CHAPTER – IV
RESULTS AND DISCUSSION
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The previous chapter represents the complete methodology of this research. In this chapter researcher has examined the differences between tribal and non-tribal girls of Nandurabar district in terms of anxiety, adjustment and achievement motivation as well as he has been presented a detail account of the results obtained in the research, along with the employed data analysis techniques. The primary goal of data analysis is to determine whether our observations support a claim about behaviour (Abelson, 1995). There are three distinct, but related stages of data analysis. In this chapter researcher used the three stage approach to data analysis. (Shaughnessy, 2005)

1) **An exploratory (investigative) stage**- In this stage researcher try to get to know the data, inspect the data carefully, get a feel for it, checked and remove errors and have assured that the data makes sense.

2) **A summary stage**- Summarizing the data in meaningful way.

3) **Confirmation stage**- Confirming what the data tells us. Does the data confirm our tentative claim or hypothesis? And try to learn more about trends and patterns among the observations.

4.1 **Data Screening and Assessing Normality**:

Researcher has been prepared a computer data file from the master chart, for this process extreme care was taken with respect to accuracy of the input of data. In the screening process there were not a single outlier was found. Hence, there is no question of the influence of the outlier on the data. The data file was completely checked three times till the errorless trials. Thus, the data in each group were carefully scrutinized by employing normality tests. The present sample consisted of four groups:
1- Rural tribal girls
2- Rural non-tribal girls
3- Urban tribal girls
4- Urban non-tribal girls

Since the major analyses of the present data involved the 2x2 factorial designs. Type of girls and area of living two independent variables, varied at two levels. Thus the data in each group were carefully scrutinized by employing frequency distributions, descriptive statistics and plots. As such the analyses, reported further, are based on the data file corrected for the extreme observations of the outlier cases. In order to find out the differences between the type of girls, and area of living a 2X2 analysis of variance (ANOVA) was carried out treating type of girls and area of living independent variables and the anxiety, adjustment and achievement motivation are the dependent variables. In this research researcher analyzed the data in following manner.

Table No.4.1 : Shows the Sampling Distribution According to 2X2 Factorial Design

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Value Label for each level</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Girls</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.00 Tribal</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>2.00 Non-tribal</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.00 Rural</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>2.00 Urban</td>
<td>200</td>
<td></td>
</tr>
</tbody>
</table>

For analyzing data in the normative pattern it is necessary to find out the relationship between two groups, hence, researcher here analyzed correlation with the help of Pearson’s Product Moment method for analyzing the relationship between two groups. Following table reveals the relationship between various variables.
Table No. 2: Shows the Relationship Among Studying Variables.

<table>
<thead>
<tr>
<th></th>
<th>Type of Girls</th>
<th>Area</th>
<th>Anxiety</th>
<th>Adjustment</th>
<th>Achievement Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Girls</strong></td>
<td>1</td>
<td>.000</td>
<td>-.077</td>
<td>-.086</td>
<td>.170(**)</td>
</tr>
<tr>
<td><strong>Area</strong></td>
<td></td>
<td>1</td>
<td>.108(*)</td>
<td>-.032</td>
<td>.014</td>
</tr>
<tr>
<td><strong>Anxiety</strong></td>
<td></td>
<td></td>
<td>1</td>
<td>.511(**)</td>
<td>-.308(**)</td>
</tr>
<tr>
<td><strong>Adjustment</strong></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>-.293(**)</td>
</tr>
<tr>
<td><strong>Achievement Motivation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

The above table reveals that there is a relationship between type of girls, i.e. tribal and non-tribal and achievement motivation. This is a positive relationship and interprets that when girls are tribal or non-tribal there is a relationship between achievement motivations.

As well as area and anxiety and anxiety and adjustment are the correlated variables. This relationship also positive in nature and interprets that when one variable is increased other also increased.

But the relationship between anxiety and achievement motivation as well as adjustment and achievement motivation are the associated factors. But there is negative correlation between them and interprets that when one variable increased another decreased.

The determinant of this matrix is .619 which is substantially less than unity.

Following is the Bartlett’s test which is indicating that the obtained correlation matrix significantly departed from the identity matrix.
The above table shows the value of 190.466 (df = 6, P < 0.01). This test is significant and reveals the nature of relationship between variables and these related variables are eligible to analyze the future process. This test is useful for the justifying the application of MANOVA. There are other assumption also justifying the application of MANOVA for the present data, they are…

1- **Cell sizes** - it is necessary to have more subjects in each cell than the number of dependent variables. When cell size is greater than 30, assumptions of normality and equal variances are of little concern. If cell sizes are small and unequal, then assumption testing becomes more critical. Although equal cell size is ideal, it is not essential. However, ratios of smallest to largest size greater than 1: 1.5 may cause problems. In our study one cell size is 100 and not violates the first assumption.

