CHAPTER IV

STATISTICAL ANALYSIS AND DISCUSSION OF RESULTS

The raw data obtained with the help of different tools are meaningless unless treated statistically. The raw data of the present study were, therefore, analysed and the results obtained were interpreted meaningfully and scientifically. These are presented in the present and the next chapter and the plan followed is as under:

The present chapter i.e., Chapter IV has been divided in two parts. Part I contains presentation and discussion of results of descriptive statistics for the Total sample, the groups of Boys and Girls and Arts and Science students. These results relate to 14 variables investigated i.e., the total score and the ten areas (HPD, FLE, SRA, SPR, PPR, HF, MR, ACW, FVE and CTP) of Mooney Problem Check List and the three independent variables - ego-identity (EI), locus of control (LOC) and family cohesion (FC). Part II includes cumulative frequency graphs (OGIVES) based on the score of boys and girls and arts and science students on all the variables.

In Chapter V are presented results of bivariate correlational analysis showing the direction and extent of relationship between the various variables used in the study. It also contains the results pertaining to the significance of differences in the mean scores of the different groups of adolescents.
studied, i.e., Boys Vs. Girls, Arts Vs. Science students and High Vs. Low groups differentiated on the basis of scores (top 27% and bottom 27%) obtained on all the variables. These differences have been determined with the help of 't' ratios. Chapter V also includes results of divergent cases, i.e., those obtaining extremely high and extremely low scores on Mooney Problem Checklist.
PART - I

RESULTS OF DESCRIPTIVE STATISTICS

In order to make use of relevance statistical techniques for analyzing the data of the present investigation, it was thought necessary to first use descriptive statistics. Consequently, the values of Mean, Standard Deviation, Skewness, Kurtosis and different Percentiles namely $P_{10}$, $P_{25}$, $P_{50}$, $P_{75}$ and $P_{90}$ were worked out in respect of Psychological Problem areas, Ego-Identity, Locus of Control and Family Cohesion for the total sample, boys and girls and arts and science groups separately.

The results are presented vide Table 4.1 for the total sample, Table 4.2 for boys, Table 4.3 for girls, Table 4.4 for arts and 4.5 for the science students.

Distribution of Scores

Scrutiny of results presented in Table 4.1 highlights the facts that for the total sample maximum positively skewed variable is home and family (HF). The value of skewness is 1.008 for this variable. On the whole the only slightly positive values of skewness for all the remaining variables (ranging from 0.141 to 0.616) indicate that the distributions are well within the tolerable limits of chance fluctuations. It is, therefore, assumed that these values of skewness are not so highly skewed as to raise doubts about the normal distribution of the scores on various variables.
**TABLE 4.1**

**SHOWING MEANS, STANDARD DEVIATIONS, SKEWNESS, KURTOSIS AND PERCENTILES FOR VARIOUS VARIABLES FOR THE TOTAL SAMPLE (N=290)**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Variables Codes</th>
<th>M</th>
<th>SD</th>
<th>Sk*</th>
<th>Ku**</th>
<th>P_{10}</th>
<th>P_{25}(Q_1)</th>
<th>P_{50} (Mdn.)</th>
<th>P_{75}(Q_3)</th>
<th>P_{90}</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>TS-MPCL</td>
<td>72.26</td>
<td>24.45</td>
<td>0.141</td>
<td>0.277</td>
<td>39.00</td>
<td>51.78</td>
<td>71.11</td>
<td>89.32</td>
<td>106.67</td>
</tr>
<tr>
<td>2</td>
<td>HPD</td>
<td>4.91</td>
<td>3.04</td>
<td>0.816</td>
<td>0.255</td>
<td>0.64</td>
<td>2.10</td>
<td>4.08</td>
<td>6.14</td>
<td>8.76</td>
</tr>
<tr>
<td>3</td>
<td>FLE</td>
<td>5.46</td>
<td>3.61</td>
<td>0.751</td>
<td>0.279</td>
<td>0.85</td>
<td>2.15</td>
<td>4.56</td>
<td>7.08</td>
<td>9.68</td>
</tr>
<tr>
<td>4</td>
<td>SRA</td>
<td>9.08</td>
<td>3.87</td>
<td>0.717</td>
<td>0.289</td>
<td>3.71</td>
<td>5.52</td>
<td>8.16</td>
<td>11.31</td>
<td>13.71</td>
</tr>
<tr>
<td>5</td>
<td>SPR</td>
<td>7.57</td>
<td>3.76</td>
<td>0.541</td>
<td>0.255</td>
<td>2.15</td>
<td>4.19</td>
<td>6.89</td>
<td>9.50</td>
<td>12.54</td>
</tr>
<tr>
<td>6</td>
<td>PPR</td>
<td>8.43</td>
<td>3.96</td>
<td>0.725</td>
<td>0.284</td>
<td>2.84</td>
<td>4.86</td>
<td>7.47</td>
<td>10.76</td>
<td>13.20</td>
</tr>
<tr>
<td>7</td>
<td>HF</td>
<td>5.59</td>
<td>3.87</td>
<td>1.008</td>
<td>0.264</td>
<td>0.94</td>
<td>2.28</td>
<td>4.29</td>
<td>7.46</td>
<td>10.73</td>
</tr>
<tr>
<td>8</td>
<td>MR</td>
<td>6.03</td>
<td>3.02</td>
<td>0.644</td>
<td>0.272</td>
<td>1.76</td>
<td>3.36</td>
<td>5.38</td>
<td>7.64</td>
<td>9.61</td>
</tr>
<tr>
<td>9</td>
<td>ACW</td>
<td>9.35</td>
<td>4.56</td>
<td>0.544</td>
<td>0.246</td>
<td>2.97</td>
<td>5.19</td>
<td>8.53</td>
<td>11.52</td>
<td>15.81</td>
</tr>
<tr>
<td>10</td>
<td>FVE</td>
<td>8.34</td>
<td>4.40</td>
<td>0.660</td>
<td>0.257</td>
<td>2.13</td>
<td>4.65</td>
<td>7.38</td>
<td>10.82</td>
<td>14.14</td>
</tr>
<tr>
<td>11</td>
<td>CTP</td>
<td>7.35</td>
<td>4.36</td>
<td>0.538</td>
<td>0.278</td>
<td>1.71</td>
<td>3.43</td>
<td>6.57</td>
<td>9.63</td>
<td>12.84</td>
</tr>
<tr>
<td>12</td>
<td>EI</td>
<td>20.53</td>
<td>3.17</td>
<td>0.632</td>
<td>0.264</td>
<td>15.71</td>
<td>17.80</td>
<td>19.86</td>
<td>22.35</td>
<td>24.35</td>
</tr>
<tr>
<td>13</td>
<td>LOC</td>
<td>9.26</td>
<td>2.74</td>
<td>0.523</td>
<td>0.257</td>
<td>5.00</td>
<td>6.85</td>
<td>8.79</td>
<td>10.76</td>
<td>12.59</td>
</tr>
<tr>
<td>14</td>
<td>FC</td>
<td>6.36</td>
<td>1.91</td>
<td>0.207</td>
<td>0.284</td>
<td>3.00</td>
<td>4.47</td>
<td>6.23</td>
<td>7.40</td>
<td>8.15</td>
</tr>
</tbody>
</table>

* indicates that all values of skewness are slightly positive.

** Ku greater than 0.263 indicates that the distribution is Platykurtic and Ku less than 0.263 indicates that distribution is leptokurtic. 
Table 4.1 also presents the coefficients of kurtosis for the fourteen variables which indicate the 'peakedness' or 'flatness' of the distribution. The values of Kurtosis for the variables under study range from 0.246 to 0.289. This indicates that various distributions are either only very slightly platykurtic or leptokurtic. Very little divergence of values of these Ku from 0.263 (which is the value of Ku for a normal distribution) justifies the conclusion that the distributions are within the acceptable limits.

It is a general trend to accept such limits in the behavioural sciences. Thus, it was concluded from the above results that by and large all the variables were quite normally distributed and did not exhibit wide departure from the normal distribution. Hence the picture was found to be quite satisfactory for the application of higher statistical techniques.

Mean Scores, Standard Deviations, Medians and Quartiles for the Total Sample on all the variables

The Mean scores, SDs, Medians, and Quartiles \( (Q_1 \text{ and } Q_3) \) of the total sample of 290 students at the +2 stage on the 14 variables (TS-MPCI, HPD, FLE, SRA, SPR, PPR, HF, MR, ACW, FVE, CTP, EI, LOC and FC) are given in Table 4.1. The table 4.1(b) further shows rank order-wise problem areas with their corresponding mean values.
**TABLE 4.1(b)**

**RANKWISE MEANS OF THE PROBLEMS IN EACH PROBLEM AREA FOR THE TOTAL SAMPLE (N=290)**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Problem Areas</th>
<th>Means</th>
<th>Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ACW</td>
<td>9.35</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>SRA</td>
<td>9.08</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>PPR</td>
<td>8.43</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>FVE</td>
<td>8.34</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>SPR</td>
<td>7.57</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>CTP</td>
<td>7.35</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>MR</td>
<td>6.03</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>HF</td>
<td>5.59</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>FLE</td>
<td>5.46</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>HPD</td>
<td>4.91</td>
<td>10</td>
</tr>
</tbody>
</table>
As seen from Table 4.1 the Mean score, SD, Mdn., $Q_1$ and $Q_3$ for the total score on the ten areas of Mooney Problem Checklist (TS-MPCL) are 72.26, 24.45, 71.11, 51.78 and 89.32 respectively.

The ten psychological problem areas are being presented next in order of hierarchy of scores, starting with the areas wherein the mean scores are the maximum (vide Table 4.1(b)).

The problem areas adjustment to college work (ACW) and social and recreational activities (SRA) get ranks 1 and 2, since their mean values are very close to each other and are higher in comparison to those in the other areas. Thus, in these two areas the problems for the total sample seem to be equally intense. The values of Means, SDs, Mdns., $Q_1$ and $Q_3$ in the two areas are 9.35, 4.56, 8.53, 5.19, 11.52; 9.08, 3.67, 8.16, 5.52 and 11.31 respectively.

So far as the Mean, Scores, SDs, Mdns., $Q_1$ and $Q_3$ of the areas ranked next i.e., personal psychological relations (PPR) and the future : vocational and educational (FVE) are concerned, they are 8.43, 3.96, 7.47, 4.86, 10.76; 8.34, 4.40, 7.38, 4.65 and 10.82 respectively. Quite close scores in two areas indicate that psychological problems are equally dominant in PPR and FVE, with PPR being on areas of slightly more of concern.

