CHAPTER 4
DATA ANALYSIS AND INTERPRETATION

CHAPTER-4

DATA ANALYSIS AND INTERPRETATION

4.1. INTRODUCTION

This chapter deals with the analysis and interpretation of the collected data. Data analysis refers to investigation of the tabulated data with a view to finding inherent facts or meanings. It involves comparison of the results of the different treatments on the different groups and arriving at a decision regarding attainment of the objectives of research. Data analysis is the most critical phase of scholarly research, of which the outcome can be foreseen. Following data collection, the data were processed and analyzed as per the plan drawn out for the purpose at the time of formulating the research plan. Hence, tabulated data does not become meaningful until statistical techniques are examined and interpreted to arrive at important and meaningful outcomes. Analysis and interpretation of data assist in determining and solving issues pertaining to future research and avoiding unnecessary duplication.

The current study was intended to find out the teacher effectiveness of secondary school teachers in relation to their emotional intelligence, teaching aptitude and sense of responsibility feeling. The study had been conducted on the light of the hypotheses formulated in the mentioned purposes and all the collected data were analyzed by using the relevant statistical techniques.

4.2. Analysis of the Data for Objectives

4.2.1. Analysis and Interpretation of Data for the Objective No. 1

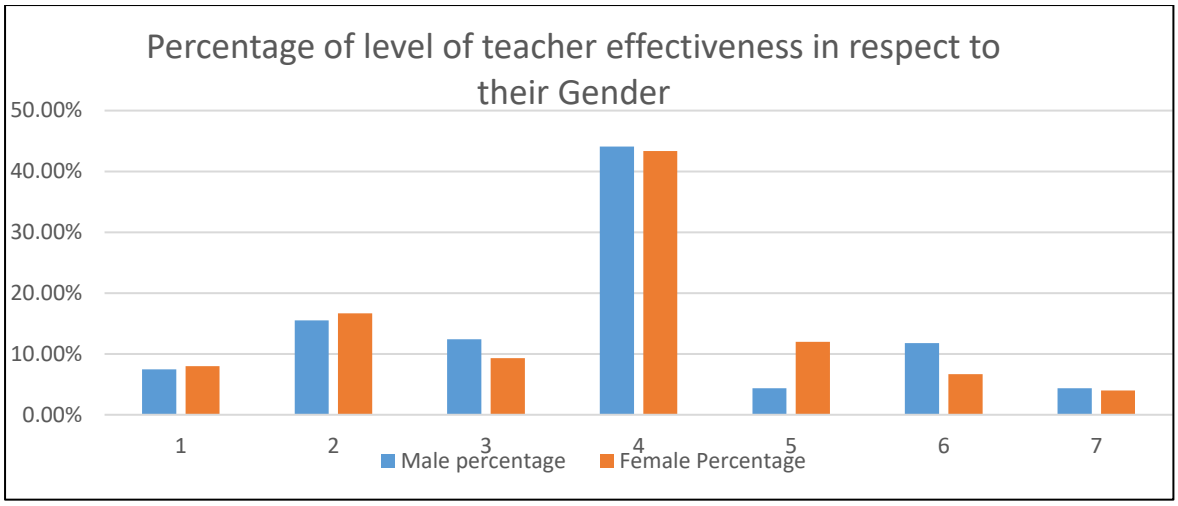
Objective 1**: To study the Teacher Effectiveness of Secondary level teachers in respect to their Gender, Locality and Stream.**

The first objective of the present study is to study the teacher effectiveness of secondary level teachers in respect to their gender, locality and stream. For the present objective the necessary data were collected with the help of self-developed Teacher Effectiveness Scale. The data were analysed with the following statistical techniques.

Table: 4.1: *Frequency and Percentage of the level of Teacher Effectiveness of secondary level teachers in respect to Gender*

Teacher Effectiveness: Male and Female Secondary School Teachers of Sonitpur District									
Gender		Very High	High	Above average	Average	Below average	Low	Very low	Total
Male	Frequencies	12	25	20	71	07	19	07	161
	percentage	7.45%	15.53%	12.42%	44.10%	4.35%	11.80%	4.35%	100%
Female	Frequencies	12	25	14	65	18	10	06	150
	Percentage	8%	16.67%	9.33%	43.33%	12%	6.67%	4%	100%

Figure 4.1: Graphical Representation of Percentage of the level of Teacher Effectiveness of Secondary level teachers in respect to their Gender.



To study the level of teacher effectiveness of the secondary level teachers of Sonitpur district the total scores obtained by the teachers were divided into 7 categories i.e. very high level of teacher effectiveness, high level, above average level, average level, below average level, low level and very low level.

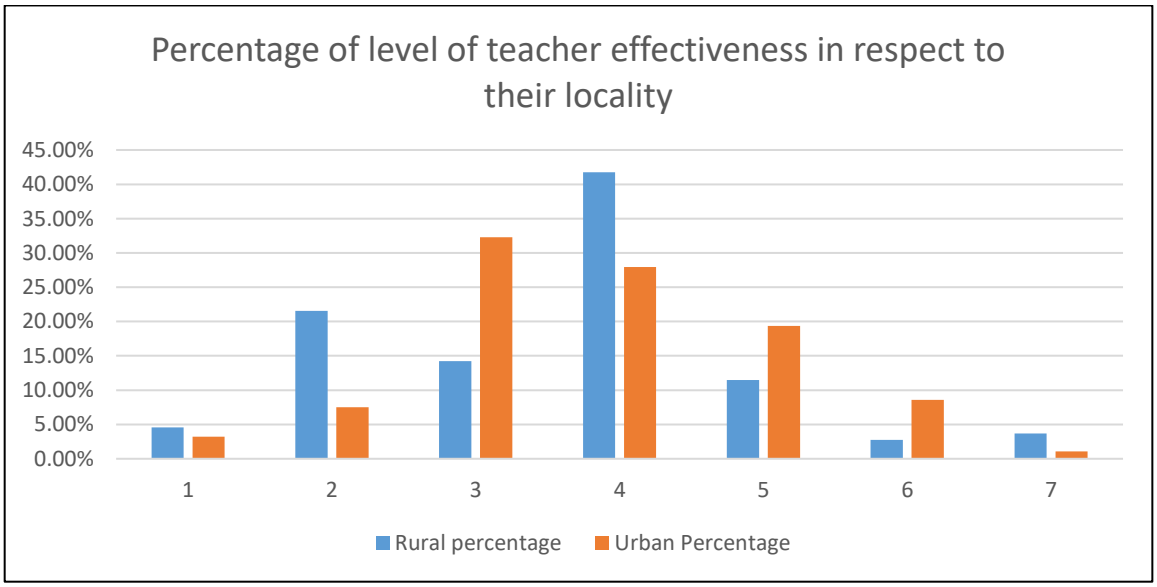
Based on the above table 4.1. and the figure 4.1., it is found that 7.45% of secondary level school male and 8% of female teachers possess very high level of teacher effectiveness, 15.53% male teachers and 16.67% female teachers possess high level, 12.42% male teachers and 9.33% female teachers are in above average level, 44.10% of male teachers and 43.33% female teachers are in average level, 4.35% of male teachers and 12% female teachers are in below average level, 11.80% of male teachers and 6.67% of female teachers are in low level and 4.35% of male teachers and 4% of female teachers are have in very low level of teacher effectiveness respectively. From the mentioned data it is clear that maximum number of secondary level school teachers of

both the gender of Sonitpur district i.e 44.10% of male and 43.33% of female secondary school teachers have possess average level of teacher effectiveness.

Table: 4.2: *Frequency and Percentage of the level of Teacher Effectiveness of secondary level teachers in respect to Locality*

Teacher Effectiveness: Rural and Urban Secondary School Teachers of Sonitpur District									
Locality		Very High	High	Above average	Average	Below average	Low	Very low	Total
Rural	Frequencies	10	47	31	91	25	06	08	218
	percentage	4.59%	21.56%	14.22%	41.74%	11.47%	2.75%	3.67%	100%
Urban	Frequencies	03	07	30	26	18	08	01	93
	Percentage	3.23%	7.53%	32.26%	27.96%	19.35%	8.60%	1.07%	100%

Figure 4.2: Graphical Representation of Percentage of the level of Teacher Effectiveness of Secondary level teachers in respect to their Locality.



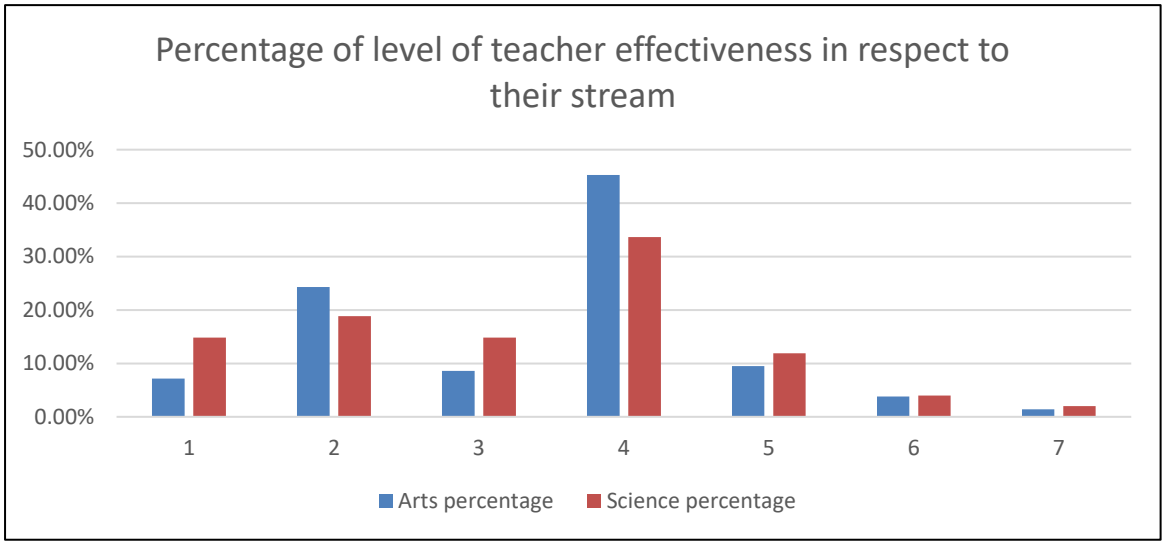
From the analysis of data in table: 4.2. and figure 4.2., it is found that 4.59% of rural teachers and 3.23% of urban secondary level teachers are have in very high level of teacher effectiveness, 21.56% of rural teachers and 7.53% of urban teachers have high level, 14.22% of rural and 32.26% of urban teachers have in above average level, 41.74% of rural and 27.96% of urban teachers have average level, 11.47% of rural and 19.35% of urban teachers have below average, 2.75% of rural and 8.60% of urban teachers have low level, 3.67% of rural teachers and 1.07% of urban secondary level school teachers have very low level of teacher effectiveness. From the mentioned data it is clear that the maximum number i.e. 41.74% of rural teachers possess average level of

teacher effectiveness whereas 32.26% of urban secondary level teachers of Sonitpur district possess above average level of teacher effectiveness.

Table 4.3: *Frequency and Percentage of the level of Teacher Effectiveness of secondary level teachers in respect to Stream*

Teacher Effectiveness: Rural and Urban Secondary School Teachers of Sonitpur District									
Stream		Very High	High	Above average	Average	Below average	Low	Very low	Total
Arts	Frequencies	15	51	18	95	20	08	03	210
	percentage	7.14%	24.29%	8.57%	45.24%	9.52%	3.81%	1.43%	100%
Science	Frequencies	15	19	15	34	12	04	02	101
	Percentage	14.85%	18.82%	14.85%	33.66%	11.88%	3.96%	1.98%	100%

Figure 4.3: Graphical Representation of Percentage of the level of Teacher Effectiveness of Secondary level teachers in respect to their Stream.



From the table: 4.3. and the figure: 4.3. it is found that 7.14% of arts teachers and 14.85% of science teachers have possess very high level of teacher effectiveness, 24.29% of arts teachers and 18.82% of science teachers have in high level, 8.57% of arts and14.85% of science teachers have above average level, 45.24% of arts and 33.66% of science teachers in average level, 9.52% of arts and 11.88% of science teachers in below average, 3.81% of arts and 3.96% of science teachers in low level and 1.43% of arts and 1.98% of science secondary level school teachers of Sonitpur district are have in very low level of teacher effectiveness. The above mentioned data clears that most of the secondary level school teachers i.e. 45.24% of Arts and 33.66% of Science background teachers of the district are have average level of teacher effectiveness.

4.2.1.1. Hypotheses related to Objective No. 1

The researcher has formulated three null hypotheses based on the objective number 1 and carry forward the analysis in the following manner:

4.2.1.1.1. Ho: 1: There is no significant difference between the mean score of teacher effectiveness of male and female Secondary school teachers.

The researcher analysed hypothesis no. 1 on the basis of the following manner:

Table 4.4: *The computed Mean and S.D. values for teacher effectiveness of male and female secondary school teachers.*

Teacher Effectiveness: Male and Female secondary school teachers of Sonitpur district		
Gender	Male	Female
Mean	270.12	266.52
S. D.	10.25	13.28

The table 4.4. shows the calculated Mean and S.D. values of Male and Female secondary school teachers of Sonitpur district. After the computation of mean and standard deviation for teacher effectiveness of secondary male and female teachers of Sonitpur district, t-test was computed and the result is shown in the following figure and the table.

Figure 4.4: Showing Mean and S.D. values for teacher effectiveness of male and female secondary school teachers.

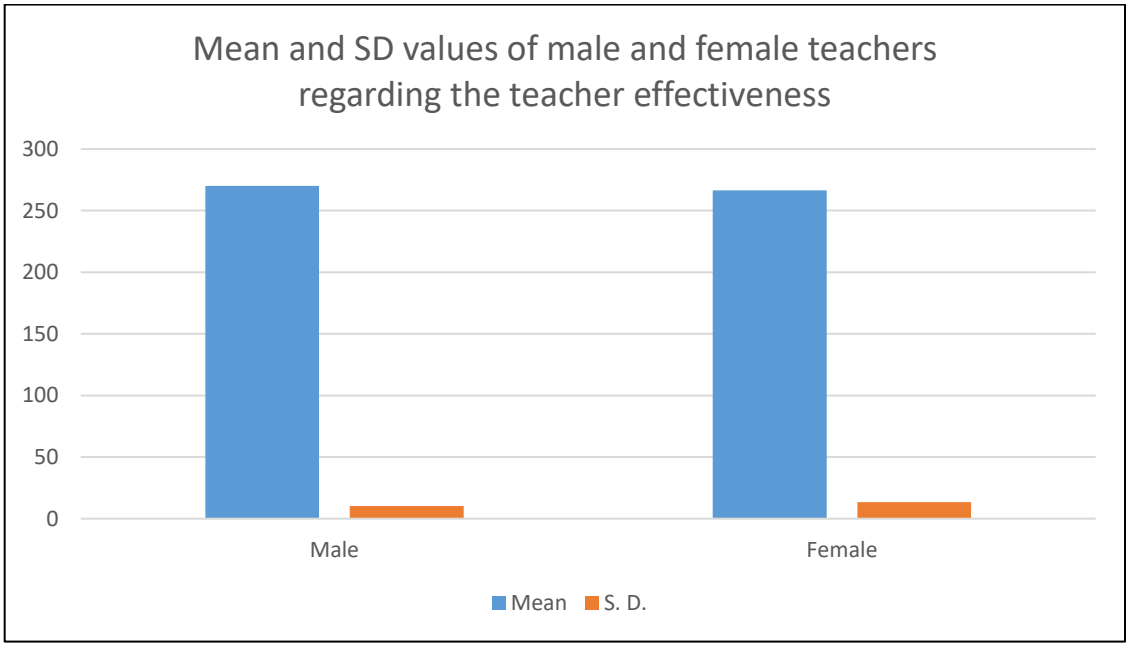


Table 4.5: *Summary of computed values for teacher effectiveness of male and female secondary school teachers.*

Teacher Effectiveness: Male and Female Secondary School Teachers of Sonitpur District							
Gender	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Male	150	270.12	9.94	310	0.015	1.96	Not Significant at 0.05 levels of confidence
Female	161	266.52	10.74				

With the computed scores displayed in the table: 4.5. it can be observed that the calculated t-value 0.015 ≤ 1.96 the table value at 0.05 level of confidence. Thus, the null hypothesis 1 is accepted and it can be concluded that there is no significant difference between the mean score of teacher effectiveness of male and female Secondary school teachers. But from the table 4.4. it is observed that the mean score of male secondary school teachers are little higher than the female teachers of Sonitpur district with mean score difference of 3.6. But the difference is not significant at 0.05 levels of confidence when the t-value is calculated between both the scores. The results of the mean score of both male and female teachers' clears that the effectiveness of the secondary school teachers of Sonitpur district is not based on the gender. Both the male and female teachers are equally experts in their discipline as well as experts in the social dynamics of classroom communication. Both the gender have active knowledge, active participation in all academic activities, team work and problem solving abilities through which they are able to leads the intelligent learning among the learners and guiding the students in direction to achieve their goals. Thus, the teachers of both the gender of Sonitpur district are equally involved in the multifarious activities to uplift the standard of education in meeting the demands of the society.

4.2.1.1.2. Ho: 2: There is no significant difference between the mean score of teacher effectiveness of rural and urban Secondary school teachers.

