CHAPTER 5

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5.1 INTRODUCTION

Data analysis should be viewed as an integral component of every research process as it is the core of the study. “Analysis is the heart of a research process” Best (1999). It means studying the organized material in order to discover the inherent facts. It involves a number of closely interrelated operations that are performed to get answers to research questions.

Analysis means categorizing, ordering, manipulating and summarizing the data to obtain answers to research questions. The purpose of analysis is to reduce data to intelligible and interpretative forms so that the relations of research problems can be studied and tested (Kerlinger, 1995).

The data collected are to be processed and analysed for scientific conclusions and for ensuring that all relevant data are used for making contemplated comparisons and analysis. Interpretation is a careful, logical and critical examination of results obtained after analysis, keeping in view the limitations of the sample chosen, and the tools used in the study. This will lead to the acceptance and rejection of the proposed hypothesis and that in turn will help in drawing conclusions and making generalizations.

The broader objective of the present study is to find out the factors affecting responsible environmental behaviour of secondary school students of Kerala. The sample for the present investigation has been selected using stratified random sampling method and while selecting the sample, socio-demographic characteristics such as gender, locale, type of school, mother’s education level, father’s education level, monthly income of the family, type of family and enrolment in nature clubs
were considered giving due representation six districts in Kerala State. The collected data were consolidated, analysed and interpreted for the realisation of the objectives of the study. Analysis is done by using the statistical package SPSS 20.

5.2 OBJECTIVES OF THE STUDY

1. To find out the level of responsible environmental behaviour of secondary school students of Kerala.

2. To find out the level of each of the select independent variables (environment related personality variables, situational factors, environmental awareness, environmental attitude, intention to act, self-efficacy and barriers to action) of secondary school students of Kerala.

3. To find out the effect of select socio-demographic characteristics (gender, locale, type of school, mother’s education level, father’s education level, monthly income of the family, type of family and enrolment in nature clubs) on responsible environmental behaviour of secondary school students of Kerala.

4. To find out the influence of each of the select independent variables on responsible environmental behaviour of secondary school students of Kerala.

5. To find out the relationship between each of the select independent variables and responsible environmental behaviour of secondary school students of Kerala for the total sample and relevant socio demographic characteristics.

6. To determine the relative contributions of factors (select independent variables and select socio-demographic characteristics) to the prediction of responsible environmental behaviour of secondary school students of Kerala.
5.3 HYPOTHESES OF THE STUDY

1. There exists significant effect of select socio-demographic characteristics on responsible environmental behaviour of secondary school students of Kerala.

2. There exists significant influence of each of the select independent variables on responsible environmental behaviour of secondary school students of Kerala.

3. There is significant relationship between each of the select independent variables and responsible environmental behaviour of secondary school students of Kerala for the total sample and relevant socio-demographic characteristics.

5.4 OBJECTIVE WISE ANALYSIS

5.4.1 Level of Responsible Environmental Behaviour of Secondary School Students of Kerala

In order to find out the level of responsible environmental behaviour, scores for responsible environmental behaviour is categorized into three as low, average and high. Those who scored equal to or less than mean minus standard deviation (M - SD) are treated as low level. Those who scored greater than or equal to mean plus standard deviation (M + SD) belong to the high level. Those whose scores fall from M - SD to M + SD belong to the average level. The descriptive analysis of responsible environmental behaviour is given in the Appendix XXXIX.
Table 5.1

Number and Percentage of Level of Responsible Environmental Behaviour among Secondary School Students of Kerala

<table>
<thead>
<tr>
<th>Levels</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>340</td>
<td>18.80</td>
</tr>
<tr>
<td>Average</td>
<td>1110</td>
<td>61.50</td>
</tr>
<tr>
<td>Low</td>
<td>356</td>
<td>19.70</td>
</tr>
<tr>
<td>Total</td>
<td>1806</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5.1 shows the level of responsible environmental behaviour among the secondary school students of Kerala. It is clear that 61.50% of students show average responsible environmental behaviour. 18.80% shows high responsible environmental behaviour and 19.70% shows low responsible environmental behaviour. From the result it can be inferred that most of the students possess average level of responsible environmental behaviour. Figure 5.1 shows the level of responsible environmental behaviour among the secondary school students of Kerala.

![Responsible Environmental Behaviour](image)

*Figure 5.1* Percentage of secondary school students of Kerala showing high, average and low levels of responsible environmental behaviour
5.4.2 Level of each of the Select Independent Variables of Secondary School Students of Kerala.

In order to find out the level of each of the select independent variables, scores for each of the select independent variables is categorized into three as low, average and high. Those who scored equal to or less than mean minus standard deviation (M - SD) are treated as low level. Those who scored greater than or equal to mean plus standard deviation (M + SD) belong to the high level. Those whose scores fall from M - SD to M + SD belong to the average level. The descriptive analyses of each of the select independent variables are given in the Appendix XL.

5.4.2.1 Level of each of the Environment Related Personality Variables of Secondary School Students of Kerala

Table 5.2

<table>
<thead>
<tr>
<th>Levels</th>
<th>Pastoralism</th>
<th>Urbanism</th>
<th>Environmental Adaptation</th>
<th>Environmental Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
<td>N %</td>
</tr>
<tr>
<td>High</td>
<td>288 15.90</td>
<td>399 22.10</td>
<td>229 12.70</td>
<td>463 25.60</td>
</tr>
<tr>
<td>Average</td>
<td>1313 72.70</td>
<td>1170 64.80</td>
<td>1497 82.90</td>
<td>1081 59.90</td>
</tr>
<tr>
<td>Low</td>
<td>205 11.40</td>
<td>237 13.10</td>
<td>80  4.40</td>
<td>262 14.50</td>
</tr>
<tr>
<td>Total</td>
<td>1806 100.00</td>
<td>1806 100.00</td>
<td>1806 100.00</td>
<td>1806 100.00</td>
</tr>
</tbody>
</table>

Table 5.2 shows the level of each of the environment related personality variables (Pastoralism, Urbanism, Environmental Adaptation, and Environmental Trust) among the secondary school students of Kerala. It is clear that 72.70% of students have average Pastoralism, 15.90% have high Pastoralism and 11.40% have
low Pastoralism. For the personality variable urbanism, 64.80% of students have average urbanism, 22.10% have high urbanism and 13.10% have low urbanism. Considering environmental adaptation, 82.90% of students have average environmental adaptation, 12.70% have high environmental adaptation and 4.40% have low environmental adaptation. It is also found that 59.90% students have average environmental trust, 25.60% have high environmental trust and 14.50% have low environmental trust. That means most of the students have average level of Pastoralism, urbanism, environmental adaptation, and environmental trust. Figure 5.2 shows the level of each of the environment related personality variables among the secondary school students of Kerala.

*Figure 5.2* Percentage of secondary school students of Kerala in low, average and high levels of pastoralism, urbanism, environmental adaptation, and environmental trust
5.4.2.2 Level of Situational Factors of Secondary School Students of Kerala

Table 5.3

<table>
<thead>
<tr>
<th>Levels</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>428</td>
<td>23.70</td>
</tr>
<tr>
<td>Average</td>
<td>950</td>
<td>52.60</td>
</tr>
<tr>
<td>Low</td>
<td>428</td>
<td>23.70</td>
</tr>
<tr>
<td>Total</td>
<td>1806</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5.3 shows the level of situational factors among the secondary school students of Kerala. It is clear that 52.60% of students come under average level, 23.70% under high level and 23.70% under low level. The result reveals that more than half of the students have average level of situational factors. Figure 5.3 shows the level of situational factors among the secondary school students of Kerala.

Figure 5.3 Percentage of secondary school students of Kerala showing high, average and low levels of situational factors
5.4.2.3 Level of Environmental Awareness of Secondary School Students of Kerala

Table 5.4

<table>
<thead>
<tr>
<th>Levels</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>329</td>
<td>18.20</td>
</tr>
<tr>
<td>Average</td>
<td>1261</td>
<td>69.80</td>
</tr>
<tr>
<td>Low</td>
<td>216</td>
<td>12.00</td>
</tr>
<tr>
<td>Total</td>
<td>1806</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5.4 shows the level of environmental awareness among the secondary school students of Kerala. It is clear that 69.80% of students have average environmental awareness. 18.20% have high environmental awareness and 12.00% have low environmental awareness. That means most of the students have average level of environmental awareness. Figure 5.4 shows the level of environmental awareness among the secondary school students of Kerala.

Figure 5.4 Percentage of secondary school students of Kerala showing high, average and low levels of environmental awareness
5.4.2.4 Level of Environmental Attitude of Secondary School Students of Kerala

Table 5.5

<table>
<thead>
<tr>
<th>Levels</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>370</td>
<td>20.50</td>
</tr>
<tr>
<td>Average</td>
<td>1224</td>
<td>67.80</td>
</tr>
<tr>
<td>Low</td>
<td>212</td>
<td>11.70</td>
</tr>
<tr>
<td>Total</td>
<td>1806</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5.5 shows the level of environmental attitude among the secondary school students of Kerala. It is clear that 67.80% of students have average environmental attitude, 20.50% have high environmental attitude and 11.70% have low environmental attitude. This shows that most of the students possess average level of environmental attitude. Figure 5.5 shows the level of environmental attitude among the secondary school students of Kerala.

![Environmental Attitude](image)

*Figure 5.5* Percentage of secondary school students of Kerala showing high, average and low levels of environmental attitude
5.3.2.5 Level of Intention to Act of Secondary School Students of Kerala

Table 5.6

<table>
<thead>
<tr>
<th>Levels</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>329</td>
<td>18.20</td>
</tr>
<tr>
<td>Average</td>
<td>1261</td>
<td>69.80</td>
</tr>
<tr>
<td>Low</td>
<td>216</td>
<td>12.00</td>
</tr>
<tr>
<td>Total</td>
<td>1806</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5.6 shows the level of intention to act among the secondary school students of Kerala. It is clear that 69.80% of students have average intention to act, 18.20% have high intention to act and 12.00% have low intention to act. This means that most of the students have an average level intention to act. Figure 5.6 shows the level of intention to act among the secondary school students of Kerala.

Figure 5.6 Percentage of secondary school students of Kerala showing high, average and low levels of intention to act
5.3.2.6 Level of Self-efficacy of Secondary School Students of Kerala

Table 5.7

<table>
<thead>
<tr>
<th>Levels</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>229</td>
<td>12.70</td>
</tr>
<tr>
<td>Average</td>
<td>1529</td>
<td>84.70</td>
</tr>
<tr>
<td>Low</td>
<td>48</td>
<td>2.70</td>
</tr>
<tr>
<td>Total</td>
<td>1806</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5.7 shows the level of self-efficacy among the secondary school students of Kerala. It is clear that 84.70% of students have average self-efficacy, 12.70% have high self-efficacy and 2.70% have low self-efficacy. The result shows that most of the students possess an average level of self-efficacy. A very few students are low in their self-efficacy. Figure 5.7 shows the level of self-efficacy among the secondary school students of Kerala.

![Self-efficacy](image_url)  

*Figure 5.7 Percentage of secondary school students of Kerala showing high, average and low levels of self-efficacy*
5.3.2.7 Level of Barriers to Action of Secondary School Students of Kerala

Table 5.8

<table>
<thead>
<tr>
<th>Levels</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>287</td>
<td>15.90</td>
</tr>
<tr>
<td>Average</td>
<td>1254</td>
<td>69.40</td>
</tr>
<tr>
<td>Low</td>
<td>265</td>
<td>14.70</td>
</tr>
<tr>
<td>Total</td>
<td>1806</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 5.8 shows the level of barriers to action among the secondary school students of Kerala. It is clear that 69.40% of students have average barriers to action, 15.90% have high barriers to action and 14.70% have low barriers to action. This shows most of the students have average level of barriers to action. Figure 5.8 shows the level of barriers to action among the secondary school students of Kerala.

Figure 5.8 Percentage of secondary school students of Kerala showing high, average and low levels of barriers to action
5.4.3 Effect of Socio-Demographic Characteristics on Responsible Environmental Behaviour of Secondary School Students of Kerala

To find out the effect of socio demographic characteristics on responsible environmental behaviour, critical ratio and analysis of variance (ANOVA) are used.

5.4.3.1 Effect of Gender on Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.9

<table>
<thead>
<tr>
<th>Variable</th>
<th>Gender</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible</td>
<td>Male</td>
<td>761</td>
<td>230.22</td>
<td>62.96</td>
<td>4.88**</td>
</tr>
<tr>
<td>Environmental</td>
<td>Female</td>
<td>1045</td>
<td>216.52</td>
<td>52.87</td>
<td></td>
</tr>
</tbody>
</table>

** p< .01

Table 5.9 shows that males (M=230.22, SD=62.96) had significantly higher responsible environmental behaviour than females (M=216.52, SD=52.87), CR=4.88, p<.01. Thus it can be interpreted that there exists a significant effect of gender on responsible environmental behaviour of secondary school students of Kerala.
Table 5.10

Test of Significance of the Difference between Components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) with Respect to Gender

<table>
<thead>
<tr>
<th>Components</th>
<th>Gender</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>Male</td>
<td>761</td>
<td>119.52</td>
<td>31.96</td>
<td>3.47**</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>114.55</td>
<td>27.25</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>Male</td>
<td>761</td>
<td>21.25</td>
<td>8.33</td>
<td>1.12</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>21.67</td>
<td>6.87</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>Male</td>
<td>761</td>
<td>22.96</td>
<td>8.18</td>
<td>4.82**</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>21.13</td>
<td>7.60</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>Male</td>
<td>761</td>
<td>18.26</td>
<td>5.40</td>
<td>4.07**</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>17.30</td>
<td>4.29</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>Male</td>
<td>761</td>
<td>16.98</td>
<td>5.37</td>
<td>3.71**</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>16.12</td>
<td>4.95</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
<td>Male</td>
<td>761</td>
<td>21.20</td>
<td>8.49</td>
<td>.77</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>20.90</td>
<td>8.19</td>
<td></td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Male</td>
<td>761</td>
<td>110.70</td>
<td>37.95</td>
<td>4.99**</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>101.97</td>
<td>35.86</td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

Table 5.10 shows the mean, standard deviation and critical ratio of components of responsible environmental behaviour of male and female students. Males ($M=119.52$, $SD=31.96$) show significantly higher actions (in total) than females ($M=114.55$, $SD=27.25$), $CR=3.47$, $p<.01$. Thus it can be interpreted that there exists a significant effect of gender on actions (in total) of secondary school students of Kerala.
The critical ratio of components of actions of male and female students shows that there is no significant difference in civic action of males and females ($CR=1.12, p>.05$), significantly higher educational action for males ($CR=4.82, p<.01$), significantly higher financial action for males ($CR=4.07, p<.01$), significantly higher legal action for males ($CR=3.71, p<.01$), significantly higher physical action for males ($CR=5.78, p<.01$) and almost same persuasion action for males and females ($CR=.77, p>.05$).