2- **Univariate and multivariate normality** - MANOVA is sensitive to violations of univariate and multivariate normality. Multivariate outliers which influence normality can be identified using Mahalanobis distance. Mahalanobis distance is evaluated as chi-square with degrees of freedom equal to the number of dependent variables. The critical chi-square levels can be found in any critical values of chi-square table. An alpha level of .001 is recommended. In the present study the Mahalanobis distance value is significant on the basic criteria and fulfills the assumption.

3- **Linearity** - linear relationships among all pairs of dependent variables must be assumed.
4- **Homogeneity of regression** - this assumption is related to step down analysis and must be tested if step-down analysis is required. It is assumed that the relationship between covariates and dependent variables in one group is the same as the relationship in other groups.

5- **Homogeneity of variance-covariance matrices** - this assumption is similar to the assumption of homogeneity of variance for individual dependent variables. In multivariate designs, this assumption is more complex. At the univariate level, Cochrans C and Bartlett-Box F tests can be used.

6- **Multicollinearity and singularity** - when correlations among dependent variables are high, problems of multicollinearity and singularity exist. When the determinant of the within-cell correlation matrix is near zero (<.0001) or when the log (determinant) is less than -9.21034, singularity or multicollinearity may be present. But our value is so far away and there is no question of the present assumption.

All the requirements of the MANOVA are fulfill but we have here three separate variables hence researcher has been decided to use the Two Way ANOVA for the expected results. The above analysis indicated that the assumptions underlying ANOVA are met quite satisfactorily in the present analysis, thus justifying the presentation of ANOVA results below, before that he presents here the descriptive analysis of each variable.
The above graph gives us an idea about the nature of the whole data of the variable anxiety. The mean score of the present data is 37.5 and standard deviation of 14.44 for the sample size 400. This normal nature of the data is useful for the application of inferential statistics. All these analyzed figures are as shown in following table.
In the above table shows a descriptive statistics of whole sample (N=400) for the variable anxiety. Mean is 37.53 which is close to the trimmed mean 37.56. The meaning of the trimmed mean is the mean of the distribution with the top 5% and the bottom 5% of scores removed. The purpose of this trimming is to obtain a measure of central tendency that is unaffected by extreme values (outliers) (Sheridan, J Coakes, 2006). Median (39.00) is greater than the mean (37.53) and it interprets that the distribution of scores is somewhat negatively skewed. Variance is 208.47, SD is 14.44 and the range between highest and lowest score is 60. The value of kurtosis (-.846) is greater than 0.263, the distribution is said to be platykurtic; means distribution of scores is ‘flattened’. (Julie Pallant, 2001).
Table No. 4.4: Shows the Cell-Wise Descriptive Analysis of the Variable Anxiety

<table>
<thead>
<tr>
<th>Type of Girls</th>
<th>Area</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribal</td>
<td>Rural</td>
<td>38.66</td>
<td>13.91</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>38.64</td>
<td>13.73</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>38.65</td>
<td>13.79</td>
<td>200</td>
</tr>
<tr>
<td>Non-tribal</td>
<td>Rural</td>
<td>33.28</td>
<td>14.17</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>39.55</td>
<td>15.24</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>36.41</td>
<td>15.01</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td>Rural</td>
<td>35.97</td>
<td>14.26</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>39.09</td>
<td>14.48</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>37.53</td>
<td>14.44</td>
<td>400</td>
</tr>
</tbody>
</table>

The above table provides the mean scores, standard deviations and N for each subgroup of the two levels of each independent variable and here anxiety is treated as dependent variable. Inspecting the pattern of these values give us an indication of the impact of Independent Variable.
A two-way between groups analysis of variance was conducted to explore the impact of type of girls (tribal and non-tribal) and area of living (rural and urban) on anxiety. Here anxiety means acquired (learned) fear, for the moment we will employ the terms anxiety and fear interchangeably, although they are often used in somewhat different ways, examples of anxiety are all around us; the student who is anxiety about taking examinations. The girls who face various anxiety related situations in their life.