Table 4.6: *The computed Mean and S.D. values for teacher effectiveness of rural and urban secondary school teachers.*

Teacher Effectiveness: Rural and Urban secondary school teachers of Sonitpur district		
Locality	Rural	Urban
Mean	268	268.85
S. D.	12.38	12.03

The table 4.6. shows the mean and S. D. values of both rural and urban secondary school teachers of Sonitpur district of Assam. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure. 4.5: Showing Mean and SD values of rural and urban secondary school teachers regarding the Teacher Effectiveness.

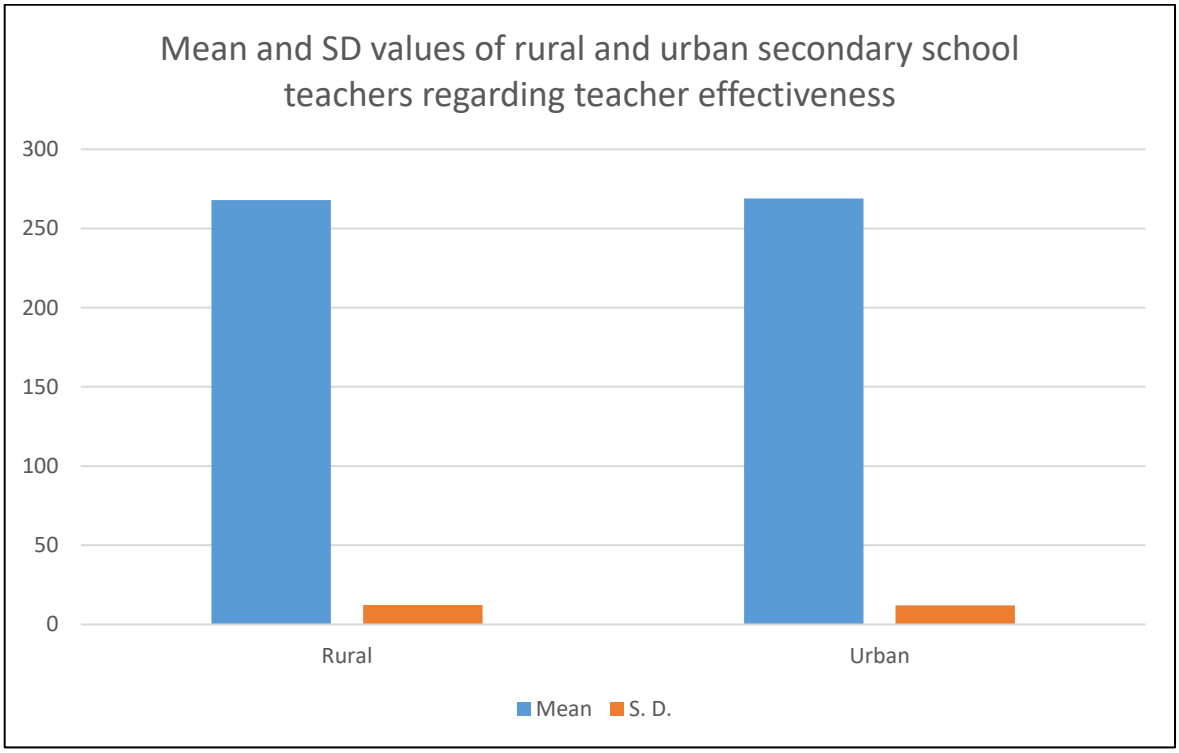


Table 4.7: *Summary of the computed scores for teacher effectiveness of rural and urban secondary school teachers of Sonitpur district.*

Teacher Effectiveness: Rural and Urban Secondary School Teachers of Sonitpur District							
Locality	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Rural	218	268	12.38	310	0.55	1.96	Not Significant at 0.05 levels of confidence
Urban	93	268.85	12.03				

With the computed scores displayed in the table 4.7. it can be observed that the calculated t-value $0.55 \leq 1.96$ the table value at 0.05 level of confidence. Thus, the null hypothesis 2 is accepted. In the light of this, it can be concluded that there is no significant difference between the mean score of teacher effectiveness of rural and urban Secondary school teachers. The locality of the teachers' whether they are from rural or from urban area it doesn't have any impact regarding their dutifulness towards their profession. Geographical belongingness doesn't have any role in their responsiveness as the community members are very supportive which can enhanced teacher performance through shared practices. But it is seen that in some localities with higher poverty levels create challenges for teacher's such as lower student readiness and absenteeism which can affect the teacher's performance to fulfil the goals of education. Due to parental involvement in that areas all the challenges are handled by the teachers. Cultural and linguistic differences in some localities enable the teachers to adapt their own methods significantly to make communicate the learning materials properly with the students.

4.2.1.1.3. Ho:3: There is no significant difference between the mean score of teacher effectiveness of Arts and Science teachers.

Table. 4.8: *The computed Mean and S.D. values for teacher effectiveness of Arts and Science secondary school teachers.*

Teacher Effectiveness: Science and Arts secondary school teachers of Sonitpur district		
Stream	Arts	Science
Mean	268.94	267.04
S. D.	12.05	14.42

The table 4.8. represents the mean and S. D. values of both Arts and Science secondary school teachers of Sonitpur district of Assam. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure 4.6: Showing Mean and SD values for teacher effectiveness of arts and science secondary school teachers of Sonitpur district.

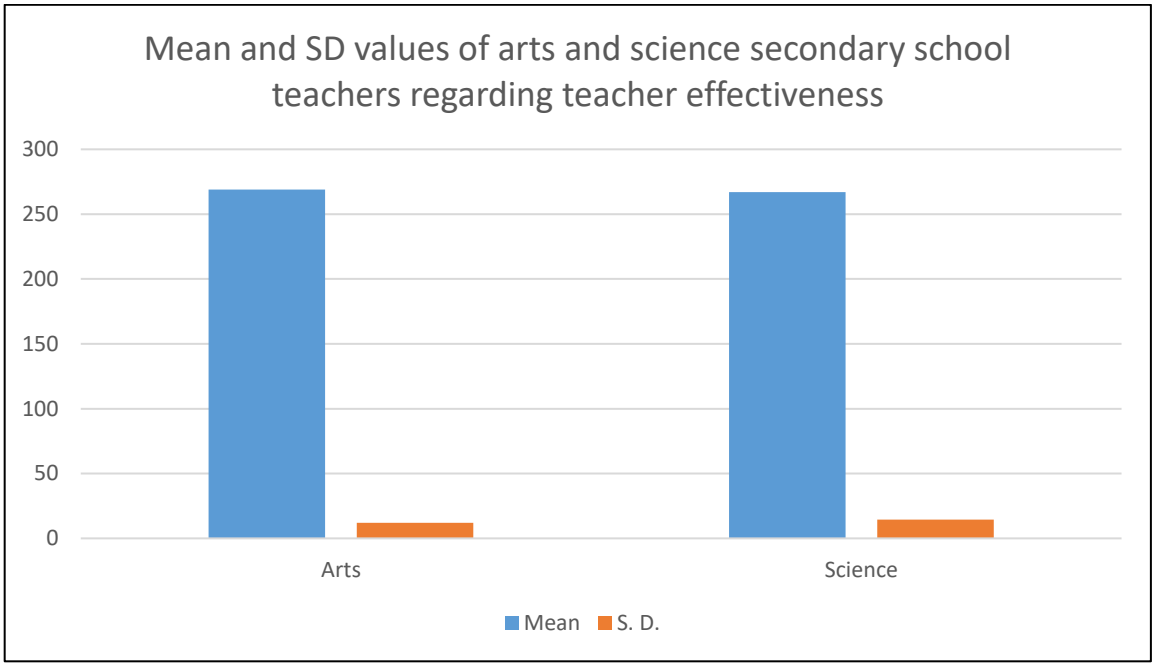


Table 4.9: *Summary of the computed values for teacher effectiveness of arts and science secondary school teachers of Sonitpur district of Assam.*

Teacher Effectiveness: Arts and Science Secondary School Teachers of Sonitpur District							
Stream	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Arts	210	268.94	12.05	310	0.24	1.96	Not Significant at 0.05 levels of confidence
Science	101	267.04	14.42				

With the computed scores displayed in the table 4.9. it can be observed that the calculated t-value 0.24 ≤ 1.96 the table value at 0.05 level of confidence. Thus, the null hypothesis 3 is accepted. In the light of this, it can be concluded that there is no significant difference between the mean score of teacher effectiveness of Arts, and

Science teachers. By looking into the mean scores of teacher effectiveness of arts (268.94) and science (267.04) secondary school teachers, it can be observed that the difference is not significant though the teachers of arts background are little higher in teacher effectiveness than the science background secondary school teachers of Sonitpur district with the mean score difference of 1.9. From the results of the study showed that as the teachers of secondary schools of Sonitpur district received their duty according to their own study background for which they are able to transmit the subject matter properly to the students and can handle any challenging situation. The teachers of their own study background also share the student's performance with their colleagues and take necessary actions accordingly for the overall development of the students. They take initiative in organising the parent-teacher association in the school with the prior permission from the Head Master/ Principal of the particular school. Thus, they co-operate the parents to solve the problems of their children.

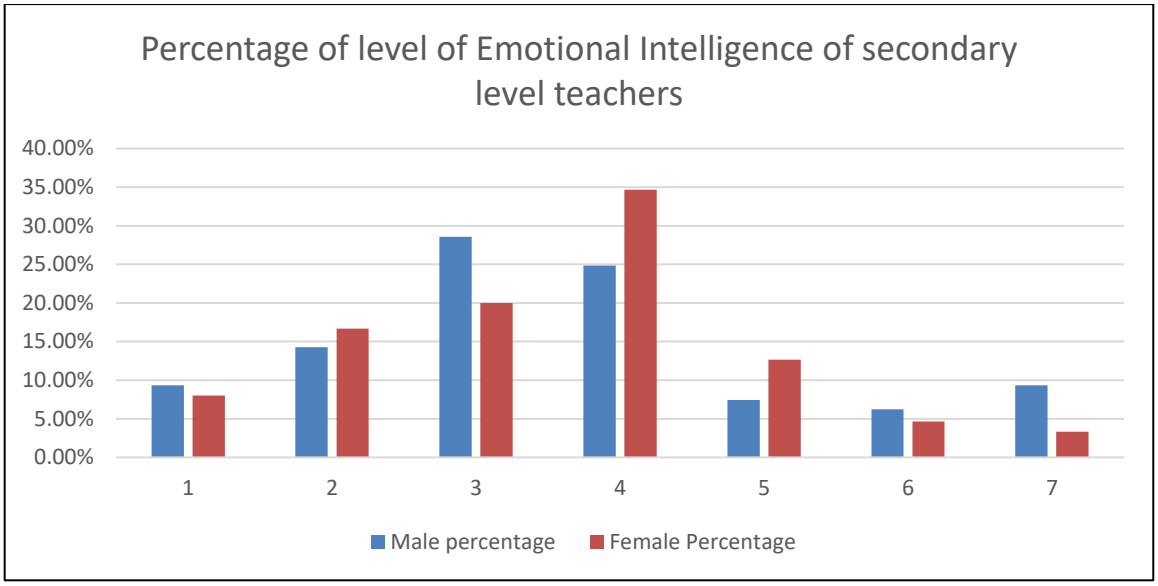
4.2.2. Analysis and Interpretation of Data for the Objective No. 2

The second objective of the present study is to study the Emotional Intelligence of secondary level teachers in respect to their gender, locality and stream. For the present objective the necessary data were collected with the help the standardized Emotional Intelligence Scale developed by Anukool Hyde, Sanjyot Pethe and Upinder Dhar. The data were analysed with the following statistical techniques.

Table: 4.10: *Frequency and Percentage of the level of Emotional Intelligence of secondary level teachers in respect to Gender.*

Emotional Intelligence: Male and Female Secondary School Teachers of Sonitpur District									
Gender		Very High	High	Above average	Average	Below average	Low	Very low	Total
Male	Frequencies	15	23	46	40	12	10	15	161
	percentage	9.32%	14.29%	28.57%	24.84%	7.45%	6.21%	9.32%	100%
Female	Frequencies	12	25	30	52	19	07	05	150
	Percentage	8%	16.67%	20%	34.67%	12.67%	4.67%	3.33%	100%

Figure 4.7: Graphical Representation of Percentage of the level of Emotional Intelligence of Secondary level teachers in respect to their Gender.



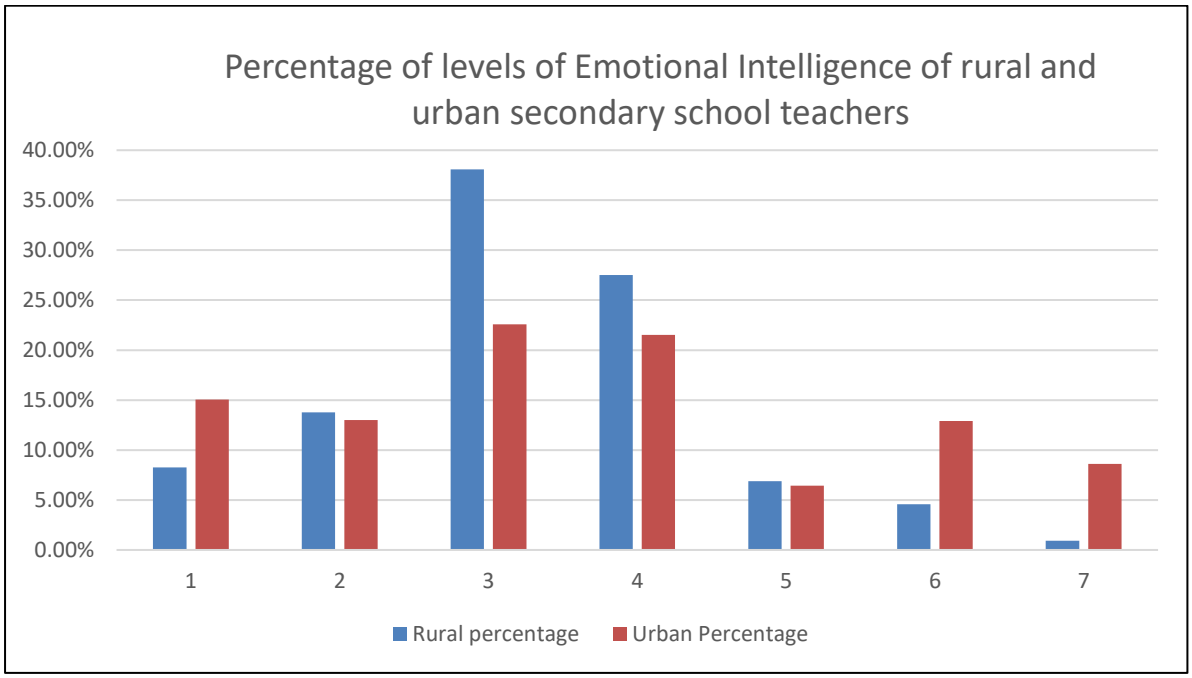
To study the level of emotional intelligence of the secondary school teachers, the total score obtained by the teachers were divided into 7 categories: very high, high, above average, average, below average, low, very low.

Based on the table 4.10. and figure 4.7. it has been found that 9.32% of male teachers and 8% of female secondary level teachers have very high emotional intelligence, 14.29% of male and 16.67% of female have high level, 28.57% of male and 20% of female have above average level, 24.84% of male and 34.67% of female have average level of emotional intelligence. On the other hand, 7.45% of male and 12.67% of female have below average level, 6.21% of male and 4.67% of female teachers have low level and 9.32% of male and 3.33% of female secondary level teachers are have very low level of emotional intelligence. From the mentioned data it is clear that more number of the male teachers are have above average level of emotional intelligence whereas in terms of female teachers more number of them are in average level.

Table: 4.11*: Frequency and Percentage of the level of Emotional Intelligence of secondary level teachers in respect to Locality*

Emotional Intelligence: Rural and Urban Secondary School Teachers of Sonitpur District									
Locality		Very High	High	Above average	Average	Below average	Low	Very low	Total
Rural	Frequencies	18	30	83	60	15	10	02	218
	percentage	8.26%	13.76%	38.07%	27.52%	6.88%	4.59%	0.92%	100%
Urban	Frequencies	14	12	21	20	06	12	08	93
	Percentage	5.05%	12.99%	22.58%	21.51%	6.45%	12.90%	8.60%	100%

Figure 4.8: Graphical Representation of Percentage of the level of Emotional Intelligence of Secondary level teachers in respect to their Locality.