Following them closely are the areas social psychological relations (SPR) and curriculum and teaching procedure (CTP)
and curriculum and teaching procedure (CTP). Since their mean values are close to each other with SPR getting a slightly higher score they get ranks 5 and 6. Their Mean scores, SDs and Mdns. are 7.57, 3.76, 6.89; 7.35, 4.36 and 6.57 respectively. The values of Q₁ and Q₃ are 4.19, 9.50; 3.43 and 9.63.

On the variable morals and religions (MR) which is 7th in order, the Mean score, SD, Mdn. and Quartile points are 6.03, 3.02, 5.38, 3.36 and 7.64 respectively.

Towards the end of the table 4.1(b) come the areas home and family (HF) and finances, living conditions and employment (FLE). Their corresponding values of Means, SDs, Mdns., Q₁ and Q₃ are 5.59, 3.87, 4.29, 2.28, 7.46; 5.46, 3.61, 4.56, 2.15 and 7.08 respectively, and they get 8th and 9th positions in ranking. The area that ranks last (10th) is health and physical development (HPD). The Mean score, SD, Mdn., Q₁ and Q₃ are 4.91, 3.04, 4.08, 2.10 and 6.14 respectively for this problem area.

Summing up the results so far it is seen that ACW, SRA, PPR and FVE are the areas of maximum and HF, FLE and HPD of minimum concern to the adolescent sample under study. These results support the hypothesis no.1 i.e., there are psychological problems typical of adolescent students at +2 stage.

As seen from Table 4.1 the Mean score, SD, Mdn. and Quartiles (Q₁ and Q₃) on the independent variable ego-identity(EI)
**TABLE 4.2**

SHOWING THE MEANS, SDs, MEDIANS AND QUARTILE POINTS FOR GROUP I (Boys, N=141) ON ALL THE VARIABLES

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Variable Codes</th>
<th>M</th>
<th>SDs</th>
<th>Q₁</th>
<th>Mdn.</th>
<th>Q₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TS-MPCL</td>
<td>70.38</td>
<td>25.32</td>
<td>48.13</td>
<td>68.54</td>
<td>90.64</td>
</tr>
<tr>
<td>2.</td>
<td>HPD</td>
<td>5.03</td>
<td>3.27</td>
<td>2.07</td>
<td>4.03</td>
<td>6.44</td>
</tr>
<tr>
<td>3.</td>
<td>FLE</td>
<td>5.18</td>
<td>3.88</td>
<td>1.68</td>
<td>3.97</td>
<td>7.07</td>
</tr>
<tr>
<td>4.</td>
<td>SRA</td>
<td>9.31</td>
<td>4.21</td>
<td>5.37</td>
<td>8.15</td>
<td>11.76</td>
</tr>
<tr>
<td>5.</td>
<td>SPR</td>
<td>7.00</td>
<td>3.91</td>
<td>3.55</td>
<td>6.27</td>
<td>8.91</td>
</tr>
<tr>
<td>6.</td>
<td>PPR</td>
<td>8.29</td>
<td>4.16</td>
<td>4.71</td>
<td>7.32</td>
<td>10.43</td>
</tr>
<tr>
<td>7.</td>
<td>HF</td>
<td>5.48</td>
<td>3.95</td>
<td>2.50</td>
<td>4.04</td>
<td>7.03</td>
</tr>
<tr>
<td>8.</td>
<td>MR</td>
<td>5.64</td>
<td>3.22</td>
<td>2.78</td>
<td>4.94</td>
<td>7.56</td>
</tr>
<tr>
<td>9.</td>
<td>ACW</td>
<td>9.12</td>
<td>4.54</td>
<td>5.07</td>
<td>8.29</td>
<td>11.25</td>
</tr>
<tr>
<td>10.</td>
<td>FVE</td>
<td>7.71</td>
<td>4.69</td>
<td>3.55</td>
<td>6.58</td>
<td>10.56</td>
</tr>
<tr>
<td>11.</td>
<td>CTP</td>
<td>7.34</td>
<td>4.88</td>
<td>2.88</td>
<td>6.31</td>
<td>10.42</td>
</tr>
<tr>
<td>12.</td>
<td>EI</td>
<td>20.84</td>
<td>3.48</td>
<td>17.75</td>
<td>19.97</td>
<td>22.98</td>
</tr>
<tr>
<td>13.</td>
<td>LCC</td>
<td>9.17</td>
<td>2.72</td>
<td>6.90</td>
<td>8.69</td>
<td>10.48</td>
</tr>
<tr>
<td>14.</td>
<td>FC</td>
<td>6.31</td>
<td>1.90</td>
<td>4.52</td>
<td>6.13</td>
<td>7.36</td>
</tr>
</tbody>
</table>
are 20.53, 3.17, 19.86, 17.80 and 22.35 respectively.

On the variable locus of control (LOC) the Mean score, SD and Mdn. are 9.26, 2.74 and 8.79 respectively. The values of $Q_1$ and $Q_3$ are 6.85 and 10.76.

The Mean score, SD, Mdn., $Q_1$ and $Q_3$ on the variable family cohesion (FC) in case of the total sample are 6.36, 1.91, 6.23, 4.47 and 7.40 respectively.

Mean Scores, Standard Deviations, Medians and Quartile points for Group I (Boys)

As seen from Table 4.2 the Mean score, SD, Mdn., $Q_1$ and $Q_3$ for the total score on the ten variables of Mooney Problem Checklist (TS-MPCL) in the case of boys sample are 70.38, 25.32, 68.54, 48.13 and 90.64 respectively.

The values for the psychological problems are presented next in order of maximum hierarchy of their mean scores. Table 4.2(b) shows that on the basis of quite similar and higher mean scores, the problem areas social and recreational activities (SRA) and adjustment to college work (ACW) get ranks 1 and 2. Their Mean scores, SDs, Mdns., $Q_1$ and $Q_3$ are 9.31, 4.21, 8.15, 5.37, 11.73 and 9.12, 4.54, 8.29, 5.07, and 11.25 respectively. This indicates that for boys as in the case of the total sample the problems in the areas SRA and ACW are equally dominant. Following is the personal psychological relations (PPR) area with Mean score, SD, Mdn.,
### TABLE 4.2 (b)

**RANKWISE MEANS OF THE PROBLEMS IN EACH AREA FOR GROUP I (Boys)**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Problem Areas</th>
<th>Means</th>
<th>Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SRA</td>
<td>9.31</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>ACW</td>
<td>9.12</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>PPR</td>
<td>8.29</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>FVE</td>
<td>7.71</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>CTP</td>
<td>7.54</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>SPR</td>
<td>7.00</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>MR</td>
<td>5.64</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>HF</td>
<td>5.48</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>FLE</td>
<td>5.18</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>HPD</td>
<td>5.03</td>
<td>10</td>
</tr>
</tbody>
</table>
Psychological problem areas the future: vocational and educational (FVE), curriculum and teaching procedure (CTP) and social psychological relations (SPR) are the areas next in hierarchy and their mean scores are quite close to each other. They are 4, 5 and 6 in rank order though only slight differences are there in their mean scores. Their Mean scores, SDs and Medians are 7.71, 4.69, 6.58; 7.34, 4.88, 6.31; 7.00, 3.91 and 6.27 respectively. The values of $Q_1$ and $Q_3$ are 3.55, 10.56; 2.88, 10.42 and 3.55, 8.91 respectively. This shows that problems in FVE, CTP and SPR are equally intense.

Trailing behind them and towards the end of the table come the four areas i.e., morals and religions (MR), home and family (HF), finances, living conditions and employment (FIE) and health and physical development (HPD). The values of Mean score for them are 5.64, 5.48, 5.18, 5.03; SDs are 3.22, 3.95, 3.86, 3.27; Median 4.94; 4.04, 3.97, 4.03; of $Q_1$ are 2.78, 2.30, 1.68, 2.07 and $Q_3$ are 7.56, 7.03, 7.07 and 6.44 respectively. Since they have almost similar scores, the four areas can, in a way be bracketed together but due to some differences in them, they get ranks 7, 8, 9 and 10. This shows that problems in the areas MR, HF, FIE and HPD pose milder problems in the case of boys and they are of almost the same intensity.

These results lead to the conclusion that SRA, ACW and PPR are the problem areas in which boys experience more of
TABLE 4.3

SHOWING MEANS, SDs, MEDIANs AND QUARTILE POINTS FOR GROUP II (Girls, N=149) ON ALL THE VARIABLES

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Variable Codes</th>
<th>M</th>
<th>SDs</th>
<th>Q₁</th>
<th>Mdn.</th>
<th>Q₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TS-MPCL</td>
<td>74.04</td>
<td>23.54</td>
<td>55.77</td>
<td>73.17</td>
<td>88.61</td>
</tr>
<tr>
<td>2.</td>
<td>HPD</td>
<td>4.79</td>
<td>2.81</td>
<td>2.12</td>
<td>4.12</td>
<td>5.94</td>
</tr>
<tr>
<td>3.</td>
<td>FLE</td>
<td>5.73</td>
<td>3.33</td>
<td>2.75</td>
<td>4.93</td>
<td>7.69</td>
</tr>
<tr>
<td>4.</td>
<td>SRA</td>
<td>8.87</td>
<td>3.51</td>
<td>5.74</td>
<td>8.17</td>
<td>10.93</td>
</tr>
<tr>
<td>5.</td>
<td>SPR</td>
<td>8.10</td>
<td>3.54</td>
<td>4.68</td>
<td>7.67</td>
<td>9.99</td>
</tr>
<tr>
<td>6.</td>
<td>PPR</td>
<td>8.55</td>
<td>3.77</td>
<td>4.98</td>
<td>7.64</td>
<td>11.06</td>
</tr>
<tr>
<td>7.</td>
<td>HF</td>
<td>5.69</td>
<td>3.80</td>
<td>2.25</td>
<td>4.54</td>
<td>7.66</td>
</tr>
<tr>
<td>8.</td>
<td>MR</td>
<td>6.40</td>
<td>2.79</td>
<td>4.10</td>
<td>5.68</td>
<td>7.70</td>
</tr>
<tr>
<td>9.</td>
<td>ACW</td>
<td>9.57</td>
<td>4.59</td>
<td>5.32</td>
<td>8.81</td>
<td>11.67</td>
</tr>
<tr>
<td>10.</td>
<td>FVE</td>
<td>8.94</td>
<td>4.02</td>
<td>5.62</td>
<td>8.04</td>
<td>11.02</td>
</tr>
<tr>
<td>11.</td>
<td>CTP</td>
<td>7.36</td>
<td>3.83</td>
<td>4.10</td>
<td>6.68</td>
<td>8.98</td>
</tr>
<tr>
<td>12.</td>
<td>EI</td>
<td>20.23</td>
<td>2.61</td>
<td>17.84</td>
<td>19.77</td>
<td>21.93</td>
</tr>
<tr>
<td>13.</td>
<td>LOC</td>
<td>9.35</td>
<td>2.76</td>
<td>6.79</td>
<td>8.90</td>
<td>10.98</td>
</tr>
<tr>
<td>14.</td>
<td>FC</td>
<td>6.40</td>
<td>1.93</td>
<td>4.43</td>
<td>6.31</td>
<td>7.44</td>
</tr>
</tbody>
</table>
problems. On the other hand, the areas MR, HF, FLE and HPD seem to exert minimum pressure on them.

