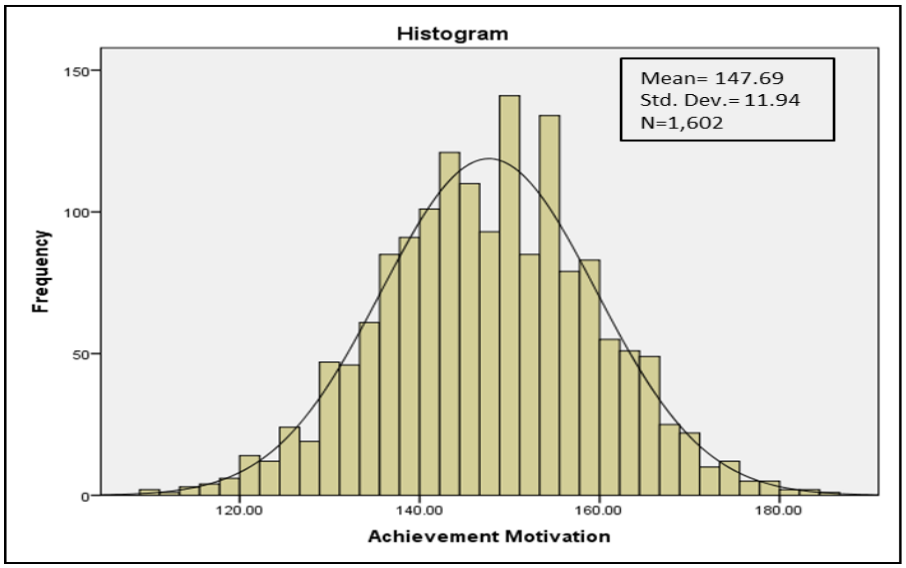

Fig. 4.5: Showing the normal distribution through histogram for scores of respondents on achievement motivation

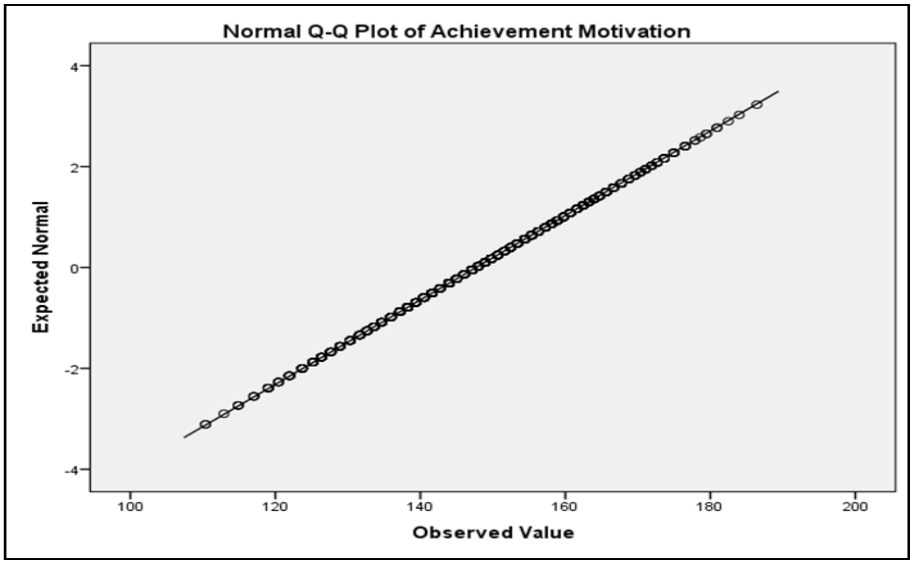

Fig. 4.6: Showing the normal distribution through Q-Q Plot for scores of respondents on achievement motivation

4.2.3. Normality test for achievement motivation of Surjapuri students

Table 4.1 displays the descriptive statistics and results of the normality test for the variable achievement motivation. The skewness value is zero, indicating no skew in the data and suggesting a symmetric distribution (Kim, 2013). On the other hand, the kurtosis value (Achievement Motivation = -0.073) is less than zero, ensuring that the data distribution is somewhat platykurtic (Brown, 2011). The z-values of Skewness and Kurtosis fall within the range of ± 1.96 at a significance level of 0.05 (Hair, Black, Babin, and Anderson, 2010), indicating that the data follow a normal distribution. A further indication of the normal distribution is provided by the non-significant results of the Kolmogorov-Smirnov and Shapiro-Wilk tests as the *p*-value is above 0.05 (Achievement Motivation: K-S Sig. = 0.09, S-W Sig. = 0.64). A visual representation of the Histogram and Q-Q plot in figure 4.5 and figure 4.6 respectively indicates that the respondents' score in achievement motivation is normally distributed. This result confirms the appropriateness of using parametric statistical analysis for this variable.

4.3.0. Analysis of Data and Interpretation of Results

The objective wise details of the analysis of data and interpretation of result are given under the following heads:

4.4.0. Objective 1- Analysis and Interpretation

To identify the level of academic achievement among class Xth Surjapuri students

For the study's first objective, the Xth class marks secured by the students in board exams were considered the data for the study, which were collected from the schools.

Table 4.2: The distribution of the level of academic achievement of the Surjapuri students

Academic Achievement	No. of students	High		Average		Low		Below Low	
		n	%	n	%	n	%	n	%
	1602	482	30.08	495	30.89	478	29.83	147	9.17

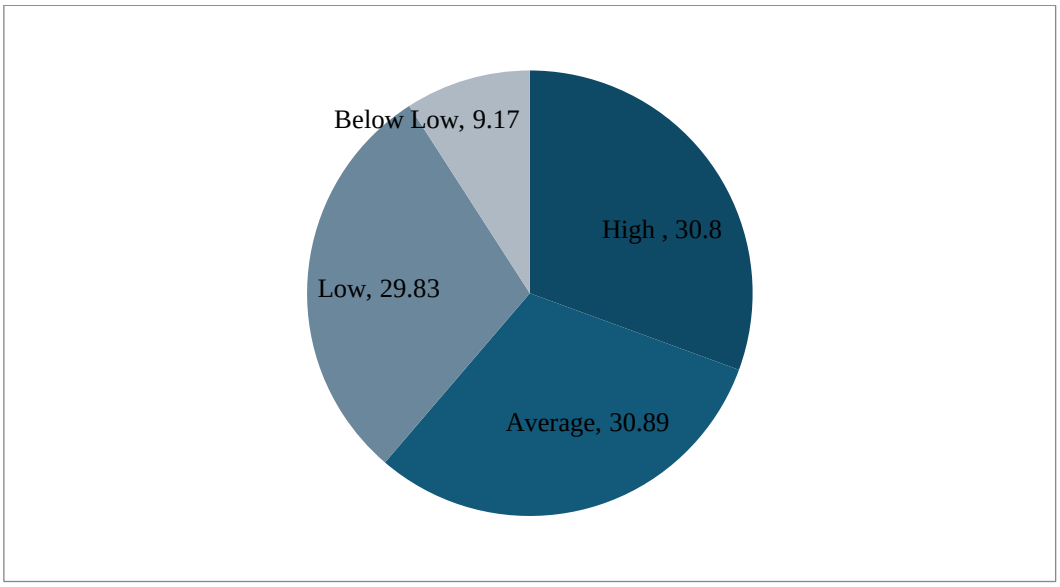

Fig. 4.7: Showing the level of academic achievement of students

Interpretation: Table 4.2 and figure 4.7 above show that 30.08% of Surjapuri students fall under the high level of academic achievement. 30.89%, 29.83%, and 9.17% of students fall under the average, low, and below-low below-low categories. Hence, it is inferred that students in the high, average, and low-level categories only have a marginal difference. However, a vast difference between the low- and below-low-level categories of academic achievement can be seen.