The critical ratio of concernment (in total) of male and female students indicates that males ($M=110.70, SD=37.95$) show significantly higher concernment (in total) than females ($M=101.97, SD=35.86$), $CR=4.99, p<.01$. Thus it can be interpreted that there exists a significant effect of gender on concernment (in total) of secondary school students of Kerala.

### 5.4.3.2 Effect of Locale on Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.11 shows that rural school students ($M=257.01, SD=45.24$) had significantly higher responsible environmental behaviour than urban school students ($M=170.41, SD=27.53$), $CR=50.52, p<.01$. Thus it can be interpreted that there exists
a significant effect of locale on responsible environmental behaviour of secondary school students of Kerala.

Table 5.12

<table>
<thead>
<tr>
<th>Components</th>
<th>Locale</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>Rural</td>
<td>1082</td>
<td>134.76</td>
<td>19.02</td>
<td>48.57**</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>89.58</td>
<td>19.89</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>Rural</td>
<td>1082</td>
<td>24.31</td>
<td>6.75</td>
<td>21.99**</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>17.28</td>
<td>6.59</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>Rural</td>
<td>1082</td>
<td>25.75</td>
<td>6.76</td>
<td>32.63**</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>16.15</td>
<td>5.67</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>Rural</td>
<td>1082</td>
<td>19.86</td>
<td>4.23</td>
<td>28.60**</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>14.48</td>
<td>3.70</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>Rural</td>
<td>1082</td>
<td>18.69</td>
<td>3.30</td>
<td>26.07**</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>13.19</td>
<td>4.50</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
<td>Rural</td>
<td>1082</td>
<td>20.72</td>
<td>4.04</td>
<td>34.89**</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>14.03</td>
<td>3.97</td>
<td></td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Rural</td>
<td>1082</td>
<td>25.43</td>
<td>4.72</td>
<td>32.66**</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>14.45</td>
<td>8.19</td>
<td></td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Rural</td>
<td>1082</td>
<td>122.25</td>
<td>35.72</td>
<td>30.51**</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>80.83</td>
<td>21.92</td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

Table 5.12 shows the mean, standard deviation and critical ratio of components of responsible environmental behaviour of rural and urban school students. In all the components of responsible environmental behaviour, actions (in total), civic action, educational action, financial action, legal action, physical action, persuasion action, concernment (in total), there exists a significant difference between rural and urban school students. In responsible environmental behaviour
scale, for all the components of responsible environmental behaviour, rural school students show significantly higher mean than the urban school students.

Rural school students shows significantly higher actions (in total) \( (CR=48.57, p<.01) \), civic action \( (CR=21.99, p<.01) \), educational action \( (CR=32.63, p<.01) \), financial action \( (CR=28.60, p<.01) \), legal action \( (CR=26.07, p<.01) \), physical action \( (CR=34.89, p<.01) \), persuasion action \( (CR=32.66, p<.01) \) and concernment (in total) \( (CR=30.51, p<.01) \) than urban school students. Thus it can be interpreted that there exists a significant effect of locale on the components of responsible environmental behaviour of secondary school students of Kerala.

5.4.3.3 Effect of Type of School Management on Responsible Environmental Behaviour of Secondary School Students of Kerala

In order to ascertain whether there exist any significant differences among the mean scores of responsible environmental behaviour among the three categories of type of school management, analysis of variance (ANOVA) was employed.

Table 5.13

<table>
<thead>
<tr>
<th>Types of school Management</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>558</td>
<td>225.90</td>
<td>68.41</td>
</tr>
<tr>
<td>Aided</td>
<td>866</td>
<td>204.48</td>
<td>47.48</td>
</tr>
<tr>
<td>Unaided</td>
<td>382</td>
<td>257.41</td>
<td>42.98</td>
</tr>
</tbody>
</table>

Table 5.13 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different types of school management.
Table 5.14

**Summary of Analysis of Variance for the Scores of Responsible Environmental Behaviour in Different Types of School Management**

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>753228.58</td>
<td>2</td>
<td>376614.29</td>
<td>129.09**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5260249.06</td>
<td>1803</td>
<td>2917.50</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.64</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

In table 5.14 an analysis of variance shows that the effect of type of school management on responsible environmental behaviour was significant $F (2, 1803) =129.09, \ p<.01$. This indicates that there exists a significant effect of school management on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of responsible environmental behaviour in the three types of school management are conducted using Scheffe’s post hoc analysis.

Table 5.15

**Scheffe’s Post Hoc Analysis for Identifying Differences in Responsible Environmental Behaviour among Different Types of School Management**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Types of School Management</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Responsible</td>
<td>Aided</td>
<td>866</td>
<td>204.48</td>
</tr>
<tr>
<td>Environmental</td>
<td>Government</td>
<td>558</td>
<td>225.90</td>
</tr>
<tr>
<td>Behaviour</td>
<td>Unaided</td>
<td>382</td>
<td></td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

Responsible environmental behaviour of unaided school students ($M=257.41$) were significantly higher than the government school students ($M=225.90$) and aided school students ($M=204.48$). Government school students
show significantly higher responsible environmental behaviour than aided school students. All the mean differences are significant at .01 level.

Table 5.16

<table>
<thead>
<tr>
<th>Components</th>
<th>Types of School Management</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>Government</td>
<td>558</td>
<td>117.97</td>
<td>33.02</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aided</td>
<td>866</td>
<td>107.88</td>
<td>26.88</td>
<td>124.97**</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>134.58</td>
<td>19.19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>23.140</td>
<td>8.19</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>Aided</td>
<td>866</td>
<td>18.830</td>
<td>6.03</td>
<td>128.09**</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>25.120</td>
<td>7.33</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>22.600</td>
<td>8.29</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>Aided</td>
<td>866</td>
<td>19.710</td>
<td>7.11</td>
<td>91.04**</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>25.830</td>
<td>7.28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>17.910</td>
<td>4.87</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>Aided</td>
<td>866</td>
<td>16.830</td>
<td>4.80</td>
<td>39.58**</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>19.380</td>
<td>4.26</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>16.330</td>
<td>4.79</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>Aided</td>
<td>866</td>
<td>15.950</td>
<td>5.34</td>
<td>21.98**</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>17.900</td>
<td>3.45</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>17.790</td>
<td>4.97</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
<td>Aided</td>
<td>866</td>
<td>17.300</td>
<td>5.60</td>
<td>40.71**</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>20.080</td>
<td>3.78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>20.200</td>
<td>9.45</td>
<td></td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Aided</td>
<td>866</td>
<td>19.260</td>
<td>7.78</td>
<td>109.90**</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>26.260</td>
<td>4.92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>107.930</td>
<td>41.30</td>
<td></td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Aided</td>
<td>866</td>
<td>96.590</td>
<td>31.60</td>
<td>73.71**</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>122.830</td>
<td>35.13</td>
<td></td>
</tr>
</tbody>
</table>

**p<.01
Analysis of variance in table 5.16 shows that the effect of type of school management on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803), for Actions (in total) ($F=124.97$, $p<.01$), civic action ($F=128.09$, $p<.01$), educational action ($F=91.04$, $p<.01$), financial action ($F=39.58$, $p<.01$), legal action ($F=21.98$, $p<.01$), physical action ($F=40.71$, $p<.01$), persuasion action ($F=109.90$, $p<.01$) and concernment (in total) ($F=73.71$, $p<.01$), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three types of school management compared, and this indicates that there exists a significant effect of type of school management on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three types of school management are conducted using Scheffé’s post hoc analysis.
Table 5.17

Scheffe’s Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) among Different Types of School Management

<table>
<thead>
<tr>
<th>Components (in Total)</th>
<th>Type of school</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Actions (in Total)</td>
<td>Aided</td>
<td>866</td>
<td>107.88</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>117.97</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>134.58</td>
</tr>
<tr>
<td>Civic Action</td>
<td>Aided</td>
<td>866</td>
<td>18.83</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>23.14</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>25.12</td>
</tr>
<tr>
<td>Educational Action</td>
<td>Aided</td>
<td>866</td>
<td>19.71</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>22.60</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>25.83</td>
</tr>
<tr>
<td>Financial Action</td>
<td>Aided</td>
<td>866</td>
<td>16.83</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>17.91</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>19.38</td>
</tr>
<tr>
<td>Legal Action</td>
<td>Aided</td>
<td>866</td>
<td>15.95</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>16.33</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>17.90</td>
</tr>
<tr>
<td>Physical Action</td>
<td>Aided</td>
<td>866</td>
<td>17.30</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>17.79</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>20.08</td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Aided</td>
<td>866</td>
<td>19.26</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>20.20</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>26.26</td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Aided</td>
<td>866</td>
<td>96.59</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>107.93</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>122.83</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
For actions (in total), the mean score of unaided school students (134.58) significantly differ from the mean score of government school students (117.97) and aided school students (107.88). Mean score of government school students significantly differ from the mean score of aided school students. All the mean differences are significant at .01 level. Thus it can be interpreted that unaided school students show more actions (in total) than government school students and aided school students. Government school students show more actions (in total) than aided school students.

For civic action, the mean score of unaided school students (25.12) significantly differ from the mean score of government school students (23.14) and aided school students (18.83). Mean score of government school students significantly differ from the mean score of aided school students. All the mean differences are significant at .01 level. Thus it can be interpreted that unaided school students show more civic action than government and aided school students. Government school students show more civic action than aided school students.

For educational action, the mean score of unaided school students (25.83) significantly differ from the mean score of government school students (22.60) and aided school students (19.71). Mean score of government school students significantly differ from the mean score of aided school students. All the mean differences are significant at .01 level. Thus it can be interpreted that unaided school students show more educational action than government and aided school students. Government school students show more educational action than aided school students.
For financial action, the mean score of unaided school students (19.38) significantly differ from the mean score of government school students (17.91) and aided school students (16.83). Mean score of government school students significantly differ from the mean score of aided school students. All the mean differences are significant at .01 level. Thus it can be interpreted that unaided school students show more financial action than government and aided school students. Government school students show more financial action than aided school students.

For legal action, the mean score of unaided school students (17.90) significantly differ from the mean score of government school students (16.33) and aided school students (15.95). The mean differences are significant at .01 level. Mean score of government school students does not differ significantly from the mean score of aided school students. Thus it can be interpreted that unaided school students show more legal action than government and aided school students.

For physical action, the mean score of unaided school students (20.08) significantly differ from the mean score of government school students (17.79) and aided school students (17.30). The mean differences are significant at .01 level. Mean score of government school students does not differ significantly from the mean score of aided school students. Thus it can be interpreted that unaided school students show more physical action than government and aided school students.

For persuasion action, the mean score of unaided school students (26.26) significantly differ from the mean score of government school students (20.20) and aided school students (19.26). The mean differences are significant at .01 level. Mean score of government school students does not differ significantly from the
mean score of aided school students. Thus it can be interpreted that unaided school students show more persuasion action than government and aided school students.

For concernment (in total), the mean score of unaided school students (122.83) significantly differ from the mean score of government school students (107.93) and aided school students (96.59). Mean score of government school students significantly differ from the mean score of aided school students. All the mean differences are significant at .01 level. Thus it can be interpreted that unaided school students show more concernment (in total) than government school students and aided school students. Government school students have more concernment (in total) than aided school students.

5.4.3.4 Effect of Mother’s Education Level on Responsible Environmental Behaviour of Secondary School Students of Kerala

In order to ascertain whether there exist any significant differences among the mean scores of responsible environmental behaviour among the three categories of mother’s education level, ANOVA was employed.

Table 5.18

<table>
<thead>
<tr>
<th>Mother’s Education Level</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below SSLC</td>
<td>638</td>
<td>237.97</td>
<td>48.41</td>
</tr>
<tr>
<td>SSLC to Degree</td>
<td>1078</td>
<td>212.84</td>
<td>62.02</td>
</tr>
<tr>
<td>Above Degree</td>
<td>90</td>
<td>224.36</td>
<td>37.37</td>
</tr>
</tbody>
</table>
Table 5.18 shows the number, mean and standard deviation for the scores of responsible environmental behaviour of secondary school students based mother’s education.

Table 5.19

Summary of Analysis of Variance for the Scores of Responsible Environmental Behaviour of Secondary School Students based on their Mother’s Education

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>253589.23</td>
<td>2</td>
<td>126794.61</td>
<td>39.69**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5759888.41</td>
<td>1803</td>
<td>3194.61</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.64</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

In table 5.19, an analysis of variance shows that the effect of mother’s education level on responsible environmental behaviour was significant $F (2, 1803) = 39.69, p<.01$. This indicates that there exists a significant effect of mother’s education level on responsible environmental behaviour of secondary school students of Kerala.

Multiple comparisons are conducted using Scheffe’s post hoc analysis.

Table 5.20

Scheffe’s Post Hoc Analysis for Identifying Differences in Responsible Environmental Behaviour among Secondary School Students based on their Mother’s Education

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type of School</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Responsible Environmental Behaviour</td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>212.84</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>224.36</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>638</td>
<td>237.97</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

From table 5.20, it is clear that the students with mother’s education level below SSLC obtained a mean score (237.97) which is higher than the mean score of students with mother’s education level SSLC to degree (212.84). The mean difference is significant at .01 level. The students with mother’s education level
below SSLC and above degree, mother’s education level above degree (M=224.36) and SSLC to degree have no significant difference in their responsible environmental behaviour.