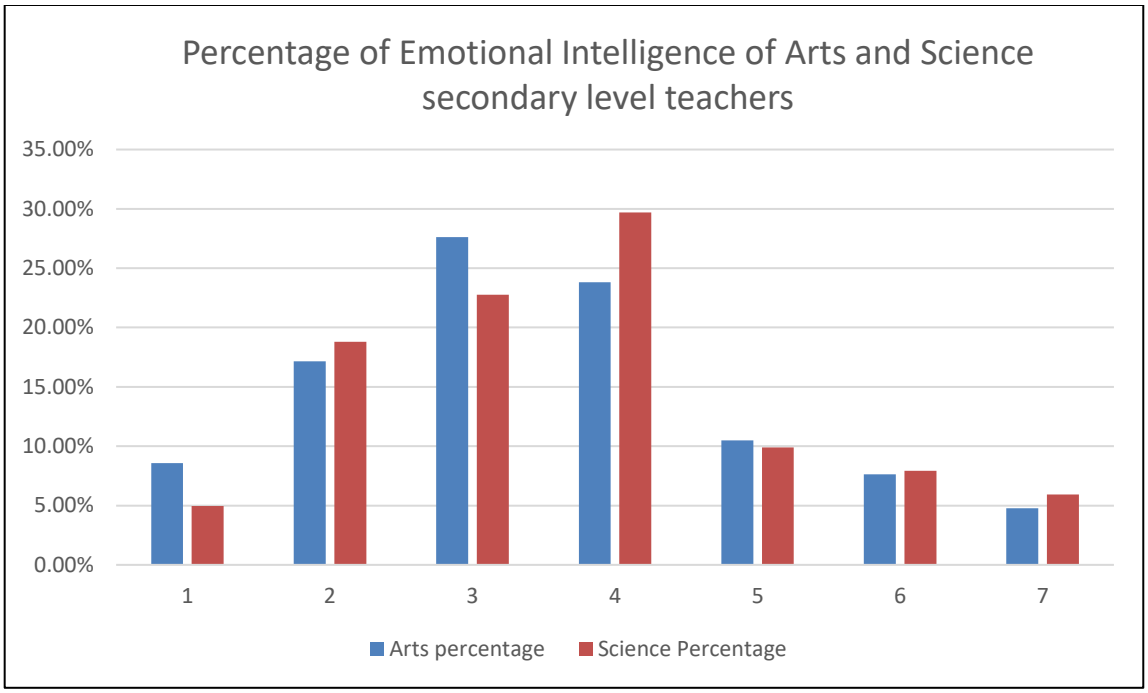
From the table 4.11. and the figure 4.8 it is found that 8.26% of rural teachers and15.05% of urban teachers are have very high level of emotional intelligence, 13.76% of rural and 12.99% of urban teachers have high level, 38.07% of rural and 22.58% of urban teachers have above average level, 27.52% of rural and 21.52% of urban teachers have average level of emotional intelligence. On the other hand, 6.88% of rural and 6.45% of urban teachers have below average level, 4.59% of rural and 12.90% of urban teachers have low level and only 0.92% of rural and 8.60% of urban secondary teachers have very low level of emotional intelligence. From the mentioned data it is clear that most of the rural

as well as urban secondary school teachers are have above average level of emotional intelligence.

Table: 4.12: *Frequency and Percentage of level of Emotional Intelligence of secondary level teachers in respect to Stream*

Emotional Intelligence: Arts and Science Secondary School Teachers of Sonitpur District									
Stream		Very High	High	Above average	Average	Below average	Low	Very low	Total
Arts	Frequencies	18	36	58	50	22	16	10	210
	percentage	8.57%	17.14%	27.62%	23.81%	10.48%	7.62%	4.76%	100%
Science	Frequencies	05	19	23	30	10	08	06	101
	Percentage	4.95%	18.81%	22.77%	29.70%	9.91%	7.92%	5.94%	100%

Figure 4.9: Graphical Representation of Percentage of the level of Emotional Intelligence of Secondary level teachers in respect to their Stream.



From the table 4.12. and the figure 4.9. it is clear that 8.57% of arts and 4.95% of science secondary teachers are in very high level of emotional intelligence, 17.14% of arts and 18.81% of science teachers are have high level, 27.62% of arts and 22.77% of science teachers are have above average level, 23.81% of arts and 29.70% of science teachers are have average level of emotional intelligence. On the other hand, 10.48% of arts teachers and 9.91% of science teachers are have below average level, 7.62% of arts and 7.92% of

science teachers have low level and only 4.76% of arts and 5.94% of science teachers are have very low level of emotional intelligence. The mentioned data shows that most of the teachers from arts background are have above average level of emotional intelligence whereas most of the science background teachers of Sonitpur district are have average level of emotional intelligence.

4.2.2.1. Hypotheses related to Objective No 2

The researcher has formulated three null hypotheses based on the objective number 2 and carry forward the analysis in the following manner:

4.2.2.1.1. Ho: 4: There is no significant difference between the mean score of emotional intelligence of male and female Secondary school teachers.

The researcher analysed hypothesis no.4 on the basis of the following manner:

Table 4.13: *The computed Mean and S.D. values for Emotional intelligence of Male and Female secondary school teachers.*

Emotional intelligence: Male and Female secondary school teachers of Sonitpur district		
Gender	Male	Female
Mean	145.43	140.23
S. D.	12.37	10.68

The above table represents the mean and S. D. values of both Male and Female secondary school teachers of Sonitpur district of Assam. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure 4.10: Showing Mean and SD values of male and female secondary school teachers of Sonitpur district regarding their Emotional Intelligence.

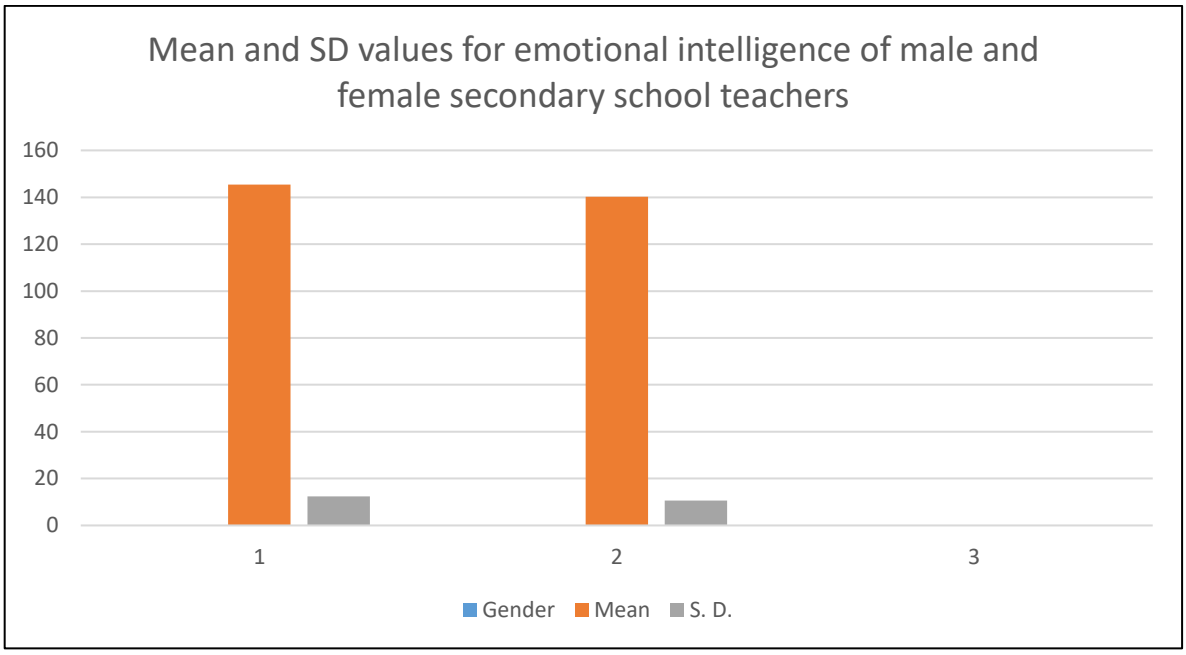


Table 4.14: *Summary of the computed scores for Emotional Intelligence of Male and Female secondary school teachers of Sonitpur district of Assam*.

Emotional intelligence: Male and Female Secondary School Teachers of Sonitpur District							
Gender	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Male	150	145.43	12.37	310	1.66	1.96	Not Significant at 0.05 levels of confidence
Female	161	140.23	10.68				

With the computed scores displayed in the table 4.14., it can be observed that the calculated t-value 1.66 ≤ 1.96 the table value at 0.05 level of confidence. Thus, the null hypothesis i.e. there is no significant difference between the mean score of emotional intelligence of male and female Secondary school teachers is accepted. The result demonstrate that as the male and female teachers share the same school settings, deal with similar challenges and often undergo the same professional development programs. Teachers often receive training in emotional awareness, classroom management, and communication, which can enhance emotional intelligence regardless of gender. It is important to note that emotional intelligence is not inherently tied to gender. Especially in professional settings like teaching, male and female can both be socialized to express

or manage emotions appropriate for the role, which reduces the differences. Both male and female teachers are subject to emotional labour expectations in teaching, which may erase gender differences.

4.2.2.1.2. Ho:5: There is no significant difference between the mean score of emotional intelligence of rural and urban Secondary school teachers.

Table 4.15: *The computed Mean and S.D. values for Emotional intelligence of Rural and Urban secondary school teachers.*

Emotional intelligence: Rural and Urban secondary school teachers of Sonitpur district		
Locality	Rural	Urban
Mean	142.90	142.34
S. D.	11.31	12.93

The table 4.15. represents the mean and S. D. values of both Rural and Urban secondary school teachers of Sonitpur district of Assam. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure 4.11: Showing the mean and SD values of Rural and Urban secondary school teachers regarding Emotional Intelligence.

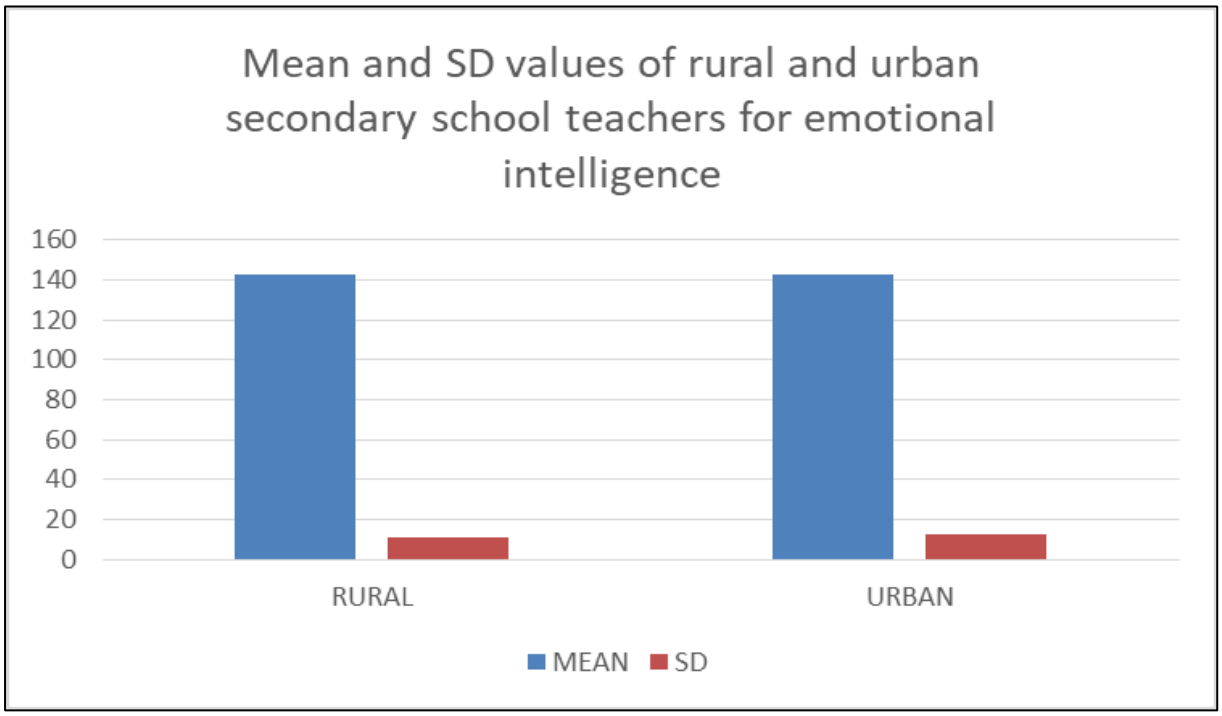


Table 4.16: *The summary of the computed scores for Emotional intelligence of Rural and Urban secondary school teachers.*

Emotional Intelligence: Rural and Urban Secondary School Teachers of Sonitpur District							
Locality	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Rural	218	142.90	11.31	310	0.72	1.96	Not Significant at 0.05 levels of confidence
Urban	93	142.34	12.93				

The summary of the computed scores for emotional intelligence of the rural and urban secondary school teachers of Sonitpur district revealed that t-value $0.72 \leq 1.96$ the table value at 0.05 level of confidence. Thus, the null hypothesis 5 "There is no significant difference between the mean score of emotional intelligence of rural and urban Secondary school teachers is accepted. When we see the mean score of both rural and urban secondary school teachers i.e. 142.90 and 142.34 respectively, the difference between the two score is 0.56 only and somehow it is clear from that there is no difference between the mean score of the teachers from both the locality. But when we calculate the t-value it revealed that the difference is not statistically significant. On the light of the above result it can be interpreted that locality does not have any effect on the emotional intelligence of the secondary school teachers of Sonitpur district. Emotional intelligence may not be influenced by geographic context i.e. rural or urban. This suggests that factors such as personality, professional training and individual experiences might play a more dominant role in shaping emotional intelligence than location. It might indicate that teachers in both areas have had similar opportunities for personal and professional development, including exposure to emotional learning, psychological awareness or stress management which may foster similar emotional competencies regardless of location. Regardless of location of the secondary school teachers of Sonitpur district are able to manage classrooms, can deals with diverse student needs and able to handle the administrative pressure regarding their profession.

4.2.2.1.3. Ho:6: There is no significant difference between the mean score of emotional intelligence of arts and science Secondary school teachers.

Table 4.17: *The computed Mean and S.D. values for Emotional Intelligence of Arts and Science secondary school teachers.*

Emotional intelligence: Arts and Science secondary school teachers of Sonitpur district		
Stream	Arts	Science
Mean	142.50	138.23
S. D.	10.33	12.39

The table 4.17. represents the mean and S. D. values of both Arts and Science secondary school teachers of Sonitpur district of Assam. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure 4.12: Showing Mean and SD values of Arts and Science Secondary School Teachers regarding their Emotional Intelligence.

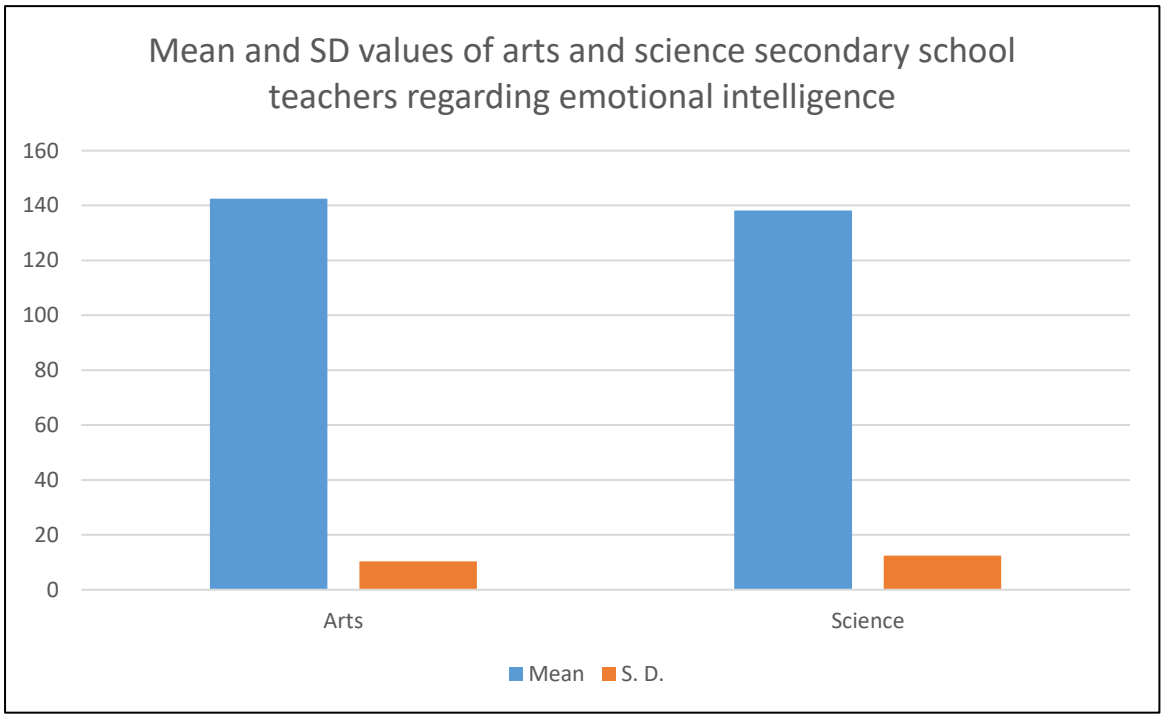


Table 4.18: *The summary of the computed score for emotional intelligence of both Arts and Science secondary school teachers of Sonitpur district of Assam.*

Emotional Intelligence: Arts and Science Secondary School Teachers of Sonitpur District							
Stream	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Arts	210	142.50	10.33	310	0.30	1.96	Not Significant at 0.05 levels of confidence
Science	101	138.23	12.39				

With the computed scores displayed in the above table, it can be observed that the calculated t-value 0.30 ≤ 1.96 the table value at 0.05 level of confidence. Thus, the null hypothesis 6 "There is no significant difference between the mean score of emotional intelligence of arts and science Secondary school teachers" gets accepted. But when we see the mean scores of the teachers i.e. 142.50 and 138.23 of arts and science teachers respectively, somehow it is clear that arts secondary school teachers are little higher in emotional intelligence than the science secondary school teachers although the difference is not significant. The reason behind the same levels of emotional intelligence may be the professional experiences of both the groups. Both groups may have received proper training in managing classroom dynamics as well as student behaviour which are the key components of emotional intelligence. All teachers often face comparable emotional demands, regardless of subject. Managing student needs, adapting to school policies and interacting with parents are common to all which are faced by every teachers in their teaching environment regardless of the subject area. But, in general, teaching requires empathy, communication and social skills which are the core aspects of emotional intelligence. These are not exclusive to arts and science but are essential across disciplines. So, it can be said that all secondary school teachers of Sonitpur district might have develop or present all the aspects of emotional intelligence in their personality.