Before commenting on these results, a brief remark on the effect sizes needs to be made. In the context of Cohen’s d, Cohen suggested that the d
value of 0.20 be regarded as small, the d value of 0.50 be regarded as medium, and the d value of 0.80 be regarded as large effect size (Shaughnessy & Zechmeister, 1997). Cohen, in 1988 (cited in Cooper, 1998, p. 130), provided corresponding r (correlation) equivalents. Accordingly, the $r^2$ of 0.010 would be a small effect size, the $r^2$ of 0.059 would be a medium effect size, and the $r^2$ of 0.138 would be a large effect size. In 2x2 ANOVA, since all the univariate effects are based on df = 1, the present researcher has decided to regard an eta square of 0.010 as small, the eta square of 0.059 as medium, and the eta square of 0.138 as the large effect size. Eta square multiplied by 100 provides another familiar measure of effect size, the PV (percent of variance explained). While interpreting the significant effects, the effect sizes are interpreted in this light. Effect sizes (eta squares) are not reported for the insignificant effects.

In the above table the main effect of first independent variable i.e. type of girls (tribal and non-tribal), the F value (1,396) is 2.451 which is not significant because this value is much less than table values. This means that there is no significant difference between tribal and non-tribal girls in scores of anxiety. The eta square, the measure of effect size, associated with the main effect of type of girls is not mention here because of non-significant result. The results of the presents study consistent with the findings for Dutta Roy,D.(2010) Interaction between mathematics preference and trait anxiety in mathematics achievement was studied through Tucky's 2 X 2 ANOVA with 126 eight grade girls. Trait anxiety was measured by Spielberger's trait anxiety inventory. Results received significant interaction effect of both variables on mathematics achievement. To control the effect of trait anxiety on mathematics achievement, ANCOVA was used. After ANCOVA, little increase in mathematics score for low mathematics preference group and little decrease in mathematics score for high and moderate mathematics preference group were found. Sud and Sujata (2006) conducted a study on academic performance in relation to
self-handicapping test anxiety and study habits of high school children. The sample consisted of 200 children from government senior secondary school of Shimla city. Self-handicapping questionnaire (Sujata, 2003) and Palsane’s study habit inventory were administered to assess children’s self-handicappness and study habits respectively. To assess the anxiety level, Sud and Sud’s test anxiety inventory was administered. Findings showed that self-handicapping and anxiety have adverse influence on academic performance of school.

Mackenzie (1994) conducted an investigation about examination preparation, anxiety and examination performance in a group of adult students. Findings showed extreme levels of trait anxiety associated with lower final examination performance. Test anxiety was significantly correlated with trait anxiety but not with exam performance.

The main effect of second independent variable i.e. area of living (rural and urban), the F value (1,396) is 4.791 which is significant on 0.05 level. Since the table values are 0.05= 3.86 and 0.01= 6.70. The obtained F value is in between the table values. Hence it is significant on 0.05 level. This means that there is difference in scores of anxiety between rural and urban girls. The eta square, the measure of effect size, associated with the main effect of area of living is .012, indicates small effect and meaning thereby that only 1.2% of the variance is explained in dependent variable anxiety. And concludes that urban girls experiences more anxiety that rural girls. The results of the presents study consistent with the findings for The potential psychological effects of puberty on rural and urban adolescents from a cross-cultural perspective are numerous. The adolescents from the rural perspectives are under intense pressure to act like adults. Childhood is short for them. The danger here is that the stages of childhood development cognitive, physical and emotional- have gotten out of synchronization and have become "developmental compression". Culturally, at puberty, in most African traditional societies, the adolescent must take a shift of attachment,
to some degree; away from his or her natal family toward the family of procreation he or she will establish in order to inculcate adult values as well as the formation of societal attachment with one's age-group. This is an initiation process of a sort fraught with psychological fear and anxiety (Petersen, 1987).

The interaction effect between type of girls and area of living is significant on 0.05 level, F (1,396) = 4.853 which is also significant on 0.05 level. The eta square value is 0.012 indicates small effect. This means there is a significant interaction between two pairs in terms of anxiety.

According to above analysis we interpret that there is no significant difference between tribal and non-tribal girls in terms of their anxiety. Hence, our first hypothesis ‘Anxiety will be high among the tribal girls than non-tribal girls’ rejected here. The results of the present study consistent with the findings for (Tiwari 2004) that frustration, anxiety, gender; religious affiliation and socio-economic status affect the level of competence and its competencies in a decided manner. The mean score of tribal and nontribal boys and girls on frustration do not show any significant difference.