Table 5.21
*Number, Mean, Standard Deviation and F Value for the Scores of Components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) among Secondary School Students based on their Mother’s Education*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Education</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actions (in Total)</strong></td>
<td>Below SSLC</td>
<td>638</td>
<td>123.26</td>
<td>25.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>112.79</td>
<td>31.91</td>
<td>26.07**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>115.93</td>
<td>15.72</td>
<td></td>
</tr>
<tr>
<td><strong>Civic Action</strong></td>
<td>Below SSLC</td>
<td>638</td>
<td>21.59</td>
<td>7.06</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>21.68</td>
<td>7.72</td>
<td>7.41**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>18.53</td>
<td>7.69</td>
<td></td>
</tr>
<tr>
<td><strong>Educational Action</strong></td>
<td>Below SSLC</td>
<td>638</td>
<td>23.32</td>
<td>7.24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>21.07</td>
<td>8.41</td>
<td>16.49**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>21.73</td>
<td>3.13</td>
<td></td>
</tr>
<tr>
<td><strong>Financial Action</strong></td>
<td>Below SSLC</td>
<td>638</td>
<td>18.62</td>
<td>3.19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>17.28</td>
<td>5.62</td>
<td>39.58**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>16.27</td>
<td>2.16</td>
<td></td>
</tr>
<tr>
<td><strong>Legal Action</strong></td>
<td>Below SSLC</td>
<td>638</td>
<td>17.02</td>
<td>4.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>16.09</td>
<td>5.37</td>
<td>8.75**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>17.33</td>
<td>2.93</td>
<td></td>
</tr>
<tr>
<td><strong>Physical Action</strong></td>
<td>Below SSLC</td>
<td>638</td>
<td>18.92</td>
<td>4.85</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>17.53</td>
<td>5.48</td>
<td>14.75**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>17.87</td>
<td>2.10</td>
<td></td>
</tr>
<tr>
<td><strong>Persuasion Action</strong></td>
<td>Below SSLC</td>
<td>638</td>
<td>23.78</td>
<td>5.47</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>19.13</td>
<td>9.31</td>
<td>75.22**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>24.20</td>
<td>5.59</td>
<td></td>
</tr>
<tr>
<td><strong>Concernment (in Total)</strong></td>
<td>Below SSLC</td>
<td>638</td>
<td>114.72</td>
<td>32.80</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>100.05</td>
<td>38.87</td>
<td>32.90**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>108.42</td>
<td>28.35</td>
<td></td>
</tr>
</tbody>
</table>

**p<.01
Analysis of variance in table 5.21 shows that the effect of mother’s education level on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803), for actions (in total) ($F=26.07$, $p<.01$), civic action ($F=7.41$, $p<.01$), educational action ($F=16.49$, $p<.01$), financial action ($F=39.58$, $p<.01$), legal action ($F=8.75$, $p<.01$), physical action ($F=14.75$, $p<.01$), Persuasion Action ($F=75.22$, $p<.01$) and Concernment (in total) ($F=32.90$, $p<.01$), are significant.

Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of mother’s education compared, and this indicates that there exists a significant effect of mother’s education level on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of mother’s education are conducted using Scheffe’s post hoc analysis.
Results of Scheffe’s Post Hoc Analysis for the components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) among Secondary School Students based on their Mother’s Education

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Education</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>112.79</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>115.93</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>638</td>
<td>123.26</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>18.53</td>
</tr>
<tr>
<td>Civic Action</td>
<td>Below SSLC</td>
<td>638</td>
<td>21.59</td>
</tr>
<tr>
<td>Educational Action</td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>21.07</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>21.73</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>638</td>
<td>23.32</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>16.27</td>
</tr>
<tr>
<td>Financial Action</td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>17.28</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>638</td>
<td>18.62</td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>16.09</td>
</tr>
<tr>
<td>Legal Action</td>
<td>Below SSLC</td>
<td>638</td>
<td>17.02</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>17.33</td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>17.53</td>
</tr>
<tr>
<td>Physical Action</td>
<td>Above Degree</td>
<td>90</td>
<td>17.87</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>638</td>
<td>18.92</td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>19.13</td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Below SSLC</td>
<td>638</td>
<td>23.78</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>24.20</td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>100.05</td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Above Degree</td>
<td>90</td>
<td>108.42</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>638</td>
<td>114.72</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
For actions (in total), the students with mother’s education level below SSLC obtained a mean score (123.26) which is significantly higher than the mean score of students with mother’s education level SSLC to degree (112.79). The mean difference is significant at .01 level. The students with mother’s education level below SSLC and above degree, mother’s education level above degree and SSLC to degree have no significant difference in their actions (in total).

For civic action, the obtained mean of the students with mother’s education level above degree (18.53) differs significantly from the means of students with mother’s education level below SSLC (21.59) and SSLC to degree (21.68). The mean difference is significant at .01 level. The students with mother’s education level below SSLC and students with mother’s education level SSLC to degree do not differ significantly in their civic action. Thus it can be interpreted that students with mother’s education level below SSLC and SSLC to degree shows high civic action than the students with mother’s education level above degree.

For educational action, the obtained mean of the students with mother’s education level below SSLC (23.32) differs significantly from the mean of students with mother’s education level above degree (21.73) and SSLC to degree (21.07). The mean difference is significant at .01 level. The students with mother’s education level above degree and SSLC to degree shows almost same educational action. Thus it can be interpreted that the students with mother’s education level below SSLC shows higher educational action.

For financial action, the students with mother’s education level below SSLC obtained a mean score (18.62) which is significantly higher than the mean score of students with mother’s education level above degree (16.27). The mean difference is
significant at .01 level. The students with mother’s education level below SSLC and SSLC to degree, mother’s education level above degree and SSLC to degree have no significant difference in their financial action.

For legal action, the obtained mean of the students with mother’s education level SSLC to degree (16.09) differs significantly from the means of students with mother’s education level below SSLC (17.02) and above degree (17.33). The mean difference is significant at .01 level. The students with mother’s education level below SSLC and above degree do not differ significantly in their legal action. Thus it can be interpreted that students with mother’s education level above degree and below SSLC shows high legal action.

For physical action, the obtained mean of the students with mother’s education level below SSLC (18.92), differs significantly from the means of students with mother’s education level above degree (17.87) and SSLC to degree (17.53). The mean difference is significant at .01 level. The students with mother’s education level above degree and SSLC to degree have almost same physical action. Thus it can be interpreted that the students with mother’s education level below SSLC shows higher physical action.

For persuasion action, the obtained mean of the students with mother’s education level SSLC to degree (19.13) differs significantly from the means of students with mother’s education level below SSLC (23.78) and above degree (24.20). The mean difference is significant at .01 level. The students with mother’s education level below SSLC and above degree do not differ significantly in their persuasion action. Thus it can be interpreted that students with mother’s education
level below SSLC and above degree shows high persuasion action than the students with mother’s education level SSLC to degree.

For concernment (in total), the students with mother’s education level below SSLC obtained a mean score (114.72) which is significantly higher than the mean score of students with mother’s education level SSLC to degree (100.05). The mean difference is significant at .01 level. The students with mother’s education level below SSLC and above degree, mother’s education level above degree and SSLC to degree have no significant difference in their concernment (in total).

**5.4.3.5 Effect of Father’s Education Level on Responsible Environmental Behaviour of Secondary School Students of Kerala**

In order to ascertain whether there exist any significant differences among the mean scores of secondary school student’s responsible environmental behaviour among the three categories of father’s education level analysis of variance (ANOVA) was employed.

Table 5.23

<table>
<thead>
<tr>
<th>Father’s Education Level</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below SSLC</td>
<td>634</td>
<td>226.48</td>
<td>64.76</td>
</tr>
<tr>
<td>SSLC to Degree</td>
<td>942</td>
<td>210.33</td>
<td>51.44</td>
</tr>
<tr>
<td>Above Degree</td>
<td>230</td>
<td>259.74</td>
<td>41.81</td>
</tr>
</tbody>
</table>

Table 5.23 shows the number, mean and standard deviation for the scores of responsible environmental behaviour of secondary school students based on their father’s Education.
Table 5.24

Summary of Analysis of Variance for the Scores of Responsible Environmental Behaviour of Secondary School Students based on their Father’s Education

<table>
<thead>
<tr>
<th>Source of Variance</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>468374.10</td>
<td>2</td>
<td>234187.05</td>
<td>76.15**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5545103.54</td>
<td>1803</td>
<td>3075.49</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.64</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

In table 5.24, analysis of variance shows that the effect of father’s education level on responsible environmental behaviour was significant $F (2, 1803) =76.15$, $p<.01$. This indicates that there exists a significant effect of father’s education level on responsible environmental behaviour of secondary school students of Kerala.

Multiple comparisons are conducted using Scheffe’s post hoc analysis.

Table 5.25

Scheffe’s Post Hoc Analysis for Identifying Differences in Responsible Environmental Behaviour among Secondary School Students based on their Father’s Education

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Education</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Responsible Environmental Behaviour</td>
<td>SSLC to degree</td>
<td>942</td>
<td>210.33</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>634</td>
<td>226.48</td>
</tr>
<tr>
<td></td>
<td>Above degree</td>
<td>230</td>
<td>259.74</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

Responsible environmental behaviour of students with father’s education level above degree ($M=259.74$) were significantly higher than the students with father’s education level below SSLC ($M=226.48$) and SSLC to degree ($M=210.33$). Students with father’s education level below SSLC had significantly higher responsible environmental behaviour than the students with father’s education level SSLC to degree. All the mean differences are significant at .01 level.
Table 5.26
*Number, Mean, Standard Deviation and F Value for the Scores of Components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) among Secondary School Students based on their Father's Education*

<table>
<thead>
<tr>
<th>Components (in Total)</th>
<th>Levels of Education</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions</td>
<td>Below SSLC</td>
<td>634</td>
<td>117.88</td>
<td>31.09</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>111.06</td>
<td>28.11</td>
<td>73.30**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>136.11</td>
<td>19.79</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>Below SSLC</td>
<td>634</td>
<td>22.81</td>
<td>7.78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>19.69</td>
<td>6.43</td>
<td>70.14**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>25.23</td>
<td>8.73</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>Below SSLC</td>
<td>634</td>
<td>22.58</td>
<td>7.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>19.99</td>
<td>7.40</td>
<td>106.62**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>27.86</td>
<td>6.22</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>Below SSLC</td>
<td>634</td>
<td>17.87</td>
<td>4.59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>17.14</td>
<td>4.84</td>
<td>24.50**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>19.56</td>
<td>4.87</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>Below SSLC</td>
<td>634</td>
<td>16.42</td>
<td>4.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>16.19</td>
<td>5.26</td>
<td>10.53**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>17.83</td>
<td>3.94</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
<td>Below SSLC</td>
<td>634</td>
<td>17.77</td>
<td>4.69</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>17.99</td>
<td>5.75</td>
<td>5.13**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>19.03</td>
<td>3.72</td>
<td></td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Below SSLC</td>
<td>634</td>
<td>20.44</td>
<td>8.89</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>20.06</td>
<td>8.19</td>
<td>63.87**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>26.61</td>
<td>3.83</td>
<td></td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Below SSLC</td>
<td>634</td>
<td>108.59</td>
<td>39.68</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>99.27</td>
<td>33.66</td>
<td>45.28**</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>123.63</td>
<td>35.57</td>
<td></td>
</tr>
</tbody>
</table>

**p<.01
Analysis of variance in table 5.26 shows that the effect of father’s education on components of responsible environmental behavior was significant. The $F$ values with degrees of freedom (2, 1803), for actions (in total) ($F = 73.30, p < .01$), civic action ($F = 70.14, p < .01$), educational action ($F = 106.62, p < .01$), financial action ($F = 24.50, p < .01$), legal action ($F = 10.53, p < .01$), physical action ($F = 5.13, p < .01$), persuasion action ($F = 63.87, p < .01$) and concernment (in total) ($F = 45.28, p < .01$), are significant.

Component wise analysis of responsible environmental behavior scale shows that there exist significant differences among the mean scores of the students in the three levels of father’s education compared, and this indicates that there exists a significant effect of father’s education level on the components of responsible environmental behavior of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behavior in the three levels of father’s education are conducted using Scheffe’s post hoc analysis.
Table 5.27

Results of Scheffe’s Post Hoc Analysis for the components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) among Secondary School Students based on their Father’s Education

<table>
<thead>
<tr>
<th>Components</th>
<th>Type of school</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Actions (in Total)</td>
<td>SSLC to degree</td>
<td>942</td>
<td>111.06</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>634</td>
<td>117.88</td>
</tr>
<tr>
<td></td>
<td>Above degree</td>
<td>230</td>
<td>136.11</td>
</tr>
<tr>
<td></td>
<td>SSLC to degree</td>
<td>942</td>
<td>19.69</td>
</tr>
<tr>
<td>Civic action</td>
<td>Below SSLC</td>
<td>634</td>
<td>22.81</td>
</tr>
<tr>
<td></td>
<td>Above degree</td>
<td>230</td>
<td>25.23</td>
</tr>
<tr>
<td></td>
<td>SSLC to degree</td>
<td>942</td>
<td>19.99</td>
</tr>
<tr>
<td>Educational action</td>
<td>Below SSLC</td>
<td>634</td>
<td>22.58</td>
</tr>
<tr>
<td></td>
<td>Above degree</td>
<td>230</td>
<td>27.86</td>
</tr>
<tr>
<td></td>
<td>SSLC to degree</td>
<td>942</td>
<td>17.14</td>
</tr>
<tr>
<td>Financial action</td>
<td>Below SSLC</td>
<td>634</td>
<td>17.87</td>
</tr>
<tr>
<td></td>
<td>Above degree</td>
<td>230</td>
<td>19.56</td>
</tr>
<tr>
<td></td>
<td>SSLC to degree</td>
<td>942</td>
<td>16.19</td>
</tr>
<tr>
<td>Legal action</td>
<td>Below SSLC</td>
<td>634</td>
<td>16.42</td>
</tr>
<tr>
<td></td>
<td>Above degree</td>
<td>230</td>
<td>17.83</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>634</td>
<td>17.77</td>
</tr>
<tr>
<td>Physical action</td>
<td>SSLC to degree</td>
<td>942</td>
<td>17.99</td>
</tr>
<tr>
<td></td>
<td>Above degree</td>
<td>230</td>
<td>19.03</td>
</tr>
<tr>
<td></td>
<td>SSLC to degree</td>
<td>942</td>
<td>20.06</td>
</tr>
<tr>
<td>Persuasion action</td>
<td>Below SSLC</td>
<td>634</td>
<td>20.44</td>
</tr>
<tr>
<td></td>
<td>Above degree</td>
<td>230</td>
<td>26.61</td>
</tr>
<tr>
<td></td>
<td>SSLC to degree</td>
<td>942</td>
<td>99.27</td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Below SSLC</td>
<td>634</td>
<td>108.59</td>
</tr>
<tr>
<td></td>
<td>Above degree</td>
<td>230</td>
<td>123.63</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
For actions (in total), the mean score of the students with father’s education level above degree (136.11) significantly differ from the mean score of the students with father’s education level below SSLC (117.88) and students with father’s education level SSLC to degree (111.06). Mean score of the students with father’s education level below SSLC significantly differ from the mean score of students with father’s education level SSLC to degree. All the mean differences are significant at .01 level. Thus it can be interpreted that students with father’s education level above degree shows more actions (in total).

For civic action, the mean score of the students with father’s education level above degree (25.23) significantly differ from the mean score of the students with father’s education level below SSLC (22.81) and students with father’s education level SSLC to degree (19.69). Mean score of the students with father’s education level below SSLC significantly differ from the mean score of students with father’s education level SSLC to degree. All the mean differences are significant at .01 level. Thus it can be interpreted that students with father’s education level above degree shows more civic action.

For educational action, the mean score of the students with father’s education level above degree (27.86) significantly differ from the mean score of the students with father’s education level below SSLC (22.58) and students with father’s education level SSLC to degree (19.99). Mean score of the students with father’s education level below SSLC significantly differ from the mean score of students with father’s education level SSLC to degree. All the mean differences are significant at .01 level. Thus it can be interpreted that students with father’s education level above degree shows more educational action.
For financial action, the mean score of students with father’s education level above degree (19.56) significantly differ from the mean score of students with father’s education level below SSLC (17.87) and mean score of students with father’s education level SSLC to degree (17.14). The mean differences are significant at .01 level. Mean score of students with father’s education level below SSLC do not differ significantly from the mean score of students with father’s education level SSLC to degree. Thus it can be interpreted that students with father’s education level above degree shows more financial action.