4.2.3. Analysis and interpretation of data for Objective No 3

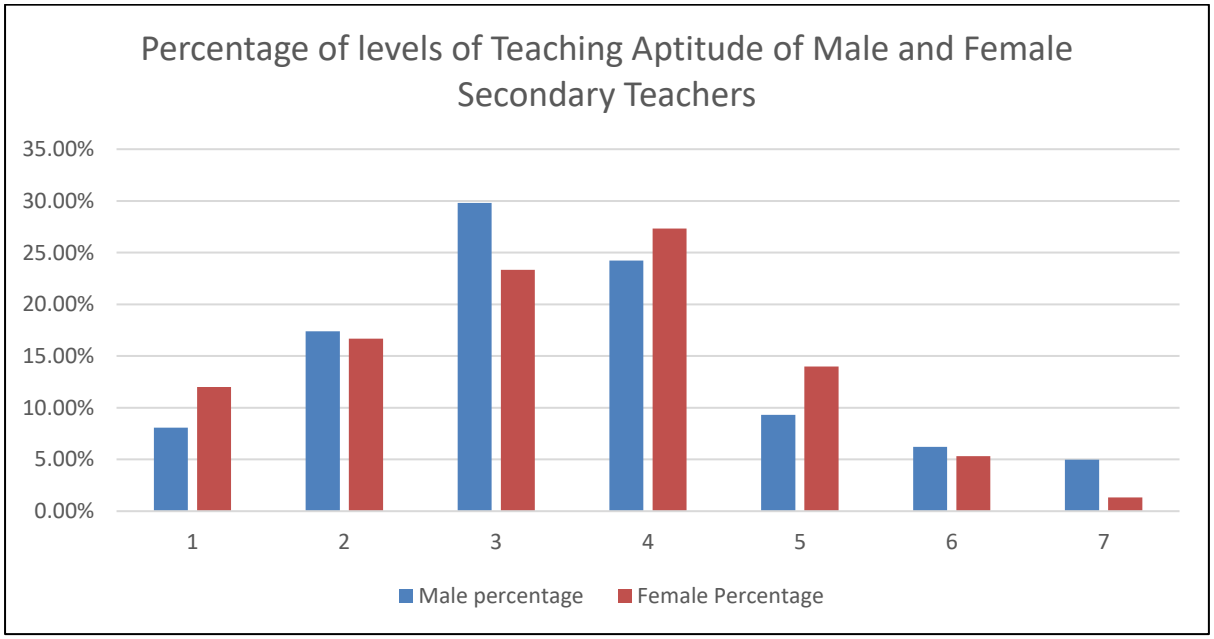
The third objective of the study is to study the Teaching Aptitude of Secondary level teachers in respect to their Gender, Locality and Stream. For the present objective, the necessary data has been collected with the help of a standardized Teaching Aptitude Test

(TAT-GR) (1971) developed by Dr. S.C. Gakhar (Chandigarh) and Dr. Rajnish (Fazilka). The data has been analysed with the following statistical techniques.

Table: 4.19. *Frequency and Percentage of the level of Teaching Aptitude of secondary level teachers in respect to Gender.*

Teaching Aptitude: Male and Female Secondary School Teachers of Sonitpur District									
Gender		Very High	High	Above average	Average	Below average	Low	Very low	Total
Male	Frequencies	13	28	48	39	15	10	08	161
	percentage	8.07%	17.39%	29.81%	24.22%	9.32%	6.22%	4.97%	100%
Female	Frequencies	18	25	35	41	21	08	02	150
	Percentage	12%	16.67%	23.33%	27.33%	14%	5.33%	1.34%	100%

Figure: 4.13: Graphical Representation of Percentage of the levels of Teaching Aptitude of Secondary school teachers in respect to their gender.



To study the level of teaching aptitude of secondary school teachers, the total scores obtained by the teachers were divided into 7 categories: very high, high, above average, average, below average, low, very low.

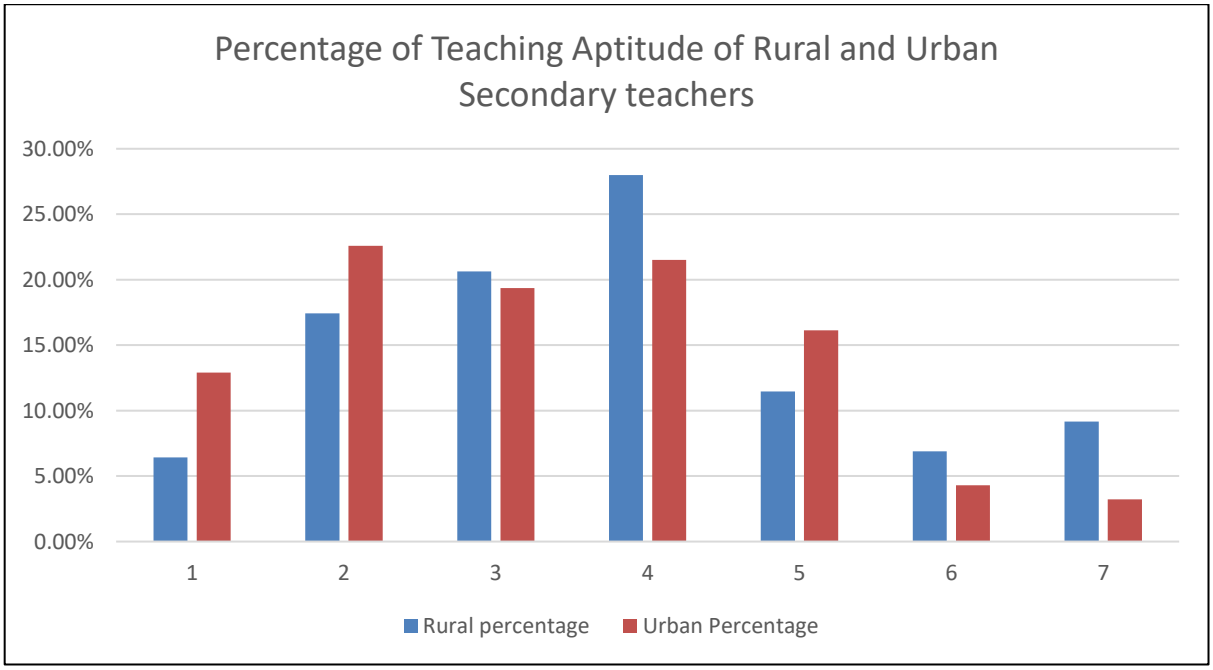
Based on the above table 4.19 and figure 4.13, it is found that 8.07% of male and 12% of female secondary school teachers have very high level of teaching aptitude, 17.39% of male teachers and 16.67% of female teachers have high level, 29.81% of male and 23.33% of female teachers have above average level, 24.22% of male and 27.33% of

female teachers have average level, 9.32% of male and 14% of female teachers have below average level, 6.22% of male and 5.33% of female have low level, 4.97% of male and 1.34% of female secondary school teachers of Sonitpur district have very low level of teaching aptitude. From the above mentioned data it is clear that most of the male secondary school teachers have above average and on the other hand, most of the female secondary school teachers have average level of teaching aptitude.

Table: 4.20: *Frequency and Percentage of the level of Teaching Aptitude of secondary level teachers in respect to Locality*

Teaching Aptitude: Rural and Urban Secondary School Teachers of Sonitpur District									
Locality		Very High	High	Above average	Average	Below average	Low	Very low	Total
Rural	Frequencies	14	38	45	61	25	15	20	218
	percentage	6.42%	17.44%	20.64%	27.98%	11.47%	6.88%	9.17%	100%
Urban	Frequencies	12	21	18	20	15	04	03	93
	Percentage	12.90%	22.58%	19.35%	21.51%	16.13%	4.30%	3.23%	100%

Figure: 4.14: Graphical Representation of Percentage of the levels of Teaching Aptitude of Secondary school teachers in respect to their locality.

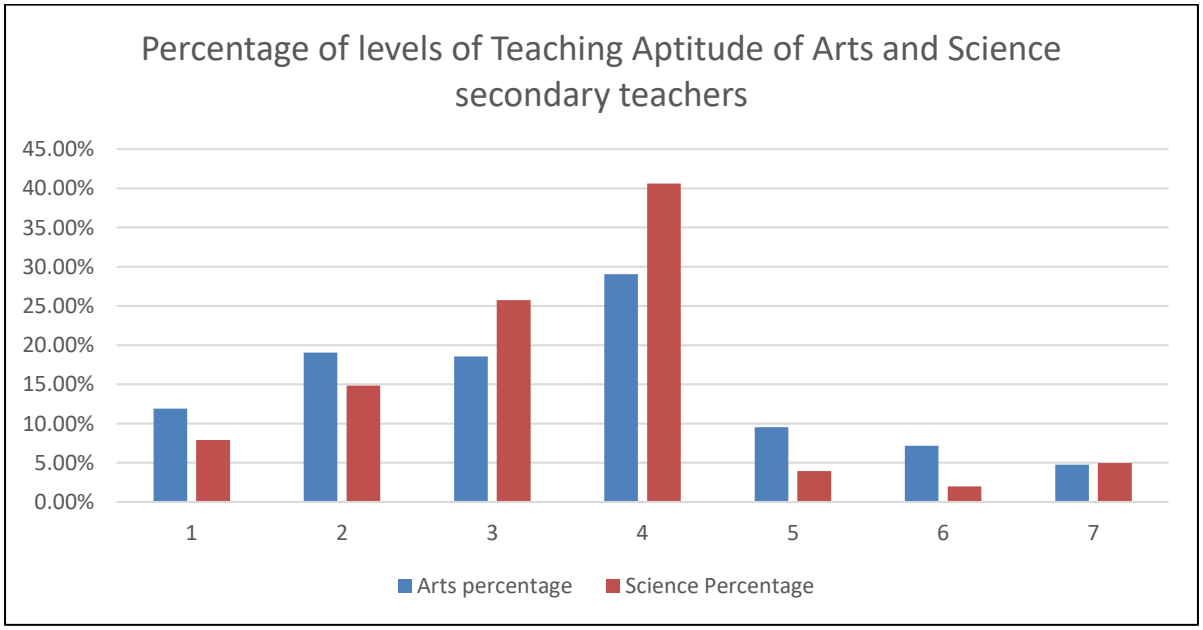


Based on the above table 4.20. and the figure 4.14, it is found that 6.42% of rural secondary school teachers and 12,90% of urban teachers have very high level, 17.44% of rural and 22.58% of urban secondary teachers have high level, 20.64% of rural and 19.35% of urban teachers have above average level, 27.98% of rural and 21.51% of urban teachers have average level, 11.47% of rural and 16.13% of urban teachers have below average level, 6.88% of rural and 4.30% of urban teachers have low level, 9.17% of rural and 3.23% of urban secondary school teachers of Sonitpur district have very low level of teaching aptitude. From the above mentioned data it can be said that most of the rural secondary teachers have average level of teaching aptitude and on the other hand most of the urban secondary school teachers of Sonitpur district have high level of teaching aptitude.

Table: 4.21: *Frequency and percentage of the level of Teaching Aptitude of secondary level teachers in respect to Stream*

Teaching Aptitude: Arts and Science Secondary School Teachers of Sonitpur District									
Stream		Very High	High	Above average	Average	Below average	Low	Very low	Total
Arts	Frequencies	25	40	39	61	20	15	10	210
	percentage	11.90%	19.05%	18.57%	29.05%	9.52%	7.15%	4.76%	100%
Science	Frequencies	08	15	26	41	04	02	05	101
	Percentage	7.92%	14.85%	25.74%	40.59%	3.96%	1.98%	4.96%	100%

Figure: 4.15: Graphical Representation of Percentage of the level of Teaching Aptitude of Secondary level teachers in respect to their Stream.



Based on the table 4.21 and figure 4.15, it is found that 11.90% of teachers from the arts background and 7.92% of teachers from science background have very high level of teaching aptitude, 19.05% of arts and 14.85% of science teachers have high level, 18.57% of arts and 25.74% of science teachers have above average level, 29.05% of arts and 40.59% of science teachers have average level, 9.52% of arts and 3.96% of science teachers have below average, 7.15% of arts and 1.98% of science teachers have low, 4.76% of arts and 4.96% of science teachers have very low level of teaching aptitude. From the data it is clear that most of the secondary school teachers from both the stream of Sonitpur district are have average level of teaching aptitude.

4.2.3.1. Hypotheses related to Objective No 3

The researcher has formulated three null hypotheses based on the objective number 3 and carry forward the analysis in the following manner:

4.2.3.1.1. Ho:7: There is no significant difference between the mean score of teaching aptitude of male and female Secondary school teachers.

The researcher analysed the hypothesis and carried out the analysis process in the following manner which is given below:

Table 4.22: *The computed Mean and S.D. values of Male and Female secondary school teachers for Teaching Aptitude.*

Teaching Aptitude: Male and Female secondary school teachers of Sonitpur district		
Gender	Male	Female
Mean	27.46	28.32
S. D.	4.02	16.56

The above table 4.22 represents the Mean and S. D. values of both Male and Female secondary school teachers of Sonitpur district of Assam. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure: 4.16: Showing the Mean and S.D. values regarding the Teaching Aptitude of Male and Female Secondary School Teachers.

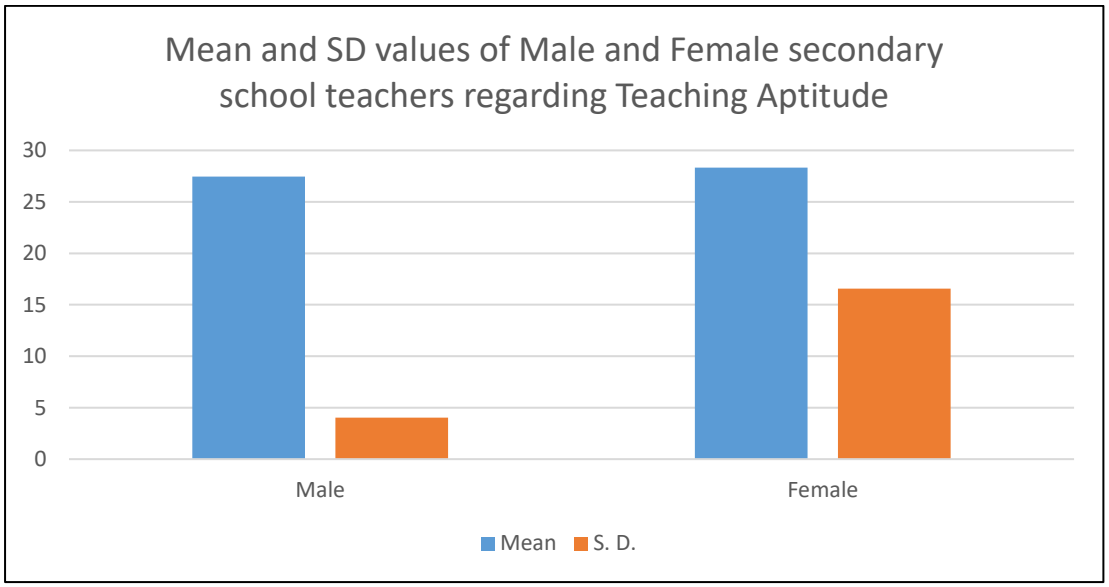


Table 4.23: *Summary of the computed scores for Teaching Aptitude of Male and Female secondary school teachers of Sonitpur district.*

Teaching Aptitude: Male and Female Secondary School Teachers of Sonitpur District							
Gender	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Male	150	27.46	4.02	310	0.53	1.96	Not Significant at 0.05 levels of confidence
Female	161	28.32	16.56				

With the computed scores displayed in the above table 4.23 it can be observed that the calculated t-value 0.53 ≤ 1.96 the table value at 0.05 level of confidence. Thus, the null hypothesis 7 "there is no significant difference between the mean score of teaching aptitude of male and female Secondary school teachers." is accepted. However, it is seen in the above table that the mean score of female teachers are 0.86 higher than the male teacher as the mean score of male teachers is count to be 27.46 and for female teachers it is count to be 28.32. From the above calculated t-value it is clear that the difference is not statistically significant. Thus, the present study revealed that there is no significant difference of male and female teachers regarding their teaching aptitude. Generally, teaching aptitude is influenced more by personality traits, motivation, communication

skills along with pedagogical knowledge than by gender. The secondary school teachers of Sonitpur district of both the gender have equal access to teacher education and professional development which may lead the similar skill development among them. Both the male and female teachers gain similar classroom experience and face comparable challenges which can help them to equalize teaching proficiency in them. Cultural shift may be one of the main reasons of such a result. Because, the gradual change in societal values, beliefs, and practices reducing the gap between male and female teachers in the teaching profession. Global movement advocating for women's right and gender equality have led to reforms in education systems, creating equal opportunities for teacher training, recruitment and advancement. Now, Government and institutional policies mandate equal pay, maternity/paternity leave and gender-neutral hiring practices, allowing both genders to thrive professionally without systematic disadvantages. Thus, these changes have helped to ensure that both male and female teachers can develop and demonstrate teaching aptitude equally.

4.2.3.1.2. Ho:8: There is no significant difference between the mean score of teaching aptitude of rural and urban Secondary school teachers.