As well as area of living make an impact on anxiety and rural and urban girls showing difference in anxiety. As per descriptive statistics it is found that rural girls mean score is low (Mean = 35.97, SD = 14.26) than urban girls mean score (Mean = 39.09, SD = 14.48) of anxiety. Here with reference to manual of anxiety test it is indicated that high score indicates high level anxiety and we concluded that urban girls are having more anxiety than rural girls. (Tiwari 2004) that frustration, anxiety, gender; religious affiliation and socio-economic status affect the level of competence and its competencies in a decided manner. The mean score of tribal and nontribal boys and girls on frustration do not show any significant difference.
But researcher interested in even keen analysis he want to search out
the difference between tribal rural and tribal girls anxiety level. So he
analyzes it by the Students t test and found non significant result by the
following analysis:

**Table No. 4.6: Showing the Difference Between Tribal Rural and Urban
Girl’s Anxiety.**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribal rural girls</td>
<td>100</td>
<td>38.66</td>
<td>13.91</td>
<td>0.01</td>
<td>NS</td>
</tr>
<tr>
<td>Tribal urban girls</td>
<td>100</td>
<td>38.64</td>
<td>13.73</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
t = \frac{{\text{Mean 1} - \text{Mean 2}}}{{\text{SED}}}
\]

\[
\therefore \text{SED} = \sqrt{\frac{{(\mu_1)^2 + (\mu_2)^2}}{{N + N}}}
\]

\[
= \sqrt{\frac{{(13.91)^2 + (13.73)^2}}{{100 + 100}}}
\]

\[
= \sqrt{\frac{{193.49 + 188.51}}{{100 + 100}}}
\]

\[
= \sqrt{1.83 + 1.89}
\]

\[
= \sqrt{3.72}
\]

\[
= 1.95
\]

\[
t = \frac{{38.66 - 38.64}}{{1.95}}
\]

\[
= 0.02
\]

\[
t = 1.95
\]

\[
t = 0.01
\]

The above t value is not significant at any level and hence we
concluded that there is no significant difference between tribal rural and
urban girls in terms of anxiety and hence, we reject our second hypothesis as ‘Anxiety will be high among the rural tribal girls than urban tribal girls’. The results of the presents study consistent with the findings for (Barinder M.A. 1985). Sex was significantly related to anxiety, both general and test anxiety.

2. Girls exhibited more general anxiety, as well as test anxiety, than the boys.
3. There was a positive relationship between general anxiety and test anxiety.
4. Socioeconomic status did not play any role in the case of boys, neither on their general anxiety nor on their test anxiety. There was significant difference in general anxiety of very high socioeconomic status girls and high socioeconomic status girls and also between very high socioeconomic status girls and average socioeconomic status girls. Test anxiety was also seen to be affected by socioeconomic status in case of girls (only in case of very high socioeconomic status and average socioeconomic status). The lower the socioeconomic status of girls, the higher was their test anxiety.
5. The interactive effects of socioeconomic status and extraversion were again not found in the case of boys, neither in general anxiety nor in test anxiety. In case of girls, the interactive effect was observed at average socioeconomic status level. There was no significant difference between very high socioeconomic status extravert girls and very high socioeconomic status introvert girls and between high socio-economic status extravert girls and high socioeconomic status introvert girls.
6. There was a significant difference between average socioeconomic status extravert girls and average socioeconomic status introvert girls on general anxiety. On test anxiety, there was no significant difference between high socioeconomic status extravert girls and very high socioeconomic status introvert girls.
7. There was a significant relationship between general anxiety and test anxiety of boys.
8. There was a significant relationship between general anxiety and test anxiety of girls.
As well as researcher try to search another keen difference between non-tribal rural and non-tribal urban girls. So he analyzed it as above manner.

**Table No. 4.7: Showing the Difference Between Non-Tribal Rural and Non-Tribal Urban Girl’s Anxiety.**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-tribal rural girls</td>
<td>100</td>
<td>33.28</td>
<td>14.17</td>
<td>3.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Non-tribal urban girls</td>
<td>100</td>
<td>39.55</td>
<td>15.24</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
t = \frac{\text{Mean 1} - \text{Mean 2}}{\text{SED}}
\]

\[
\text{SED} = \sqrt{\frac{(\sigma_1)^2 + (\sigma_2)^2}{N_1 + N_2}}
\]

\[
= \sqrt{\frac{(14.17)^2 + (15.24)^2}{100 + 100}}
\]

\[
= \sqrt{\frac{200.79 + 232.26}{100 + 100}}
\]

\[
= \sqrt{\frac{433.05}{200}}
\]

\[
= \sqrt{2.17}
\]

\[
= 1.48
\]

\[
= 2.08
\]

\[
t = \frac{6.27}{2.08}
\]

\[
t = 3.01
\]
The above t value is significant at 0.01 level and we concluded that there is significant difference between non-tribal rural and non-tribal urban girls in terms of their anxiety and hence, we accept our third hypothesis as ‘Anxiety will be high among the urban non-tribal girls than rural non-tribal girls’.

This difference is displayed in following graph.