The Mean score, SD, Mdn., $Q_1$ and $Q_3$ for the independent variable ego-identity (EI) as given in Table 4.2 in case of boys are 20.84, 3.48, 19.97, 17.75 and 22.98 respectively.

On the second independent variable i.e. locus of control (LCC), the Mean score, SD and Mdn. are 9.17, 2.72 and 8.69 respectively. The values of $Q_1$ and $Q_3$ are 6.90 and 10.48.

The Mean score, SD, Mdn., $Q_1$ and $Q_3$ for the third independent variable family cohesion (FC) are 6.31, 1.90, 6.15, 4.52 and 7.36 respectively.

Mean Scores, Standard Deviations, Medians and Quartile points on all the variables for Group II (Girls)

The Mean score, SD, Mdn., $Q_1$ and $Q_3$ for the total score on the ten areas of Money Problem Checklist as given in Table 4.3 in case of girls are 74.04, 23.54, 73.17, 55.77 and 88.61 respectively.

The Mean score, SD, Mdn., $Q_1$ and $Q_3$ for the problem area adjustment to college work (ACW) are 9.57, 4.59, 8.81, 5.32 and 11.67 respectively and it ranks 1 in the hierarchy of problems (vide Table 4.3(b)).

Following closely are the areas the future: vocational
### TABLE 4.3(b)

**RANKWISE MEANS OF THE PROBLEMS IN EACH AREA FOR GROUP II (Girls)**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Problem Areas</th>
<th>Means</th>
<th>Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ACW</td>
<td>9.57</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>FVE</td>
<td>8.94</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>SRA</td>
<td>8.87</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>PPR</td>
<td>8.55</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>SPR</td>
<td>8.10</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>CTP</td>
<td>7.36</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>MR</td>
<td>6.40</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>FLE</td>
<td>5.73</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>HF</td>
<td>5.69</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>HPQ</td>
<td>4.79</td>
<td>10</td>
</tr>
</tbody>
</table>
and educational (FVE), social and recreational activities (SRA), personal psychological relations (PPR) and social psychological relations (SPR) that rank next i.e., 2, 3, 4 and 5. Their Mean scores, SDs and Mdns. are 8.94, 4.02, 8.64; 8.67, 3.51, 8.17; 8.55, 3.77, 7.64; 8.10, 3.54 and 7.67 respectively. The values of $Q_1$ and $Q_3$ are 5.62, 5.74, 4.98, 4.68; 11.02, 10.93, 11.06 and 9.99 respectively. Since these values are quite close to each other, the adolescent girls seem to be concerned with problems in these areas to an almost equal extent.

The area curriculum and teaching procedure (CTP) has rank 6 with Mean score, SD, Mdn. and Quartiles of 7.36, 3.83, 6.68, 4.10 and 8.98 respectively - followed by the area morals and religion (MR), with values of Mean, SD, Mdn., $Q_1$ and $Q_3$ 6.40, 2.79, 5.68, 4.10 and 7.70 respectively.

For the psychological problem areas finances, living conditions and employment (FLE) and home and family (HF) that get ranks 8 and 9, Mean scores, SD and Mdns. are 5.73, 3.33, 4.93, 5.69, 3.80 and 4.54 respectively. The Quartile values for these are 2.75, 2.25; 7.09 and 7.86. Trailing behind is the area that ranks last (10th) i.e., health and physical development (HPD) with the Mean score, SD, Mdn., $Q_1$ and $Q_3$ 4.79, 2.81, 4.12, 2.12 and 5.94 respectively.

Summing up of results presented so far thus reveals that in case of girls the problem areas ACW, FVE, SRA, PPR and
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Variable Codes</th>
<th>M</th>
<th>SDs</th>
<th>Q₁</th>
<th>Mdn.</th>
<th>Q₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TS-MPGL</td>
<td>74.28</td>
<td>24.60</td>
<td>53.65</td>
<td>73.00</td>
<td>91.31</td>
</tr>
<tr>
<td>2.</td>
<td>HPD</td>
<td>4.97</td>
<td>3.23</td>
<td>2.01</td>
<td>4.03</td>
<td>6.10</td>
</tr>
<tr>
<td>3.</td>
<td>FIE</td>
<td>5.80</td>
<td>3.74</td>
<td>2.50</td>
<td>4.79</td>
<td>7.23</td>
</tr>
<tr>
<td>4.</td>
<td>SRA</td>
<td>9.48</td>
<td>4.05</td>
<td>5.63</td>
<td>8.71</td>
<td>11.98</td>
</tr>
<tr>
<td>5.</td>
<td>SPR</td>
<td>8.00</td>
<td>3.79</td>
<td>4.64</td>
<td>7.29</td>
<td>9.73</td>
</tr>
<tr>
<td>6.</td>
<td>PPR</td>
<td>8.66</td>
<td>4.25</td>
<td>4.84</td>
<td>7.54</td>
<td>11.24</td>
</tr>
<tr>
<td>7.</td>
<td>HF</td>
<td>5.44</td>
<td>4.01</td>
<td>2.11</td>
<td>3.83</td>
<td>7.47</td>
</tr>
<tr>
<td>8.</td>
<td>MR</td>
<td>6.07</td>
<td>3.16</td>
<td>3.44</td>
<td>5.46</td>
<td>7.77</td>
</tr>
<tr>
<td>9.</td>
<td>ACW</td>
<td>9.56</td>
<td>4.74</td>
<td>5.09</td>
<td>8.76</td>
<td>11.74</td>
</tr>
<tr>
<td>10.</td>
<td>FVE</td>
<td>9.25</td>
<td>4.46</td>
<td>5.68</td>
<td>8.18</td>
<td>11.65</td>
</tr>
<tr>
<td>11.</td>
<td>GTP</td>
<td>7.03</td>
<td>4.01</td>
<td>3.50</td>
<td>6.52</td>
<td>9.31</td>
</tr>
<tr>
<td>12.</td>
<td>EI</td>
<td>20.36</td>
<td>2.90</td>
<td>17.93</td>
<td>19.64</td>
<td>21.98</td>
</tr>
<tr>
<td>13.</td>
<td>LOC</td>
<td>9.27</td>
<td>2.70</td>
<td>7.02</td>
<td>8.85</td>
<td>10.63</td>
</tr>
<tr>
<td>14.</td>
<td>FC</td>
<td>6.28</td>
<td>1.89</td>
<td>4.45</td>
<td>6.14</td>
<td>7.25</td>
</tr>
</tbody>
</table>
SPR pose maximum problems whereas the areas FLE, HF and HPD are of minimum concern to them.

As seen from Table 4.3 the Mean score, SD, Mdn., Q₁ and Q₃ on the independent variable ego-identity (EI) are 20.23, 2.81, 19.77, 17.84 and 21.93 respectively.

The values of Mean scores, SD, Mdn., Q₁ and Q₃ on the second independent variable i.e., locus of control (IOC) are 9.35, 2.76, 8.90, 6.79 and 10.98 respectively.

On the variable family cohesion (FC) the Mean score, SD, Mdn., Q₁ and Q₃ are 6.40, 1.93, 6.31, 4.43 and 7.44 respectively.

Mean Scores, Standard Deviations, Median and Quartile points for all the variables for Group III (Arts students)

The Mean scores, SDs, Mdns. and Quartiles for the Arts Group on fourteen variables are given in table 4.4. Further, table 4.4(b) reflects the rank orderwise problem areas with their corresponding mean values.

As seen from table 4.4 the Mean score, SD, Mdn., Q₁ and Q₃ for the total score on the ten variables of Mooney Problem Checklist are 74.28, 24.60, 73.00, 53.65 and 91.31 respectively.

Table 4.4(b) shows that mean scores for the three problem areas adjustment to college work (ACW), social and recreational activities (SRA) and the future: vocational and
### Table 4.4(b)

**Rankwise Means of the Problems in Each Problem Area for Group III (Arts students)**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Problem Areas</th>
<th>Means</th>
<th>Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ACW</td>
<td>9.56</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>SRA</td>
<td>9.48</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>FVE</td>
<td>9.25</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>PPR</td>
<td>8.66</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>SPR</td>
<td>8.00</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>CTP</td>
<td>7.03</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>MR</td>
<td>6.07</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>FLE</td>
<td>5.80</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>HF</td>
<td>5.44</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>HPD</td>
<td>4.97</td>
<td>10</td>
</tr>
</tbody>
</table>
educational (FVE) are higher as compared to the other areas and get ranks 1, 2 and 3. Their Mean scores, SDs and Medians are 9.56, 4.74, 8.76; 9.48, 4.05, 8.71 and 9.25, 4.46 and 8.18 respectively. The values of Q₁ and Q₃ are 5.09, 11.74; 5.63, 11.96 and 5.68, 11.65 respectively. As the mean values for the areas ACW, SRA and FVE are on the higher side and are close to each other, these are thus the areas of maximum concern.

As far as the Mean scores, SDs, Medians and Quartiles of the areas that rank next i.e., personal psychological relations (PPR) and social psychological relations (SPR) are concerned, they are 8.66, 4.25, 7.54, 4.84, 11.24; 8.00, 3.79, 7.29, 4.64 and 9.73 respectively. This shows that the problems in both the areas are equally dominant. Problem area curriculum and teaching procedure (CTP) is trailing behind with Mean value, SD, Mdns., Q₁ and Q₃ of 7.03, 4.01, 6.52, 3.50 and 9.31 respectively, followed by the area morals and religion with rank 7 and the mean and the other values of 6.07, 3.16, 5.46, 3.44 and 7.77 respectively.

The problem areas that get rank 8 and 9 i.e., finances, living conditions and employment and home and family have almost similar mean values of 5.60 and 5.44 respectively. Their values of SDs, Medns., Q₁ and Q₃ are 3.74, 4.79, 2.50, 7.23; 4.01, 3.83, 2.11 and 7.47 respectively.