For legal action, the mean score of students with father’s education level above degree (17.83) significantly differ from the mean score of students with father’s education level below SSLC (16.42) and mean score of students with father’s education level SSLC to degree (16.19). The mean differences are significant at .01 level. Mean score of students with father’s education level below SSLC do not differ significantly from the mean score of students with father’s education level SSLC to degree. Thus it can be interpreted that students with father’s education level above degree shows more legal action.

For physical action, the students with father’s education level above degree obtained a mean score (19.03) which is significantly higher than the mean score of students with father’s education level below SSLC (17.77). The mean difference is significant at .01 level. The students with father’s education level above degree and SSLC to degree, father’s education level SSLC to degree and below SSLC have no significant difference in their physical action.
For persuasion action, the mean score of students with father’s education level above degree (26.61) significantly differ from the mean score of students with father’s education level below SSLC (20.44) and mean score of students with father’s education level SSLC to degree (20.06). The mean differences are significant at .01 level. Mean score of students with father’s education level below SSLC do not differ significantly from the mean score of students with father’s education level SSLC to degree. Thus it can be interpreted that students with father’s education level above degree shows more persuasion action.

For concernment (in total), the mean score of the students with father’s education level above degree (123.63) significantly differ from the mean score of the students with father’s education level below SSLC (108.59) and students with father’s education level SSLC to degree (99.27). Mean score of the students with father’s education level below SSLC significantly differ from the mean score of students with father’s education level SSLC to degree. All the mean differences are significant at .01 level. Thus it can be interpreted that students with father’s education level above degree shows more concernment (in total).
5.4.3.6 Effect of Family Monthly Income on Responsible Environmental Behaviour of Secondary School Students of Kerala.

Table 5.28

<table>
<thead>
<tr>
<th>Family Monthly Income</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 1000</td>
<td>358</td>
<td>227.47</td>
<td>63.76</td>
</tr>
<tr>
<td>1000-5000</td>
<td>841</td>
<td>232.48</td>
<td>56.47</td>
</tr>
<tr>
<td>5000-10000</td>
<td>263</td>
<td>217.75</td>
<td>61.54</td>
</tr>
<tr>
<td>10000-15000</td>
<td>240</td>
<td>197.90</td>
<td>42.38</td>
</tr>
<tr>
<td>Above 15000</td>
<td>104</td>
<td>189.89</td>
<td>32.35</td>
</tr>
</tbody>
</table>

Table 5.28 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different family monthly income.

Table 5.29

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>354184.35</td>
<td>4</td>
<td>88546.09</td>
<td>28.18**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>5659293.28</td>
<td>1801</td>
<td>3142.31</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

In table 5.29, analysis of variance shows that the effect of family income on responsible environmental behaviour was significant $F (4, 1801) = 28.18, p<.01$. This indicates that there exists a significant effect of family income on responsible
environmental behaviour of secondary school students of Kerala. Multiple comparisons are conducted using Scheffe’s post hoc analysis.

Table 5.30

*Results of Scheffe’s Post Hoc Analysis for the components of Responsible Environmental Behaviour among Different Family Monthly Income*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Family Monthly Income</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Responsible Environmental</td>
<td>Above15000</td>
<td>104</td>
<td>189.89</td>
</tr>
<tr>
<td>Behaviour</td>
<td>10000-15000</td>
<td>240</td>
<td>197.90</td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>217.75</td>
</tr>
<tr>
<td></td>
<td>below 1000</td>
<td>358</td>
<td>227.47</td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>232.48</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

For responsible environmental behaviour, the mean score of the students with family monthly income above 15000 (\(M=189.89\)) and 10000-15000 (\(M =197.90\)) significantly differ from the mean score of the students with family monthly income 5000-10000 (\(M =217.75\)), below 1000 (\(M =227.47\)) and 1000-5000 (\(M =232.48\)). The mean differences are significant at .01 level. The students with family monthly income above 15000 and 10000-15000 show almost same responsible environmental behaviour. Similarly the students with family monthly income 5000-10000, below 1000 and 1000-5000 show almost same responsible environmental behaviour. Thus it can be interpreted that students with family monthly income below 1000, 1000-5000 and 5000-10000 shows more responsible environmental behaviour than the students with family monthly income 10000-15000 and above 15000.
Table 5.31
Number, Mean, Standard Deviation and F Value for the Scores of Components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) in Different Family Monthly Income

<table>
<thead>
<tr>
<th>Variable</th>
<th>Family Monthly Income</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>Below 1000</td>
<td>358</td>
<td>118.41</td>
<td>33.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>121.24</td>
<td>28.37</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>119.68</td>
<td>26.40</td>
<td>35.15**</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>97.62</td>
<td>23.83</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above 15000</td>
<td>104</td>
<td>109.67</td>
<td>23.02</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>Below 1000</td>
<td>358</td>
<td>20.06</td>
<td>8.44</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>22.33</td>
<td>7.48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>24.91</td>
<td>6.20</td>
<td>38.87**</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>17.77</td>
<td>5.59</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above 15000</td>
<td>104</td>
<td>19.58</td>
<td>6.30</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>Below 1000</td>
<td>358</td>
<td>20.80</td>
<td>8.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>24.52</td>
<td>7.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>21.91</td>
<td>8.32</td>
<td>74.28**</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>16.98</td>
<td>6.25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above 15000</td>
<td>104</td>
<td>15.77</td>
<td>4.86</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>Below 1000</td>
<td>358</td>
<td>19.13</td>
<td>5.65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>17.97</td>
<td>4.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>17.31</td>
<td>4.87</td>
<td>23.21**</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>15.59</td>
<td>2.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above 15000</td>
<td>104</td>
<td>16.50</td>
<td>6.30</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>Below 1000</td>
<td>358</td>
<td>18.05</td>
<td>4.54</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>16.19</td>
<td>4.60</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>18.22</td>
<td>4.46</td>
<td>47.34**</td>
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<td>10000-15000</td>
<td>240</td>
<td>13.37</td>
<td>3.92</td>
<td></td>
</tr>
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<td>Above 15000</td>
<td>104</td>
<td>16.21</td>
<td>6.85</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
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<td>358</td>
<td>19.18</td>
<td>6.00</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>18.24</td>
<td>4.09</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>19.68</td>
<td>5.62</td>
<td>42.59**</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>14.99</td>
<td>5.87</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above 15000</td>
<td>104</td>
<td>15.37</td>
<td>2.88</td>
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</tr>
</tbody>
</table>
Analysis and Interpretation of Data

Persuasion Action

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Total</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 1000</td>
<td>358</td>
<td>21.18</td>
<td>8.10</td>
</tr>
<tr>
<td>1000-5000</td>
<td>841</td>
<td>21.98</td>
<td>7.58</td>
</tr>
<tr>
<td>5000-10000</td>
<td>263</td>
<td>17.64</td>
<td>10.83</td>
</tr>
<tr>
<td>10000-15000</td>
<td>240</td>
<td>18.92</td>
<td>7.17</td>
</tr>
<tr>
<td>Above 15000</td>
<td>104</td>
<td>26.25</td>
<td>4.85</td>
</tr>
</tbody>
</table>

Concernment (in Total)

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Total</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 1000</td>
<td>358</td>
<td>109.06</td>
<td>36.15</td>
</tr>
<tr>
<td>1000-5000</td>
<td>841</td>
<td>111.24</td>
<td>36.00</td>
</tr>
<tr>
<td>5000-10000</td>
<td>263</td>
<td>98.08</td>
<td>42.69</td>
</tr>
<tr>
<td>10000-15000</td>
<td>240</td>
<td>100.28</td>
<td>30.26</td>
</tr>
<tr>
<td>Above 15000</td>
<td>104</td>
<td>80.22</td>
<td>31.16</td>
</tr>
</tbody>
</table>

**p<.01

Analysis of variance in table 5.31 shows that the effect of family monthly income on components of responsible environmental behaviour was significant.

The $F$ values with degrees of freedom (4, 1801), for actions (in total) ($F=35.15$, $p<.01$), civic action ($F=38.87$, $p<.01$), educational action ($F=74.28$, $p<.01$), financial action ($F=23.21$, $p<.01$), legal action ($F=47.34$, $p<.01$), physical action ($F=42.59$, $p<.01$), persuasion action ($F=29.54$, $p<.01$) and concernment (in total) ($F=22.92$, $p<.01$), are significant.

Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the different family monthly income compared, and this indicates that there exists a significant effect of family monthly income on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in different family monthly income are conducted using Scheffe’s post hoc analysis.
Table 5.32

Results of Scheffe’s Post Hoc Analysis for the components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) among Different Family Monthly Income

<table>
<thead>
<tr>
<th>Components</th>
<th>Family Income</th>
<th>N</th>
<th>Subset for alpha = 0.01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>97.62</td>
</tr>
<tr>
<td></td>
<td>Above15000</td>
<td>104</td>
<td>109.67</td>
</tr>
<tr>
<td></td>
<td>Below 1000</td>
<td>358</td>
<td>118.41</td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>119.68</td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>121.24</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>17.77</td>
</tr>
<tr>
<td></td>
<td>Above15000</td>
<td>104</td>
<td>19.58</td>
</tr>
<tr>
<td>Civic action</td>
<td>Below 1000</td>
<td>358</td>
<td>20.06</td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>22.33</td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>24.91</td>
</tr>
<tr>
<td></td>
<td>Above15000</td>
<td>104</td>
<td>15.77</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>16.98</td>
</tr>
<tr>
<td>Educational</td>
<td>Below 1000</td>
<td>358</td>
<td>20.80</td>
</tr>
<tr>
<td>action</td>
<td>5000-10000</td>
<td>263</td>
<td>21.91</td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>24.52</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>15.59</td>
</tr>
<tr>
<td></td>
<td>Above15000</td>
<td>104</td>
<td>16.50</td>
</tr>
<tr>
<td>Financial</td>
<td>5000-10000</td>
<td>263</td>
<td>17.31</td>
</tr>
<tr>
<td>action</td>
<td>1000-5000</td>
<td>841</td>
<td>17.97</td>
</tr>
<tr>
<td></td>
<td>Below 1000</td>
<td>358</td>
<td>19.13</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>13.37</td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>16.19</td>
</tr>
<tr>
<td></td>
<td>Above15000</td>
<td>104</td>
<td>16.21</td>
</tr>
<tr>
<td>Legal action</td>
<td>Below 1000</td>
<td>358</td>
<td>18.05</td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>18.22</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>14.99</td>
</tr>
<tr>
<td></td>
<td>Above15000</td>
<td>104</td>
<td>15.37</td>
</tr>
<tr>
<td>Physical</td>
<td>1000-5000</td>
<td>841</td>
<td>18.24</td>
</tr>
<tr>
<td>action</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Means for groups in homogeneous subsets are displayed

For actions (in total), students with family monthly income below 1000, 5000-10000, 1000-5000 shows almost same action (in total) with mean 118.41, 119.68 and 121.24. Students with family monthly income below 1000 and above 15000 show almost same action in total with mean 118.4, 109.67. Students with family monthly income 10000-15000 shows low action (in total) with mean 97.62. The mean differences are significant at .01 level.

For civic action, students with family monthly income 10000-15000, above 15000 and below 1000 shows almost same civic action with mean 17.77, 19.58 and mean 20.06. Students with family monthly income below 1000 and 1000-5000 shows almost same civic action with mean 20.06 and 22.33. Students with family monthly income 5000-10000 shows high civic action with mean 24.91. The mean differences are significant at .01 level.

<table>
<thead>
<tr>
<th>Persuasion action</th>
<th>Concernment (in Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 1000</td>
<td>358</td>
</tr>
<tr>
<td>5000-10000</td>
<td>263</td>
</tr>
<tr>
<td>5000-10000</td>
<td>263</td>
</tr>
<tr>
<td>10000-15000</td>
<td>240</td>
</tr>
<tr>
<td>Below 1000</td>
<td>358</td>
</tr>
<tr>
<td>1000-5000</td>
<td>841</td>
</tr>
<tr>
<td>Above 15000</td>
<td>104</td>
</tr>
<tr>
<td>Above 15000</td>
<td>104</td>
</tr>
<tr>
<td>5000-10000</td>
<td>263</td>
</tr>
<tr>
<td>10000-15000</td>
<td>240</td>
</tr>
<tr>
<td>Below 1000</td>
<td>358</td>
</tr>
<tr>
<td>1000-5000</td>
<td>841</td>
</tr>
</tbody>
</table>
For educational action, students with family monthly income above 15000 and 10000-15000 shows almost same educational action with mean 15.77 and 16.98. Students with family monthly income below 1000 and 5000-10000 show almost same educational action with mean 20.80, 21.91. Students with family monthly income 1000-5000 show high educational action with mean 24.52. The mean differences are significant at .01 level.

For financial action, students with family monthly income 10000-15000 and above 15000 have almost same financial action with mean 15.59 and 16.50. Students with family monthly income above 15000, 5000-10000, 1000-5000 have almost same financial action with mean 16.50, 17.31 and 17.97. Students with family monthly income 1000-5000 and below 1000 show same financial action with mean 17.97 and 19.13. The mean differences are significant at .01 level.

For legal action, students with family monthly income 10000-15000 have lower mean among the groups 13.37. Students with family monthly income 1000-5000 and above 15000 shows almost same legal action with mean 16.19 and 16.21. Students with family monthly income below 1000 and 5000-10000 shows almost same legal action with mean 18.05 and 18.22. The mean differences are significant at .01 level.

For physical action, students with family monthly income 10000-15000 and above 15000 shows almost same physical action with mean 14.99 and 15.37. Students with family monthly income 1000-5000, below 1000 and 5000-10000 shows almost same physical action with mean 18.24, 19.18 and 19.68. The mean differences are significant at .01 level.
For persuasion action, students with family monthly income 5000-10000 and 
10000-15000 shows almost same physical action with mean 17.64 and 18.92. 
Students with family monthly income 10000-15000 and below 1000 shows almost 
same physical action with mean 18.92 and 21.18. Students with family monthly 
income below 1000 and 1000-5000 have almost same physical action with mean 
21.18 and 21.98. Students with family monthly income above 15000 show high 
persuasion action with mean 26.25. The mean differences are significant at .01 level.

For concernment (in total), students with family monthly income above 
15000 has lowest mean of 80.22. Students with family monthly income 5000-10000, 
10000-15000 and below 1000 shows almost same concernment (in total) with mean 
98.08, 100.28 and 109.06. Students with family monthly income 10000-15000, 
below 1000 and 1000-5000 shows almost same concernment (in total) with mean 
100.28, 109.06 and 111.24. The mean differences are significant at .01 level.