**Graph 4.2: Shows Difference Between Non-tribal Rural girls and Non-tribal Urban Girls in Terms of Anxiety.**
The above graph gives us an idea about the nature of the whole data of the variable adjustment. The mean score of the present data is 165.4 and standard deviation of 21.73 for the sample size 400. This normal nature of the data is useful for the application of inferential statistics. All these analyzed figures are as shown in following table.
In the above table shows a descriptive statistics of whole sample (N=400) for the variable adjustment. Mean is 165.36 which are close to the trimmed mean 165.43. The meaning of the trimmed mean is already explained in previous section. Median (164.00) is smaller than the mean (165.36) and it interprets that the distribution of scores is somewhat positively skewed. Variance is 472.35, SD is 21.73 and the range between highest and lowest score is 106. The value of kurtosis (-.293) is slightly greater than 0.263, the distribution is said to be platykurtic; means distribution of scores is ‘flattened’. (Julie Pallant, 2001).
Table No. 4.9: Shows the Cell-Wise Descriptive Analysis of the Variable Adjustment.

<table>
<thead>
<tr>
<th>Type of Girls</th>
<th>Area</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribal</td>
<td>Rural</td>
<td>167.00</td>
<td>21.73</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>167.44</td>
<td>20.89</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>167.22</td>
<td>21.26</td>
<td>200</td>
</tr>
<tr>
<td>Non-tribal</td>
<td>Rural</td>
<td>165.11</td>
<td>21.97</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>161.88</td>
<td>22.26</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>163.50</td>
<td>22.09</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td>Rural</td>
<td>166.06</td>
<td>21.81</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>164.66</td>
<td>21.68</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>165.36</td>
<td>21.73</td>
<td>400</td>
</tr>
</tbody>
</table>

The above table provides the mean scores, standard deviations and N for each subgroup of the two levels of each independent variable and here adjustment is treated as dependent variable. Inspecting the pattern of these values give us an indication of the impact of Independent Variable.
Table 4.10: Showing Summary of ANOVA of the Dependent Variable Adjustment.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE OF GIRLS</td>
<td>1387.562</td>
<td>1</td>
<td>1387.56</td>
<td>2.946</td>
<td>NS</td>
<td>--</td>
</tr>
<tr>
<td>AREA OF LIVING</td>
<td>194.602</td>
<td>1</td>
<td>194.602</td>
<td>.413</td>
<td>NS</td>
<td>--</td>
</tr>
<tr>
<td>TYPE * AREA</td>
<td>336.723</td>
<td>1</td>
<td>336.723</td>
<td>.715</td>
<td>NS</td>
<td>--</td>
</tr>
<tr>
<td>Error</td>
<td>186546.990</td>
<td>396</td>
<td>471.078</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>11125707.0</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>188465.877</td>
<td>399</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significant Level, 0.05 = 3.86  0.01 = 6.70
Eta Squared effect size, .01 = small  .06 = moderate  .14 = large effect (Cohen, 1988)

A two-way between groups analysis of variance was conducted to explore the impact of type of girls (tribal and non-tribal) and area of living (rural and urban) on adjustment. Here adjustment is the process by which a living organism maintains a balance between its needs and the circumstances that influence the satisfaction of these needs.

Effect sizes explanation explained in previous analysis and avoid the duplication.

In the above table the main effect of first independent variable i.e. type of girls (tribal and non-tribal), the F value (1,396) is 2.946 which is not significant because this value is much less than table values. This means
that there is no significant difference between tribal and non-tribal girls in scores of adjustment. The eta square, the measure of effect size, associated with the main effect of type of girls is not mention here because of non-significant result.

The main effect of second independent variable i.e. area of living (rural and urban), the F value (1,396) is 0.413 which is not significant because this value is much less than table values. This means that there is no significant difference between rural and urban girls in scores of adjustment. The eta square, the measure of effect size, associated with the main effect of type of girls is not mention here because of non-significant result.

The interaction effect between type of girls and area of living is also not significant.

According to above analysis we interpret that there is no significant difference between tribal and non-tribal girls in terms of their adjustment.

Hence, our fourth hypothesis ‘Adjustment level will be poor among the tribal girls than non-tribal girls’ rejected here. The results of the presents study consistent with the findings for Thousands of tribal women and girls migrate from their hinterlands in tribal areas to urban city centers mainly in search of employment. They are new to the city life style and environment and find it difficult to make adjustment with the changed situation and environment.

As well as area of living don’t make any effect on adjustment of rural and urban girls.