Towards the end of the table 4.4(b) comes the area health
### TABLE 4.5

SHOWING THE MEANS, SDs, MEANS AND QUARTILE POINTS FOR
GROUP IV (Science Students, N=149) ON ALL THE VARIABLES

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Variable Codes</th>
<th>M</th>
<th>SDs</th>
<th>Q₁</th>
<th>Mdn.</th>
<th>Q₃</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TS-MPCI</td>
<td>70.34</td>
<td>24.23</td>
<td>49.35</td>
<td>69.21</td>
<td>86.81</td>
</tr>
<tr>
<td>2.</td>
<td>HPD</td>
<td>4.84</td>
<td>2.86</td>
<td>2.17</td>
<td>4.13</td>
<td>6.18</td>
</tr>
<tr>
<td>3.</td>
<td>FLE</td>
<td>5.14</td>
<td>3.47</td>
<td>1.86</td>
<td>4.30</td>
<td>6.94</td>
</tr>
<tr>
<td>4.</td>
<td>SRA</td>
<td>8.71</td>
<td>3.67</td>
<td>5.40</td>
<td>7.74</td>
<td>10.70</td>
</tr>
<tr>
<td>5.</td>
<td>SPR</td>
<td>7.16</td>
<td>3.69</td>
<td>3.63</td>
<td>6.58</td>
<td>9.25</td>
</tr>
<tr>
<td>6.</td>
<td>PPR</td>
<td>8.20</td>
<td>3.66</td>
<td>4.88</td>
<td>7.41</td>
<td>10.43</td>
</tr>
<tr>
<td>7.</td>
<td>HF</td>
<td>5.73</td>
<td>3.74</td>
<td>2.49</td>
<td>4.61</td>
<td>7.43</td>
</tr>
<tr>
<td>8.</td>
<td>MR</td>
<td>6.00</td>
<td>2.89</td>
<td>3.31</td>
<td>5.31</td>
<td>7.53</td>
</tr>
<tr>
<td>9.</td>
<td>ACW</td>
<td>9.15</td>
<td>4.39</td>
<td>5.25</td>
<td>8.21</td>
<td>11.37</td>
</tr>
<tr>
<td>10.</td>
<td>FVE</td>
<td>7.48</td>
<td>4.17</td>
<td>4.08</td>
<td>6.56</td>
<td>9.69</td>
</tr>
<tr>
<td>11.</td>
<td>GTP</td>
<td>7.65</td>
<td>4.66</td>
<td>3.37</td>
<td>6.63</td>
<td>9.97</td>
</tr>
<tr>
<td>12.</td>
<td>EI</td>
<td>20.69</td>
<td>3.40</td>
<td>17.66</td>
<td>20.16</td>
<td>22.70</td>
</tr>
<tr>
<td>13.</td>
<td>LOC</td>
<td>9.26</td>
<td>2.78</td>
<td>6.70</td>
<td>8.73</td>
<td>10.90</td>
</tr>
<tr>
<td>14.</td>
<td>FC</td>
<td>6.43</td>
<td>1.93</td>
<td>4.49</td>
<td>6.34</td>
<td>7.51</td>
</tr>
</tbody>
</table>
and physical development (HPD) which gets rank 10. The values of Mean, SD, Mdn., Q₁ and Q₃ for this are 4.97, 3.23, 4.03, 2.01 and 6.10 respectively.

Summing up of the results, it can be said that the problem areas ACW, SRA and FVE, are of maximum concern in case of arts group. The areas of minimum concern are FLE, HF and HPD.

For the independent variable ego-identity (EI) as seen from table 4.4 the Mean score, SD, Mdn., Q₁ and Q₃ are 20.36, 2.90, 19.64, 17.93 and 21.98 respectively.

On the variable locus of control (IOC) the Mean score, SD, Mdn., Q₁ and Q₃ are 9.27, 2.70, 8.85, 7.02 and 10.63 respectively.

The Mean score, SD, Mdn., Q₁ and Q₃ for the third independent variable family cohesion are 6.28, 1.89, 6.14, 4.45 and 7.25 respectively.

Mean Scores, Standard Deviations, Median and Quartile points on all the variables for Group IV (Science students)

For the total score on the ten variables of Mooney Problem Checklist as seen from table 4.5, the Mean score, SD, Mdn., Q₁ and Q₃ are 70.34, 24.23, 69.21, 49.35 and 86.81 respectively.

Table 4.5(b) indicates that the problem area adjustment to college work (ACW) with the highest mean value of 9.15
<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Problem Areas</th>
<th>Means</th>
<th>Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ACW</td>
<td>9.15</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>SRA</td>
<td>8.71</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>PPR</td>
<td>8.20</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>GTP</td>
<td>7.65</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>FVE</td>
<td>7.48</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>SPR</td>
<td>7.16</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>MR</td>
<td>6.00</td>
<td>7</td>
</tr>
<tr>
<td>8</td>
<td>HF</td>
<td>5.73</td>
<td>8</td>
</tr>
<tr>
<td>9</td>
<td>FLE</td>
<td>5.14</td>
<td>9</td>
</tr>
<tr>
<td>10</td>
<td>HPD</td>
<td>4.84</td>
<td>10</td>
</tr>
</tbody>
</table>
in comparison to other problem areas gets rank 1 and thus is the area of maximum concern. The values of SD, Mdn., Q₁ and Q₃ for this are 4.39, 8.21, 5.25 and 11.37 respectively. The areas social and recreational activities (SRA) and personal psychological relations rank next and they stand close to each other with their Mean scores, SDs, Mdns., Q₁ and Q₃ of 8.71, 3.67, 7.74, 5.40, 10.70; 8.20, 3.66, 7.41, 4.88 and 10.43 respectively. The closeness of these scores indicates that problems in both the areas are equally intense.

The areas that get ranks 4, 5 and 6 are curriculum and teaching procedure (CTP), the future: vocational and educational (FVE) and social psychological relations (SPR). They could in a way be bracketed together for they have almost similar mean scores which are 7.65, 7.48 and 7.16 respectively. Their corresponding values of SDs, Mdns., Q₁ and Q₃ are 4.66, 6.63, 3.37, 9.97; 4.17, 6.56, 4.08, 9.69; 3.69, 6.58, 3.63 and 9.25 respectively (vide Table 4.5(b) ).

Trailing behind them is the area morals and religion (MR) with values of Mean, SD, Mdn., Q₁ and Q₃ of 6.00, 2.89, 5.31, 3.31 and 7.53 respectively.

Towards the end of the table comes the areas home and family (HF) and the finances, living conditions and employment (FIE) with the Mean scores, SDs, Mdns., of 5.73, 3.74, 4.16; 5.14, 3.47 and 4.30 respectively. The values of
Q₁ and Q₃ are 2.49, 7.43, 1.86 and 6.94 respectively. Following them is the problem area health and physical development (HPD) with Mean score, SD, Mdn., Q₁ and Q₃ of 4.84, 2.86, 4.13, 2.17 and 6.18 respectively. This exhibits that these areas are of least concern to the science students. Hence, they rank 8, 9 and 10, respectively.

Summing up of results in the Science group indicates that out of the ten problem areas the areas of maximum concern are ACW, SRA and PPR. Those of minimum concern are HF, FIE and HPD.

Table 4.5 shows that for the independent variable ego-identity (EI) the values of Mean, SD, Mdn., Q₁ and Q₃ are 20.69, 3.40, 20.16, 17.66 and 22.70 respectively.

For the variable locus of control (LOC) the Mean score, SD and Mdn. are 9.26, 2.78, and 8.73 respectively. The values of Q₁ and Q₃ are 6.70 and 10.90.

The Mean score, SD, Mdn., Q₁ and Q₃ for the variable family cohesion (FC) are 6.43, 1.93, 6.34, 4.49 and 7.51 respectively.
DISCUSSION OF RESULTS OF DESCRIPTIVE STATISTICS

The Total Sample

The results presented in Table 4.1 indicate that the mean score of the total sample under study on the total score of Mooney Problem Checklist (TS-MPCL) is slightly more than the median. Otherwise also the score range 30–72 covers 61.03\% of cases and the scores on the extreme end of the range are very few. This may be interpreted to mean that the adolescents in the total sample are not free from psychological problems, but they are experiencing problems in various areas with lesser intensity.

The Mean scores, Medians and Quartiles (Q_{1} and Q_{3}) of the total sample in problem areas like adjustment to college work (ACW) and social and recreational activities (SRA) are close to each other and they are higher as compared to the other problem areas. The higher scores in them shows more of problems faced by the students in these areas.

It can therefore be deduced from the study that the work load tends to overburden adolescents in their transition process from high school education to senior level of education. The school and society in general are also not providing adequate interaction and recreational facilities to its youth. This results in their getting few chances for self expression and thus they are likely to develop feelings of embarrassment, inadequacy and emotional conflicts.
The personal psychological relations (PPR) and the future; vocational and educational (FVE) are the two problematic areas that get ranks 3 and 4 in the case of the total sample. This may be due to the fact adolescents at their age are still dependent upon their parents and they feel oppressed by the expectations of the cultural heritage that they are required to meet. Young adolescents are thus craving for independence from the elders and want to make independent decisions about their future. Further, the questions of uncertain future and unemployment become a source of conflict and frustration for them.

These results are supported by the studies of Morris (1954), Amos and Washington (1960), Moser and Moser (1963), Lam (1980), Lafuente Benaches (1987), Isralowitz andHong (1990), Vohra (1990), and Walia (1992). ACW/ASW in all these studies were found to be the problem areas of maximum concern, followed closely by the areas FVE, SRA and PPR.

In case of social psychological relations (SPR) and curriculum and teaching procedure (CTP), problems arise due to the fact that adequate facilities for interaction may not be available to them whereas they want social approval for various modes of their behaviour. Moreover, frequent strikes in schools and colleges, both by the teachers and the students, poor examination system, poorly co-ordinated campus activities and lack of recreational facilities etc.
lead to difficulty in adjusting to work and teaching procedure.

Morals and religion (MR) have also become a source of problem for the adolescent's as there is a conflict of ideas between science and religion. Most of the morals have become outdated with the coming of new technology, especially the computers which has become man's best decision making tool. Scientific temper may also clash with the beliefs and values that have to do with morals and religions. Hence, they feel a crisis vis a vis this issue.