Table 4.3: Distribution of the level of academic achievement score of the Surjapuri students according to their area of residence.

Academic Achievement	Area of Residence	High		Average		Low		Below Low		Total
	Urban	325	26.74	392	32.26	366	30.12	105	8.64	1215
	Male	131	33.85	103	26.61	112	28.94	42	10.85	387

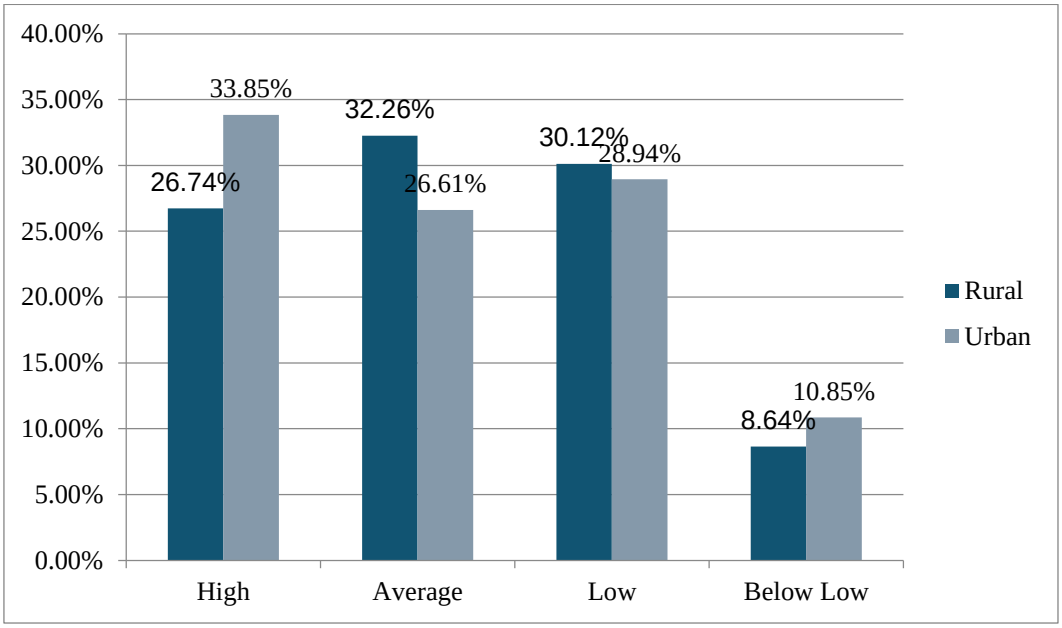

Fig. 4.8: Showing the level of academic achievement of students in relation to their area of residence

Interpretation: Table 4.3 and figure 4.8 show the distribution of the level of academic Achievement of Surjapuri students according to their area of residence. Among these, rural students have a 26.74% high, 32.26% average, 30.12% and below 8.64% level of academic achievement, and that is of urban students a 33.85% high, 26.61% average, 28.94% low and 10.85% below low. From table 4.3 and figure 4.8, it has been found that urban students have a higher level of academic achievement than rural students. Still, in the case of the average level of academic achievement, the

number of rural students is higher than that of urban students. Compared to low academic achievement, students from rural and urban areas have almost the same number with a very low margin among them, and only a few students from both categories have below-low Academic Achievement.

Table 4.4: Distribution of the level of academic achievement score of the Surjapuri students according to their gender.

Academic Achievement	Gender	High		Average		Low		Below Low		Total
	Male	276	39.65	200	28.73	166	23.85	54	7.75	696
	Female	206	22.73	295	32.56	312	34.43	93	10.26	906

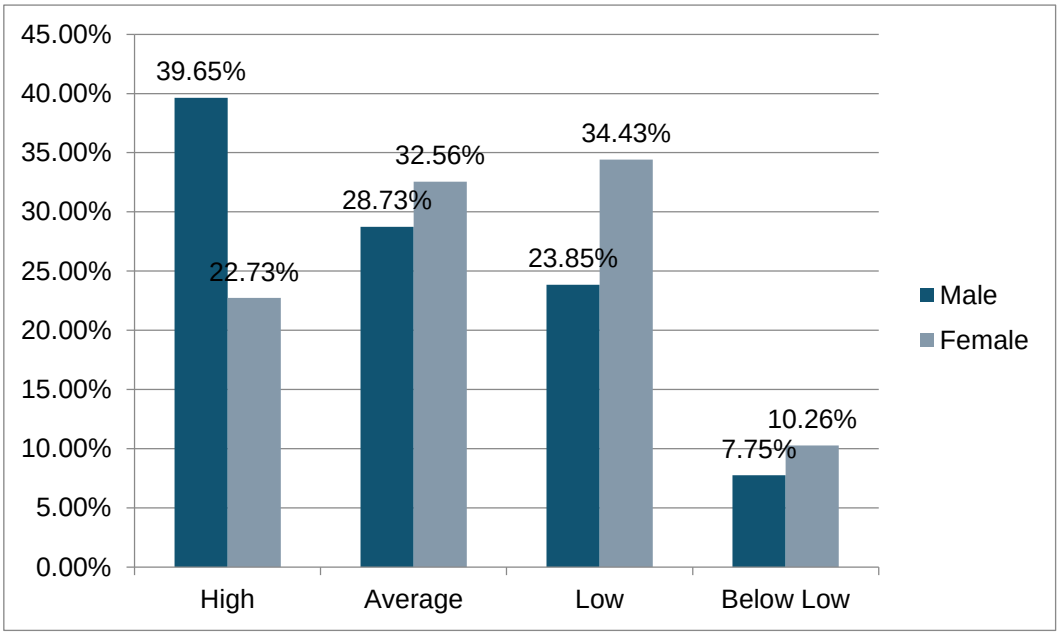

Fig. 4.9: Showing the level of academic achievement of students in relation to their gender

Table 4.4 and figure 4.9 display that among these, male students have 39.65% high, 28.73% average, 23.85% low, and 7.75% below the low level of academic achievement, and that is of female students 22.73% high, 32.56% average, 34.43% low and 10.26% below low. Hence, it is inferred that among the students with high levels of academic achievement, the number of male students is higher than that of

female students. Still, in the case of average, low, and below-low levels of academic achievement, the number of female students is higher than that of male students. The margin of difference among them is very low.