But here also researcher interested in even keen analysis he want to search out the difference between tribal rural and tribal girls adjustment level. So he analyzes it by the Students t test and found non significant result by the following analysis:
Table No. 4.11: Showing the Difference Between Tribal Rural and Urban Girl’s Adjustment.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribal rural girls</td>
<td>100</td>
<td>167.00</td>
<td>21.73</td>
<td>0.15</td>
<td>NS</td>
</tr>
<tr>
<td>Tribal urban girls</td>
<td>100</td>
<td>167.44</td>
<td>20.89</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
t = \frac{\text{Mean 1} - \text{Mean 2}}{\text{SED}}
\]

\[
\therefore \quad \text{SED} = \sqrt{\frac{(\text{SD}_1)^2 + (\text{SD}_2)^2}{N_1 + N_2}}
\]

\[
= \sqrt{\frac{21.73^2 + 20.89^2}{100 + 100}}
\]

\[
= \sqrt{\frac{472.19 + 436.89}{100 + 100}}
\]

\[
= \sqrt{9.09}
\]

\[
= 3.01
\]

\[
t = \frac{167.00 - 167.44}{3.01}
\]

\[
t = \frac{0.44}{3.01}
\]

\[
t = 0.145
\]

The above t value is not significant at any level and hence we concluded that there is no significant difference between tribal rural and urban girls in terms of their adjustment and hence, we reject our fifth hypothesis as ‘Adjustment level will be poor among the rural tribal girls than urban tribal girls’. The results of the presents study consistent with the findings for Hima (1995) found that boys and girls in the secondary schools of Kerala differ in their personal adjustment. Girls have better personal adjustment than boys. Rural pupils have more problems than the urban as
well as researcher try to search another keen difference between non-tribal rural and non-tribal urban girls. So he analyzed it as above manner.

Table No. 4.12: Showing the Difference Between Non-Tribal Rural and Non-Tribal Urban Girl’s Adjustment

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-tribal rural girls</td>
<td>100</td>
<td>165.11</td>
<td>21.97</td>
<td>1.03</td>
<td>NS</td>
</tr>
<tr>
<td>Non-tribal urban girls</td>
<td>100</td>
<td>161.88</td>
<td>22.26</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
\begin{align*}
\text{t} &= \frac{\text{Mean 1} - \text{Mean 2}}{\text{SED}} \\
\text{SED} &= \sqrt{\frac{(\sigma 1)^2 + (\sigma 2)^2}{N + N}} \\
&= \sqrt{\frac{(21.97)^2 + (22.26)^2}{100 + 100}} \\
&= \sqrt{\frac{482.68 + 495.51}{100 + 100}} \\
&= \sqrt{4.98} = 4.98 \\
&= 4.98 \\
&= 3.13 \\
\text{t} &= \frac{165.11 - 161.88}{3.13} \\
&= \frac{3.23}{3.13} \\
&= 1.03
\end{align*}
\]

The above t value is not significant and we concluded that there is no significant difference between non-tribal rural and non-tribal urban girls in terms of their adjustment and hence, we reject our sixth hypothesis as ‘Adjustment level will be good among the urban non-tribal girls than rural
non-tribal girls’. (Srivastava, 1997), and the problems in social adjustment faced by many tribal boys and girls who are often discriminated against by upper-caste children.

**Graph No. 4.4: Histogram Shows the Normality of the Variable Achievement Motivation.**

The above graph gives us an idea about the nature of the whole data of the variable achievement motivation. The mean score of the present data is 141.6 and standard deviation of 23.07 for the sample size 400. This normal nature of the data is useful for the application of inferential statistics. All these analyzed figures are as shown in following table.
Table No. 4.13: Shows the Descriptive Analysis of the Variable Achievement Motivation.

<table>
<thead>
<tr>
<th>Achievement Motivation</th>
<th>Descriptive</th>
<th>Statisti</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>141.57</td>
<td>1.15</td>
<td></td>
</tr>
<tr>
<td>5% Trimmed Mean</td>
<td>141.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>142.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>532.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>23.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>85.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>186.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>101.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>-.274</td>
<td>.122</td>
<td></td>
</tr>
<tr>
<td>Kurtosis</td>
<td>.696</td>
<td>.243</td>
<td></td>
</tr>
</tbody>
</table>

In the above table shows a descriptive statistics of whole sample (N=400) for the variable achievement motivation. Mean is 141.57 which is close to the trimmed mean 141.99. The meaning of the trimmed mean is already explained in previous section. Median (142.00) is greater than the mean (141.57) and it interprets that the distribution of scores is somewhat negatively skewed. Variance is 532.02, SD is 23.07 and the range between highest and lowest score is 101. The value of kurtosis (.696) is greater than 0.263, the distribution is said to be platykurtic; means distribution of scores is ‘flattened’. (Julie Pallant, 2001).
Table No. 4.14: Shows the Cell-Wise Descriptive Analysis of the Variable Achievement Motivation.