Home and family (HF), finances, living conditions and employment (FLE) and health and physical development (HPD) are the areas of least concern for the total sample. Home and family relations and finances and living conditions for the Indian adolescent students are usually less problematic since they are well looked after till such time as they are fit for taking up jobs and be on their own. Part-time employment is also very rare, particularly for the adolescent students in our culture. These being areas of least concern are thus explicable. This result is also supported by the mean score obtained on the independent variable of family cohesion, which is found to be on the higher side. This indicates more of family harmony for the present sample. Health and physical development (HPD) also coming in this category can be explained in terms of the majority of the adolescents being in good health and generally enjoying a state of physical well being.
Their interest in exercise, body building and games etc. shows more of energy available for physical activity and not concern for health and physical development. These results of the present study are supported by the investigations of Odiwuor (1989), Vohra (1990) and Walia (1992).

Taking up the results of the independent variable ego-identity, a perusal of Table 4.1 shows that the mean score is more than the median and it may be considered on the higher side. This may be interpreted to mean that ego-identity in case of the total sample seems to be fairly established. As can be seen from the results, the score range 10-22 covers 72.07% of cases and scores on the extreme ends are fewer. This also shows that the sample under study has a higher standing on this variable.

As far as the mean score on the second independent variable i.e., locus of control (LOC), is concerned, it cannot be considered on the higher side since the cut off point for externality as given in the manual of this test is 13. Further, the mean score falls within the range 1-10 and it covers 67.93% of cases. This indicates that adolescents in the total sample are experiencing more of internal orientation.

The mean score on the variable family cohesion (FC) is slightly more than the median and it may thus be considered
on the higher side (the score distribution being normal). This exhibits that in case of the total sample, the family structure is quite cohesive. The score range 1-7 covering 66.21% of cases also shows that the scores on the extreme ends are very few.

Finally, it may be pointed out that discussion of results in respect of psychological problems has so far been focussed on their ranking only which means indicating the problem areas of maximum and minimum concern. But a perusal of results further shows that the clustering of scores for almost all the areas is more at the lower end of the distribution. These results reflect that the intensity of the problems of the adolescents in the present study is not such as may be a cause of serious concern. It may, therefore, be concluded that whereas the standing of the total sample on ego-identity (EI) and family cohesion (FC) is on the higher side, it is comparatively on the lower side in the various areas of problems. Mean score on the independent variable locus of control (LOC) is also on the lower side, which in fact means a better standing. Lower score in this case is indicative of internal and higher of external locus of control. The adolescent sample studied is thus internally oriented which is a more desirable and a healthier aspect of this variable.
The Various Groups

Before taking up of the discussion of results of the analysis of psychological problems, it may be made clear that the mean scores of the four groups i.e., boys, girls, arts and science students though higher than their medians in all the problem areas are not indicative of seriousness of problems. Since the clustering of the scores in all these areas is more on the lower score end of the distribution, intensity of problems in the various groups under study may not be considered much. However, for purposes of determining the relative dominance and intensity of problem areas and their rank order and for comparison amongst groups, the analysis has already been presented and the following section contains the discussion of results pertaining to the different groups.

Group I - Boys

The results presented in Table 4.2 shows that the mean score of the boys for the total score on Mooney Problem Checklist (TS-MPCL) is more than the median and hence it can be considered on the higher side. The mean score falls within the range 30-72 and it covers 55.32% of cases. Thus, there are approximately 45% of scores on the upper end of the range. This may be interpreted to mean that boys sample is not free from problems, but the extent of problems is not such as may be a cause for much concern.
As far as the rank order of problems is concerned, the results presented earlier show that social and recreational activities (SRA) and adjustment to college work (ACW) are the major psychological problems, since the mean scores of boys are the highest in these problem areas. This may be due to the fact that they have more interest in outdoor activities, have more leadership skills and prefer adventure. But the school is not providing adequate interaction and recreational facilities to them which means they get little chance to do what they want to do. Society also puts a lot of stress on learning and little on recreation. Moreover, in transition process from high school education to the senior cadre of education, the work load tends to overburden them. Worries about exams, fear of failure, inability to concentrate well on studies etc. become the source of irritability and frustration among boys which in turn leads to adjustment problems.

In case of personal psychological relations (PPR), problems may be due to the fact that males tend to be more ambitious and when their ambitions are not fulfilled, they compensate for them or take refuge in acts like day-dreaming. In case of their failure in some undertakings, it becomes difficult for them to take it as a defeat and reconcile to it easily.

These results of the present study find full support
in the research of Walia (1992) where in these very areas were found to be of dominant concern among college students. Studies of Sharma (1978) and Gade, Hurlburt and Fuqua (1988) support the finding in respect of ACW; Odiwuor (1989) in respect of SRA and PPR and Vohra (1990) in respect of PPR as being amongst the areas of maximum concern.

The mean scores and the values of standard deviation, medians, and quartile points in the areas the future: vocational and educational (FVE), curriculum and teaching procedure (CTP) and social psychological relations (SPR) which are next in hierarchical order are quite similar showing the same extent of graveness of problems faced by the boys in these areas. During adolescence they want to show and prove their worth in every activity. Uncertainty about their vocational choices, value of college degree or further education, occupational information, unemployment poorly co-ordinated campus activities, poorly organized courses, strict rules and regulations etc. and being deprived of desired status in home and society become the source of problems in FVE, CTP and SRA.

It can be seen from the results of the present study that problem areas morals and religion (MR), home and family (HF), finances, living conditions and employment (FIE) and health and physical development (HPD) pose lesser problems
to boys. The reason for this may be that being interested in outdoor activities which require skill and muscular dexterity, the boys spend more time to interact with people outside home. Thus, they may not be so mindful of the need for enough of clothing, privacy to entertain friends at home, healthy body, moral and religious considerations.

The studies of Odiwuor (1989), Vohra (1990) and Walia (1992) support the above findings of the present study in regard to the rank-order of problems of minimum concern to the boys sample.

Table 4.2 shows that the mean score of the boys on independent variable ego-identity (EI) is more than the median. The mean score falls within the range 10-22 covers 68.09% of cases. The scores on the upper end of the range are very few in case of this group. This may be interpreted to mean that ego-identity of the boys sample is fairly established.

On the variable locus of control (LOC) the mean score is also more than the median and the score range 0-10 covers 70.92% of boys' cases. The mean score obtained is indicative of internality and therefore, the same interpretation holds good in this case also as for the total sample.

The mean score on the variable family cohesion (FC) is more than the median. Further the mean falls within the
score range 1-7 and covers 66.67% of cases. This shows that family cohesion in case of boys is on the higher side.

Group II - Girls

The results given in Table 4.3 indicate that the mean score of the girls for the total score on Mooney Problem Checklist (TS-MPCL) is more than the median. The mean score falls within the score range 30-78 and it covers 59.73% of cases. This indicates the clustering of the scores more towards the lower end of the distribution and the scores at the extreme upper end being very few. Thus, the girls under study may not be considered as being free from psychological problems, but experiencing them in various areas with lesser intensity.

So far as the rank order of problem areas on the basis of their mean scores is concerned, the major psychological problems that seem to be dominant in this group i.e., girls in the senior secondary schools of Chandigarh are in the area - adjustment to college work (ACW). Problems in this area indicate that the tests and examinations in the schools, inability to concentrate well on studies, hesitation to speak-up in class discussions, inadequate high school training etc. are some of the problems that hamper adjustment to academic work, which is equivalent to college work in case of the present sample.
The problems in the areas the future: vocational and educational (FVE), social recreational activities (SRA), personal psychological relations (PPR) and social psychological relations (SPR) which are next in hierarchical order are due to the fact that girls have to spend more time under the strict supervision of the elders. Our schools and society do not allow as much interaction and the kind of recreational facilities that they desire. The result is that they want to become independent and fear of uncertainty after graduation creates doubts in them about their future. Thus, they usually live an intensely emotional life.

These results in regard to the rank order of areas of maximum concern to the girls under study are supported by the studies of Mooney (1943), Kalra (1976), Goswami (1980), Gupta (1981), Manese, Sed Lacek and Leong (1989), Odiiwuor (1989), Atallah (1990), Vohra (1990) and Walia (1992).

The problems in the curriculum and teaching procedure (CTP) are indicative of the fact that poorly coordinated campus activities, ineffective teaching procedures and over-taxing curriculum etc. leads to difficulty in adjusting to classwork and the teaching procedure.

The area morals and religion (MR) also poses problem to girls because they are more concerned with these matters. Losing of earlier religious faiths, doubts about the value of
worship and prayer, having beliefs which differ from those of the family, scientific attitude and confusions on some moral questions etc. are some of the factors that result in girls facing more problems in this area.

Home and Family (HF), finances, living conditions and employment (FLE) and health and physical development (HPD) are the problem areas of least concern for girls. Girls are mostly domesticated and unlike boys they don't come into much clash with their parents and other members of the family. Further, issues relating to finances, living conditions and employment are also of lesser concern to them. Since in our culture, they are more looked upon as home makers, than taking to careers essentially. These areas, therefore, are not very much problematic for them. Matters concerning health and physical development are also of lesser concern to girls, although physical appearance and looks are a source of major worries and concern to them. These results find full support in the research of Atallah (1990) wherein these very areas were found to be least concern for girls. Studies of Mooney (1989), Vohra (1990) and Walia (1992) HPD and FIE being amongst the areas of minimum concern.

Table 4.3 reflects that the mean score of the girls on independent variable ego-identity (EI) is more than the median and hence it may be considered on the higher side. It thus shows that ego-identity is fairly established in the case of
girls also. Otherwise too the score range 10-22 covers 75.84% of cases and the scores on the extreme ends are very few.

On the second independent variable locus of control (LCC) the mean score is again higher than the median. The mean score falls within the score range 1-10 and it covers 65.10% of cases. The value of the mean score obtained is indicative of internality. Thus, girls' sample under study seems to be experiencing more of internal locus of control.

The mean score on the variable family cohesion (FC) is more than the median and it may also be considered on the higher side. This may be interpreted to mean that there is a fairly strong family cohesion in case of girls' sample. Moreover, the score range 1-7 covers 65.77% of cases and very few scores are there at the extreme ends.

Group III - Arts Students

Table 4.4 reflecting the results of arts students indicates that their mean score on the total score on Mooney Problem Checklist (TS-MPCL) is more than the median. Further, the score range 30-78 covers 58.67% of cases. The scores on the extreme end of range are very few as also found in case of total sample. Thus, the same explanation as for the total sample holds valid in case of the arts students also.
The major psychological problem areas for the arts group are adjustment to college work (ACW), social and recreational activities (SRA) and the future: vocational and educational (FVE). This can be attributed to the fact that lack of sufficient extracurricular activities in the school and society puts a lot of stress on learning and no importance is given to recreation for youth. Arts students usually feel dissatisfied with their work in school. Also their course content seems to be too general to be applied technically in any vocation. In the modern competitive world, no one can expect to do well in life unless one achieves high in the educational sphere. Worries about academic work and uncertainty about future, therefore, become matters of more concern to them. Studies of Odiwuor (1989), Vohra (1990) and Walia (1992) support the results in regard to the problem areas of maximum concern to arts students.