5.4.3.7 Effect of Type of Family on Responsible Environmental Behaviour of 
Secondary School Students of Kerala

Table 5.33

<table>
<thead>
<tr>
<th>Variable</th>
<th>Type of Family</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>CR</th>
</tr>
</thead>
<tbody>
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<td>Responsible Environmental Behaviour</td>
<td>Nuclear</td>
<td>1674</td>
<td>223.62</td>
<td>58.61</td>
<td>4.67**</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>205.47</td>
<td>41.47</td>
<td></td>
</tr>
</tbody>
</table>

** p<.01

Table 5.33 shows that students from nuclear family (M=223.62, SD=58.61) 
had significantly higher responsible environmental behaviour than students from
joint family \((M=205.47, \ SD=41.47), \ CR=4.67, \ p<.01\). Thus it can be interpreted that there exists a significant effect of type of family on responsible environmental behaviour of secondary school students of Kerala.

Table 5.34

Test of Significance of the Difference between Components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) with Respect to Type of Family

<table>
<thead>
<tr>
<th>Components</th>
<th>Type of Family</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>Nuclear</td>
<td>1674</td>
<td>117.26</td>
<td>30.11</td>
<td>5.17**</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>108.82</td>
<td>16.77</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>Nuclear</td>
<td>1674</td>
<td>21.74</td>
<td>7.55</td>
<td>5.14**</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>18.27</td>
<td>6.36</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>Nuclear</td>
<td>1674</td>
<td>22.04</td>
<td>8.13</td>
<td>5.51**</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>20.18</td>
<td>3.45</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>Nuclear</td>
<td>1674</td>
<td>17.89</td>
<td>4.91</td>
<td>11.21**</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>15.27</td>
<td>2.31</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>Nuclear</td>
<td>1674</td>
<td>16.64</td>
<td>4.85</td>
<td>4.88**</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>14.50</td>
<td>4.85</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
<td>Nuclear</td>
<td>1674</td>
<td>18.15</td>
<td>5.32</td>
<td>5.97**</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>16.64</td>
<td>2.51</td>
<td></td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Nuclear</td>
<td>1674</td>
<td>20.80</td>
<td>8.48</td>
<td>6.43**</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>23.95</td>
<td>5.11</td>
<td></td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Nuclear</td>
<td>1674</td>
<td>106.35</td>
<td>37.46</td>
<td>3.60**</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>96.65</td>
<td>29.14</td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

Table 5.34 shows the mean, standard deviation and critical ratio of components of responsible environmental behaviour of students from nuclear and joint family.
In all the components of responsible environmental behaviour, actions (in total), civic action, educational action, financial action, legal action, physical action, persuasion action, concernment (in total), there exists a significant difference between students from nuclear and joint family. In responsible environmental behaviour scale, for all the components of responsible environmental behaviour, students from nuclear family have significantly higher mean than the students from joint family. Students from nuclear family shows significantly higher actions (in total) \((CR=5.17, p<.01)\), civic action \((CR=5.14, p<.01)\), educational action \((CR=5.51, p<.01)\), financial action \((CR=11.21, p<.01)\), legal action \((CR=4.88, p<.01)\), physical action \((CR=5.97, p<.01)\), persuasion action \((CR=6.43, p<.01)\) and concernment (in total) \((CR=3.60, p<.01)\) than students from joint family. Thus it can be interpreted that there exists a significant effect of type of family on the components of responsible environmental behaviour of secondary school students of Kerala.

5.4.3.8 Effect of Enrolment in Nature Clubs on Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.35

*Test of Significance of the Difference between the Overall Responsible Environmental Behaviour with Respect to Enrolment in Nature Clubs*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Enrolment in Nature Clubs</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Environmental Behaviour</td>
<td>Yes</td>
<td>600</td>
<td>226.72</td>
<td>66.48</td>
<td>2.13*</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1206</td>
<td>220.09</td>
<td>52.71</td>
<td></td>
</tr>
</tbody>
</table>

* P<.05
Table 5.35 shows that students who enrolled in nature clubs ($M=226.72$, $SD=66.48$) shows significantly higher responsible environmental behaviour than students who does not enrolled in nature clubs ($M=220.09$, $SD=52.71$), $CR=2.13$, $p<.05$. Thus it can be interpreted that there exists a significant effect of enrolment in nature clubs on responsible environmental behaviour of secondary school students of Kerala.

Table 5.36

*Test of Significance of the Difference between Components of Responsible Environmental Behaviour (Actions, Components of Action and Concernment) with Respect to Enrolment in Nature Clubs*

<table>
<thead>
<tr>
<th>Components</th>
<th>Enrolment in Nature Clubs</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Actions</strong> (in Total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>600</td>
<td>118.35</td>
<td>31.88</td>
<td>1.67</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>1206</td>
<td>115.80</td>
<td>28.09</td>
<td></td>
</tr>
<tr>
<td><strong>Civic Action</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>600</td>
<td>22.85</td>
<td>8.00</td>
<td>5.27**</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>1206</td>
<td>20.81</td>
<td>7.18</td>
<td></td>
</tr>
<tr>
<td><strong>Educational Action</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>600</td>
<td>22.89</td>
<td>8.06</td>
<td>3.77**</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>1206</td>
<td>21.41</td>
<td>7.77</td>
<td></td>
</tr>
<tr>
<td><strong>Financial Action</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>600</td>
<td>17.94</td>
<td>4.70</td>
<td>1.50</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>1206</td>
<td>17.58</td>
<td>4.86</td>
<td></td>
</tr>
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<td><strong>Legal Action</strong></td>
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<td>Yes</td>
<td></td>
<td>600</td>
<td>16.45</td>
<td>4.63</td>
<td>0.12</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>1206</td>
<td>16.50</td>
<td>5.00</td>
<td></td>
</tr>
<tr>
<td><strong>Physical Action</strong></td>
<td></td>
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</tr>
<tr>
<td>Yes</td>
<td></td>
<td>600</td>
<td>17.84</td>
<td>4.80</td>
<td>1.18</td>
</tr>
<tr>
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<td>1206</td>
<td>18.14</td>
<td>5.36</td>
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</tr>
<tr>
<td><strong>Persuasion Action</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>600</td>
<td>20.38</td>
<td>9.13</td>
<td>2.21*</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>1206</td>
<td>21.35</td>
<td>7.86</td>
<td></td>
</tr>
<tr>
<td><strong>Concernment</strong> (in Total)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td>600</td>
<td>108.36</td>
<td>40.62</td>
<td>2.10*</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>1206</td>
<td>104.29</td>
<td>35.00</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05  **p<.01
Table 5.36 shows the mean, standard deviation and critical ratio of components of responsible environmental behaviour of male and female students. While comparing the components of responsible environmental behaviour, students who enrolled in nature clubs show significantly higher civic action ($CR=5.27, p<.01$), educational action ($CR=3.77, p<.01$), persuasion action ($CR=2.21, p<.05$) and concernment (in total) ($CR=2.10, p<.05$) than the students who does not enrolled in nature clubs. There is no significant difference in actions (in total) ($CR=1.67, p>.05$), financial action ($CR=1.50, p>.05$), legal action ($CR=0.12, p>.05$) and physical action ($CR=1.18, p>.05$) of students who enrolled in nature clubs with that of students who does not enrolled in nature clubs.

### 5.4.4 Influence of Independent Variables on Responsible Environmental Behaviour of Secondary School Students of Kerala

In order to find out the influence of independent variables, scores for each of the independent variable is categorized into three levels as low, average and high. Those who scored equal to or less than mean minus standard deviation (M - SD) are treated as low group. Those who scored greater than or equal to mean plus standard deviation (M + SD) belong to the high level. Those whose scores fall from M - SD to M + SD belong to the average level. Three levels (low, average and high) based on each of the independent variables are compared with respect to their responsible environmental behaviour.

#### 5.4.4.1 Influence of Pastoralism on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable pastoralism is compared with respect to the mean scores obtained in
responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.

Table 5.37

*Number, Mean and Standard Deviation for the Scores of Responsible Environmental Behaviour in the Three Levels of Pastoralism*

<table>
<thead>
<tr>
<th>Pastoralism</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>288</td>
<td>293.25</td>
<td>50.82</td>
</tr>
<tr>
<td>Average</td>
<td>1313</td>
<td>211.37</td>
<td>46.40</td>
</tr>
<tr>
<td>Low</td>
<td>205</td>
<td>192.57</td>
<td>56.85</td>
</tr>
</tbody>
</table>

Table 5.37 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of pastoralism.

Table 5.38

*Summary of Analysis of Variance for the Three Levels of Pastoralism with Respect to their Scores of Responsible Environmental Behaviour*

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1787845.82</td>
<td>2</td>
<td>893922.91</td>
<td>381.42**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4225631.81</td>
<td>1803</td>
<td>2343.67</td>
<td>381.42**</td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P<.01

Analysis of variance in table 5.38 shows that the influence of pastoralism on responsible environmental behaviour was significant $F(2, 1803) = 381.42, p<.01$. This indicates that there exists a significant influence of pastoralism on responsible environmental behaviour of secondary school students of Kerala.
Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of pastoralism are conducted using Scheffe’s post hoc analysis.

Table 5.39

**Result of Scheffe’s Post Hoc Analysis for Identifying the Differences in Responsible Environmental Behaviour among Different Levels of Pastoralism**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Pastoralism</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>1</td>
</tr>
<tr>
<td>Responsible Environmental Behaviour Average</td>
<td>1313</td>
<td></td>
<td>211.37</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>288</td>
<td></td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

The mean score of responsible environmental behaviour of high level of pastoralism (293.25) significantly differ from the mean score of responsible environmental behaviour of average level of pastoralism (211.37) and the mean score of responsible environmental behaviour of low level of pastoralism (192.57). Mean score of responsible environmental behaviour of average level of pastoralism significantly differ from the mean score of responsible environmental behaviour of low level of pastoralism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of pastoralism shows more responsible environmental behaviour than average and low levels of pastoralism.
Table 5.40

*Number, Mean, Standard Deviation and F Value for the Sores of Components of Responsible Environmental Behaviour in the Three Levels of Pastoralism*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Pastoralism</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>High</td>
<td>288</td>
<td>149.10</td>
<td>20.37</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1313</td>
<td>111.85</td>
<td>24.86</td>
<td>288.54**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>101.75</td>
<td>35.27</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>High</td>
<td>288</td>
<td>29.06</td>
<td>6.07</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1313</td>
<td>20.35</td>
<td>6.62</td>
<td>225.78**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>18.20</td>
<td>8.13</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>High</td>
<td>288</td>
<td>29.30</td>
<td>6.55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1313</td>
<td>20.75</td>
<td>7.16</td>
<td>187.62**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>18.85</td>
<td>8.14</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>High</td>
<td>288</td>
<td>19.55</td>
<td>3.98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1313</td>
<td>17.22</td>
<td>4.38</td>
<td>94.11**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>16.13</td>
<td>5.23</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>High</td>
<td>288</td>
<td>19.55</td>
<td>3.98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1313</td>
<td>16.09</td>
<td>4.73</td>
<td>81.41**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>14.69</td>
<td>5.20</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
<td>High</td>
<td>288</td>
<td>21.67</td>
<td>3.98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1313</td>
<td>17.53</td>
<td>5.00</td>
<td>99.57**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>16.23</td>
<td>5.56</td>
<td></td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>High</td>
<td>288</td>
<td>28.52</td>
<td>4.55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1313</td>
<td>19.91</td>
<td>7.86</td>
<td>173.22**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>17.65</td>
<td>9.30</td>
<td></td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>High</td>
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<td>144.15</td>
<td>40.05</td>
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</tr>
<tr>
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<td>1313</td>
<td>99.51</td>
<td>30.95</td>
<td>241.17**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>90.82</td>
<td>33.75</td>
<td></td>
</tr>
</tbody>
</table>

**p<.01
Analysis of variance in table 5.40 shows that the influence of pastoralism on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803), for actions (in total) ($F=288.54$, $p<.01$), civic action ($F=225.78$, $p<.01$), educational action ($F=187.62$, $p<.01$), financial action ($F=94.11$, $p<.01$), legal action ($F=81.41$, $p<.01$), physical action ($F=99.57$, $p<.01$), persuasion action ($F=173.22$, $p<.01$) and concernment (in total) ($F=241.17$, $p<.01$), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of pastoralism compared, and this indicates that there exists a significant influence of pastoralism on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of pastoralism are conducted using Scheffe’s post hoc analysis.
Table 5.41  

* Scheffe’s Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Pastoralism*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Pastoralism</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td>1</td>
</tr>
<tr>
<td>Actions (in Total)</td>
<td>Low</td>
<td>205</td>
<td>101.75</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1313</td>
<td>111.85</td>
</tr>
<tr>
<td></td>
<td>High</td>
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<td>Low</td>
<td>205</td>
<td>18.20</td>
</tr>
<tr>
<td>Civic Action</td>
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<td>1313</td>
<td>20.35</td>
</tr>
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<td>High</td>
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<td>29.06</td>
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</tr>
<tr>
<td>Educational Action</td>
<td>Average</td>
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<td>20.75</td>
</tr>
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<td></td>
<td>High</td>
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<td>29.30</td>
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<td>Low</td>
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<td>288</td>
<td>21.67</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>17.65</td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Average</td>
<td>1313</td>
<td>19.91</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>288</td>
<td>28.52</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>205</td>
<td>90.82</td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Low</td>
<td>205</td>
<td>90.82</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1313</td>
<td>99.51</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>288</td>
<td>144.15</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed.
The mean score of action (in total) of high level of pastoralism (149.10) significantly differ from the mean score of actions (in total) of average level of pastoralism (111.85) and the mean score of actions (in total) of low level of pastoralism (101.75). Mean score of actions (in total) of average level of pastoralism significantly differ from the mean score of actions (in total) of low level of pastoralism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of pastoralism shows more actions (in total) than the students with average and low levels of pastoralism.

The mean score of civic action of high level of pastoralism (29.06) significantly differ from the mean score of civic action of average level of pastoralism (20.35) and the mean score of civic action of low level of pastoralism (18.20). Mean score of civic action of average level of pastoralism significantly differ from the mean score of civic action of low level of pastoralism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of pastoralism shows more civic action than average and low levels of pastoralism.

The mean score of educational action of high level of pastoralism (29.30) significantly differ from the mean score of educational action of average level of pastoralism (20.75) and the mean score of educational action of low level of pastoralism (18.85). Mean score of educational action of average level of pastoralism significantly differ from the mean score of educational action of low level of pastoralism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of pastoralism shows more educational action than average and low levels of pastoralism.
The mean score of financial action of high level of pastoralism (21.01) significantly differ from the mean score of financial action of average level of pastoralism (17.22) and the mean score of financial action of low level of pastoralism (16.13). Mean score of financial action of average level of pastoralism significantly differ from the mean score of financial action of low level of pastoralism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of pastoralism shows more financial action than average and low levels of pastoralism.