<table>
<thead>
<tr>
<th>Type of Girls</th>
<th>Area</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribal</td>
<td>Rural</td>
<td>137.47</td>
<td>22.73</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>137.85</td>
<td>23.96</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>137.66</td>
<td>23.30</td>
<td>200</td>
</tr>
<tr>
<td>Non-tribal</td>
<td>Rural</td>
<td>145.02</td>
<td>23.14</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>145.94</td>
<td>21.35</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>145.48</td>
<td>22.21</td>
<td>200</td>
</tr>
<tr>
<td>Total</td>
<td>Rural</td>
<td>141.25</td>
<td>23.19</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>141.90</td>
<td>22.99</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>141.57</td>
<td>23.07</td>
<td>400</td>
</tr>
</tbody>
</table>

The above table provides the mean scores, standard deviations and N for each subgroup of the two levels of each independent variable and here achievement motivation is treated as dependent variable. Inspecting the pattern of these values give us an indication of the impact of Independent Variable.
Table 4.15: Showing Summary of ANOVA of the Dependent Variable Achievement Motivation.

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>TYPE OF GIRLS</td>
<td>6115.240</td>
<td>1</td>
<td>6115.240</td>
<td>11.749</td>
<td>0.01</td>
<td>.029</td>
</tr>
<tr>
<td>AREA OF LIVING</td>
<td>42.250</td>
<td>1</td>
<td>42.250</td>
<td>.081</td>
<td>NS</td>
<td>--</td>
</tr>
<tr>
<td>TYPE * AREA</td>
<td>7.290</td>
<td>1</td>
<td>7.290</td>
<td>.014</td>
<td>NS</td>
<td>--</td>
</tr>
<tr>
<td>Error</td>
<td>206111.260</td>
<td>396</td>
<td>520.483</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8229102.00</td>
<td>400</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>212276.040</td>
<td>399</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Significant Level, 0.05 = 3.86  0.01 = 6.70
Eta Squared effect size, .01 = small  .06 = moderate
                                  .14 = large effect (Cohen, 1988)

A two-way between groups analysis of variance was conducted to explore the impact of type of girls (tribal and non-tribal) and area of living (rural and urban) on achievement motivation. Here achievement motivation is the driving force by which we achieve our goals.

Effect sizes explanation explained in previous analysis and avoid the duplication.

In the above table the main effect of first independent variable i.e. type of girls (tribal and non-tribal), the F value (1,396) is 11.749 which is significant on 0.01 level because table value is 6.70 and obtained F value 11.749 is exceeds that table value. This means that there is significant difference between tribal and non-tribal girls in scores of achievement
motivation. The eta square, the measure of effect size, associated with the main effect of type of girls is .029 indicates small effect and explains only 2.9 % variance in dependent variable achievement motivation.

Here on the basis of mean value of tribal girls (Mean = 137.66 and SD = 23.30) is lower than non-tribal girls (Mean = 145.48 and SD = 22.21). Since high score indicates high motivation in the achievement. Hence, we concluded that non-tribal girls are highly motivated in their achievement related activities.

This difference is showing in the following graph.

Graph No. 4.5: Shows Difference Between Tribal and Non-Tribal Girls

Achievement Motivation.

The main effect of second independent variable i.e. area of living (rural and urban), the F value (1,396) is 0.81 which is not significant because this value is much less than table values. This means that there is no significant difference between rural and urban girls in scores of achievement motivation. The eta square, the measure of effect size, associated with the
main effect of type of girls is not mention here because of non-significant result.

The interaction effect between type of girls and area of living is also not significant.

According to above analysis we interpret that there is significant difference between tribal and non-tribal girls in terms of their achievement motivation. Non-tribal girls are highly motivated about their achievement.

Hence, we accept and confirm our seventh hypothesis ‘Achievement motivation will be low among the tribal girls than non-tribal girls’. The results of the present study consistent with the findings for L.B. Singh (1979) likewise tried to make a comparative study of some personality dimensions such as intelligence, anxiety, extraversion and achievement motivation and the academic achievements of Santal and non-Santal undergraduate students. Significantly, all these studies were made among the tribals in Bihar.

As well as area of living don’t make any effect on achievement motivation of rural and urban girls.