Problem areas personal psychological relations (PPR) and social psychological relations (SPR) being issues of equal concern are also natural. Arts students having more free time to interact with other people, they are also more willing to discuss with others issues relating to life in general, their own interests and personality. Scared of being constantly belittled or ridiculed by others, they come to perceive themselves as socially inapt and incapable of effective group membership. A great amount of frustration is thus witnessed among them and this may affect their personal
and social relations by way of dissatisfaction with their own selves and the people around.

The problem area like curriculum and teaching procedure (CTP) pose problem to arts students because they generally do not treat academic work as seriously as the students in professional and science courses. Their reading habits are also not the best. But defective courses, syllabi and the modes of instruction are important issues which ultimately affect their future educational orientation and vocational placement.

Morals and religion (MR) are the source of lesser problems to arts students as they frequently find parents, friends and teachers as unsatisfactory substitutes and turn to religion when they find themselves in need of aid in meeting their personal problems.

The problem areas finances, living conditions and employment (FIE), home and family (HF) and health and physical development (HPD) do not seem to pose much problem to arts students. This seems somewhat unexpected. Since having more free time at their disposal and also being uncertain about their future career, they are likely to be unhappy and dissatisfied with themselves and their families also. Their being less concerned with these issues seems difficult to explain. However, the studies by Odiwuor (1989), Vohra (1990) and Walia (1992) for the areas HPD and FIE support these
findings wherein these very areas were found to be of minimum concern to arts students.

It can be seen from Table 4.4 that on the variable ego-identity, mean score is also more than the median. Further, the score range 10-22 in which the value of mean falls covers 75.18% of cases. Thus, it may be interpreted to mean that adequate ego-identity formation has taken place in this group of students as well.

So far as the mean score on the variable of control (LOC) is concerned, it is more than the median. The mean score falls within the range 0-10 and it covers 68.79% of cases. The value of the mean score is 9.27 which is indicative of internality. Thus the arts students seem to have more of internal locus of control.

The mean score on the variable family cohesion (FC) is more than the median and may also be considered on the higher side. This may be interpreted to mean that there is a harmonious cohesive and well balanced family environment to which the arts students belong. Moreover, the score range 1-7 covers 70.21% of cases and very few scores are there at the extreme ends.
Group IV - Science Students

The results presented earlier in Table 4.5 show that the mean score of the science students on the total score of MPCL is suggestive of medium intensity of problems.

As seen from Table 4.5(b) the problem area adjustment to college work (ACW) is of maximum concern to this group of students. This may be due to the fact that although the science students are serious about their studies, they don't get adequate library and laboratory facilities. Heavy workload also overburdens them. Such conditions make their adjustment to academic work more arduous.

The problems in the areas social and recreational activities (SRA) and personal psychological relations (PPR) which are next in hierarchial order, seem to be equally dominant for the science students. It can, therefore, be deduced from the study that 3/4th of their time is spent in studying and whatever small time they have got for recreation appears to be inadequate for their self expression. This may affect their social and personal adjustment.

These results find full support in the researches of Vohra (1990) and Walia (1992) wherein these very areas were found to be of maximum concern to the science students. Study of Odiwuor (1989) supports the findings in respect of problem area SRA.

As far as the problem areas curriculum and teaching
procedure (CTP), the future vocational and educational (FVE) and social psychological relations (SPR) are concerned, it can be seen that science students being busy in their studies may not be able to have much contact with others. Further, the poorly co-ordinated campus activities, ineffective teaching procedure, heavy curriculum etc. leads to difficulty in adjusting to classwork also. Sometimes, they may also feel disturbed due to lack of adequate information about various fields of scientific study and working in such fields as may one day give them academic and social recognition.

Morals and religion (MR) pose lesser intensity of problems for this group because science students are likely to be realistic and practical minded and have scientific attitude.

Problems in the areas home and family (HF), finances, living conditions and employment (FIE) and health and physical development (HPD) are of least concern to them due to the fact that being engrossed in their studies the science students may not feel much concerned about issues relating in the above areas. These results of the present study find full support in the research of Walia (1992) wherein she found the above areas as those of least concern to the science students. Studies of Odiwuor (1989) and Vohra (1990) also support these results in regard of problem areas HPD and FIE.
Table 4.5 shows that the mean score of the science students on the variable ego-identity (EI) is more than the median. The score range 10-22 on this variable covers 69.13% of cases. This may be interpreted to mean that ego-identity of science students is fairly well established.

Taking up the mean score of second independent variable, i.e., locus of control (LOC), it is also found to be more than the median. The mean score falls within the score range 0-10 and it covers 67.11% of cases. However, the obtained mean value of 9.26 is not high enough and may be interpreted to mean that the science students have more of internal locus of control.

The mean score on the variable family-cohesion (FC) is again more than the median and hence it may be considered more on the higher side. Moreover, the score range 1-7 covers 62.42% of cases. This shows that the science students also have higher cohesive family structure.
A useful, overall sexwise and disciplinewise comparison of groups can be provided when ogives representing their scores on a given checklist and questionnaire are plotted upon the same coordinated axes. A presentation of the same is given in figures 4.6 to 4.34 which shows the ogives of the scores earned by two categories of student's - Group I and II, i.e., Boys Vs. Girls and Group III and IV i.e., Arts Vs. Science students on the variables of MPCL, EI, LCC and FC. Data on the basis of which these ogives have been constructed are given in the appendices.

Graph 1 : Figure 4.6 shows the ogives of the total scores earned by two groups of student's - 141 boys and 149 girls upon the total score on psychological problems. Conclusions drawn from the figure are as follows-

The differences in the total score of Psychological Problems between the two groups are calculated by the distances separating the two curves at various points in distribution i.e., $Q_1$, Median and $Q_3$. The girls ogive lie to the right of the boys showing that the girls score consistently higher than boys. But beyond the median boys ogive lies to the right of the girls indicating that on the 75th percentile boys scored more than girls on psychological problems.
OGIVES REPRESENTING TOTAL SCORES MADE BY BOYS AND GIRLS ON PSYCHOLOGICAL PROBLEMS

FIG. 4.6

OGIVES REPRESENTING TOTAL SCORES MADE BY BOYS AND GIRLS ON PSYCHOLOGICAL PROBLEMS
OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA HPD

MID POINTS OF CLASS INTERVALS

FIG. 4.7

OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA HPD

MID POINTS OF CLASS INTERVALS

CUMULATIVE PERCENTAGES

Boys
Girls
It is clear from the ogive that the median in the case of girls is 73.17 and the score range 30-78 covers 59.73% cases whereas the median of the boys is 68.54 and the score range 30-72 covers 55.32% of cases. On comparing the two distributions in terms of "Overlapping" it is that approximately 62% of the boys fall below the girls' median and only 38% of the boys exceed it.

Further, the 75th percentile of the boys is 90.64 and the girls is 88.61. The score range 30-96 covers 79.43% of boys and the score range 30-90 covers 77.18% cases in case of girls. Computing overlap from girls to boys it is found that 83% girls fall below the 75th percentile of boys' This means only 17% of the girls exceed the boys 75th percentile.

An examination of the distribution of the scores of both the groups shows that the clustering of the total score in psychological problems are at the lower score end of the distribution.

Graph 2: Ogives given in Figure 4.7 present the total scores of boys and girls on the problem area health and physical development (HPD). The figure reveals the following:

The boys' ogive lies to the right of the girls over the entire range showing that the boys score higher than the girls on this area. It is clear that the differences at the
FIG. 4.8

OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA FILE

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS
extremes - between the very high scoring and the very low scoring of boys and girls are not so great as are differences over the 75th percentile. The 75th percentile for boys is 6.44 and for girls is 5.94. In case of boys the score range 0-8 covers 84.40% cases whereas the score range 0-6 covers 75.84% cases of girls. Computing overlap from girls to boys, we find that 87% girls fall below boys median and hence approximately 13% of the girls surpass the boys median.

Graph 3: Figure 4.6 represents the Ogives of boys and girls on the problem area finances, living conditions and employment (FLE). The results are as follows-

It is clear from the figure that upto the median of the girls ogive lies to the right of the boys and beyond median the boys ogive lies to the right of the girls. This indicates that upto the median the girls score more than the boys and on the 75th percentile the boys score more than the girls. The values of the median are: girls 4.93 and boys 3.97. In case of girls the score range 2-6 covers 64.43% of cases and the score range 2-4 covers 50.35% of boys. Computing overlap we find that approximately 67% of the boys fall below the girls median. This means that only 33% of the boys exceed the girls median.

The 75th percentile in case of boys is 7.07, and the score range 2-8 covers 81.56% cases whereas the score range 2-6 in case of girls covers 64.43% of cases. Computing overlap it is clear that only 17% of the girls exceed the
OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA SRA

Gig. 4.9

MID POINTS OF CLASS INTERVALS

CUMULATIVE PERCENTAGES

0
10
20
30
40
50
60
70
80
90
100

1 1

162

Boys

Girls

1 1

1 7

1 1
FIG. 4.10

OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA SFR

MID POINTS OF CLASS INTERVALS

CUMULATIVE PERCENTAGES

<table>
<thead>
<tr>
<th>Mid Points of Class Intervals</th>
<th>0</th>
<th>1</th>
<th>3</th>
<th>5</th>
<th>7</th>
<th>9</th>
<th>11</th>
<th>13</th>
<th>15</th>
<th>17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boys</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Graph 4: Figure 4.9 presents the distribution of scores in terms of ogives made by boys and girls on the area social and recreational activities (SRA) and it reveals the following—

As seen from the figure the differences of both the groups at the extremes are not so great as are differences over the 75th percentile. At this point the boys ogive lies to the right of girls ogive. This means that boys score consistently higher than the girls. The 75th percentile of boys is 11.76 and the score range 2-12 covers 76.60% cases. In case of girls the 7th percentile is 10.93 and the score range 02-10 covers 67.79% of cases. Computing the distribution of scores in terms of 'Overlapping' we find that 17% of the girls exceed the median of the boys. On computing the percentage of boys scores at or above girls 75th percentile, it has been found that approximately 63% of cases fall below the girls median and 37% are above this point.