Table 4.5: Distribution of the level of academic achievement score of the Surjapuri students according to their SES.

Academic Achievement	SES	High		Average		Low		Below Low		Total
	APL	149	30.34	142	28.92	155	31.56	45	9.16	491
	BPL	333	29.97	353	31.77	323	29.07	102	9.18	1111

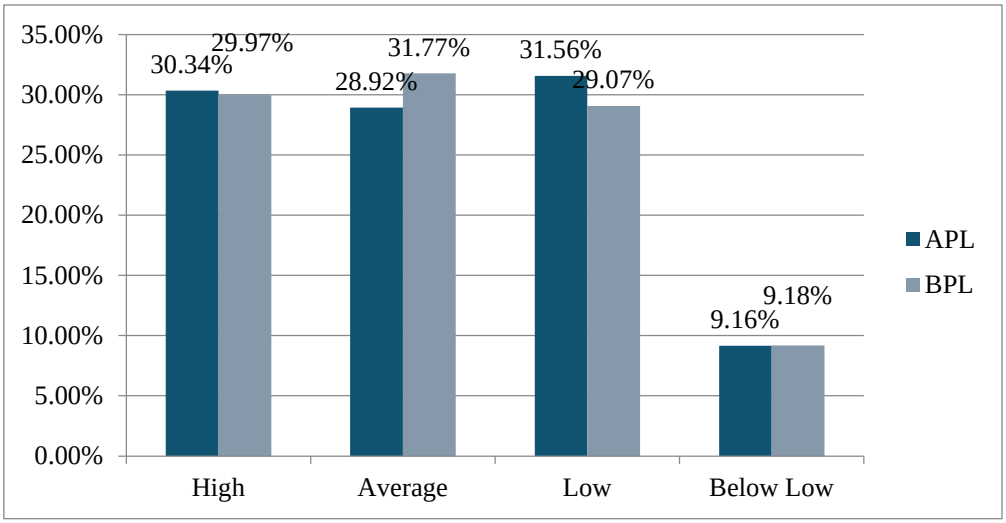

Fig. 4.10: Showing the level of academic achievement of students in relation to their socio-economic status

Similarly, table 4.5 and figure 4.10 depict that the APL students have a 30.34% high, 28.92% average, 31.56% low, and 9.16% below the low level of academic achievement, and that is of the BPL students have a 29.97% high, 31.77% average, 29.07% low and 9.18% below low. Hence, it is inferred that the APL and BPL students have the same percentage of high and below-low levels of academic

achievement. Regarding the average level of academic achievement, the percentage of BPL students is slightly higher than that of APL students. On the contrary, APL students have a higher percentage than BPL students with a low level of academic achievement.

4.4.1. Hypothesis Testing of Objective 1

The researcher formulated three hypotheses based on the first objective of the study, and the collected data were analyzed as follows:

H01. There is no significant difference among Surjapuri students in their level of academic achievement in relation to their place of residence

Table 4.6: Descriptive Statistics and Independent t-test analysis of the level of academic achievement of the Surjapuri students in relation to their place of residence (rural and urban)

Area of Residence	n	Mean	S.D	t-value	df	*p*-value
Urban	387	257.41	82.95	0.972	1600	0.33
Rural	1215	252.95	77.29			

Interpretation: Table 4.6 shows that the urban students have a mean score of 257.41 and a standard deviation of 82.95, whereas the rural students have a mean score of 252.95 and a standard deviation of 77.29. At df= 1600, the calculated t-value is 0.972, and the *p*-value is 0.33, more significant than the significance level of 0.05. This indicates no statistically significant difference in academic achievement between urban and rural students, leading to the acceptance of the null hypothesis.

H02. There is no significant difference among Surjapuri students in terms of their level of academic achievement in relation to their gender

Table 4.7: Descriptive Statistics and Independent t-test analysis of the level of academic achievement of the Surjapuri students in relation to their gender (Male and Female students)

Gender	n	Mean	S.D	t-value	df	*p*-value
Male	696	271.59	83.84	7.98	1600	0.00
Female	906	240.53	71.67			

Interpretation: Table 4.7 revealed that the mean score for male students is 271.59 with a standard deviation of 83.84, while female students have a mean score of 240.53 with a standard deviation 71.67. At df= 1600, the calculated t-value is 7.98, and the *p*-value is 0.00, less than the significance level of 0.05. This indicates that the observed difference in mean scores between male and female students is statistically significant, leading to the rejection of the null hypothesis. Therefore, there is a significant difference in academic achievement between male and female students, with males scoring higher on average than females.

H03. There is no significant difference among Surjapuri students in terms of their level of academic achievement in relation to their socio-economic status

Table 4.8: Descriptive Statistics and Independent t-test analysis of the level of academic achievement of the Surjapuri students in relation to their SES (BPL and APL)

SES	n	Mean	S.D	t-value	df	*p*-value
APL	491	251.99	79.86	0.68	1600	0.492
BPL	1111	254.92	78.19			

Interpretation: Table 4.8 indicates that the mean score for APL students is 251.99 with a standard deviation of 79.86, while BPL students have a mean score of 254.92 with a standard deviation of 78.19. At df= 1600, the calculated t-value is 0.68, and the *p*-value is 0.492, greater than the significance level of 0.05. This indicates that the

difference in mean academic achievement scores between APL and BPL students is not statistically significant, and thus, the null hypothesis cannot be rejected.

4.5.0. Objective 2- Analysis and Interpretation

To assess the level of social support available among class X^{th} Surjapuri students

Table 4.9: Distribution of the level of social support of the Surjapuri students

Range of Z Scores	**Level of Social Support**	**Frequency**	**%**
2.01 and above	Extremely High	55	3.43%
1.26 to 2.00	High	136	8.49%
0.51 to 1.25	Above Average	270	16.85%
-0.50 to 0.50	Average	595	37.14%
-1.25 to -0.51	Below Average	408	25.47%
-2.00 to -1.26	Low	118	7.37%
-2.01 and below	Extremely Low	20	1.25%
Total		1602	100%