The mean score of legal action of high level of pastoralism (19.55) significantly differ from the mean score of legal action of average level of pastoralism (16.09) and the mean score of legal action of low level of pastoralism (14.69). Mean score of legal action of average level of pastoralism significantly differ from the mean score of legal action of low level of pastoralism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of pastoralism shows more legal action than average and low levels of pastoralism.

The mean score of physical action of high level of pastoralism (21.67) significantly differ from the mean score of physical action of average level of pastoralism (17.53) and the mean score of physical action of low level of pastoralism (16.23). Mean score of physical action of average level of pastoralism significantly differ from the mean score of physical action of low level of pastoralism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of pastoralism shows more physical action than average and low levels of pastoralism.
The mean score of persuasion action of high level of pastoralism (28.52) significantly differ from the mean score of persuasion action of average level of pastoralism (19.91) and the mean score of persuasion action of low level of pastoralism (17.65). Mean score of persuasion action of average level of pastoralism significantly differ from the mean score of persuasion action of low level of pastoralism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of pastoralism shows more persuasion action than average and low levels of pastoralism.

The mean score of concernment (in total) of high level of pastoralism (144.15) significantly differ from the mean score of concernment (in total) of average level of pastoralism (99.51) and the mean score of concernment (in total) of low level of pastoralism (90.82). Mean score of concernment (in total) of average level of pastoralism significantly differ from the mean score of concernment (in total) of low level of pastoralism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of pastoralism shows more concernment than average and low levels of pastoralism.

5.4.4.2 Influence of Urbanism on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable urbanism is compared with respect to the mean scores obtained in responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.
Table 5.42

*Number, Mean and Standard Deviation for the Scores of Responsible Environmental Behaviour in the Three Levels of Urbanism*

<table>
<thead>
<tr>
<th>Urbanism</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>399</td>
<td>179.48</td>
<td>54.69</td>
</tr>
<tr>
<td>Average</td>
<td>1170</td>
<td>221.72</td>
<td>43.35</td>
</tr>
<tr>
<td>Low</td>
<td>237</td>
<td>297.19</td>
<td>48.93</td>
</tr>
</tbody>
</table>

Table 5.42 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of urbanism.

Table 5.43

*Summary of Analysis of Variance for the Three Levels of Urbanism with Respect to their Scores of Responsible Environmental Behaviour*

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2061001.03</td>
<td>2</td>
<td>1030500.51</td>
<td>470.08**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3952476.60</td>
<td>1803</td>
<td>2192.17</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P<.01

Analysis of variance in table 5.43 shows that the influence of urbanism on responsible environmental behaviour was significant $F (2, 1803) = 470.08, p<.01$. This indicates that there exists a significant influence of urbanism on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of urbanism are conducted using Scheffe’s post hoc analysis.
Table 5.44

*Scheffe’s Post Hoc Analysis for Identifying Differences of Responsible Environmental Behaviour in Different Levels of Urbanism*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Urbanism</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Responsible Environmental</td>
<td>High</td>
<td>399</td>
<td>179.48</td>
</tr>
<tr>
<td>Behaviour</td>
<td>Average</td>
<td>1170</td>
<td>221.72</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>297.19</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

The mean score of responsible environmental behaviour of low level of urbanism (297.19) significantly differ from the mean score of responsible environmental behaviour of average level of urbanism (221.72) and the mean score of responsible environmental behaviour of high level of urbanism (179.48). Mean score of responsible environmental behaviour of average level of urbanism significantly differ from the mean score of responsible environmental behaviour of high level of urbanism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of urbanism shows more responsible environmental behaviour than average and low levels of urbanism.
Table 5.45

Number, Mean, Standard Deviation and F Value for the Scores of Components of Responsible Environmental Behaviour in the Three Levels of Urbanism

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Urbanism</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>High</td>
<td>399</td>
<td>96.39</td>
<td>33.92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>116.22</td>
<td>21.35</td>
<td>392.61**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>152.83</td>
<td>20.37</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>20.17</td>
<td>8.42</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>20.08</td>
<td>6.13</td>
<td>263.01**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>30.68</td>
<td>5.40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>17.84</td>
<td>7.91</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>21.81</td>
<td>7.00</td>
<td>184.69**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>29.17</td>
<td>6.88</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>14.77</td>
<td>5.64</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>17.92</td>
<td>3.60</td>
<td>181.68**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>21.56</td>
<td>5.43</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>13.44</td>
<td>5.01</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>16.78</td>
<td>4.34</td>
<td>174.44**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>20.15</td>
<td>4.12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>14.79</td>
<td>5.28</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>18.19</td>
<td>4.57</td>
<td>221.21**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>22.77</td>
<td>3.75</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>15.38</td>
<td>9.24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>21.45</td>
<td>7.12</td>
<td>238.66**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>28.49</td>
<td>4.79</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>83.09</td>
<td>31.48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>105.50</td>
<td>31.27</td>
<td>263.15**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>144.36</td>
<td>39.85</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01
Analysis of variance in table 5.45 shows that the influence of urbanism on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803) , for actions (in total) ($F=392.61, p<.01$), civic action ($F=263.01, p<.01$), educational action ($F=184.69, p<.01$), financial action ($F=181.68, p<.01$), legal action ($F=174.44, p<.01$), physical action ($F=221.21, p<.01$), persuasion action ($F=238.66, p<.01$) and concernment (in total) ($F=263.15, p<.01$), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of urbanism compared, and this indicates that there exists a significant influence of urbanism on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of urbanism are conducted using Scheffe’s post hoc analysis.
### Table 5.46

*Scheffe’s Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Urbanism*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Urbanism</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Actions (in Total)</strong></td>
<td>High</td>
<td>399</td>
<td>96.39</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>116.22</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>152.83</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>20.17</td>
</tr>
<tr>
<td><strong>Civic Action</strong></td>
<td>Average</td>
<td>1170</td>
<td>20.08</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>30.68</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>17.84</td>
</tr>
<tr>
<td><strong>Educational Action</strong></td>
<td>High</td>
<td>399</td>
<td>17.84</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>21.81</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>29.17</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>14.77</td>
</tr>
<tr>
<td><strong>Financial Action</strong></td>
<td>Average</td>
<td>1170</td>
<td>17.92</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>21.56</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>13.44</td>
</tr>
<tr>
<td><strong>Legal Action</strong></td>
<td>Average</td>
<td>1170</td>
<td>16.78</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>20.15</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>14.79</td>
</tr>
<tr>
<td><strong>Physical Action</strong></td>
<td>Average</td>
<td>1170</td>
<td>18.19</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>22.77</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>399</td>
<td>15.38</td>
</tr>
<tr>
<td><strong>Persuasion Action</strong></td>
<td>Average</td>
<td>1170</td>
<td>21.45</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>28.49</td>
</tr>
<tr>
<td><strong>Concernment (in Total)</strong></td>
<td>High</td>
<td>399</td>
<td>83.09</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1170</td>
<td>105.50</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>237</td>
<td>144.36</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed.
The mean score of actions (in total) of low level of urbanism (152.83) significantly differ from the mean score of action (in total) of average level of urbanism (116.22) and the mean score of action (in total) of high level of urbanism (96.39). Mean score of action (in total) of average level of urbanism significantly differ from the mean score of action (in total) of high level of urbanism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of urbanism have shows more action (in total) than average and high levels of urbanism.

The mean score of civic action of low level of urbanism (30.68) significantly differ from the mean score of civic action of average level of urbanism (20.17) and the mean score of civic action of high level of urbanism (20.08). The mean difference is significant at .01 level. Thus it can be interpreted that students with lower levels of urbanism shows more civic action than average and high levels of urbanism.

The mean score of educational action of low level of urbanism (29.17) significantly differ from the mean score of educational action of average level of urbanism (21.81) and the mean score of educational action of high level of urbanism (17.84). Mean score of educational action of average level of urbanism significantly differ from the mean score of educational action of high level of urbanism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of urbanism shows more educational action than average and high levels of urbanism.
The mean score of financial action of low level of urbanism (21.56) significantly differ from the mean score of financial action of average level of urbanism (17.92) and the mean score of financial action of high level of urbanism (14.77). Mean score of financial action of average level of urbanism significantly differ from the mean score of financial action of high level of urbanism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of urbanism shows more financial action than average and high levels of urbanism.

The mean score of legal action of low level of urbanism (20.15) significantly differ from the mean score of legal action of average level of urbanism (16.78) and the mean score of legal action of high level of urbanism (13.44). Mean score of legal action of average level of urbanism significantly differ from the mean score of legal action of high level of urbanism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of urbanism shows more legal action than average and high levels of urbanism.

The mean score of physical action of low level of urbanism (22.77) significantly differ from the mean score of physical action of average level of urbanism (18.19) and the mean score of physical action of high level of urbanism (14.79). Mean score of physical action of average level of urbanism significantly differ from the mean score of physical action of high level of urbanism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of urbanism shows more physical action than average and high levels of urbanism.
The mean score of persuasion action of low level of urbanism (28.49) significantly differ from the mean score of persuasion action of average level of urbanism (21.45) and the mean score of persuasion action of high level of urbanism (15.38). Mean score of persuasion action of average level of urbanism significantly differ from the mean score of persuasion action of high level of urbanism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of urbanism shows more persuasion action than average and high levels of urbanism.

The mean score of concernment (in total) of low level of urbanism (144.36) significantly differ from the mean score of concernment (in total) of average level of urbanism (105.50) and the mean score of concernment (in total) of high level of urbanism (83.09). Mean score of concernment (in total) of average level of urbanism significantly differ from the mean score of concernment (in total) of high level of urbanism. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of urbanism shows more concernment (in total) than average and high levels of urbanism.

5.4.4.3 Influence of Environmental Adaptation on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable environmental adaptation is compared with respect to the mean scores obtained in responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.
Table 5.47

<table>
<thead>
<tr>
<th>Environmental Adaptation</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>229</td>
<td>146.38</td>
<td>22.28</td>
</tr>
<tr>
<td>Average</td>
<td>1497</td>
<td>231.03</td>
<td>51.50</td>
</tr>
<tr>
<td>Low</td>
<td>80</td>
<td>276.08</td>
<td>58.20</td>
</tr>
</tbody>
</table>

Table 5.47 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of environmental adaptation.

Table 5.48

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1665204.25</td>
<td>2</td>
<td>832602.13</td>
<td>345.24**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4348273.38</td>
<td>1803</td>
<td>2411.69</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P<.01

Analysis of variance in table 5.48 shows that the influence of environmental adaptation on responsible environmental behaviour was significant $F$ (2, 1803) =345.24, $p<.01$. This indicates that there exists a significant influence of environmental adaptation on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of environmental adaptation are conducted using Scheffe’s post hoc analysis.
Table 5.49

Scheffe’s Post Hoc Analysis for Identifying Differences of Responsible Environmental Behaviour in Different Levels of Environmental Adaptation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Environmental Adaptation</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Environmental Behaviour</td>
<td>High</td>
<td>229</td>
<td>146.38</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1497</td>
<td>231.03</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>80</td>
<td>276.08</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

The mean score of responsible environmental behaviour of low level of environmental adaptation (276.08) significantly differ from the mean score of responsible environmental behaviour of average level of environmental adaptation (231.03) and the mean score of responsible environmental behaviour of high level of environmental adaptation (146.38). Mean score of responsible environmental behaviour of average level of environmental adaptation significantly differ from the mean score of responsible environmental behaviour of high level of environmental adaptation. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of environmental adaptation shows more responsible environmental behaviour than average and low levels of environmental adaptation.
Table 5.50

*Number, Mean, Standard Deviation and F Value for the Sores of Components of Responsible Environmental Behaviour in the Three Levels of Environmental Adaptation*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Environmental Adaptation</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions</td>
<td>High</td>
<td>229</td>
<td>72.53</td>
<td>14.11</td>
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</tr>
<tr>
<td></td>
<td>Average</td>
<td>1497</td>
<td>122.18</td>
<td>24.88</td>
<td>466.72**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>80</td>
<td>139.44</td>
<td>27.13</td>
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</tr>
<tr>
<td></td>
<td>Civic Action</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>17.07</td>
<td>8.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1497</td>
<td>21.80</td>
<td>7.02</td>
<td>81.78**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>80</td>
<td>28.45</td>
<td>7.48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Educational Action</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>13.18</td>
<td>2.86</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1497</td>
<td>22.90</td>
<td>7.50</td>
<td>220.23**</td>
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<td>80</td>
<td>28.21</td>
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<td>229</td>
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<td>3.44</td>
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<tr>
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<td>Average</td>
<td>1497</td>
<td>18.54</td>
<td>4.21</td>
<td>264.07**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>80</td>
<td>19.16</td>
<td>6.25</td>
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<td></td>
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<tr>
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<td>229</td>
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<td>2.79</td>
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<td>Average</td>
<td>1497</td>
<td>17.29</td>
<td>4.40</td>
<td>272.26**</td>
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<td>229</td>
<td>8.84</td>
<td>4.42</td>
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</tr>
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<td>Average</td>
<td>1497</td>
<td>22.68</td>
<td>7.14</td>
<td>414.80**</td>
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<td>Low</td>
<td>80</td>
<td>24.96</td>
<td>7.72</td>
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<td>Concernment (in Total)</td>
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<td>229</td>
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<td>108.85</td>
<td>36.27</td>
<td>135.90**</td>
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<td>Low</td>
<td>80</td>
<td>136.64</td>
<td>36.34</td>
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</tr>
</tbody>
</table>

**P < .01

Analysis of variance in table 5.50 shows that the influence of environmental adaptation on components of responsible environmental behaviour was significant.
The $F$ values with degrees of freedom (2,1803) , for actions (in total) ($F$=466.72, $p$<.01), civic action ($F$=81.78, $p$<.01), educational action ($F$=220.23, $p$<.01), financial action ($F$=264.07, $p$<.01), legal action ($F$=272.26, $p$<.01), physical action ($F$=289.14, $p$<.01), persuasion action ($F$=414.80, $p$<.01) and concernment (in total) ($F$=135.90, $p$<.01), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of environmental adaptation compared, and this indicates that there exists a significant influence of environmental adaptation on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of environmental adaptation are conducted using Scheffe’s post hoc analysis.
Table 5.51

*Scheffe’s Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Environmental Adaptation*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Environmental Adaptation</th>
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<tr>
<td></td>
<td>Actions</td>
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</tr>
<tr>
<td></td>
<td>(in Total)</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>72.53</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1497</td>
<td>122.18</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>80</td>
<td>139.44</td>
</tr>
<tr>
<td></td>
<td>Civic Action</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>17.07</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1497</td>
<td>21.80</td>
</tr>
<tr>
<td></td>
<td>Low</td>
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<td>High</td>
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<td>13.18</td>
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<td>11.70</td>
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<td>Average</td>
<td>1497</td>
<td>18.54</td>
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<td>Low</td>
<td>80</td>
<td>19.16</td>
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<td>Legal Action</td>
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<td>229</td>
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<td>Average</td>
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<td>17.29</td>
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<td>18.88</td>
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<td>Physical Action</td>
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<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>11.36</td>
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<td>Average</td>
<td>1497</td>
<td>18.97</td>
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<tr>
<td></td>
<td>Low</td>
<td>80</td>
<td>19.78</td>
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<td></td>
<td>Persuasion Action</td>
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<td></td>
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<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>8.84</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1497</td>
<td>22.68</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>80</td>
<td>24.96</td>
</tr>
<tr>
<td></td>
<td>Concernment (in Total)</td>
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<td></td>
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<td></td>
<td>High</td>
<td>229</td>
<td>73.86</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1497</td>
<td>108.85</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>80</td>
<td>136.64</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
The mean score of actions (in total) of low level of environmental adaptation (139.44) significantly differ from the mean score of actions (in total) of average level of environmental adaptation (122.18) and the mean score of actions (in total) of high level of environmental adaptation (72.53). Mean score of actions (in total) of average level of environmental adaptation significantly differ from the mean score of actions (in total) of high level of environmental adaptation. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of environmental adaptation shows more actions (in total) than average and high levels of environmental adaptation.