The present hypothesis is analysed by the researcher by using following analysis process:

Table: 4.24: *Computed Mean and S.D. values for teaching Aptitude of rural and urban secondary school teachers.*

Teaching Aptitude: Male and Female secondary school teachers of Sonitpur district		
Locality	Rural	Urban
Mean	27.29	27.19
S. D.	4.25	3.94

The above table 4.24 represents the Mean and S. D. values of both Rural and Urban secondary school teachers of Sonitpur district of Assam. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure 4.17: Showing the Mean and SD values regarding Teaching Aptitude of Rural and Urban Secondary School Teachers.

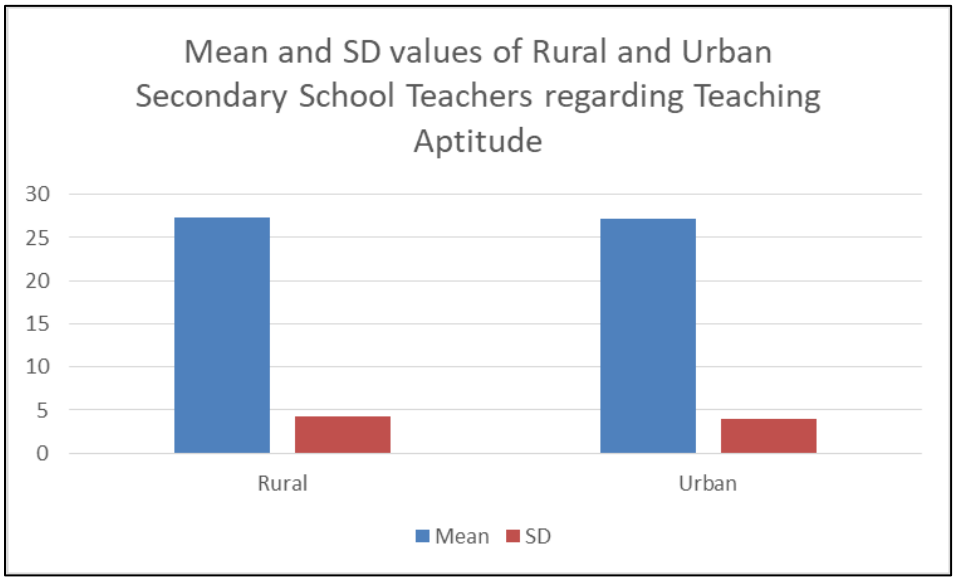


Table 4.25: *Summary of the computed scores for the Teaching Aptitude of Rural and Urban Secondary School Teachers.*

Teaching Aptitude: Rural and Urban Secondary School Teachers of Sonitpur District							
Locality	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Rural	18	7.29	4.25	310	0.85	1.96	Not Significant at 0.05 levels of confidence
Urban	93	7.19	3.94				

With the computed scores displayed in the above table 4.25, it can be observed that the calculated t-value 0.85 ≤ 1.96 the table value at 0.05 level of confidence. Thus, the null hypothesis 8 "there is no significant difference between the mean score of teaching aptitude of rural and urban Secondary school teachers" is accepted. Thus, the study revealed that both the rural and urban secondary school teachers have the same levels of teaching aptitude. The reason behind this may be teachers in both areas regardless of their location may possess equal levels of intrinsic motivation and commitment towards their profession. As the online resources becoming more available, the rural teachers are now access the same materials and can receive the development opportunities as the urban teachers. The teachers' recruitment exams and the qualifications are the same for both the rural and urban areas teachers which can lead to a similar aptitude baseline.

Teachers from both the location can receive the similar training for which they can be ensure uniform skills and methods of teaching.

4.2.3.1.3. Ho:9: There is no significant difference between the mean score of teaching aptitude of arts and science Secondary school teachers.

The researcher analysed this null hypothesis by using the following statistical techniques:

Table: 4.26: *The computed Mean and S.D. values for teaching Aptitude of Arts and Science secondary school teachers.*

Teaching Aptitude: Arts and Science secondary school teachers of Sonitpur district		
Stream	Arts	Science
Mean	27.72	26.29
S. D.	3.93	4.44

The above table 4.26 represents the Mean and S. D. values of both Arts and Science secondary school teachers of Sonitpur district of Assam. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure 4.18: Showing the Mean and SD values of Arts and Science Secondary School Teachers regarding Teaching Aptitude.

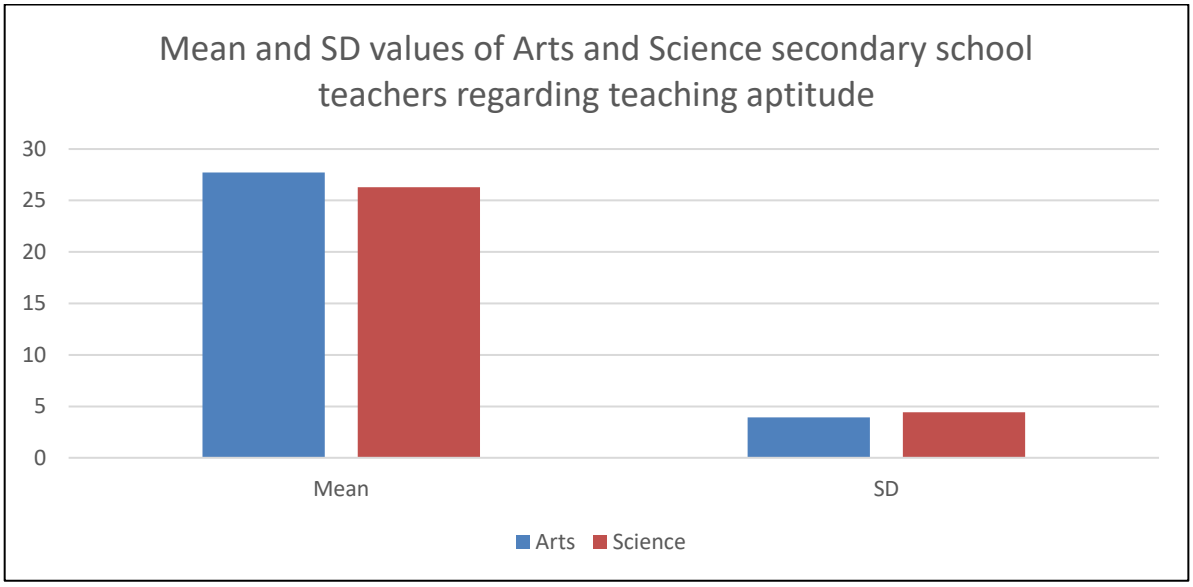


Table 4.27: *Summary of computed scores for Teaching Aptitude of Arts and Science Secondary School Teachers of Sonitpur district.*

Teaching Aptitude: Arts and Science Secondary School Teachers of Sonitpur District							
Stream	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Arts	210	27.72	3.93	310	0.66	1.96	Not Significant at 0.05 levels of confidence
Science	101	26.29	4.44				

With the computed scores displayed in the above table, it can be observed that the calculated t-value $0.66 \leq 1.96$ the table value at 0.05 level of confidence. Thus, the null hypothesis 9 is accepted and can be concluded that there is no significant difference between the mean score of arts and science secondary school teachers regarding their teaching aptitude. The reason might be that many elements of good teaching like-organization of the subject matter, dedication towards their profession, empathy are not tied to any one discipline. Teachers of both the discipline might have comparable levels of experience, enthusiasm for teaching and dedication to student outcomes, which strongly influence their aptitude levels. The standardized teacher education programs may be one of the reasons of it as both arts and science teachers undergo the same teacher education programs like B.Ed. Since both arts and science secondary school teachers receive this same foundation, their levels of teaching aptitude may be the same. After entering the profession, both groups often attend in-service training mandated by school educational boards again these opportunities emphasize not specific content, helping both groups grow at a similar pace. Now-a-days modern education system focusses on student-centred learning. Thus, professional training in the present time emphasizes on student engagement, inquiry based learning and differentiated instruction-all of which apply equally to arts and science classroom. Thus, training and development focusses on generic teaching skills rather than subject specific methods, for which both the groups have developed same levels of teaching aptitude towards their profession. `

4.2.4. Analysis and interpretation of data for Objective No 4

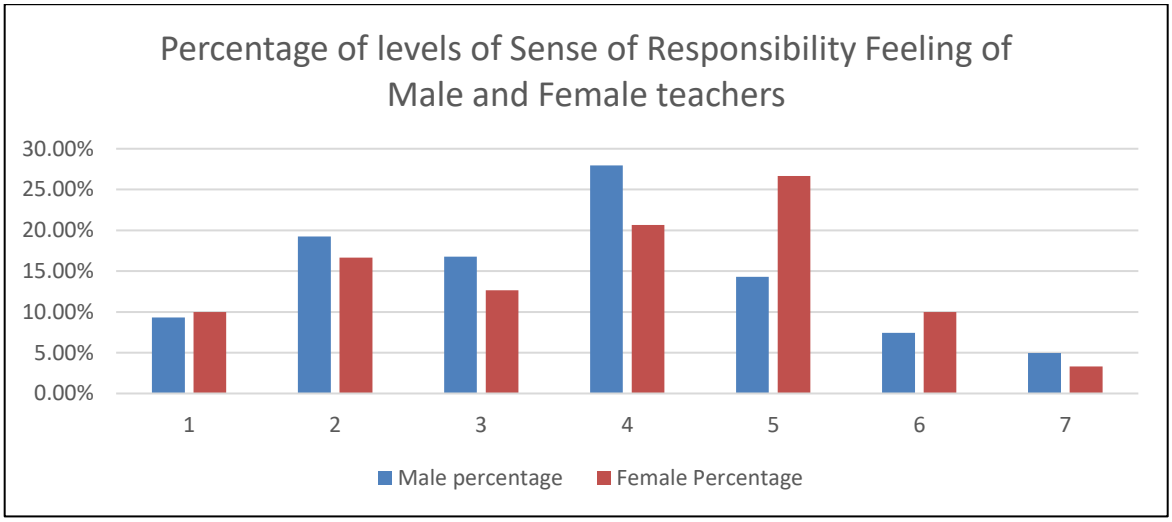
The fourth objective of the study is to study the Sense of Responsibility feeling of Secondary level teachers in respect to their Gender, Locality and Stream.

For the present objective, the necessary data has been collected with the help of a self-developed sense of responsibility feeling test. The data has been analysed with the following statistical techniques.

Table: 4.28: *Frequency and Percentage of the level of Sense of Responsibility Feeling of secondary level teachers in respect to Gender.*

Sense of Responsibility Feeling: Male and Female Secondary School Teachers of Sonitpur District									
Gender		Very High	High	Above average	Average	Below average	Low	Very low	Total
Male	Frequencies	15	31	27	45	23	12	08	161
	percentage	9.32%	19.25%	16.77%	27.95%	4.29%	7.45%	4.97%	100%
Female	Frequencies	15	25	19	31	40	15	05	150
	Percentage	10%	16.67%	12.67%	20.67%	26.67%	10%	3.32%	100%

Figure 4.19: Graphical Representation of Percentage of the level of sense of responsibility feeling of Secondary level teachers in respect to their gender.



To study the level of sense of responsibility feeling of secondary school teachers, the total scores obtained by the teachers were divided into 7 categories: very high, high, above average, average, below average, low, very low.

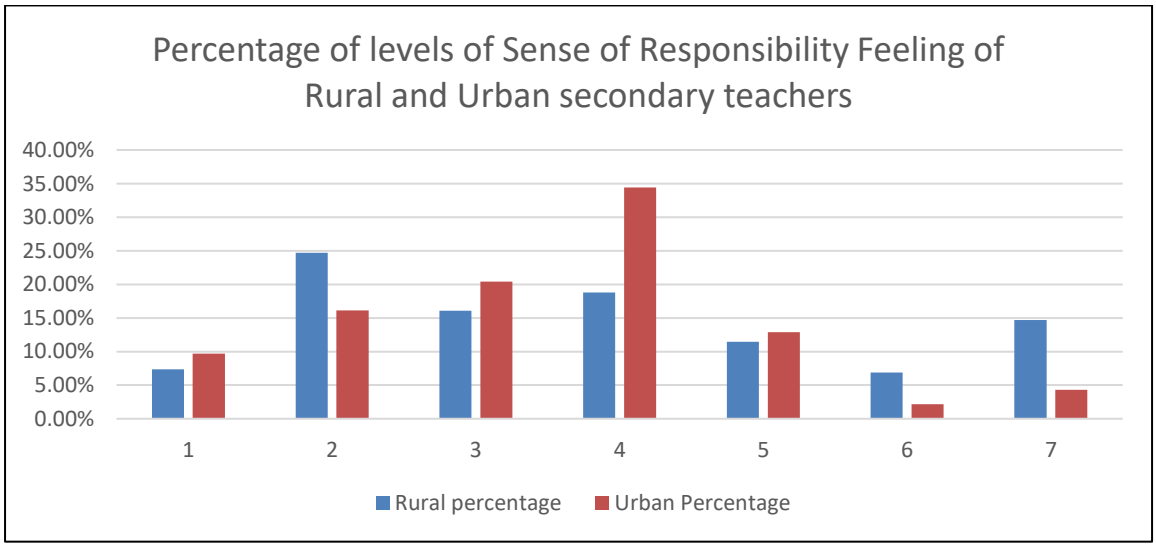
Based on the above table 4.28 and the figure 4.19 it is found that 9.32% of male and 10% of female of secondary school teachers have very high level of sense of responsibility feeling, 19.25% of male and 16.67% of female teachers have high level, 16.77% of male and 12.67% of female teachers have above average level, 27.95% of male and 20.67% of female teachers have average level, 14.29% of male and 26.67% of female teachers have

below average level, 7.45% of male and 10% of female teachers have low level, 4.97% of male and 3.32% of female secondary school teachers of Sonitpur district have very low level of sense of responsibility feeling. From the above mentioned data it is clear that most of the male secondary school teachers have average level of sense of responsibility feeling. On the other hand, most of the female teachers have below average level of sense of responsibility feeling.

Table: 4.29: *Frequency and Percentage of Sense of Responsibility Feeling of secondary level teachers in respect to Locality.*

Sense of Responsibility Feeling: Rural and Urban Secondary School Teachers of Sonitpur District									
Locality		Very High	High	Above average	Average	Below average	Low	Very low	Total
Rural	Frequencies	16	54	35	41	25	15	32	218
	percentage	7.34%	24.71%	16.06%	18.81%	1.47%	6.88%	14.67%	100%
Urban	Frequencies	09	15	19	32	12	02	04	93
	Percentage	9.68%	16.13%	20.43%	34.41%	12.90%	2.15%	4.30%	100%

Figure: 4.20: Graphical Representation of Percentage of the level of sense of responsibility feeling of Secondary level teachers in respect to their locality.



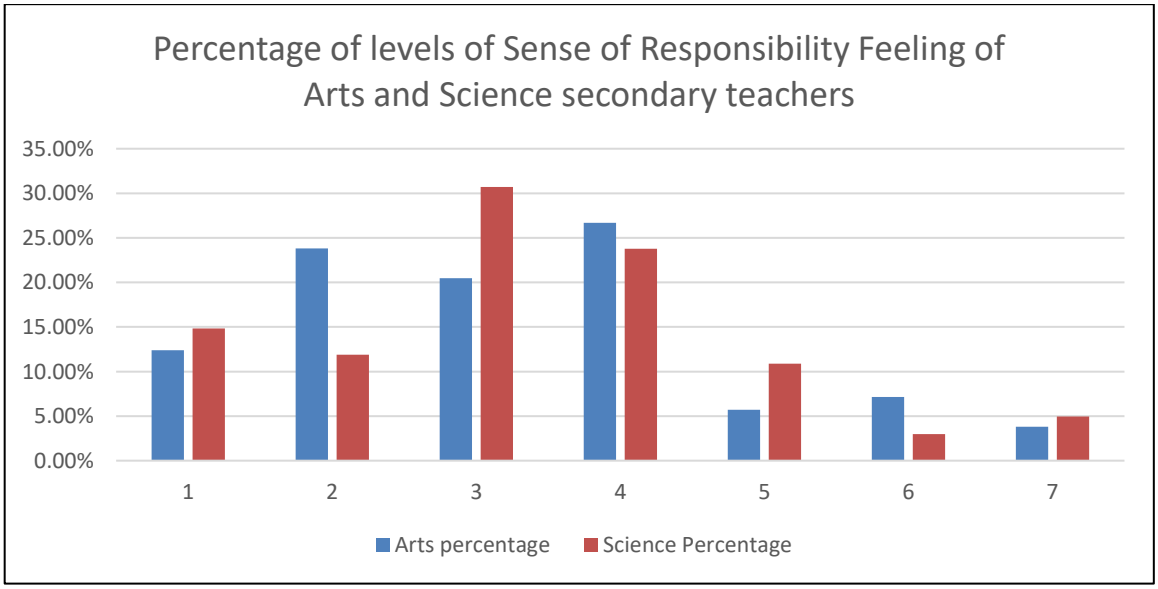
From the table 4.29 and the figure 4.20, it is found that 7.34% of rural secondary school teachers and 9.68% of urban secondary teachers have very high level of sense of responsibility feeling, 24.71% of rural and 16.13% of urban teachers have high level, 16.06% of rural and 20.43% of urban teachers have above average level, 18.81% of rural and 34.41% of urban teachers have average level, 11.47% of rural and 12.90% of urban

teachers have below average, 6.88% of rural and 2.15% of urban teachers have low level, 14.67% of rural and 4.30% of urban secondary school teachers have very low level of sense of responsibility feeling. From the above mentioned data it is clear that most of the rural teachers of Sonitpur district have high level of sense of responsibility feeling whereas most of the urban teachers have average level of sense of responsibility feeling.