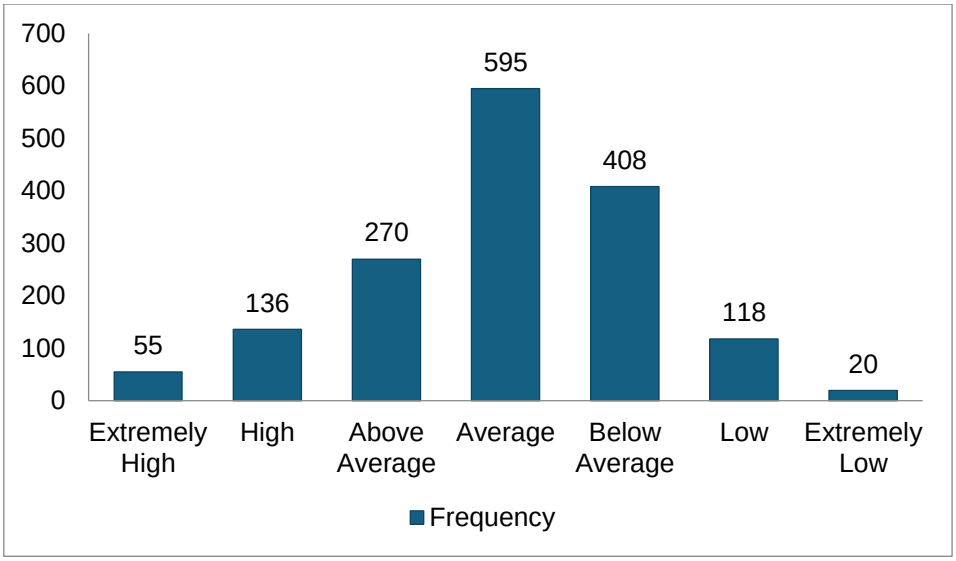

Fig. 4.11: Showing the level of social support of students

Interpretation: Table 4.9 and figure 4.11 show the distribution of Surjapuri students according to their level of social support. From the table, it has been observed that 3.43% of the Surjapuri students possess an extremely high level of social support, 8.49% have a high level of social support, 16.85% possess an above average level of social support, the majority, 37.14%, have an average level of social support, 25.47% fall into the below average category, 7.37% experience a low level of social support and 1.25% fall under the extremely low level of social support. Based on these findings, it can be deduced that most Surjapuri students receive average social support. However, a significant number of students experienced both above-average and below-average levels of social support.

Table 4.10: Distribution of the level of social support score of the Surjapuri students according to their area of residence.

Social Support	Area of Res.	Extremely High	High	Above Av.	Av.	Below Av.	Low	Extremely Low
	Rural	3	32	168	495	381	116	20
	Urban	52	104	102	100	27	2	0

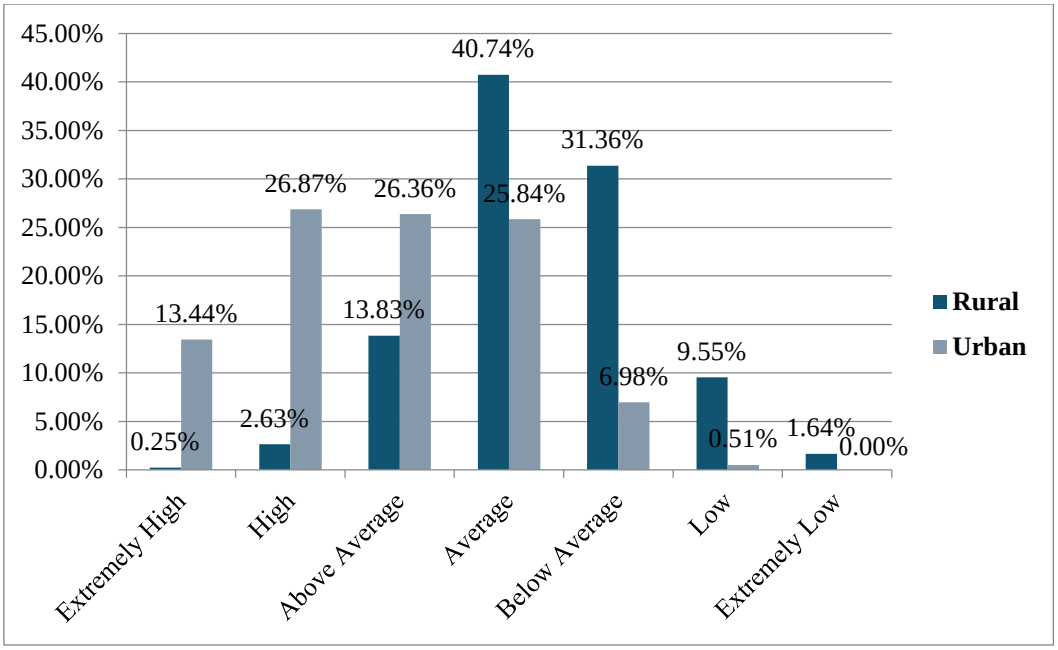

Fig. 4.12: Showing the level of social support in relation to their area of residence

Interpretation: Table 4.10 and figure 4.12 show the distribution of the level of social support of Surjapuri students according to their area of residence.

Table 4.10 and figure 4.12 show that only 0.25% of rural students experience extremely high social support compared to 13.44% of urban students. 2.63% of rural students have high social support, significantly higher at 26.87% for urban students. 13.83% of rural students report above-average support, compared to 26.36% of urban students. Many rural students (40.74%) fall into the average social support category, whereas 25.84% of urban students are in this category. 31.36% of rural students have below-average social support, compared to 6.98% of urban students. 9.55% of rural students receive low social support, compared to just 0.51% of urban students. 1.64% of rural students experience extremely low support, while none of the urban students fall into this category. The results indicate that urban students receive significantly higher social support than their rural counterparts. Most urban students are more likely to fall into high, above-average, and average levels of social support. In contrast, rural students predominantly fall into average and below-average levels of social support.

Table 4.11: Distribution of the level of social support score of the Surjapuri students according to gender.

Social Support	Gender	Extremely High	High	Above Av.	Av.	Below Av.	Low	Extremely Low
	Male	34	80	189	311	75	7	0
	Female	21	56	81	284	333	122	19