The mean score of civic action of low level of environmental adaptation (28.45) significantly differ from the mean score of civic action of average level of environmental adaptation (21.80) and the mean score of civic action of high level of environmental adaptation (17.07). Mean score of civic action of average level of environmental adaptation significantly differ from the mean score of civic action of high level of environmental adaptation. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of environmental adaptation shows more civic action than average and high levels of environmental adaptation.

The mean score of educational action of low level of environmental adaptation (28.21) significantly differ from the mean score of educational action of average level of environmental adaptation (22.90) and the mean score of educational action of high level of environmental adaptation (13.18). Mean score of educational action of average level of environmental adaptation significantly differ from the mean score of educational action of high level of environmental adaptation. All the
mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of environmental adaptation shows more educational action than average and high levels of environmental adaptation.

The mean score of financial action of low level of environmental adaptation (19.16) and the mean score of financial action of average level of environmental adaptation (18.54) significantly differ from the mean score of financial action of high level of environmental adaptation (11.70). The mean difference is significant at .01 level. Mean score of financial action of low level of environmental adaptation do not differ significantly from the mean score of financial action of average level of environmental adaptation. Thus it can be interpreted that students with lower levels of environmental adaptation and average levels of environmental adaptation shows more financial action than and high levels of environmental adaptation.

The mean score of legal action of low level of environmental adaptation (18.88) significantly differ from the mean score of legal action of average level of environmental adaptation (17.29) and the mean score of legal action of high level of environmental adaptation (10.38). Mean score of legal action of average level of environmental adaptation significantly differ from the mean score of legal action of high level of environmental adaptation. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of environmental adaptation shows more legal action than average and high levels of environmental adaptation.

The mean score of physical action of low level of environmental adaptation (19.78) and the mean score of physical action of average level of environmental adaptation
adaptation (18.97) significantly differ from the mean score of physical action of high level of environmental adaptation (11.36). The mean difference is significant at .01 level. Mean score of physical action of low level of environmental adaptation do not differ significantly from the mean score of physical action of average level of environmental adaptation. Thus it can be interpreted that students with lower levels of environmental adaptation and average levels of environmental adaptation shows more physical action than and high level of environmental adaptation.

The mean score of persuasion action of low level of environmental adaptation (24.96) significantly differ from the mean score of persuasion action of average level of environmental adaptation (22.68) and the mean score of persuasion action of high level of environmental adaptation (8.84). Mean score of persuasion action of average level of environmental adaptation significantly differ from the mean score of persuasion action of high level of environmental adaptation. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of environmental adaptation shows more persuasion action than average and high levels of environmental adaptation.

The mean score of concernment (in total) of low level of environmental adaptation (136.64) significantly differ from the mean score of concernment (in total) of average level of environmental adaptation (108.85) and the mean score of concernment (in total) of high level of environmental adaptation (73.86). Mean score of concernment (in total) of average level of environmental adaptation significantly differ from the mean score of concernment (in total) of high level of environmental adaptation. All the mean differences are significant at .01 level. Thus it can be
interpreted that students with lower levels of environmental adaptation shows more concernment (in total) than average and high levels of environmental adaptation.

5.4.4.4 Influence of Environmental Trust on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable environmental trust is compared with respect to the mean scores obtained in responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.

Table 5.52
Number, Mean and Standard Deviation for the Scores of Responsible Environmental Behaviour in the Three Levels of Environmental Trust

<table>
<thead>
<tr>
<th>Environmental Trust</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>463</td>
<td>258.77</td>
<td>65.29</td>
</tr>
<tr>
<td>Average</td>
<td>1081</td>
<td>223.66</td>
<td>41.13</td>
</tr>
<tr>
<td>Low</td>
<td>262</td>
<td>152.18</td>
<td>34.53</td>
</tr>
</tbody>
</table>

Table 5.52 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of environmental trust.

Table 5.53
Summary of Analysis of Variance for the Three Levels of Environmental Trust with Respect to their Scores of Responsible Environmental Behaviour

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1906298.44</td>
<td>2</td>
<td>953149.22</td>
<td>418.42**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4107179.19</td>
<td>1803</td>
<td>2277.97</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P<.01
Analysis of variance in table 5.53 shows that the influence of environmental trust on responsible environmental behaviour was significant $F (2, 1803) = 418.42, p < .01$. This indicates that there exists a significant influence of environmental trust on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of environmental trust are conducted using Scheffe’s post hoc analysis.

Table 5.54

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Environmental Trust</th>
<th>N</th>
<th>Subset for alpha = .01</th>
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<td></td>
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<td>1</td>
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<tr>
<td>Responsible Environmental</td>
<td>Low 262</td>
<td>152.18</td>
<td></td>
</tr>
<tr>
<td>Behaviour</td>
<td>Average 1081</td>
<td>223.66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High 463</td>
<td>258.77</td>
<td></td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

The mean score of responsible environmental behaviour of high level of environmental trust (258.77) significantly differ from the mean score of responsible environmental behaviour of average level of environmental trust (223.66) and the mean score of responsible environmental behaviour of low level of environmental trust (152.18). Mean score of responsible environmental behaviour of average level of environmental trust significantly differ from the mean score of responsible environmental behaviour of low level of environmental trust. All the mean differences are significant at .01 level. Thus it can be interpreted that students with
higher levels of environmental trust shows more responsible environmental
behaviour than average and low levels of environmental trust.

Table 5.55
*Number, Mean, Standard Deviation and F Value for the Scores of Components of 
Responsible Environmental Behaviour in the Three Levels of Environmental Trust*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Environmental Trust</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
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<td>Actions (in Total)</td>
<td>High</td>
<td>463</td>
<td>136.54</td>
<td>30.76</td>
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</tr>
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<td>Average</td>
<td>1081</td>
<td>117.62</td>
<td>19.90</td>
<td>540.01**</td>
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<tr>
<td></td>
<td>Low</td>
<td>262</td>
<td>77.48</td>
<td>20.69</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>High</td>
<td>463</td>
<td>26.71</td>
<td>7.37</td>
<td></td>
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<td>20.07</td>
<td>6.14</td>
<td>189.45**</td>
</tr>
<tr>
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<td>Low</td>
<td>262</td>
<td>18.13</td>
<td>8.42</td>
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<td>Educational Action</td>
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<td>463</td>
<td>26.59</td>
<td>8.14</td>
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<td>21.91</td>
<td>6.77</td>
<td>302.58**</td>
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<td>281.60**</td>
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<td>3.72</td>
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<tr>
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<td>463</td>
<td>18.13</td>
<td>4.79</td>
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</tr>
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<td>1081</td>
<td>17.11</td>
<td>4.28</td>
<td>261.05**</td>
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<td>Physical Action</td>
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<td>463</td>
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<td>5.07</td>
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<td>18.61</td>
<td>4.55</td>
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<td>21.79</td>
<td>6.63</td>
<td>374.72**</td>
</tr>
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<td>Low</td>
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<td>10.64</td>
<td>6.71</td>
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</tr>
<tr>
<td>Concernment (in Total)</td>
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<td>44.54</td>
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</tr>
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<td>Average</td>
<td>1081</td>
<td>106.04</td>
<td>31.03</td>
<td>163.13**</td>
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<tr>
<td></td>
<td>Low</td>
<td>262</td>
<td>74.69</td>
<td>22.83</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01
Analysis of variance in table 5.55 shows that the influence of environmental trust on components of responsible environmental behaviour was significant. The \( F \) values with degrees of freedom (2,1803) , for actions (in total) \( (F=540.01, p<.01) \), civic action \( (F=189.45, p<.01) \), educational action \( (F=302.58, p<.01) \), financial action \( (F=281.60, p<.01) \), legal action \( (F=261.05, p<.01) \), physical action \( (F=311.84, p<.01) \), persuasion action \( (F=374.72, p<.01) \) and concernment (in total) \( (F=163.13, p<.01) \), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of environmental trust compared, and this indicates that there exists a significant influence of environmental trust on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of environmental trust are conducted using Scheffe’s post hoc analysis.
Table 5.56

*Scheffe’s Post Hoc for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Environmental Trust*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Environmental Trust</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions</td>
<td>Low</td>
<td>262</td>
<td>77.48</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1081</td>
<td>117.62</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>463</td>
<td>136.54</td>
</tr>
<tr>
<td></td>
<td>Civic Action</td>
<td>262</td>
<td>18.13</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1081</td>
<td>20.07</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>463</td>
<td>26.71</td>
</tr>
<tr>
<td></td>
<td>Educational Action</td>
<td>262</td>
<td>13.59</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1081</td>
<td>21.91</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>463</td>
<td>26.59</td>
</tr>
<tr>
<td></td>
<td>Financial Action</td>
<td>262</td>
<td>12.27</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1081</td>
<td>18.13</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>463</td>
<td>19.79</td>
</tr>
<tr>
<td></td>
<td>Legal Action</td>
<td>262</td>
<td>10.97</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1081</td>
<td>17.11</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>463</td>
<td>18.13</td>
</tr>
<tr>
<td></td>
<td>Physical Action</td>
<td>262</td>
<td>11.88</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1081</td>
<td>18.61</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>463</td>
<td>20.20</td>
</tr>
<tr>
<td></td>
<td>Persuasion Action</td>
<td>262</td>
<td>10.64</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1081</td>
<td>21.79</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>463</td>
<td>25.12</td>
</tr>
<tr>
<td></td>
<td>Concernment (in Total)</td>
<td>262</td>
<td>74.69</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1081</td>
<td>106.04</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>463</td>
<td>122.24</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
The mean score of action (in total) of high level of environmental trust (136.54) significantly differ from the mean score of actions (in total) of average level of environmental trust (117.62) and the mean score of actions (in total) of low level of environmental trust (77.48). Mean score of actions (in total) of average level of environmental trust significantly differ from the mean score of actions (in total) of low level of environmental trust. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental trust shows more actions (in total) than average and low levels of environmental trust.

The mean score of civic action of high level of environmental trust (26.71) significantly differ from the mean score of civic action of average level of environmental trust (20.07) and the mean score of civic action of low level of environmental trust (18.13). Mean score of civic action of average level of environmental trust significantly differ from the mean score of civic action of low level of environmental trust. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental trust shows more civic action than average and low levels of environmental trust.

The mean score of educational action of high level of environmental trust (26.59) significantly differ from the mean score of educational action of average level of environmental trust (21.91) and the mean score of educational action of low level of environmental trust (13.59). Mean score of educational action of average level of environmental trust significantly differ from the mean score of educational action of low level of environmental trust. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental trust shows more educational action than average and low levels of environmental trust.
The mean score of financial action of high level of environmental trust (19.79) significantly differ from the mean score of financial action of average level of environmental trust (18.13) and the mean score of financial action of low level of environmental trust (12.27). Mean score of financial action of average level of environmental trust significantly differ from the mean score of financial action of low level of environmental trust. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental trust shows more financial action than average and low levels of environmental trust.

The mean score of legal action of high level of environmental trust (18.13) significantly differ from the mean score of legal action of average level of environmental trust (17.11) and the mean score of legal action of low level of environmental trust (10.97). Mean score of legal action of average level of environmental trust significantly differ from the mean score of legal action of low level of environmental trust. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental trust shows more legal action than average and low levels of environmental trust.

The mean score of physical action of high level of environmental trust (20.20) significantly differ from the mean score of physical action of average level of environmental trust (18.61) and the mean score of physical action of low level of environmental trust (11.88). Mean score of physical action of average level of environmental trust significantly differ from the mean score of physical action of low level of environmental trust. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental trust shows more physical action than average and low levels of environmental trust.
The mean score of persuasion action of high level of environmental trust (25.12) significantly differ from the mean score of persuasion action of average level of environmental trust (21.79) and the mean score of persuasion action of low level of environmental trust (10.64). Mean score of persuasion action of average level of environmental trust significantly differ from the mean score of persuasion action of low level of environmental trust. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental trust shows more persuasion action than average and low levels of environmental trust.

The mean score of concernment (in total) of high level of environmental trust (122.24) significantly differ from the mean score of concernment (in total) of average level of environmental trust (106.04) and the mean score of concernment (in total) of low level of environmental trust (74.69). Mean score of concernment (in total) of average level of environmental trust significantly differ from the mean score of concernment (in total) of low level of environmental trust. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental trust shows more concernment (in total) than average and low levels of environmental trust.

5.4.4.5 Influence of Situational Factors on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable situational factors is compared with respect to the mean scores obtained in responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.
Table 5.57

*Number, Mean and Standard Deviation for the Scores of Responsible Environmental Behaviour in the Three Levels of Situational Factors*

<table>
<thead>
<tr>
<th>Environmental Trust</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>428</td>
<td>280.04</td>
<td>46.929</td>
</tr>
<tr>
<td>Average</td>
<td>950</td>
<td>225.51</td>
<td>42.070</td>
</tr>
<tr>
<td>Low</td>
<td>428</td>
<td>157.40</td>
<td>18.969</td>
</tr>
</tbody>
</table>

Table 5.57 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of situational factors.