Table: 4.30: *Frequency and Percentage of Sense of Responsibility Feeling of secondary level teachers in respect to Stream.*

Sense of Responsibility Feeling: Arts and Science Secondary School Teachers of Sonitpur District									
Stream		Very High	High	Above average	Average	Below average	Low	Very low	Total
Arts	Frequencies	26	50	43	56	12	15	08	210
	percentage	12.38%	3.81%	20.48%	26.67%	5.71%	7.14%	3.81%	100%
Science	Frequencies	15	12	31	24	11	03	05	101
	Percentage	14.85%	11.88%	30.69%	23.77%	0.89%	2.97%	4.95%	100%

Figure: 4.21: Graphical Representation of Percentage of the level of sense of responsibility feeling of Secondary level teachers in respect to their stream.



From the table 4.30 and the figure 4.21, it is found that 12.38% of secondary teachers from arts background and 14.85% of secondary teachers from science background have very high level of sense of responsibility feeling, 23.81% of arts and 11.88% of science teachers have high level, 20.48% of arts and 30.69% of science teachers have above average level, 26.67% of arts and 23.77% of science teachers have average level, 5.71% of arts and 10.89% of science teachers have below average, 7.14% of arts and 2.97% of

science teachers have low level, 3.81% of arts and 4.95% of science secondary school teachers have very low level of sense of responsibility feeling. From the mentioned data it is clear that most of the teachers from arts background have average level of sense of responsibility feeling whereas most of the secondary teachers from science background have above average level of sense of responsibility feeling.

4.2.4.1. The researcher has formulated three null hypotheses based on the objective number 4 and carry forward the analysis in the following manner:

4.2.4.1.1. Ho:10: There is no significant difference between the mean score of sense of responsibility feeling of male and female Secondary school teachers.

Table: 4.31: *The computed Mean and S.D. values for sense of responsibility feeling of Male and Female secondary school teachers.*

Sense of Responsibility Feeling: Male and Female secondary school teachers of Sonitpur district		
Gender	Male	Female
Mean	105.26	100.22
S. D.	10.92	15.90

The above table represents the Mean and S. D. values of both Male and Female secondary school teachers of Sonitpur district regarding their sense of responsibility feeling. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure 4.22: Showing the Mean and S.D. values of Male and Female Secondary School Teachers regarding their Sense of Responsibility feeling.

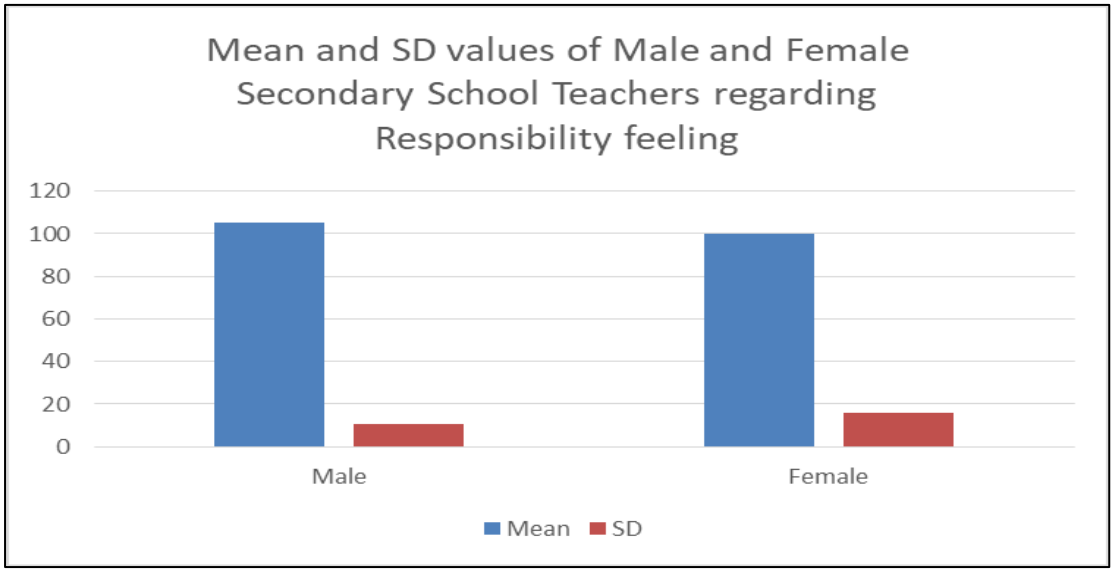


Table 4.32: *The summary of the computed values for Responsibility Feeling of Male and Female secondary school teachers.*

Responsibility Feeling: Male and Female Secondary School Teachers of Sonitpur District							
Gender	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Male	150	105.26	10.92	310	0.15	1.96	Not Significant at 0.05 levels of confidence
Female	161	100.55	15.90				

With the computed scores displayed in the above table, it can be observed that the calculated t-value $0.15 \leq 1.96$ the table value at 0.05 level of confidence. Thus, the null hypothesis 10 "there is no significant difference between the mean score of sense of responsibility feeling of male and female Secondary school teachers" is accepted. Although from the above table it is seen that the mean score of the male secondary school teachers is slightly higher than the female teachers, statistically the difference is not significant. The reason of the same level of responsibility feeling of both male and female teachers could stem from professionally shared values, training and expectations. Teaching as a profession is associated with nurturing, responsibility and commitment apply for regardless of gender. Most of the male and female secondary school teachers have undergone similar training which creates a uniform perception of their responsibilities amongst them. Most of the teachers irrespective of their gender, have an active internal motive which encourages students to learn, therefore supporting a similar sense of responsibility. School policies may be one of the reason of the same level of sense of responsibility feeling regardless of gender. Usually, policies provided by the institution allocate duties to all teachers irrespective of their gender. Thus, it can be stated that the female teachers are not lacking behind in terms of social upliftment by moulding the behaviour of our future generation through their profession.

4.2.4.1.2. Ho:11: There is no significant difference between the mean score of sense of responsibility feeling of rural and urban Secondary school teachers.

Table 4.33: *The computed Mean and S.D. values for Responsibility Feeling of Rural and Urban secondary school teachers.*

Sense of Responsibility Feeling: Rural and Urban secondary school teachers of Sonitpur district		
Locality	Rural	Urban
Mean	101.94	104.32
S. D.	14.49	12.42

The above table represents the Mean and S. D. values of both Rural and Urban secondary school teachers of Sonitpur district regarding their sense of responsibility feeling. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure 4.23: Showing the Mean and SD values of Rural and Urban Secondary School Teachers regarding their sense of Responsibility Feeling.

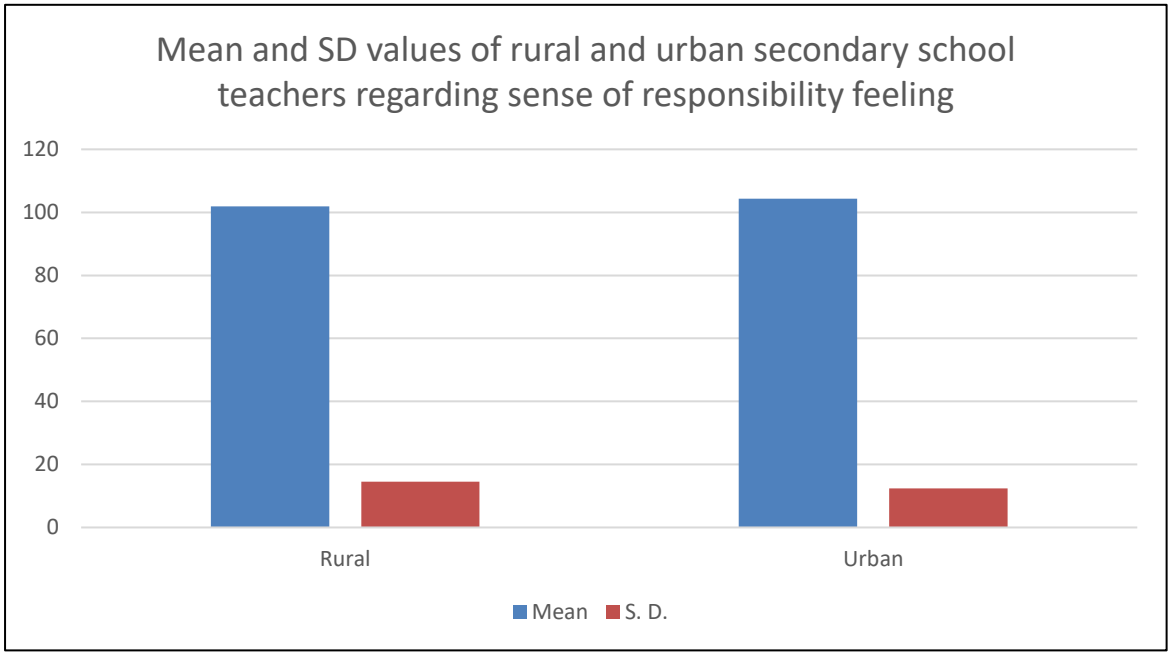


Table: 4.34: *The summary of the computed values for sense of responsibility feeling of Rural and Urban secondary school teachers.*

Responsibility Feeling: Rural and Urban Secondary School Teachers of Sonitpur District							
Locality	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Rural	218	101.94	14.49	310	0.14	1.96	Not Significant at 0.05 levels of confidence
Urban	93	104.32	12.42				

With the computed scores displayed in the above table, it can be observed that the calculated t-value $0.14 \leq 1.96$ the table value at 0.05 level of confidence. Thus, the null hypothesis 11 "there is no significant difference between the mean score of sense of responsibility feeling of rural and urban Secondary school teachers" is accepted. Thus, it can be interpreted that locality of the teachers' whether they are from rural or urban area it doesn't have any impact regarding their dutifulness towards their profession. Geographical belongingness doesn't play any role on their responsiveness towards the teaching profession. Though there is geographical divergence among secondary school teachers, but teaching in urban and rural settings share common basic duties such as lesson preparation, teaching, grading, student counselling etc. Thus, it can be said that job role similarities may be one of the reasons of the same level of sense of responsibility of both rural and urban secondary school teachers. It is often seen that teachers from different zones undergo parallel professional training, fostering uniform expectations regarding their roles and duties. Kant (2011) on his study "A study of teaching aptitude and responsibility feeling of secondary school teachers in relation to their sex and locale" also found that location doesn't play any role in terms of responsibility feeling of a teachers.

4.2.4.1.3. Ho:12: There is no significant difference between the mean score of sense of responsibility feeling of arts and science Secondary school teachers.

Table 4.35: The computed Mean and S.D. values for sense of Responsibility Feeling of Arts and Science secondary school teachers.

Sense of Responsibility Feeling: Arts and Science secondary school teachers of Sonitpur district		
Stream	Arts	Science
Mean	100.71	106.68
S. D.	12.48	15.87

The above table 4.35. represents the Mean and S. D. values of both Arts and Science secondary school teachers of Sonitpur district regarding their sense of responsibility feeling. After computation of mean and S. D. the t-test was computed and the result is shown in the following figure and table.

Figure 4.24: Showing the Mean and SD values of Arts and Science Secondary School Teachers regarding their sense of Responsibility Feeling.

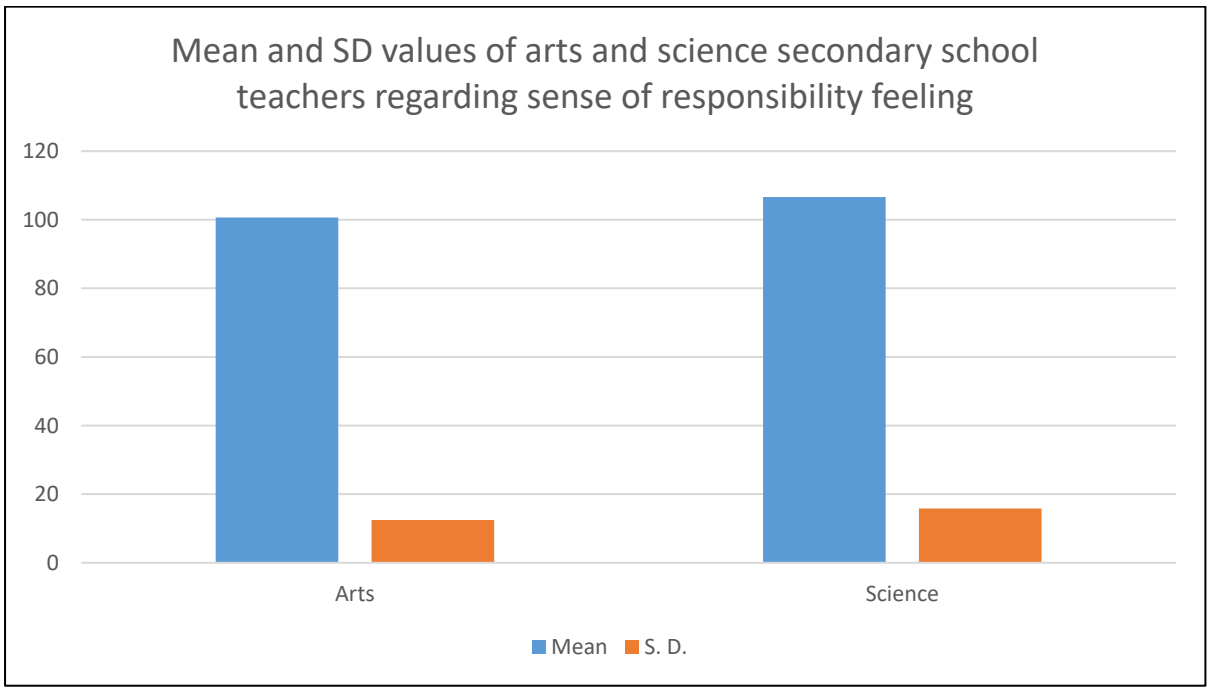


Table 4.36: *The summary of the computed values for sense of Responsibility Feeling of Arts and Science secondary school teachers.*

Responsibility Feeling: Arts and Science Secondary School Teachers of Sonitpur District							
Stream	N	Mean	S.D.	df	Calculated t-Value	Table Value	Remarks
Arts	210	100.71	12.48	310	1.41	1.96	Not Significant at 0.05 levels of confidence
Science	101	107.67	13.09				

With the computed scores displayed in the above table, it can be observed that the calculated t-value 1.41 ≤ 1.96 the table value at 0.05 level of confidence. Thus, the null hypothesis 12 "there is no significant difference between the mean score of sense of responsibility feeling of arts and science Secondary school teachers" is accepted. It can be interpreted that the teachers from arts background and the teachers from science background both have the same level of sense of responsibility feeling towards their profession. Both the types of teachers may be equally value their role in shaping the personality of the students regardless of the subject matter. The professional identity of the teachers can be said as one of the reasons of it. Most of the teachers often see themselves as educators first rather than subject specialists, which can lead to a shared responsibility towards fulfilling the goals of education with the help of the holistic development of the personality of the children. Both types of teachers may be equally accountable to shaping the students' critical thinking, creativity and moral development regardless of their subject background. Most of the teachers used interdisciplinary approach through collaborative projects and inquiry based learning in their teaching. Thus, the several shared professional and psychological factors can be the reason of the same level of sense of accountability of the secondary school teachers.

4.2.5. Analysis and Interpretation of data for Objective No 5

The fifth objective of the study is to study the relationship between Emotional Intelligence and Teacher Effectiveness of Secondary School Teachers in respect to their Gender, Locality and Stream. For the present objective the necessary data has been collected with the help of the standardized Emotional Intelligence Scale (EIS-HPD) (2002) developed by Anukool Hyde, Sanjyot Pethe and Upinder Dhar and the Teacher Effectiveness Scale developed by the researcher.

4.2.5.1. Hypotheses related to Objective No 5

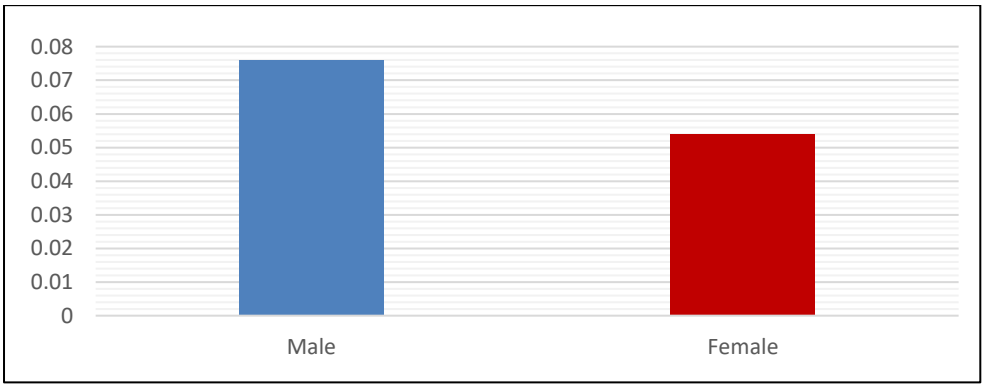
4.2.5.1.1. Ho:13: There exists no any significant relationship between teacher effectiveness and emotional intelligence of secondary school teachers in respect to their gender.

The researcher analysed the hypotheses with the help of Pearson Product Moment Co-relation technique.