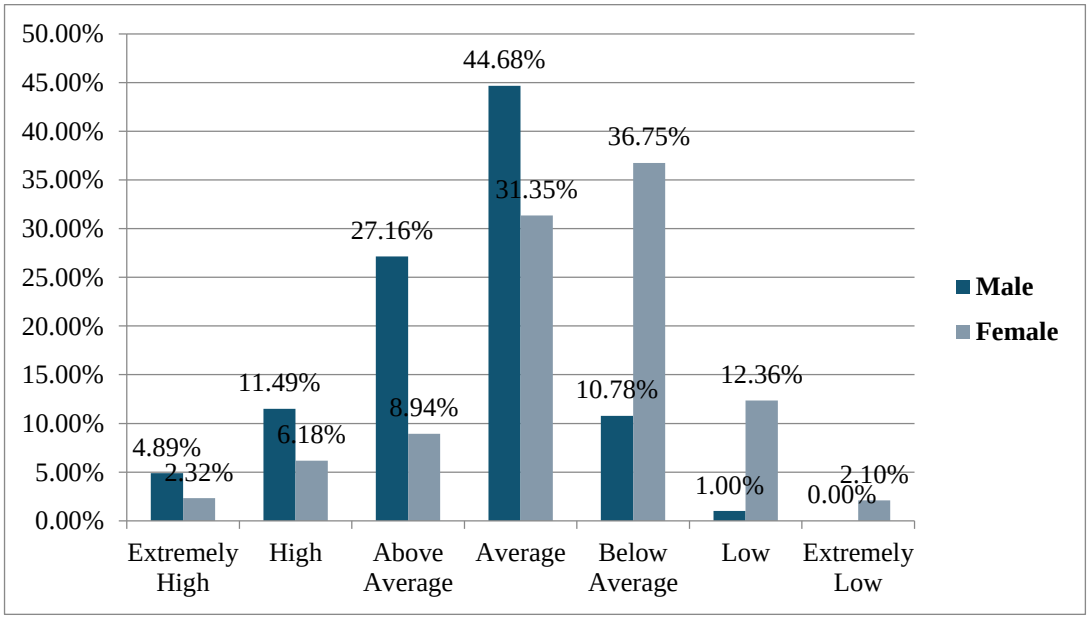

Fig. 4.13: Showing the level of social support in relation to their gender

Table 4.11 and figure 4.13 demonstrated that 4.89% of male students experience extremely high social support, compared to 2.32% of female students. 11.49% of male students have high social support, whereas 6.18% of female students fall into this category. 27.16% of male students report above-average support, compared to 8.94% of female students. 44.68% of male students fall into the average support category, while 31.35% of female students are in this category. 10.78% of male students have below-average support, compared to 36.75% of female students. Only 1% of male students receive low social support, whereas 12.36% of female students receive low social support. No male students experience extremely low support, compared to 2.10% of female students. These results indicate that male students generally receive higher levels of social support than female students. Most male students are more

likely to fall into above-average and average levels of social support, while female students predominantly fall into average and below-average social support.

Table 4.12: Distribution of the level of social support scores of the Surjapuri students according to their SES

Social Support	SES	Extremely High	High	Above Av.	Av.	Below Av.	Low	Extremely Low
	APL	48	71	141	169	55	7	0
	BPL	7	65	129	426	353	111	20

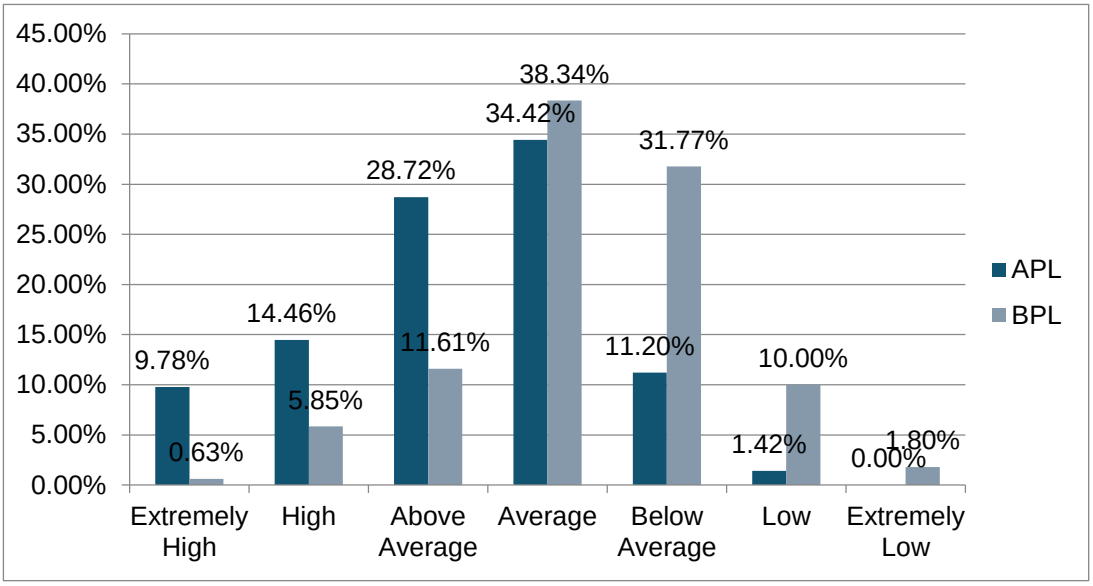

Fig. 4.14: Showing the level of social support in relation to their SES

Moreover, Table 4.12 and figure 4.14 reveal that 9.78% of APL students experience extremely high social support, compared to 0.63% of BPL students. 14.46% of APL students report high social support, whereas 5.85% of BPL students fall into this category. 28.72% of APL students receive above-average support, compared to 11.61% of BPL students. 34.42% of APL students fall into the average support category, while 38.34% of BPL students are in this category. 11.20% of APL students have below average support, compared to 31.77% of BPL students. 1.42% of APL students experience low social support, unlike 10% of BPL students. None of the APL students report extremely low support, while 1.80% of BPL students fall into this category. The results show that students from APL backgrounds generally receive

higher levels of social support than their BPL counterparts. Most APL students are likelier to have above-average and average levels of social support. In contrast, BPL students are more likely to fall into average and below-average levels of social support.

4.5.1. Hypothesis Testing of Objective 2

The researcher formulated three hypotheses based on the second objective of the study, and the collected data were analyzed as follows:

H04. There is no significant difference among Surjapuri students in their level of available social support in relation to their place of residence

Table 4.13: Descriptive Statistics and Independent t-test analysis of the level of social support of the Surjapuri students in relation to their place of residence (Rural and Urban)

Area	n	Mean	S.D	t-value	df	*p*-value
Rural	1215	147.67	10.22	24.97	1600	0.00
Urban	387	163.34	12.26			

Interpretation: The data from table 4.13 shows that the mean score for students in rural areas is 147.67, with a standard deviation of 10.22. On the other hand, urban students have a mean score of 163.34, with a standard deviation of 12.26. The t-value of 24.97, with 1600 degrees of freedom, yields a *p*-value of 0.00. This *p*-value is below the significance level of 0.05. These demonstrate that urban students had significantly higher mean scores than their rural counterparts, rejecting the null hypothesis. Thus, there exists a significant difference in the level of social support between rural and urban students.

H05. There is no significant difference among Surjapuri students in their level of available social support in relation to their gender

Table 4.14: Descriptive Statistics and Independent t-test analysis of the level of social support of the Surjapuri students in relation to their gender

Gender	n	Mean	S.D	t-value	df	*p*-value
Male	696	156.98	10.70	16.56	1600	0.00
Female	906	147.21	12.42			

Interpretation: From Table 4.14, it has been found that male students exhibit a mean score of 156.98 with a standard deviation of 10.70, whereas female students have a mean score of 147.21 with a standard deviation of 12.42. The calculated t-value of 16.56, with 1600 degrees of freedom, yields a p-value of 0.00, below the significance level of 0.05. These findings demonstrate that male students had significantly higher mean scores than female students. Consequently, a significant difference in the level of social support between male and female students has been established, leading to the rejection of the null hypothesis.