Graph 5: The results referred in Figure 4.10, which presents the ogives of boys and girls on social psychological relations (SPR) are as follows—

Figure 4.10 shows that girls ogive lies to the right of the boys over the entire range showing that the girls score higher than boys. The distribution of scores of both groups
FIG. 4.11

OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA PFR

BOYS

GIRLS

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS
FIG. 4.12

OGIVE REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA HF

MID POINTS OF CLASS INTERVALS
differ more at median than at either quartile. The median of girls is 7.67 and the score range 0 -8 covers 52.35% of cases. In case of boys the score range 0 -6 covers 47.52% cases and the corresponding value of median is 6.27. Computing overlap we find that approximately 65% of boys fall below the girls' median. This means only 35% of the boys exceed the girls median. It can also be found that 38% of girls lie below the boys median and 62% are above this point.

Graph 6: Figure 4.11 shows the ogives representing scores made by boys and girls on the problem area personal psychological relations (PPR). It is clear from the figure that the differences at the extremes between those scoring very high and those scoring very low in case of boys and girls are not so great over the entire range i.e., $Q_1$, $Mdn.$, and $Q_3$ points. Hence, it may be interpreted to mean that both the groups at various percentile points scored more or less the same on this area. However, a slight variation is found at and after the 90th percentile, whereas the score range 0-18 covers 99% of girls, it covers 96% of boys. This means that only 1% of girls exceed the boys at this score range.

Graph 7: The results reflected in Figure 4.12 show that in the area home and family (HF) boys and girls do not show much of difference at the median or either of quartile points. However small variation is found at and beyond 90th
FIG. 4.13

OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA

MID POINTS OF CLASS INTERVALS

CUMULATIVE PERCENTAGES

100 90 80 70 60 50 40 30 20 10

Boys
Girls
FIG. 414

Ogives representing scores made by boys and girls on the problem area ACW

Mid Points of Class Intervals

Cumulative Percentages

Boys
Girls
percentile wherein the score range 0-14 covers 96.45% of boys and the score range 0-12 covers 92.62% of girls cases. Computing overlap it is clear that only 3% of the girls exceed the boys 90th percentile.

Graph 8: The conclusions drawn from a perusal of Figure 4.13 are that on the area morals and religion (MR) boys and girls differ more at the Q1. The value of Q1 in case of girls is 4.10 and the score range 0-6 covers 55.03% cases. The Q1 of boys is 2.78 and the score range 0-4 covers 39.72% cases. Computing overlap we find that 61% of boys fall below the girls median and only 39% of boys exceed it. Moreover approximately 23% girls fall below the boys median and 77% are above this point.

Graph 9: In Figure 4.14 are presented the ogives for the scores made by boys and girls on area adjustment to college work (ACW). Both the groups at median and either quartile $Q_1$ and $Q_3$ scored more or less the same on this area and only slight variation is found at the extreme upper end i.e., at and beyond 90th percentile. In case of boys the score range 0-18 covers 97.16% of cases whereas in case of girls score range 0-16 covers 90.60% of cases. This means that only 7% of girls exceed the boys at 90th percentile.
FIG. 4.15

OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA FVE

MID POINTS OF CLASS INTERVALS

CUMULATIVE PERCENTAGES

0  10  20  30  40  50  60  70  80  90  100

1  3  5  7  9  11  13  15  17  19

Boys

Girls
FIG. 4.16
OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE PROBLEM AREA CTP

MID POINTS OF CLASS INTERVALS

CUMULATIVE PERCENTAGES

Boys
Girls
Graph 10: Figure 4.15 represents the ogives of the two distributions of scores made by boys and girls on the area the future: vocational and educational (FVE). The conclusions drawn from the figure are as below—

The girls ogive lies to the right of the boys (except at the higher end) showing that girls score consistently higher than the boys. The differences in scores between the two groups are not so great as are differences over the middle range. On this variable the median in case of girls is 8.04 and the score range 0-8 covers 49.66% of cases. The score range 0-6 covers 44.68% cases in case of boys and the value of median is 6.58. Computing overlap it is noted that approximately 63% of the boys fall below the girls median. This means that only 37% boys excel the girls median. It is also found that approximately 28% girls fall below the boys median and 72% are above this point.

Graph 11: Distribution of scores made by boys and girls on the area curriculum and teaching procedure (CTP) in the form of ogives are given in Figure 4.16. It reveals that at the beginning the girls ogive lies to the right of the boys, but on progressing towards the 75th percentile, it seems that the boys ogive lies to the right of the girls. This shows that on the 75th percentile the boys have higher score.
OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE INDEPENDENT VARIABLE EI

Fig. 4.17

MID POINTS OF CLASS INTERVALS
that the girls. In other words the marked differences are shown by the two groups only over quartile $Q_3$. The score range 0-10 covers 72.34% cases of boys and the comparative value of $Q_3$ is 10.42. In case of girls the value of $Q_3$ is 8.96 and the score range 0-8 covers 67.79% of cases. Computation of overlap shows that approximately 82% girls fall below the boys median and only 18% exceed it. It may also be noted that 59% boys fall below girls median and 41% are above this point.

Graph 12: Figure 4.17 gives the ogives representing scores made by boys and girls on the independent variable ego-identity (EI). The results reflected in the fig. are as follows:

It is clear from the figure that the boys ogive lies to the right of the girls over the entire range showing that the boys score consistently higher than the girls. The differences at the extremes between the very high scoring and very low scoring boys and girls are not so great as are differences over the 75th percentile. An examination of the distribution of scores shows that the 75th percentile in case of boys is 22.96 and the score range 10-24 covers 82.27% of cases. But in case of girls the score range 10-22 covers 75.64% of cases and the comparative value of $Q_3$ is 21.93. On computing distribution overlaps it is clear that approximately 94% of the girls falls below the boys median.
FIG. 4.18

OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE VARIABLE ICC

CUMULATIVE PERCENTAGES

Mid Points of Class Intervals

Boys
Girls
FIG. 4.19

OGIVES REPRESENTING SCORES MADE BY BOYS AND GIRLS ON THE VARIABLE FC

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS
This means that only 6% of the girls exceed their median. Computing overlap from boys to girls we find that approximately 68% of the boys exceed the girls median.

Graph 13: The results projected in Figure 4.18 reveal that on the second independent variable i.e., locus of control (LOC) boys and girls do not show sharp differences over the entire range except for a small difference at the extreme upper end. This indicates that the two groups at various percentile points got almost similar scores on the variable locus of control.

Graph 14: Figure 4.19 which shows ogives of the scores obtained by the two groups—boys and girls on family cohesion (FC) reflects that the differences shown by them over the entire range are not so great. This means that boys and girls earned almost similar scores on this variable at various percentile points.

Graph 15: Figure 4.20 shows the ogives of the total score earned by the two groups—arts students (N=141) and science students (N=149) on psychological problems. Conclusions drawn from a perusal of the figure are as follows—

The arts students' ogive lies to the right of the science students' over the entire range showing that the arts
OGIVES REPRESENTING TOTAL SCORES MADE BY THE ARTS AND SCIENCE STUDENTS ON PSYCHOLOGICAL PROBLEMS

FIG. 4.20

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS

- Boys
+ Girls
students score consistently higher than the science students. It is clear from the ogives that the differences between the two groups are greater over the 75th percentile and the extreme upper end. The 75th percentile of the arts students is 91.31 and that of the science students is 86.81. The score range 30-96 covers 79.43% of arts students and the score range 30-90 covers 77.85% of science students. Computing the overlap it is found that approximately 83% of the science students fall below the 75th percentile of arts students and only 17% exceed it. It may also be noticed that approximately 73% arts students be below 75th percentile of science students and only 27% are above this point.

The variation is also witnessed at the 90th percentile. It is noticed that the score range 30-120 covers 95.74% of arts students whereas the score range 30-108 covers 91.20% of science students cases. On comparing two distributions in terms of overlapping it is found that approximately 98% of the science students fall below the arts students and only 2% exceed it at 90th percentile. It is also found that approximately 90% of arts students lie below the science students and 10% are above this point.

An examination of the distribution of the scores of the two groups indicates that science students scores as compared to that of arts students cluster at the lower score end of the distribution and this shows that they face lesser
FIG. 4.21

Ogives representing scores made by the Arts and Science students on the problem area HFD
problems as compared to arts students.

Graph 16: Ogives given in Figure 4.21 present the total score of arts and science students on the problem area health and physical development (HPD). The figure reveals the following.

The arts student's ogive lies to the right of the science students over the entire range showing that the arts student's score consistently higher than the science student's. It is clear from the figure that the differences at the medium and either quartiles, in the scores of the arts and science students are not so great as at and after the 90th percentile. The 90th percentile in case of arts student's is 8.99 and the score range 0-10 covers 95.04% cases. The science students 90th percentile is 8.55 and the score range 0-8 covers 87.25% cases. Computing overlap it is found that approximately 97% of the science students fall below 90th percentile of arts student's. This means that only 3% of the science students exceed the 90th percentile of arts students. Further, on computing overlap of arts students to science student's, it is found that 85% of arts students fall below the science students and 15% of them are above this point.
FIG. 4.22

OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS ON THE PROBLEM AREA FILE

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS

□ Arts
+ Science
Graph 17: Figure 4.22 represents the ogives of the arts and science students on the problem area finances, living conditions and employment (FLE). The results are as follows.

It is clear from the figure that the ogive of the arts students lies to the right of the science students over the entire range indicating that the arts students score higher than the science students. The differences at the extremes - between the very high scoring and the very low scoring are not so great as are differences over the middle range and quartile $Q_3$. The values of medians are - for arts students 4.79 and for science students 4.30. In case of arts students the score range 0-6 covers 64.54% cases whereas the score range 0-4 covers 46.98% of science students. Computing overlap it is found that approximately 67% of science students fall below the arts students' median. This means that only 33% of the science students exceed the arts students' median.

The 75th percentile of arts students is 7.23 and the score range 0-8 covers 81.56% cases. In case of science students the comparative value of $Q_3$ is 6.94 and the score range 0-6 covers 67.11% cases. Computing overlap it is clear that 83% of the science students fall below the 75th percentile of the arts students and only 17% of science students exceed it. It is also found that 64% of
FIG. 4.23

OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS ON THE PROBLEM AREA SRA

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS

- Arts
+ Science
FIG. 4.24

OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS
ON THE PROBLEM AREA SPR

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS

□ Arts
+ Science
arts students fall below the 75th percentile of science students and 36% are above this point.

Graph 18: Figure 4.22 presents the distribution of scores in terms of ogives made by arts and science students on the problem area social and recreational activities (SRA) and it reveals the following—

As seen from the figure the arts students ogive lies to the right of the science students ogive over the total range and the differences of the two groups at the extremes are not so great as are differences over the 75th percentile. The values of the 75th percentile are—arts students 11.98 and science students 10.70. The score range 0-12 in case of arts students covers 75.18% cases whereas the score range 0-10 covers 69.80% of science students. On comparing the distribution of scores in terms of overlapping it is found that approximately 84% of science students fall below the 75th percentile of arts students and 16% exceed it. On computing the percentage of arts students scores at or above science students and only 40% are above this point.