Table 4.37: *Showing Co-efficient of Co-relation between Teacher Effectiveness and Emotional Intelligence in respect to their Gender.*

Variables		Gender	' r' Value	df	Sig./Not sig.
Teacher Effectiveness	Emotional Intelligence	Male	0.076	149	Sig.at 0.01
		Female	0.054	160	Sig. at 0.01

Figure 4.25: Showing the co-efficient of co-relation between teacher effectiveness and emotional intelligence of Male and Female secondary school teachers.



It is found from the above table 4.37 that the calculated 'r' value for male secondary school teachers is 0.076 which is positive and significant at 0.01 level ($p<0.01$). This shows that a positive and significant relationship exists between teacher effectiveness and Emotional intelligence of secondary school male teachers of Sonitpur district. Regarding the female secondary school teachers the calculated 'r' value is 0.054 which is positive and significant at 0.01 level ($p<0.01$). Hence, the null hypothesis 13 "there exists no any significant relationship between teacher effectiveness and emotional intelligence of secondary school teachers in respect to their gender" is rejected. Thus, it can be interpreted that a significant relationship exists between teacher effectiveness and emotional intelligence of both male and female secondary school teachers. Emotional

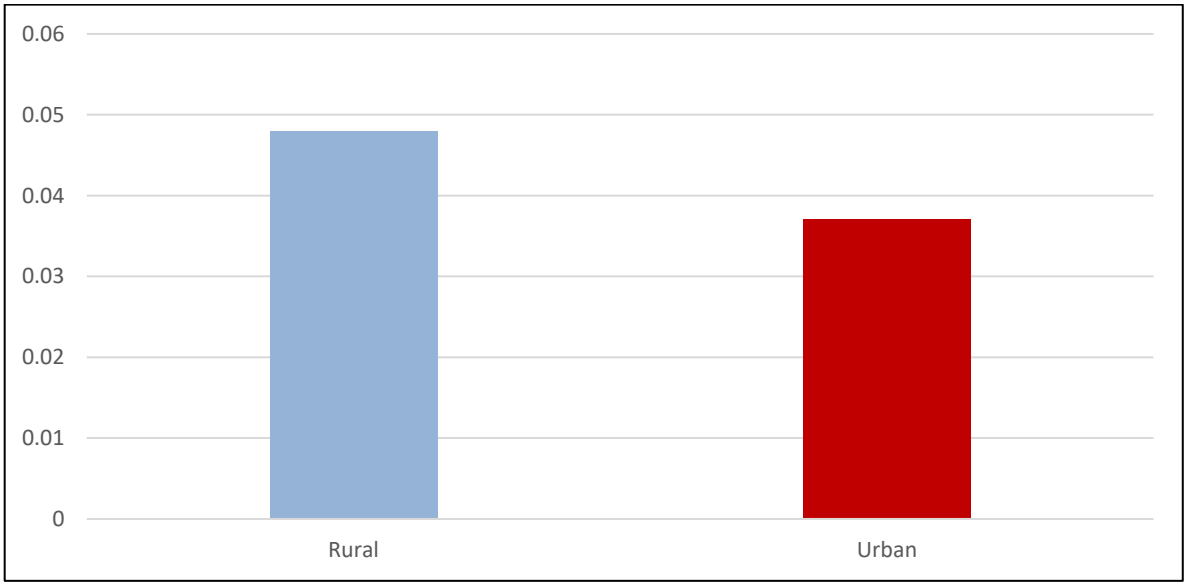
intelligence of both male and female secondary level teachers have affected the level of their effectiveness. The reason might be emotionally intelligent teachers are more empathetic and more capable of understanding students' emotional and learning needs. This builds trust and rapport, which leads to increased student engagement and helps them in their holistic development of personality. Teaching is a stressful profession. Emotional intelligence enables both male and female teachers to manage stress, stay motivated, which in turn enables consistent and effective teaching.

4.2.5.1.2. Ho:14: There exists no any significant relationship between teacher effectiveness and emotional intelligence of secondary school teachers in respect to their locality.

Table 4.38: *Co-relation between Teacher Effectiveness and Emotional Intelligence in respect to their Locality.*

Variables		Locality	'r' value	df	Sig./Not Sig.
Teacher Effectiveness	Emotional Intelligence	Rural	0.048	217	Sig. at 0.01
		Urban	0.037	92	Sig. at 0.01

Figure: 4.26: Showing Co-relation between Teacher Effectiveness and Emotional Intelligence in respect to their Locality.



It is found from the above table 4.38 that the calculated 'r' value for Rural secondary school teachers is 0.048 which is positive and significant at 0.01 level ($p<0.01$). This shows that a positive and significant relationship is exists between teacher effectiveness

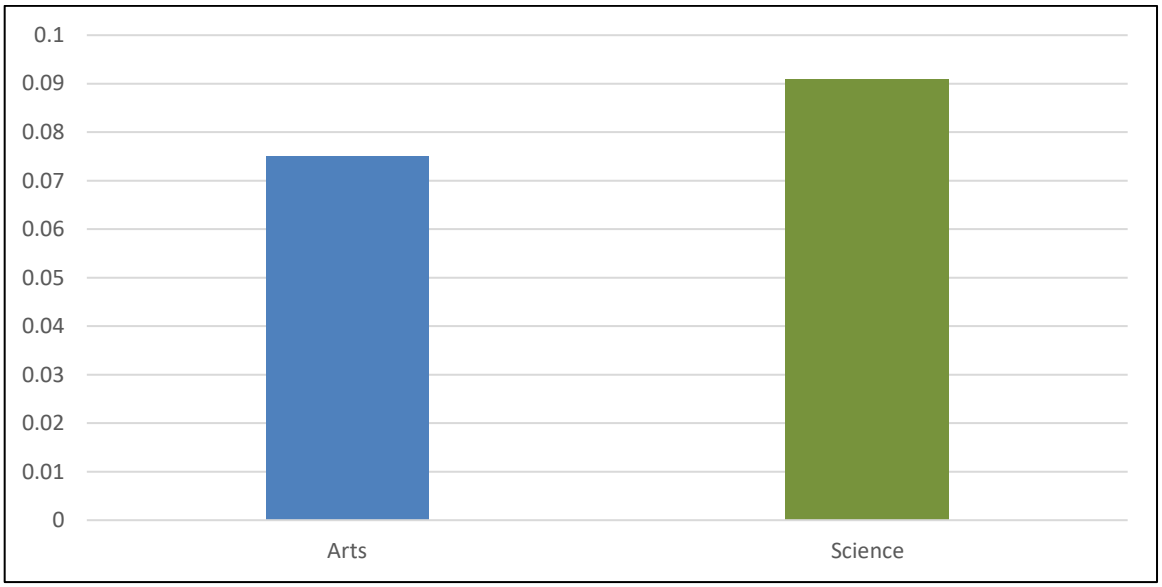
and emotional intelligence of secondary rural teachers. Regarding the urban secondary school teachers the calculated 'r' value is 0.037 which is positive and significant at 0.01 level of significance ($p<0.01$). The null hypothesis 14 "there exists no any significant relationship between teacher effectiveness and emotional intelligence of secondary school teachers in respect to their locality" is rejected. Thus, it can be interpreted that there exists a positive significant relationship between teacher effectiveness and emotional intelligence of secondary school teachers in respect to their locality. Emotional intelligence of the secondary school teachers have affected positively on their effectiveness of both the rural and urban secondary school teachers of Sonitpur district of Assam. The reason might be that the highly emotionally intelligent teachers are able to control their own emotions and those of their students, regardless of their location, making the learning environment more effective. High emotional intelligence teachers are better able to accommodate diverse institutional settings-rural (tend to be under-resourced) or urban (tend to be over-extended). Emotional intelligence facilitates intrinsic motivation and the capacity to remain concentrated, organized and goal oriented which can improve the teaching performance of a teacher. Generally, it is seen that emotional intelligence improves the interpersonal skills, enabling teachers to communicate effectively and compassionately with students, parents and colleagues, which enhances their overall performance regardless of their location.

4.2.5.1.3. Ho:15: There exists no any significant relationship between teacher effectiveness and emotional intelligence of secondary school teachers in respect to their stream.

Table 4.39: *Co-relation between Teacher Effectiveness and Emotional Intelligence in respect to their Stream.*

Variables		Stream	'r' value	df	Sig./ Not sig.
Teacher Effectiveness	Emotional Intelligence	Arts	0.075	209	Sig. at 0.01 level
		Science	0.091	100	Sig. at 0.01 level

Figure: 4.27: Showing Co-relation between Teacher Effectiveness and Emotional Intelligence in respect to their Stream.



It is found from the above table that the calculated 'r' value for Arts secondary school teachers is 0.075 which is positive and significant at 0.01 level of significance ($p<0.01$). Regarding the Science secondary school teachers the calculated 'r' value is 0.091 which is positive and significant at 0.01 level of significance ($p<0.01$). Hence, the null hypothesis 15 "there exists no any significant relationship between teacher effectiveness and emotional intelligence of secondary school teachers in respect to their stream" is also rejected. Thus, it can be interpreted that there exists a positive and significant relationship between teacher effectiveness and emotional intelligence of both arts and science secondary school teachers of Sonitpur district of Assam. The emotional intelligence of both arts and science secondary school teachers have a positive effect regarding their effectiveness. The reason might be that the teachers from both the background are able to build an effective staff relationship. With the help of professional collaboration they are able to recognize the students' needs and emotional states and establish more effective teacher-student relationships, which further boosts learning outcomes. They are able to adapt teaching to motivate and engage diverse learners. In both in arts and science subjects where creativity or analytical thinking is called for, become more stressful. But the highly emotional intelligence of the secondary school teachers of both the discipline are able to handle stress, remain calm in pressure situations and able to take more reflective and balanced decisions.

4.2.6. Analysis and Interpretation of the Objective No 6

The sixth objective of the study is to study the relationship between Teaching Aptitude and Teacher Effectiveness of Secondary School Teachers in respect to their Gender, Locality and Stream. For the present objective the necessary data has been collected with the help of the standardized Teaching Aptitude Test (TAT-GR) (1971) developed by Dr. S. C. Gakhar Dr. Rajnish and the Teacher Effectiveness Scale developed by the researcher.

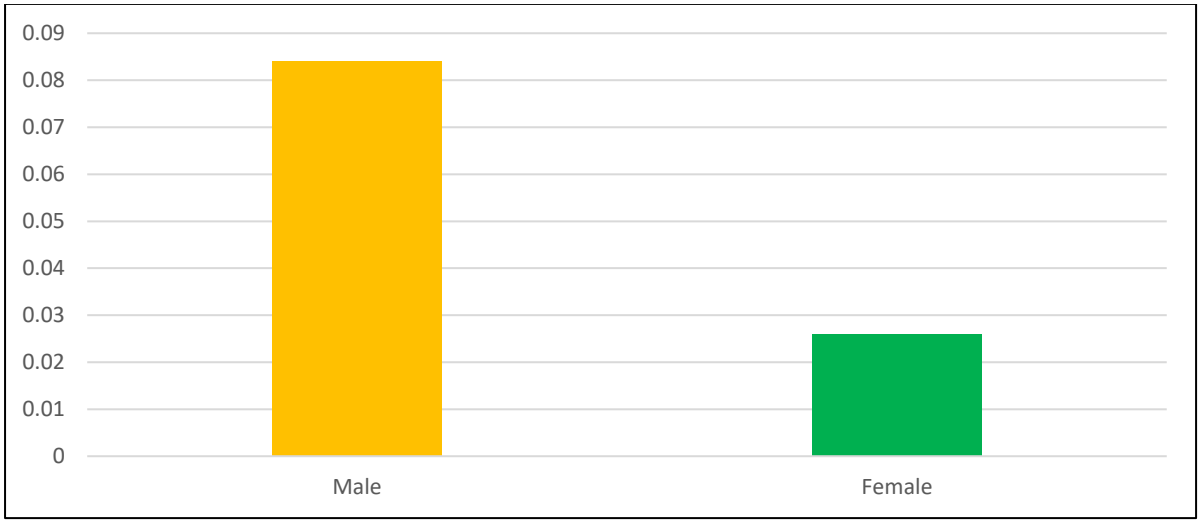
4.2.6.1. Hypotheses related to Objective No 6

4.2.6.1.1. Ho:16: There exists no any significant relationship between teacher effectiveness and teaching aptitude of secondary school teachers in respect to their gender.

Table 4.40: *Co-relation between Teacher Effectiveness and Teaching Aptitude in respect to their Gender.*

Variables		Gender	'r' value	df	Sig./ Not sig.
Teacher Effectiveness	Teaching Aptitude	Male	0.084	149	Sig. at 0.01 level
		Female	0.026	160	Sig. at 0.01 level

Figure: 4.28: Showing Co-relation between Teacher Effectiveness and Teaching Aptitude in respect to their Gender.



It is found from the above table 4.40 that the calculated 'r' value for male secondary school teachers is 0.084 which is positive and significant at 0.01 level of significance

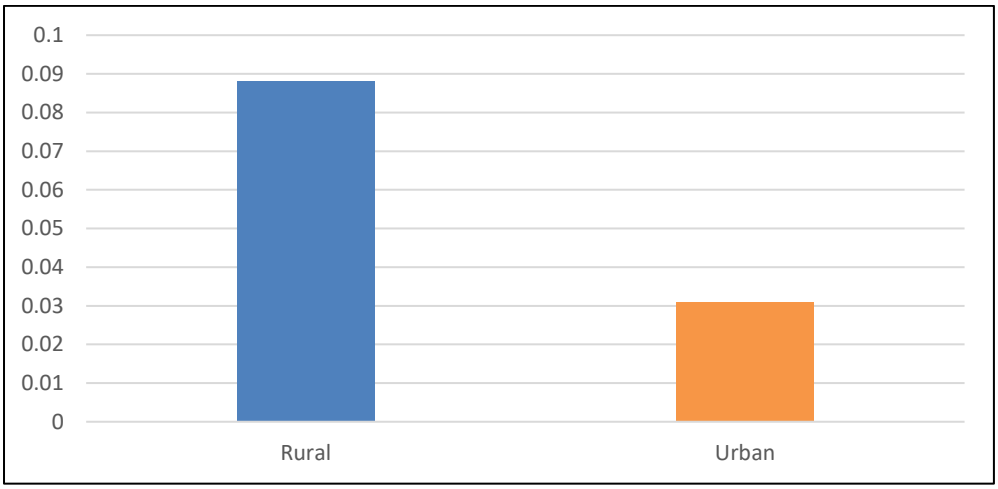
(p<0.01)and the female secondary school teachers the calculated 'r' value is 0.026 which is also positive and significant at 0.01 level (p<0.01). Hence, the null hypothesis 16 "there exists no any significant relationship between teacher effectiveness and teaching aptitude of secondary school teachers in respect to their gender" is rejected. From the above analysis, it can be interpreted that a significant positive relationship exists between teacher effectiveness and teaching aptitude in respect to the gender. The teaching aptitude of both the male and female teachers have positively affected the level of their effectiveness. Instructional aptitude encourages skills such as communication skills, subject matter knowledge, classroom management and flexibility which are not gender oriented but all lead to effectiveness. Highly aptitude teachers tend to formulate superior instructional plans and create a positive teaching and learning environment regardless of their gender. The highly aptitude teachers of both the gender are likely to be more confident and motivated, which results in improved preparation, interaction and presentation in classroom. These practices tend to lead to better student learning results and hence greater teacher effectiveness. The highly aptitude teachers tend to be proactive in seeking professional development, thereby enhancing their effectiveness. Higher aptitude level teachers regardless of their gender naturally follow student-centred and inclusive strategies, which improves learning outcomes of the students. As from the above result it is found that both male and female secondary school teachers exhibit the positive co-relation between the teaching aptitude and teacher effectiveness, it indicates that teaching aptitude is a strong predictor of teacher effectiveness.

4.2.6.1.2. Ho:17: There exists no any significant relationship between teacher effectiveness and teaching aptitude of secondary school teachers in respect to their locality.

Table 4.41: *Co-relation between Teacher Effectiveness and Teaching Aptitude in respect to their Locality.*

Variables		Locality	'r ' value	df	Sig./ Not sig.
Teacher Effectiveness	Teaching Aptitude	Rural	0.088	217	Sig. at 0.01 level
		Urban	0.031	92	Sig. at 0.01 level

Figure: 4.29: Showing Co-relation between Teacher Effectiveness and Teaching Aptitude in respect to their Locality.