H06. There is no significant difference among Surjapuri students in their level of available social support in relation to their socio-economic status

Table 4.15: Descriptive Statistics and Independent t-test analysis of the level of social support of the Surjapuri students in relation to their Socio-Economic Status (APL and BPL)

SES	n	Mean	S.D	t-value	df	*p*-value
APL	491	159.34	12.41	18.19	1600	0.00
BPL	1111	147.97	11.12			

Interpretation: Table 4.15 depicts that APL students exhibit a mean score of 159.34 with a standard deviation of 12.41, whereas BPL students have a mean score of 147.21 with a standard deviation of 11.12. The calculated t-value of 18.19, with 1600 degrees of freedom, yields a *p*-value of 0.00, below the significance level of 0.05. These findings demonstrate that APL students had significantly higher mean scores

than BPL students. Consequently, a significant difference in the level of social support between APL and BPL students has been found, thereby rejecting the null hypothesis.

4.6.0. Objective 3- Analysis and Interpretation

To analyze the level of achievement motivation among class X^{th} Surjapuri students

Table 4.16: The distribution of the level of achievement motivation of students

z-Score Range	Level of Achievement Motivation	Frequency	%
2.01 and above	Highly Motivated	50	3.12%
1.26 to 2.00	High Motivation	135	8.43%
0.51 to 1.25	Above Average Motivation	299	18.66%
-0.50 to 0.50	Average Motivation	602	37.58%
-1.25 to -0.51	Below Average Motivation	360	22.47%
-2.00 to -1.26	Low Motivation	140	8.74%
-2.01 and below	Lowest Motivation	16	1%
Total		1602	100%

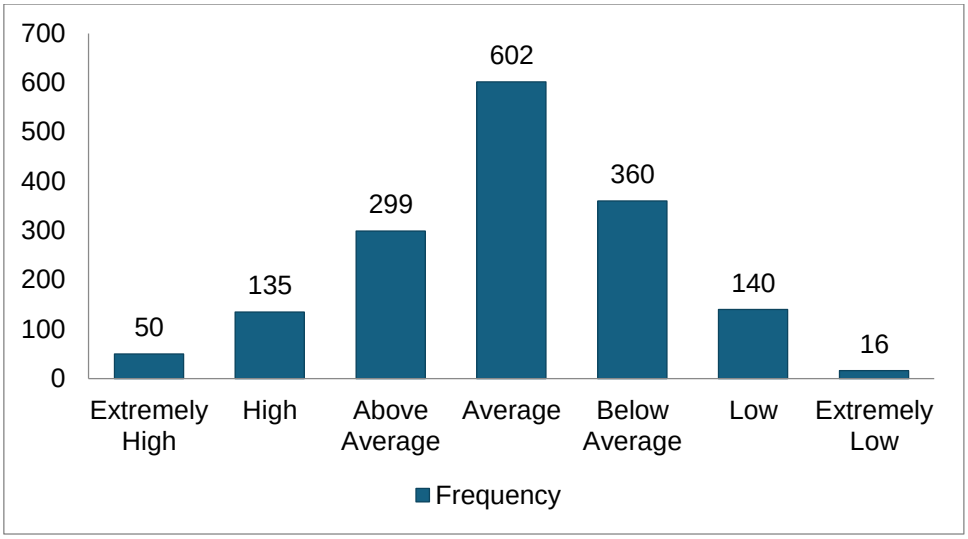

Fig. 4.15: Showing the level of achievement motivation of students

Interpretation: Table 4.16 and Figure 4.15 above show the distribution of the level of achievement motivation of Surjapuri students. From the table, it has been observed that 3.12% of the Surjapuri students were highly motivated, 8.43% of the students possess high motivation, 18.66% possess an above average level of achievement motivation, the majority, 37.58% have an average level of achievement motivation, 22.47% fall into the below average category, 8.74% have a low level of achievement motivation and only 1% fall under the lowest level of achievement motivation. Based on these findings, most Surjapuri students exhibit average achievement motivation. However, many students showed above-average and below-average levels of achievement motivation.

Table 4.17: Distribution of the level of achievement motivation scores of the Surjapuri students according to their area of residence.

Level of Achievement Motivation	**Area of Res.**	**Extremely High**	**High**	**Above Av.**	**Av.**	**Below Av.**	**Low**	**Extremely Low**
	Rural	30	110	226	445	271	20	113
	Urban	32	153	77	76	33	9	7

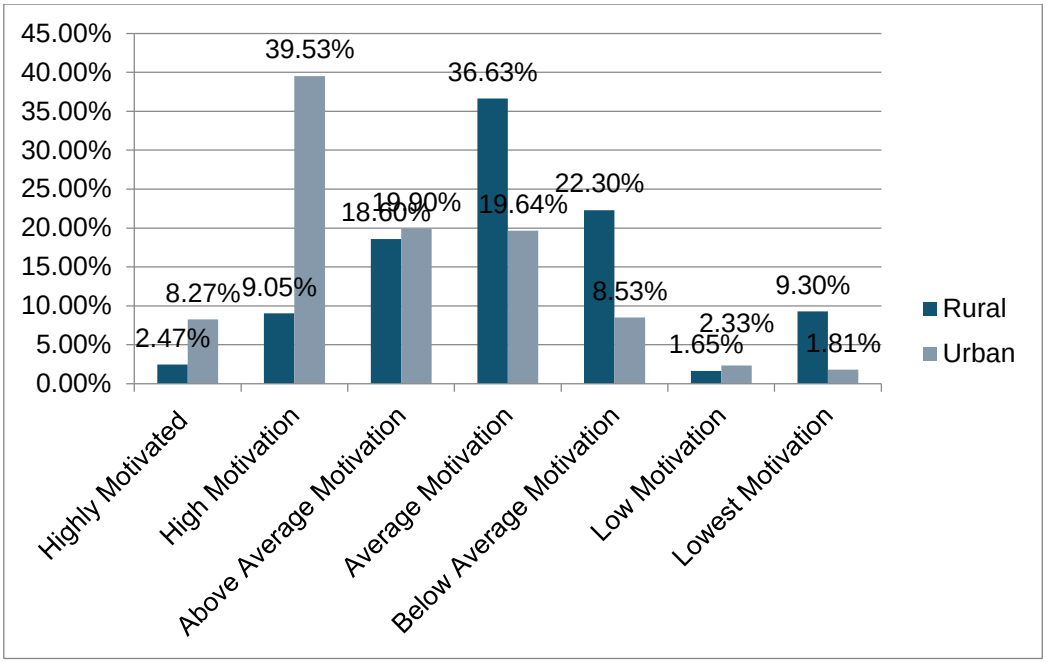

Fig. 4.16: Showing the level of achievement motivation of students in relation to their area of residence

Interpretation: Table 4.17 shows the distribution of the level of achievement motivation of Surjapuri students according to their area of residence.