But once again researcher interested in even keen analysis, he want to search out the difference between tribal rural and tribal urban girls achievement motivation level. So he analyzes it by the Students t test and found non-significant result by the following analysis:
Table No. 4.16: Showing the Difference Between Tribal Rural and Tribal Urban Girl’s Achievement Motivation.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tribal rural girls</td>
<td>100</td>
<td>137.47</td>
<td>22.73</td>
<td>0.115</td>
<td>NS</td>
</tr>
<tr>
<td>Tribal urban girls</td>
<td>100</td>
<td>137.85</td>
<td>23.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
t = \frac{\text{Mean}_1 - \text{Mean}_2}{\text{SED}}
\]

\[
\text{SED} = \sqrt{\frac{(\sigma_1)^2 + (\sigma_2)^2}{N_1 + N_2}}
\]

\[
= \sqrt{\frac{(22.73)^2 + (23.96)^2}{100 + 100}}
\]

\[
= \sqrt{\frac{516.65 + 574.08}{200}}
\]

\[
= \sqrt{\frac{1090.73}{200}}
\]

\[
= \sqrt{5.45}
\]

\[
= 2.34
\]

\[
t = \frac{137.47 - 137.85}{3.30}
\]

\[
t = \frac{0.38}{3.30}
\]

\[
t = 0.115
\]

The above t value is not significant at any level and hence we concluded that there is no significant difference between tribal rural and tribal urban girls in terms of their achievement motivation and hence, we reject our eighth hypothesis as ‘Achievement motivation will be low among the rural tribal girls than urban tribal girls’.
The result of the present study consistent with the finds for Aradhan Shukla and Shelly Panday, motivational correlates in tribal as affected by sex and age. Keeping these views in consideration, present study was planned in the realm of 4x2x2 mixed model factorial design ascertaining the relative efficacy of sub-cultural groups, sex and age on achievement motivation. It was assumed that higher level of achievement motivation would be favoured by males and chronological age. In addition, it was also thought that the difference would be evinced by sub-cultural variation. Three hundred twenty 7-12 Yr. olds served as subjects and they were arranged according to the requirements of 4x2x2 factorial design with four subcultural groups (Bhotia, Tharu, Buxas and General Kumaonies), two types of sex (male and female) and two levels of age (7-9 and 10-12 Yrs) i.e. 20 Ss per cell. Motivation was studied in two ways namely achievement and general motivation.

As well as researcher try to search another keen difference between non-tribal rural and non-tribal urban girls. So he analyzed it as above manner.
Table No. 4.17: Showing the Difference Between Non-Tribal Rural and Non-Tribal Urban Girl’s Achievement Motivation.

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-tribal rural girls</td>
<td>100</td>
<td>145.02</td>
<td>23.14</td>
<td>0.292</td>
<td>NS</td>
</tr>
<tr>
<td>Non-tribal urban girls</td>
<td>100</td>
<td>145.94</td>
<td>21.35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
t = \frac{\text{Mean 1} - \text{Mean 2}}{\text{SED}}
\]

\[
\therefore \text{SED} = \sqrt{\frac{(\sigma_1)^2 + (\sigma_2)^2}{N + N}}
\]

\[
= \sqrt{\frac{(23.14)^2 + (21.35)^2}{100 + 100}}
\]

\[
= \sqrt{\frac{535.46 + 455.82}{100 + 100}}
\]

\[
= \sqrt{9.91}
\]

\[
= 3.15
\]

\[
t = \frac{145.02 - 145.94}{3.15}
\]

\[
= 0.92
\]

\[
t = 0.292
\]

The above t value is not significant and we concluded that there is no significant difference between non-tribal rural and non-tribal urban girls in terms of their achievement motivation and hence, we reject our ninth hypothesis as ‘Achievement motivation will be high among the urban non-tribal girls than rural non-tribal girls’. The results of the presents study
consistent with the findings for Padhi (1991) conducted a study on effects of classroom environment and creativity on academic self concept and academic achievement. The sample consisted of 636 students from IX class drawn from 15 schools randomly (8 urban and 76 rural). The main effect of creativity and classroom environment on academic achievement and academic self concept is found to be significant by using Rentoul and Frasers individualized classroom environment questionnaire (ICEQ) and Acharuyulus’s think creatively (ATC). The findings of the study revealed that classroom environment affects academic achievement of the student significantly.

Mishra (2002) attempted to study the perception of classroom environment of middle (200) school children from Bilaspur district. Among them there were 100 Tribal and 100 nontribal students. In each group there were 50 urban and 50 rural students. The classroom environment was considered in terms of four major dimensions i.e. interpersonal relationship, goal orientation or personal development, system maintenance and system change. The results revealed that urban, non-tribal and male students perceived classroom environment better than rural tribal and girl students.

4.2 Summary:

As per statistical analysis, researcher here able to interpret the figures and explain the human means girls behavior, which is a basic requirement of the psychological research. Anxiety, adjustment and achievement motivation are differently works in the various groups and this is an output of the present research.