It is found from the above table 4.41 that the calculated 'r' value for Rural secondary school teachers is 0.088 which is positive and significant at 0.01 ($p<0.01$) and the Urban secondary school teachers the calculated 'r' value is 0.031which is also positive and significant at 0.01 ($p<0.01$) level of significance. Hence, the null hypothesis 14 "there exists no any significant relationship between teacher effectiveness and teaching aptitude of secondary school teachers in respect to their locality is rejected. From the above table it can be interpreted that there is a positive and significant relationship exists between teacher effectiveness and teaching aptitude of the teachers of both the locale. The teaching aptitude of the secondary school teachers of both the locale have positively affected their effectiveness. The teachers with better teaching aptitude in rural areas where resources may be more limited can be more effective, because of their ability to work around the constraints. Thus too, in urban areas, those with high teaching aptitude can cope with the diligence of diverse and high-demand classrooms. The teachers with good teaching aptitude are more likely to be adaptive and responsive to criticism, which helps them refine their practices with time irrespective of the limitations experienced in rural or urban environments. One of the main reasons of positive and significant relationship between teacher effectiveness and teaching aptitude in respect to their locality is intrinsic motivation on the part of the secondary teachers of both locality as intrinsic motivation often go hand-in-hand with love for teaching. Teachers with high motivation goes an extra mile, apply innovative techniques and form healthy relationships with students, which ultimately leads to improved performance. Characteristics of teaching aptitude such as-patience, clarity and enthusiasm-are effective

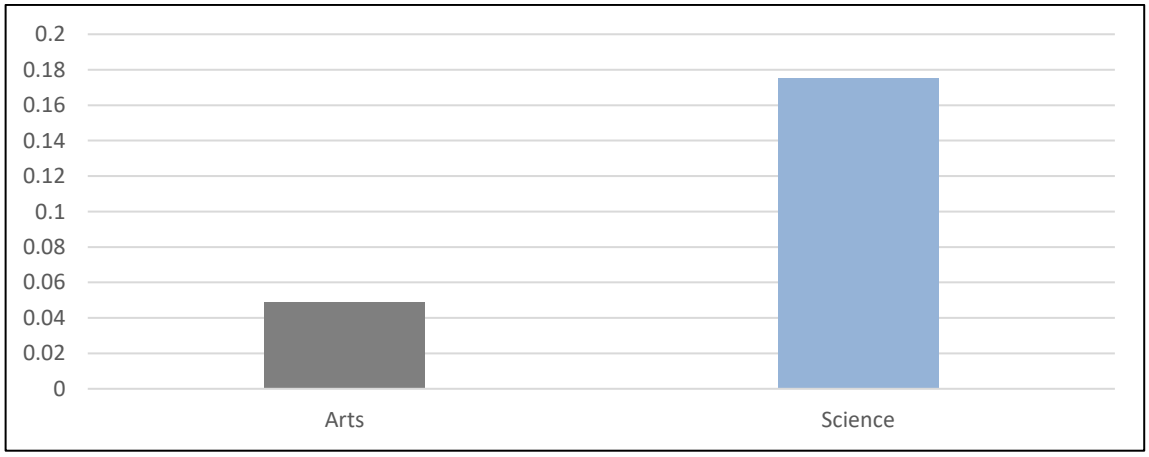
everywhere. Therefore, their influence on teacher effectiveness is robust in both rural and urban settings.

4.2.6.1.3. Ho:18: There exists no any significant relationship between teacher effectiveness and teaching aptitude of secondary school teachers in respect to their stream.

Table 4.42: *Co-relation between Teacher Effectiveness and Teaching Aptitude in respect to their Stream.*

Variables		Stream	'r' value	df	Sig./ Not sig.
Teacher Effectiveness	Teaching Aptitude	Arts	0.049	209	Sig. at 0.01 level
		Science	0.175	100	Sig. at 0.01 level

Figure: 4.30: Showing Co-relation between Teacher Effectiveness and Teaching Aptitude in respect to their Stream.



It is found from the above table 4.42 that the calculated 'r' value for Arts secondary school teachers is 0.049 which is positive and significant at 0.01 level ($p<0.01$). Regarding the Science secondary school teachers the calculated 'r' value is 0.175 which is positive and significant at 0.01 level ($p<0.01$). Hence, the null hypothesis 18 "there exists no any significant relationship between teacher effectiveness and teaching aptitude of secondary school teachers in respect to their stream" is rejected. Thus, it can be interpreted that the teaching aptitude of both the arts and science secondary school teachers have positively affected the level of their effectiveness. The reasons behind such kind of results state that aptitude indicates the capability of a teacher to learn and adapt. The arts and science streams need contemporary knowledge and adaptable approaches to

teaching, which highly aptitude teachers tend to demonstrate. Both arts and science secondary teachers tend to depend significantly on critical thinking and conceptual knowledge. Strong teaching aptitude facilitates greater integration of content knowledge with appropriate teaching strategies, ultimately resulting in increased teacher effectiveness. Aptitude for teaching encompasses skills like communication, thought clarity, and pedagogical skills in the subject. Highly aptitude teachers are likely to be effective as they can communicate content effectively. Highly aptitude teachers regardless of their stream tend to better manage classrooms and develop effective learning environments, both of which are the important indicators of teacher effectiveness. Professional commitment and motivation may be one of the main reasons of such a result. Strong aptitude teachers tend to possess stronger intrinsic motivation, professional commitment and desire for improvement, which directly improves the performance of a teacher.

4.2.7. Analysis and Interpretation of the Objective No 7

The seventh objective of the study is to study the relationship between Sense of Responsibility Feeling and Teacher Effectiveness of Secondary School Teachers in respect to their Gender, Locality and Stream. For the present objective the necessary data has been collected with the help of Responsibility Feeling Test and the Teacher Effectiveness Scale. Both the tools are developed by the researcher.

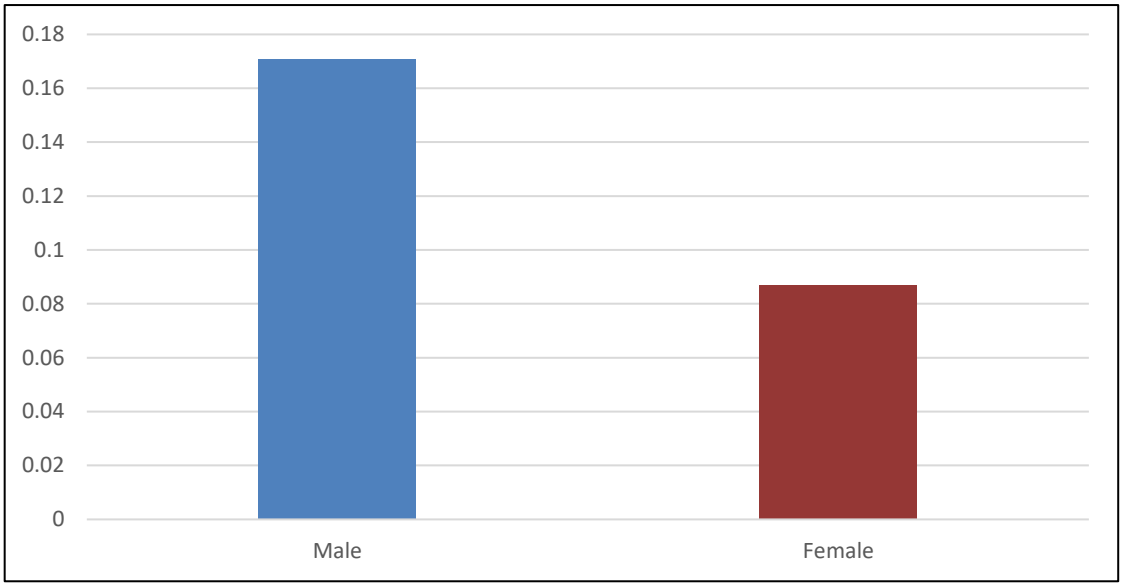
4.2.7.1. Hypotheses related to Objective No 7

4.2.7.1.1. Ho:19: There exists no any significant relationship between teacher effectiveness and sense of responsibility feeling of secondary school teachers in respect to their gender.

Table 4.43: *Co-relation between Teacher Effectiveness and sense of responsibility feeling in respect to their Gender.*

Variables		Gender	'r' value	df	Sig./ Not sig.
Teacher Effectiveness	Sense of responsibility feeling	Male	0.171	149	Sig. at 0.01 level
		Female	0.087	160	Sig. at 0.01 level

Figure: 4.31: Showing Co-relation between Teacher Effectiveness and sense of responsibility feeling in respect to their Gender.



It is found from the above table 4.43 that the calculated 'r' value for male secondary school teachers is 0.171 which is positive and significant on 0.01 level of significance ($p<0.01$) and the female secondary school teachers the calculated 'r' value is 0.087 which is also positive and significant at 0.01 level of significance. Hence, the null hypothesis 19 "there exists no any significant relationship between teacher effectiveness and sense of responsibility feeling of secondary school teachers in respect to their gender" is rejected. Thus, from the above data it can be interpreted that the sense of responsibility feeling of both the male and female secondary school teachers have positively affect their effectiveness. The reason of such a result might be that teachers who possess a high sense of responsibility tend to feel personally responsible for student learning and welfare regardless of gender. This internal motivation encourages them to prepare their activity more extensively which reflect and enhance their instructional strategies also. This tends to increase their classroom effectiveness naturally. It is seen generally that the responsible teachers are more committed to professional obligations. They usually spend more time in planning their professional development and work co-operatively with their colleagues and parents. This commitment ultimately leads greater teacher effectiveness. Responsible teachers are more likely to have good classroom discipline and organization, which results in less disruption in the classroom and create a more effective learning environment. This directly contributes to their actual and

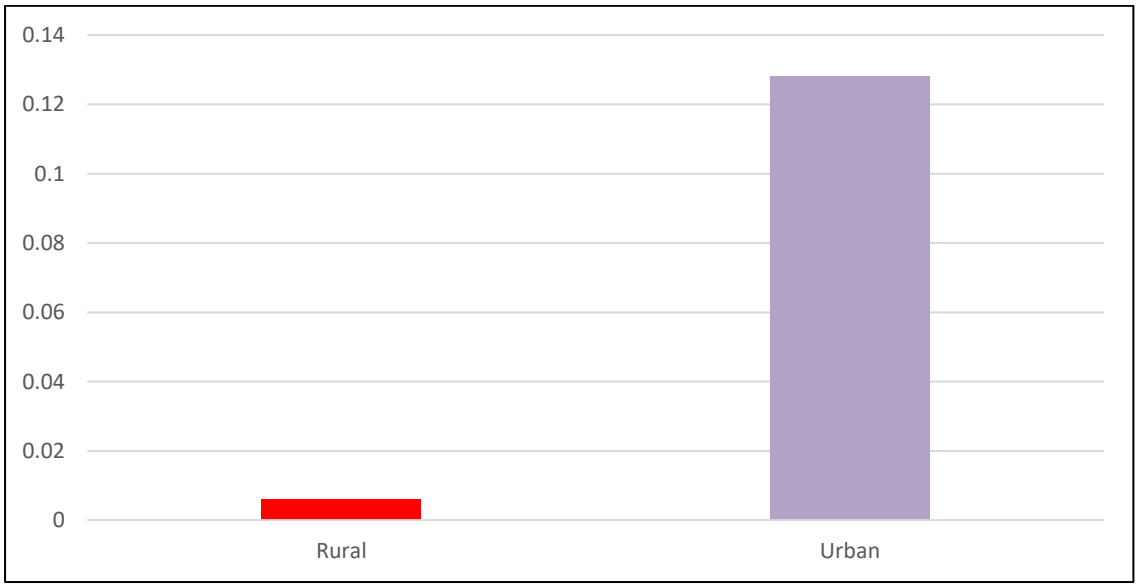
perceived effectiveness. Thus, this result indicates that sense of responsibility feeling is a cross-gender predictor of teacher effectiveness. This may be due to a common professional culture and the equal training and assessment standards between both the genders in the schools. Teachers with high sense of responsibility feeling tend to maintain high ethical standards, resulting in respectful and fair treatment of students and helps in become a role model which increases their reputation and effectiveness.

4.2.7.1.2. Ho:20: There exists no any significant relationship between teacher effectiveness and sense of responsibility feeling of secondary school teachers in respect to their locality.

Table 4.44: *Co-relation between Teacher Effectiveness and sense of responsibility feeling in respect to their Locality.*

Variables		Locality	'r' value	df	Sig./ Not sig.
Teacher Effectiveness	Sense of responsibility feeling	Rural	0.006	217	Sig. at 0.01 level
		Urban	0.128	92	Sig. at 0.01 level

Figure: 4.32: Showing Co-relation between Teacher Effectiveness and sense of responsibility feeling in respect to their Locality.



It is found from the above table 4.44 that the calculated 'r' value for Rural secondary school teachers is 0.006 which is positive and significant at 0.01 level ($p<0.01$) and the Urban secondary school teachers the calculated 'r' value is 0.128 which is also positive

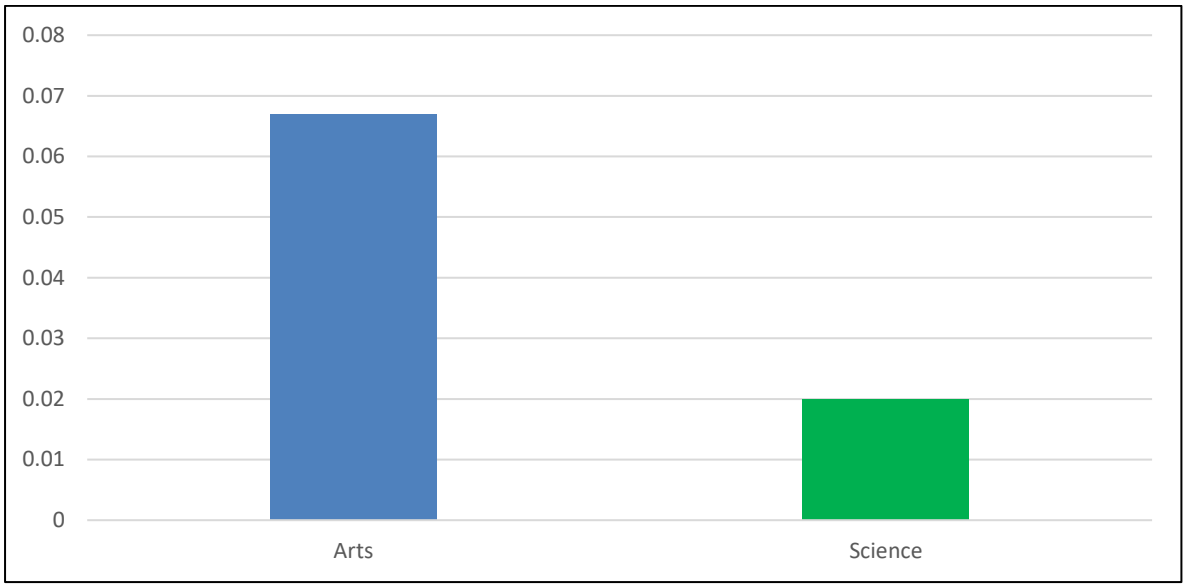
and significant at 0.01 level ($p<0.01$) of significance. Hence, the null hypothesis 20 "there exists no any significant relationship between teacher effectiveness and sense of responsibility feeling of secondary school teachers in respect to their locality" is rejected. From the above mentioned result it can be interpreted that the sense of responsibility feeling of the secondary school teachers of Sonitpur district from both the locale have positively affected their effectiveness. The reasons might be that the professional commitment on the part of the teachers to do betterment of student society. Teachers who take pride in the success of their students are more internally driven to design better lessons, adopt better teaching strategies according to the needs of the students and interact with them which leads them to become more effective. Teachers who consider their role as vital to students' development are more likely to take their responsibilities seriously, going out of their own way in instruction and classroom management. The responsible teachers irrespective of their location are always monitor student progress, give prompt feedback, and adapt their approaches to suit student needs, thus making them more responsive and effective. Thus, it can be said that a sense of responsibility typically indicates a teacher's professionalism, which might result in ongoing self-development, teaching innovation and greater in overall performance of a teacher regardless of their location.

4.2.7.1.3. Ho:21: There exists no any significant relationship between teacher effectiveness and sense of responsibility feeling of secondary school teachers in respect to their stream.

Table 4.45: *Co-relation between Teacher Effectiveness and Sense of Responsibility feeling in respect to their Stream.*

Variables		Stream	'r' value	df	Sig./ Not sig.
Teacher Effectiveness	Sense of Responsibility feeling	Arts	0.067	209	Sig. at 0.01 level
		Science	0.020	100	Sig. at 0.01 level

Figure: 4.33: Showing Co-relation between Teacher Effectiveness and Sense of Responsibility feeling in respect to their Stream.



It is found from the above table 4.45 that the calculated 'r' value for Arts secondary school teachers is 0.067 which is positive and significant at 0.01 level ($p<0.01$) and regarding the Science secondary school teachers the calculated 'r' value is 0.020 which is also positive and significant at 0.01 level ($p<0.01$). Hence, the null hypothesis 21 "there exists no any significant relationship between teacher effectiveness and sense of responsibility feeling of secondary school teachers in respect to their stream" gets rejected. From the above mentioned values it can be interpreted that there is a positive and significant relationship exists between the sense of responsibility feeling and teacher effectiveness of secondary level teachers of Sonitpur district in respect to their stream. The cause of a positive and significant correlation between teacher effectiveness and sense of responsibility among both arts and science secondary teachers can be attributed to a number of psychological, professional and organizational reasons. The feeling of responsibility is not domain-specific. The teachers of both the domains require planning, flexibility and student-focussed teaching. Thus, it can be said as cross-disciplinary applicability. The teachers with high responsibility regardless of their stream are likely to plan their lessons carefully by considering student needs and strive for ongoing improvement. This responsible mind set automatically translates into better teacher effectiveness. The responsible teachers make adjustments to their teaching strategies based on student feedback which helps to raises student participation and attainment in the teaching-learning process –important indicators of teacher effectiveness. High

responsibility often encompasses to setting own performance standards, tracking their own teaching practices, asking for feedback and responding to it. These actions improve teaching quality with time. Positive school climate always influence the teachers' performance which likely to exhibit greater responsibility and effectiveness.

In the present chapter, the researcher has discussed the results which are acquired from the application of the different statistical techniques and the data are presented in graphical and tabulated form. The interpretation are given here in a comprehensive manner. But based on the objectives and hypotheses, the researcher analysed the data which helps in arriving at specific results. Those results are discussed in detailed in the next chapter.