Table 4.17 and Figure 4.16 show that only 2.47% of rural students are highly motivated compared to 8.27% of urban students. A notable 9.05% of rural students fall into the high motivation category compared to 39.53% of urban students. 18.60% of rural students report above-average achievement motivation, unlike 19.90% of urban students. Most rural students (36.63%) fall into the average achievement motivation category compared to 19.64% of urban students. 22.30% of rural students have below-average achievement motivation, compared to 8.53% of urban students. 1.65% of rural and 2.33% of urban students fall into the low achievement motivation category. 9.30% of rural students fall into the lowest achievement motivation category compared to 1.81% of urban students, showing a significantly higher percentage of rural students have the lowest motivation. The results indicate that urban students have higher achievement motivation than their rural counterparts. Urban students are likelier to have high, above-average, and average achievement motivation than rural students. In contrast, rural students predominantly fall into the above-average, average, and below-average levels of achievement motivation.

Table 4.18: Distribution of the achievement motivation scores of the Surjapuri students according to their gender.

Level of Achievement Motivation	Gender	Extremely High	High	Above Av.	Av.	Below Av.	Low	Extremely Low
	Male	57	109	163	276	56	24	11
	Female	44	61	122	387	230	59	3

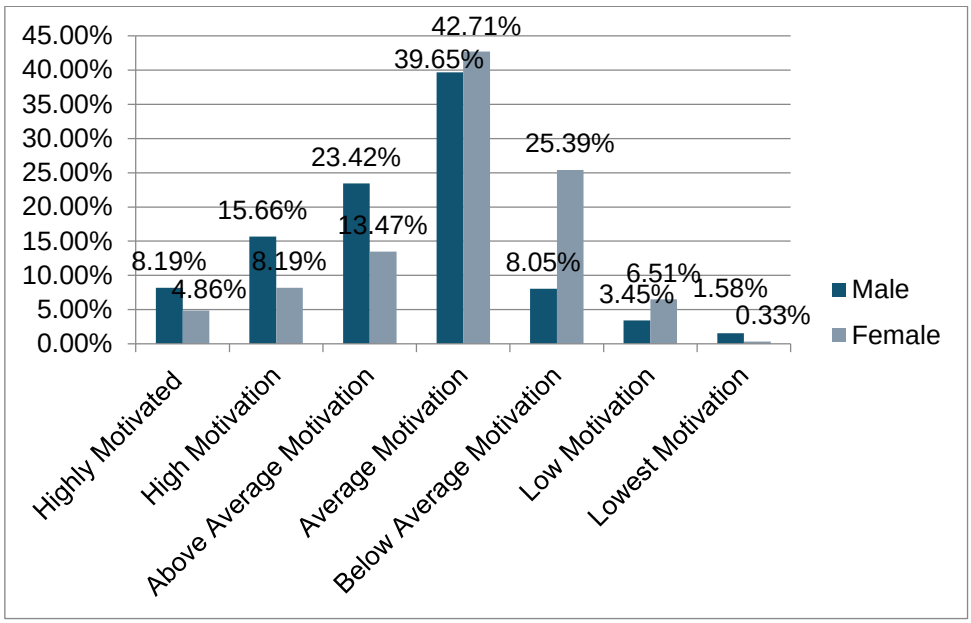

Fig. 4.17: Showing the level of achievement motivation of students in relation to their gender

Table 4.18 and Figure 4.17 demonstrated that 8.19% of male students are highly motivated compared to 4.86% of female students. 15.66% of male students fall into the high motivation category compared to 6.73% of female students. 23.42% of male students exhibit above-average achievement motivation, whereas 13.47% of female students fall into this category. 39.65% of male students and 42.71% of female students fall into the average motivation category, indicating that a large portion of both genders have average levels of motivation, with female students slightly higher. 8.05% of male students have below-average achievement motivation, compared to 25.39% of female students. 3.45% of male students and 6.51% of female students have low motivation, showing that female students are more likely to have low motivation. 1.58% of male students fall into the lowest motivation category compared

to 0.33% of female students. The results indicate that male students have higher achievement motivation levels than female students. Most male students are more likely to be highly motivated or have high or above-average achievement motivation. In contrast, female students predominantly fall into the average, below average, and low levels of achievement motivation.

Table 4.19: Distribution of the level of achievement motivation scores of the Surjapuri students according to SES

Level of Achievement Motivation	SES	Extremely High	High	Above Av.	Av.	Below Av.	Low	Extremely Low
	APL	44	92	181	126	31	11	6
	BPL	10	87	214	427	243	88	42

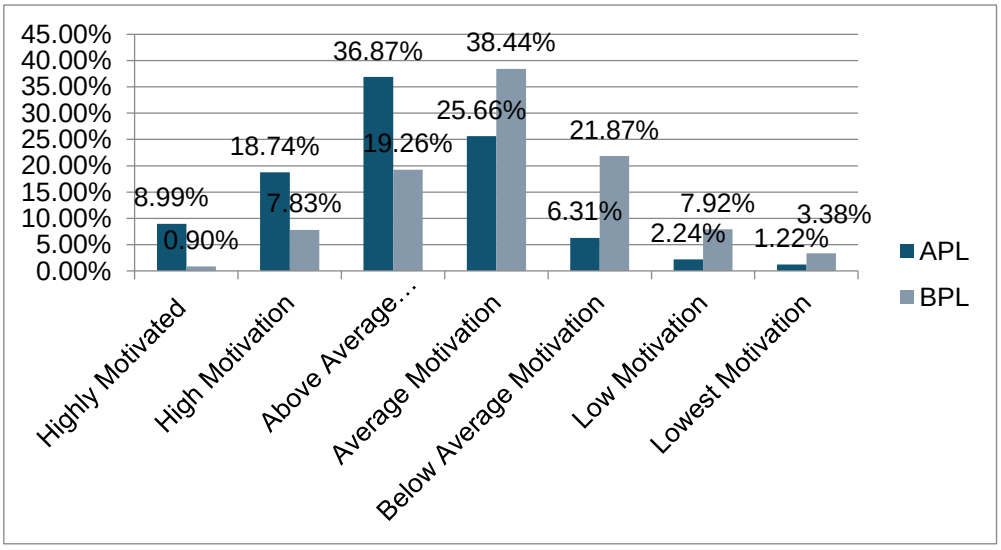

Fig. 4.18: Showing the level of achievement motivation of students in relation to their Socio-economic status

Moreover, from Table 4.19 and Figure 4.18, it has been revealed that 8.96% of APL students are highly motivated compared to only 0.90% of BPL students. 18.74% of APL students report high achievement motivation, whereas 7.83% of BPL students are in this category. 36.87% of APL students exhibit above-average motivation, compared to 19.26% of BPL students. 25.66% of APL students fall into the average motivation category, while 38.44% of BPL students are in this category. 6.31% of APL students have below-average motivation, compared to 21.87% of BPL students.

2.24% of APL students and 7.92% of BPL students have low levels of achievement motivation. 1.22% of APL students fall into the lowest motivation category, compared to 3.78% of BPL students, indicating that BPL students are likelier to have the lowest levels of achievement motivation. The results indicate that APL students have higher achievement motivation levels than BPL students. Most APL students are more likely to be highly motivated or have a high motivation for achievement. In contrast, BPL students predominantly fall into the above-average, average, and below-average levels of achievement motivation.

