APPENDIX-VI
LEAST SIGNIFICANT
DIFFERENCE SCALE (LSD)
Least Significant Difference (LSD) test on MAQ-C scores in ANOVA
in case of means of MAQ-C on variable A=Emotional maturity.

Table 4.2
Means and Sample Size of Emotional Maturity (EM) Groups.

<table>
<thead>
<tr>
<th></th>
<th>ES</th>
<th>MS</th>
<th>U</th>
<th>EU</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>120</td>
<td>480</td>
</tr>
<tr>
<td>M</td>
<td>23.18</td>
<td>19.98</td>
<td>17.30</td>
<td>15.63</td>
<td></td>
</tr>
</tbody>
</table>

Procedure for computing LSD

\[
t = \frac{\text{Difference between Means}}{\text{Std. error of difference}}
\]

\[
t \times SE_D = \text{Difference between Means}
\]

\[
= A_1 - A_2
\]

\[
= A_1 - A_3
\]

\[
= A_1 - A_4
\]

\[
= A_2 - A_3
\]

\[
= A_2 - A_4
\]

\[
= A_3 - A_4
\]

\[
SE_D = \sqrt{\frac{2 \times MS_{\text{error}}}{n}} \quad \text{in case of equal numbers}
\]

\[
SE_D = \sqrt{\frac{MS_{\text{error}}}{n_1} - \frac{MS_{\text{error}}}{n_2}} \quad \text{in case of unequal numbers}
\]
In above examples,

\[ MS_{\text{error}} = 8.39 \]

\[ SE_d = \sqrt{\frac{2 \times 8.39}{120}} \]

LSD value of t at .05 = 1.98

LSD value of t at .01 = 2.62

Where df for t = 464

LSD value of t at .05 level = 1.98 \[ \sqrt{\frac{2 \times 8.39}{120}} \]

\[ = 1.98 \sqrt{\frac{16.78}{120}} \]

\[ = 1.98 \sqrt{0.1398} \]

\[ = 1.98 \times 0.3739 \]

\[ = 0.7404 \]

\[ 0.05 = 0.74 \]

LSD value of t at .01 level = 2.62 \[ \sqrt{\frac{2 \times 8.39}{120}} \]

\[ = 2.62 \times 0.3739 \]

\[ = 0.9796 \]

\[ 0.01 = 0.98 \]
All results are summarised in Table 4.3 thus:

Table 4.3
Results of LSD Test on EM Means

<table>
<thead>
<tr>
<th>Pair</th>
<th>Means Obtained</th>
<th>Expected Diff. at .05</th>
<th>Expected Diff. at .01</th>
<th>Level of Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ES : MS 23.18 : 19.98</td>
<td>12.80</td>
<td>0.74</td>
<td>0.98</td>
<td>.01</td>
</tr>
<tr>
<td>ES : U 23.18 : 17.30</td>
<td>23.50</td>
<td>0.74</td>
<td>0.98</td>
<td>.01</td>
</tr>
<tr>
<td>ES : EU 23.18 : 15.63</td>
<td>30.19</td>
<td>0.74</td>
<td>0.98</td>
<td>.01</td>
</tr>
<tr>
<td>MS : U 19.98 : 17.30</td>
<td>10.70</td>
<td>0.74</td>
<td>0.98</td>
<td>.01</td>
</tr>
<tr>
<td>MS : EU 19.98 : 15.63</td>
<td>17.39</td>
<td>0.74</td>
<td>0.98</td>
<td>.01</td>
</tr>
<tr>
<td>U : EU 17.30 : 15.63</td>
<td>06.69</td>
<td>0.74</td>
<td>0.98</td>
<td>.01</td>
</tr>
</tbody>
</table>

n = 120 couples for df = 464

\[ t_{.05} = 1.98 \]

\[ t_{.01} = 2.62 \]

\[ \text{Expected LSD} = t \times \sqrt{\frac{2 \times MS_x}{n}} \]

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