Graph 19: The results derived from the figure which presents the ogives of arts and science students on the area social psychological relations (SPR) are as follows—

Figure 4.24 reflects that the arts students ogive lies to the right of the science students over the entire
range showing that the arts students score consistently higher than the science students. The distribution of scores of both the groups differ more at median and the higher end i.e., at and above the 90th percentile. The median of the arts students is 7.29 and the score range 0-8 covers 55.32% of cases. In case of science students the score range 0-6 covers 44.97% cases and the corresponding value of median is 6.58. Computing overlap it is found that approximately 62% of the science students fall below the arts students median. This means only 38% science students exceed the arts students median. It is also found that 40% of the arts students fall below the median of science students and only 60% are above this point.

The variation is also found at the 90th percentile. It is noted that the score range 0-14 in case of arts students cover 95.04% cases whereas the score range 0-12 covers 89.26% of science students' cases. Computing overlap it has been found that only 3% of the science students surpass the 90th percentile of arts students.

Graph 20: Figure 4.25 shows the ogives representing scores made by arts and science students on the problem area personal psychological relations (PPR). The arts students ogive lies to the right of the science students' over the entire range. Hence, it shows that the arts students on this area score higher than the science students. The differences
OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS ON THE PROBLEM AREA PPR

---

CUMULATIVE PERCENTAGES

<table>
<thead>
<tr>
<th>Mid Point of Class Intervals</th>
<th>0</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
<th>80</th>
<th>90</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- □ Arts
- + Students
between both the groups at extremes are not so great as over the 75th and the 90th percentile. On 75th percentile the value of Q₃ is 11.24 and the score range 0-12 covers 80.14% cases of arts students. Whereas the score range 0-10 covers 71.14% of the science students and value of Q₃ is 10.43. Computing overlap it is found that approximately 89% of the science students fall below the 75th percentile of arts students and only 11% of them excel it. On computing overlap from arts to science students it has been found that 66% arts students lie below the 75th percentile of science students and 34% are above this point.

The variation is also seen at the 90th percentile. At this point the score range 0-14 in case of arts students covers 92.20% cases whereas the score range 0-12 covers 89.26% cases of science students. The comparative values of percentile 90th in both the cases are - arts students 13.64 and science students 12.28. Computing overlap it is found that 94% of the science students fall below the arts students 90th percentile. This means only 6% of the science students exceed the 90th percentile of arts students.

Graph 21: Figure 4.26 represents the ogives of arts and science students on the problem area home and family (HF). The results are as under-
FIG. 4.26

Ogives representing scores made by the Arts and Science students on the problem area HF

Cumulative Percentages

Mid Points of Class Intervals
It is clear from the figure that up to the median science students ogive lies to the right of arts students and beyond median the arts students ogive lies to the right of science students. This indicates that up to the median the science students score more than arts students and 75th percentile onwards the arts students score more than the science students. The two groups show differences over the middle range and at the 90th percentile.

The values of median are - arts students 3.63 and science students 4.61. In case of science students the score range 0–6 covers 67.79% of cases and the score range 0–4 covers 52.48% in case of the arts students. Computing overlap it is found that approximately 64% of arts students fall below the science students median. Thus, only 36% of the science students surpass the arts students median.

The distribution at the higher end indicates that the 90th percentile in case of arts students is 11.16 and the score range 0–12 covers 91.49% cases. The score range 0–10 covers 89.26% of science students and the value of 90th percentile is 10.37. Comparing overlap it is found that approximately 93% of science students fall below the 90th percentile of arts students and only 7% exceed it. It may also be found that nearly 87% of arts students fall below the 90th percentile of science students and only 13% of them are above this point.
FIG. 4.27
OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS ON THE PROBLEM AREA MR

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS

□ Arts
+ Science
FIG. 4.28

OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS ON THE PROBLEM AREA ACW

MID POINTS OF CLASS INTERVALS

CUMULATIVE PERCENTAGES

1  3  5  7  9  11  13  15  17  19  21

□ Arts
+ Science
Graph 22: The conclusions drawn from Figure 4.27 are that on the area morals and religion (MR) the arts students' ogive lies to the right of science students, indicating higher scores achieved by arts students as compared to the science students. On this area both the groups differ more at the 75th percentile. The comparative values of Q₃ in the two cases are - arts students 7.77 and science students 7.53. In case of arts students the score range 0-10 covers 92.91% cases whereas the score range 0-8 covers 79.67% of science students. Computing overlap it is found that 92% of science students fall below the 75th percentile of arts students and only 8% of them excel it.

Graph 23: Figure 4.28 presents the ogives for the scores made by arts and science students on the area adjustment to college work (ACW). The results are as follows—

It is clear from the figure that the two groups differ more over the middle range than at the either quartile. However, a variation is also seen at the higher end i.e., at or above 90th percentile. In case of arts students the median is 8.76 and the score range 0-10 covers 64.54% cases. The median of science students is 8.21 and the score range 0-8 covers 48.32% cases. On computing overlap it is clear that approximately 64% of science students fall below the median of arts students. This indicates that only 36% science
FIG. 4.29

OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS ON THE PROBLEM AREA FVE

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS

Arts
Science
students surpass the value of arts students' median.

At the higher end, the value of 90th percentile for arts students is 16.23 and for science students it is 15.42. The score range 0-18 in case of arts students covers 95.04% cases whereas the score range 0-16 covers 91.95% of the science students. Computing overlap it has been found that 98% science students fall below the 90th percentile of arts students and hence only 2% science students exceed the 90th percentile of arts students.

Graph 24: Figure 4.29 represents the ogives of the two distributions of scores made by arts and science students on the area the future: vocational and educational (FVE). The conclusions drawn from the figure are as below.

The arts students' ogive lies to the right of the science students over the entire range showing that the arts students score consistently higher than the science students. The differences between the two groups at the lower end are not so great as are differences over the middle range, and the quartile point $Q_3$. However, some variation is also seen at the higher end. On this variable the median in case of arts students is 8.18 and the score range 0-8 covers 48.94% cases. The score range 0-4 covers 44.97% of science students and the value of median is 6.56. Computing overlap it is noted that approximately 63% science students fall below the arts students' median and only
OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS ON THE PROBLEM AREA CTP

FIG. 4.30

MID POINTS OF CLASS INTERVALS

CUMULATIVE PERCENTAGES
Further the 75th percentile in case of arts students is 11.65 and for science students it is 9.69. In case of arts students, the score range 0-12 covers 78.01% cases and the score range 0-10 covers 77.18% of science students. On computing overlap it is found that approximately 87% of science students fall below the 75th percentile of arts students. This indicates that only 13% science students exceed the $Q_3$ value of arts students.

At the higher end it is noted that the 90th percentile in case of arts students is 15.48% and the score range 0-16 covers 91.49% cases. The score range 0-14 covers 93.29% science students and the value of 90th percentile is 12.78. Computing overlap it is found that approximately 97% of science students fall below the 90th percentile of arts students. This means that only 3% of science students are above this point.

Graph 25: Distribution of scores made by arts and science students on the area curriculum and teaching procedure (CTP) in the form of ogives are given in Figure 4.30. It reveals that the differences at the extremes between the two groups are not so great over the median and the either quartile. However, a small variation is indicated at the higher end, i.e., above the 90th percentile. The score range
FIG. 4.31

OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS ON THE VARIABLE EI

CUMULATIVE PERCENTAGES

MID POINTS OF CLASS INTERVALS
0-16 covers 96.64% cases of science students and 98.58% of arts students. Hence it may be interpreted to mean that in case of the science students the score reach the higher range and thus they face more problems related to this area as compared to arts students.

Graph 26: Figure 4.31 gives the ogives representing scores made by arts and science students on the independent variable ego-identity (EI). The results reflected in the figure are as follows.

It is clear from the figure that at the median the science students ogive lies to the right side of the arts students, but at the extreme upper end the arts students ogive lies to the right of science students. This indicates that at the middle range the science students scored slightly more than the arts students on this independent variable whereas at the extreme upper end arts students score more than the science students. The value of median for arts students is 19.64 and for science students 20.16. The score range 10-20 covers 55.32% cases of arts students whereas the score range 10-22 covers 69.13% of science students. Computing overlap it is found that approximately 75% of arts students lie below the science students median. This means only 25% of them exceed it.

At the extreme upper under it may be noted that the
Fig. 4.32

Ogives representing scores made by the arts and science students on the variable LOC.

Midpoints of class intervals.

Cumulative Percentages
FIG. 4.33

OGIVES REPRESENTING SCORES MADE BY THE ARTS AND SCIENCE STUDENTS
ON THE VARIABLE FC
score range 10-26 covers 97.37% of arts students whereas it covers 95.47% cases of science students. This indicates that the distribution of scores further reaches higher range in case of science students. Thus science students experience more problems as compared to arts student's.

Graph 27: The results vide Figure 4.32 reveal that on the second independent variable i.e., locus of control (LOC), arts and science students do not show marked differences over the entire range except small differences at the extreme upper end. This indicates that the two groups got more or less the similar scores on this variable.

Graph 28: Figure 4.33 which shows ogives of the scores obtained by the two groups - arts students and science students on family cohesion (FC) reflects that differences shown by them over the total range are not so great. This means that arts and science students earned almost similar scores on this variable at the various percentile points.

An examination of the distribution of scores in case of the groups boys vs. girls and arts vs. science students presented above indicates that -

(i) the scores obtained on the psychological problem areas cluster more at lower end of the distribution and very few frequencies are there at the upper end.
(ii) Whatever small differences are there on percentiles are witnessed more towards the upper end of the graph. Wherever differences are there, they are almost all the areas at and around the 75th percentile. Differences in some cases are also visible at the extreme upper end i.e., from 90th to 100th percentile.

(iii) Differences on the independent variable ego-identity (EI) are also more marked at and beyond 75th percentile for boys and girls. In case of arts and science student's differences are very small and they are conspicuous only at the extreme upper end.

(iv) On the second independent variable i.e., locus of control (LOC) slight differences that are there are also at the extreme upper end in case of both sets of groups.

(v) The ogives for boys and girls and arts and science students do not show any differences on the third independent variable, i.e., family cohesion (FC).

To conclude it may be said that the score distribution of two sets of groups investigated is not very much different from each other on the dependent as well as on the independent variables. Whatever small differences are there, are beyond the median in almost all the cases. The values of mean and median, therefore for the pairs of groups compared are quite close to each other.