4.6.1. Hypothesis Testing of Objective 3

The researcher formulated three hypotheses based on the third objective of the study, and the collected data were analyzed as follows:

H07. There is no significant difference among Surjapuri students in their level of achievement motivation in relation to their place of residence

Table 4.20: Descriptive Statistics and Independent t-test analysis of the level of achievement motivation of the Surjapuri students in relation to their place of residence (Rural and Urban)

Area	n	Mean	S.D	t-value	df	*p*-value
Urban	387	158.56	11.14	23.79	1600	0.00
Rural	1215	144.23	10.04			

Interpretation: Table 4.20 presents that the mean score of achievement motivation for urban students is 158.56 with a standard deviation of 11.14, whereas rural students have a mean score of 144.23 with a standard deviation of 10.04. The t-test yields a t-value of 23.79 with 1,600 degrees of freedom, and the *p*-value is 0.00, indicating a highly significant difference between the two groups. This result suggests that urban students experience significantly higher levels of achievement motivation than their rural counterparts. Thus, the null hypothesis, which posits that the Surjapuri students do not differ among themselves significantly in their level of achievement motivation in relation to their place of residence, is rejected.

H08. There is no significant difference among Surjapuri students in their level of achievement motivation in relation to their gender

Table 4.21: Descriptive Statistics and Independent t-test analysis of the level of achievement motivation of the Surjapuri students in relation to their gender (Male and Female)

Gender	n	Mean	S.D	t-value	df	*p*-value
Male	696	153.06	9.92	17.04	1600	0.00
Female	906	143.57	11.82			

Interpretation: Table 4.21 indicates that male students' mean score of achievement motivation is 153.06 with a standard deviation of 9.92, whereas female students have a mean score of 143.57 with a standard deviation of 11.82. The t-test yields a t-value of 17.04 with df 1,600, and the *p*-value is 0.00, indicating a highly significant difference between the two groups. This result suggests that male students have a higher level of achievement motivation compared to female students. Thus, the null hypothesis, which posits that the Surjapuri students do not differ among themselves significantly in their level of achievement motivation in relation to gender, is rejected.

H09. There is no significant difference among Surjapuri students in their level of achievement motivation in relation to their socio-economic status

Table 4.22: Descriptive Statistics and Independent t-test analysis of the level of achievement motivation of the Surjapuri students in relation to their Socio-Economic Status (APL and BPL)

SES	n	Mean	S.D	t-value	df	*p*-value
APL	491	155.14	11.41	18.11	1600	0.00
BPL	1111	144.40	10.71			

Interpretation: Table 4.22 indicates that the mean score of achievement motivation for APL students is 155.14 with a standard deviation of 11.41, whereas BPL students have a mean score of 144.40 with a standard deviation of 10.71. The t-test yields a t-value of 18.11 with df 1,600, and the *p*-value is 0.00, indicating a highly significant difference between the two groups. This result suggests that APL students have a higher level of achievement motivation compared to BPL students. Thus, the null hypothesis, which posits that the Surjapuri students do not differ among themselves significantly in their level of achievement motivation in relation to socio-economic status, is rejected.

4.7.0. Objective 4- Analysis and Interpretation

To find out the relationship between academic achievement and social support for class Xth Surjapuri students

To examine the fourth objective, the researcher formulated the following hypothesis, which has been analyzed below.

4.7.1. Hypothesis Testing of Objective 4

H010. There is no significant relationship between academic achievement and social support for Surjapuri students

Table 4.23: Showing the Pearson's coefficient of correlation between Academic Achievement and Social Support of Surjapuri students

		Academic Achievement	Social Support
Academic Achievement	Pearson Correlation	1	.406**
	Sig. (2-tailed)		.000
	N	1602	1602
Social Support	Pearson Correlation	.406**	1
	Sig. (2-tailed)	.000	
	N	1602	1602

Interpretation: Table 4.23 displays Pearson's correlation coefficient between the academic achievement and social support of Surjapuri students. It has been observed

that the value of the Pearson correlation coefficient (*r*) is 0.406, indicating a positively moderate correlation between the two variables. The *p*-value (0.000) is less than the significance level of 0.05, indicating a statistically significant relation between academic achievement and social support. Thus, the null hypothesis, which states that there is no significant relationship between academic achievement and social support among Surjapuri students, is rejected, and it is proposed that when the level of social support among students improves, students' academic achievement tends to increase simultaneously, and vice versa.

4.8.0. Objective 5- Analysis and Interpretation

To investigate the relationship between academic achievement and achievement motivation of class Xth Surjapuri students

To examine the fifth objective, the researcher formulated the following hypothesis, which has been analyzed below.

4.8.1. Hypothesis Testing of Objective 5

$H_0$11. There is no significant relationship between academic achievement and achievement motivation of Surjapuri students

Table 4.24: Showing the Pearson's coefficient of correlation between academic achievement and achievement motivation of Surjapuri students

		Academic Achievement	Achievement Motivation
Academic Achievement	Pearson Correlation	1	.513**
	Sig. (2-tailed)		.000
	N	1602	1602
Achievement Motivation	Pearson Correlation	.513**	1
	Sig. (2-tailed)	.000	
	N	1602	1602

Interpretation: Table 4.24 displays Pearson's correlation coefficient between the academic achievement and achievement motivation of Surjapuri students. It has been observed that the value of the Pearson correlation coefficient (*r*) is 0.513, indicating a positively moderate correlation between the two variables. The *p*-value (0.000) is less than the significance level of 0.05, indicating a statistically significant relation between academic achievement and achievement motivation. Thus, the null hypothesis, which states that there is no significant relationship between academic achievement and achievement motivation among Surjapuri students, is rejected and suggests that higher levels of achievement motivation are associated with higher academic achievement.

4.9.0. Objective 6- Analysis and Interpretation

To examine the relationship between social support and achievement motivation of class Xth Surjapuri students

To examine the sixth objective, the researcher formulated the following hypothesis, which has been analyzed below.

4.9.1. Hypothesis Testing of Objective 6

H012. There is no significant relationship between social support and achievement motivation of Surjapuri students

Table 4.25: Showing the Pearson's coefficient of correlation between social support and achievement motivation of Surjapuri students

		Achievement Motivation	Social Support
Achievement Motivation	Pearson Correlation	1	.636**
	Sig. (2-tailed)		.000
	N	1602	1602
Social Support	Pearson Correlation	.636**	1
	Sig. (2-tailed)	.000	
	N	1602	1602

Interpretation: Table 4.25 revealed the Pearson's correlation coefficient between social support and achievement motivation of Surjapuri students. The Pearson correlation coefficient (*r*) value is 0.636, indicating a moderate correlation between the two variables. The *p*-value (0.000) is less than the significance level of 0.05, meaning there is a statistically significant relation between social support and achievement motivation. Therefore, the null hypothesis is rejected, which states no significant relationship exists between social support and achievement motivation among Surjapuri students. This implies that higher levels of social support are associated with higher achievement motivation among surjapuri students.