Table 5.58

*Summary of Analysis of Variance for the Three Levels of Situational Factors with Respect to their Scores of Responsible Environmental Behaviour*

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>3239817.61</td>
<td>2</td>
<td>1619908.80</td>
<td>1053.01**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>2773660.03</td>
<td>1803</td>
<td>1538.36</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.64</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P<.01

Analysis of variance in table 5.58 shows that the influence of situational factors on responsible environmental behaviour was significant $F$ (2, 1803) =1053.01, $p<.01$. This indicates that there exists a significant influence of situational factors on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of situational factors are conducted using Scheffe’s post hoc analysis.
Table 5.59

Scheffe’s Post Hoc Analysis for Identifying Differences of Responsible Environmental Behaviour in Different Levels of Situational Factors

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Situational Factors</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td></td>
<td>428</td>
<td>157.40</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>950</td>
<td>225.51</td>
</tr>
<tr>
<td>High</td>
<td></td>
<td>428</td>
<td>280.04</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

The mean score of responsible environmental behaviour of high level of situational factors (280.04) significantly differ from the mean score of responsible environmental behaviour of average level of situational factors (225.51) and the mean score of responsible environmental behaviour of low level of situational factors (157.40). Mean score of responsible environmental behaviour of average level of situational factors significantly differ from the mean score of responsible environmental behaviour of low level of situational factors. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of situational factors shows more responsible environmental behaviour than average and low levels of situational factors.
Table 5.60

*Number, Mean, Standard Deviation and F Value for the Sores of Components of Responsible Environmental Behaviour in the Three Levels of Situational Factors*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Situational Factors</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>High</td>
<td>428</td>
<td>147.57</td>
<td>18.19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>950</td>
<td>117.69</td>
<td>20.39</td>
<td>1170.65**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>83.42</td>
<td>18.36</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>27.60</td>
<td>6.69</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>Average</td>
<td>950</td>
<td>20.71</td>
<td>6.23</td>
<td>288.48**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>17.11</td>
<td>7.07</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>28.97</td>
<td>6.78</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>Average</td>
<td>950</td>
<td>21.65</td>
<td>6.14</td>
<td>489.38**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>15.39</td>
<td>6.40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>21.80</td>
<td>5.05</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>Average</td>
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<td>18.00</td>
<td>3.28</td>
<td>615.57**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>12.94</td>
<td>2.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>19.87</td>
<td>3.61</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>Average</td>
<td>950</td>
<td>17.09</td>
<td>3.84</td>
<td>475.74**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>11.75</td>
<td>4.48</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>22.14</td>
<td>4.03</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
<td>Average</td>
<td>950</td>
<td>18.56</td>
<td>4.04</td>
<td>592.17**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>12.80</td>
<td>3.99</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>27.20</td>
<td>4.79</td>
<td></td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Average</td>
<td>950</td>
<td>21.67</td>
<td>6.88</td>
<td>447.54**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>13.43</td>
<td>8.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>132.47</td>
<td>40.78</td>
<td></td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Average</td>
<td>950</td>
<td>107.83</td>
<td>30.44</td>
<td>386.77**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>73.98</td>
<td>18.10</td>
<td></td>
</tr>
</tbody>
</table>

*P<.01
Analysis of variance in table 5.60 shows that the influence of situational factors on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803), for actions (in total) ($F=1170.65$, $p<.01$), civic action ($F=288.48$, $p<.01$), educational action ($F=489.38$, $p<.01$), financial action ($F=615.57$, $p<.01$), legal action ($F=475.74$, $p<.01$), physical action ($F=592.17$, $p<.01$), persuasion action ($F=447.54$, $p<.01$) and concernment (in total) ($F=386.77$, $p<.01$), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of situational factors compared, and this indicates that there exists a significant influence of situational factors on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of situational factors are conducted using Scheffe’s post hoc analysis.
Table 5.61
Scheffe’s Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Situational Factors

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Situational Factors</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Actions (in Total)</td>
<td>Low</td>
<td>428</td>
<td>83.42</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>950</td>
<td>117.69</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>147.57</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>17.11</td>
</tr>
<tr>
<td>Civic Action</td>
<td>Average</td>
<td>950</td>
<td>20.71</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>27.60</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>15.39</td>
</tr>
<tr>
<td>Educational Action</td>
<td>Average</td>
<td>950</td>
<td>21.65</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>28.97</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>12.94</td>
</tr>
<tr>
<td>Financial Action</td>
<td>Average</td>
<td>950</td>
<td>18.00</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>21.80</td>
</tr>
<tr>
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<td>11.75</td>
</tr>
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<td>Average</td>
<td>950</td>
<td>17.09</td>
</tr>
<tr>
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<td>High</td>
<td>428</td>
<td>19.87</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>12.80</td>
</tr>
<tr>
<td>Physical Action</td>
<td>Average</td>
<td>950</td>
<td>18.56</td>
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<td>High</td>
<td>428</td>
<td>22.14</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>13.43</td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Average</td>
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<td>21.67</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>27.20</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>428</td>
<td>73.98</td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Average</td>
<td>950</td>
<td>107.83</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>428</td>
<td>132.47</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
The mean score of action (in total) of high level of situational factors (147.57) significantly differ from the mean score of actions (in total) of average level of situational factors (117.69) and the mean score of actions (in total) of low level of situational factors (83.42). Mean score of actions (in total) of average level of situational factors significantly differ from the mean score of actions (in total) of low level of situational factors. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of situational factors shows more actions (in total) than average and low levels of situational factors.

The mean score of civic action of high level of situational factors (27.60) significantly differ from the mean score of civic action of average level of situational factors (20.71) and the mean score of civic action of low level of situational factors (17.11). Mean score of civic action of average level of situational factors significantly differ from the mean score of civic action of low level of situational factors. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of situational factors shows more civic action than average and low levels of situational factors.

The mean score of educational action of high level of situational factors (28.97) significantly differ from the mean score of educational action of average level of situational factors (21.65) and the mean score of educational action of low level of situational factors (15.39). Mean score of educational action of average level of situational factors significantly differ from the mean score of educational action of low level of situational factors. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of situational factors shows more educational action than average and low levels of situational factors.
The mean score of financial action of high level of situational factors (21.80) significantly differ from the mean score of financial action of average level of situational factors (18.00) and the mean score of financial action of low level of situational factors (12.94). Mean score of financial action of average level of situational factors significantly differ from the mean score of financial action of low level of situational factors. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of situational factors shows more financial action than average and low levels of situational factors.

The mean score of legal action of high level of situational factors (19.87) significantly differ from the mean score of legal action of average level of situational factors (17.09) and the mean score of legal action of low level of situational factors (11.75). Mean score of legal action of average level of situational factors significantly differ from the mean score of legal action of low level of situational factors. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of situational factors shows more legal action than average and low levels of situational factors.

The mean score of physical action of high level of situational factors (22.14) significantly differ from the mean score of physical action of average level of situational factors (18.56) and the mean score of physical action of low level of situational factors (12.80). Mean score of physical action of average level of situational factors significantly differ from the mean score of physical action of low level of situational factors. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of situational factors shows more physical action than average and low levels of situational factors.
The mean score of persuasion action of high level of situational factors (27.20) significantly differ from the mean score of persuasion action of average level of situational factors (21.67) and the mean score of persuasion action of low level of situational factors (13.43). Mean score of persuasion action of average level of situational factors significantly differ from the mean score of persuasion action of low level of situational factors. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of situational factors shows more persuasion action than average and low levels of situational factors.

The mean score of concernment (in total) of high level of situational factors (132.47) significantly differ from the mean score of concernment (in total) of average level of situational factors (107.83) and the mean score of concernment (in total) of low level of situational factors (73.98). Mean score of concernment (in total) of average level of situational factors significantly differ from the mean score of concernment (in total) of low level of situational factors. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of situational factors shows more concernment (in total) than average and low levels of situational factors.

### 5.4.4.6 Influence of Environmental Awareness on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable environmental awareness is compared with respect to the mean scores obtained in responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.
Table 5.62

*Number, Mean and Standard Deviation for the Scores of Responsible Environmental Behaviour in the Three Levels of Environmental Awareness*

<table>
<thead>
<tr>
<th>Environmental Awareness</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>329</td>
<td>279.02</td>
<td>53.979</td>
</tr>
<tr>
<td>Average</td>
<td>1261</td>
<td>221.44</td>
<td>44.704</td>
</tr>
<tr>
<td>Low</td>
<td>216</td>
<td>140.84</td>
<td>14.787</td>
</tr>
</tbody>
</table>

Table 5.62 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of environmental awareness.

Table 5.63

*Summary of Analysis of Variance for the Three Levels of Environmental Awareness with Respect to their Scores of Responsible Environmental Behaviour*

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2492760.10</td>
<td>2</td>
<td>1246380.05</td>
<td>638.29**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3520717.53</td>
<td>1803</td>
<td>1952.70</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**p<.01

Analysis of variance in table 5.63 shows that the influence of environmental awareness on responsible environmental behaviour was significant $F$ (2, 1803) =638.29, $p<.01$. This indicates that there exists a significant influence of environmental awareness on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of environmental awareness are conducted using Scheffe’s post hoc analysis.
### Table 5.64

*Scheffe’s Post Hoc Analysis for Identifying Differences of Responsible Environmental Behaviour in Different Levels of Environmental Awareness*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Environmental Awareness</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Environmental Behaviour</td>
<td>Low</td>
<td>216</td>
<td>140.84</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>221.44</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>279.02</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

The mean score of responsible environmental behaviour of high level of environmental awareness (279.02) significantly differ from the mean score of responsible environmental behaviour of average level of environmental awareness (221.44) and the mean score of responsible environmental behaviour of low level of environmental awareness (140.84). Mean score of responsible environmental behaviour of average level of environmental awareness significantly differ from the mean score of responsible environmental behaviour of low level of environmental awareness. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental awareness shows more responsible environmental behaviour than average and low levels of environmental awareness.
Table 5.65

*Number, Mean, Standard Deviation and F Value for the Sores of Components of Responsible Environmental Behaviour in the Three Levels of Environmental Awareness*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Environmental Awareness</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>High</td>
<td>329</td>
<td>143.96</td>
<td>26.56</td>
<td>752.05**</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>117.46</td>
<td>21.66</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>70.28</td>
<td>11.69</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>High</td>
<td>329</td>
<td>28.86</td>
<td>6.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>20.10</td>
<td>6.29</td>
<td>252.98**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>18.39</td>
<td>8.63</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>High</td>
<td>329</td>
<td>27.72</td>
<td>7.61</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>22.01</td>
<td>7.02</td>
<td>338.09**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>12.39</td>
<td>1.86</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>High</td>
<td>329</td>
<td>20.47</td>
<td>5.64</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>18.23</td>
<td>3.55</td>
<td>475.09**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>10.39</td>
<td>2.19</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>High</td>
<td>329</td>
<td>19.20</td>
<td>4.12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>16.84</td>
<td>4.41</td>
<td>309.54**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>10.25</td>
<td>2.96</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
<td>High</td>
<td>329</td>
<td>21.50</td>
<td>4.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>18.36</td>
<td>4.70</td>
<td>408.67**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>10.89</td>
<td>.811</td>
<td></td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>High</td>
<td>329</td>
<td>26.22</td>
<td>7.78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>21.91</td>
<td>6.74</td>
<td>538.30**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>7.97</td>
<td>2.26</td>
<td></td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>High</td>
<td>329</td>
<td>135.06</td>
<td>39.55</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>103.98</td>
<td>32.66</td>
<td>260.56**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>70.56</td>
<td>16.67</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01
Analysis of variance in table 5.65 shows that the influence of Environmental Awareness on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803), for actions (in total) ($F=752.05$, $p<.01$), civic action ($F=252.98$, $p<.01$), educational action ($F=338.09$, $p<.01$), financial action ($F=475.09$, $p<.01$), legal action ($F=309.54$, $p<.01$), physical action ($F=408.67$, $p<.01$), persuasion action ($F=538.30$, $p<.01$) and concernment (in total) ($F=260.56$, $p<.01$), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of environmental awareness compared, and this indicates that there exists a significant influence of environmental awareness on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of environmental awareness are conducted using Scheffe’s post hoc analysis.
Table 5.66

Scheffe’s Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Environmental Awareness

<table>
<thead>
<tr>
<th>Components (in Total)</th>
<th>Levels of Environmental Awareness</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Actions</td>
<td>Low</td>
<td>216</td>
<td>70.28</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1261</td>
<td>117.46</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>143.96</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>18.39</td>
</tr>
<tr>
<td>Civic Action</td>
<td>Average</td>
<td>1261</td>
<td>20.10</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>28.86</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>12.39</td>
</tr>
<tr>
<td>Educational Action</td>
<td>Average</td>
<td>1261</td>
<td>22.01</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>27.72</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>10.39</td>
</tr>
<tr>
<td>Financial Action</td>
<td>Average</td>
<td>1261</td>
<td>18.23</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>20.47</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>10.25</td>
</tr>
<tr>
<td>Legal Action</td>
<td>Average</td>
<td>1261</td>
<td>16.84</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>19.20</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>10.89</td>
</tr>
<tr>
<td>Physical Action</td>
<td>Average</td>
<td>1261</td>
<td>18.36</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>21.50</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>7.97</td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>Average</td>
<td>1261</td>
<td>21.91</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>26.22</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>70.56</td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Average</td>
<td>1261</td>
<td>103.98</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>135.06</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
The mean score of actions (in total) of high level of environmental awareness (143.96) significantly differ from the mean score of actions (in total) of average level of environmental awareness (117.46) and the mean score of actions (in total) of low level of environmental awareness (70.28). Mean score of actions (in total) of average level of environmental awareness significantly differ from the mean score of actions (in total) of low level of environmental awareness. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental awareness shows more actions (in total) than average and low levels of environmental awareness.

The mean score of civic action of high level of environmental awareness (28.86) significantly differ from the mean score of civic action of average level of environmental awareness (20.10) and the mean score of civic action of low level of environmental awareness (18.39). Mean score of civic action of average level of environmental awareness significantly differ from the mean score of civic action of low level of environmental awareness. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental awareness shows more civic action than average and low levels of environmental awareness.

The mean score of educational action of high level of environmental awareness (27.72) significantly differ from the mean score of educational action of average level of environmental awareness (22.01) and the mean score of educational action of low level of environmental awareness (12.39). Mean score of educational action of average level of environmental awareness significantly differ from the mean score of educational action of low level of environmental awareness. All the mean differences are significant at .01 level. Thus it can be interpreted that students
with higher levels of environmental awareness shows more educational action than average and low levels of environmental awareness.

The mean score of financial action of high level of environmental awareness (20.47) significantly differ from the mean score of financial action of average level of environmental awareness (18.23) and the mean score of financial action of low level of environmental awareness (10.39). Mean score of financial action of average level of environmental awareness significantly differ from the mean score of financial action of low level of environmental awareness. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental awareness shows more financial action than average and low levels of environmental awareness.

The mean score of legal action of high level of environmental awareness (19.20) significantly differ from the mean score of legal action of average level of environmental awareness (16.84) and the mean score of legal action of low level of environmental awareness (10.25). Mean score of legal action of average level of environmental awareness significantly differ from the mean score of legal action of low level of environmental awareness. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental awareness shows more legal action than average and low levels of environmental awareness.

The mean score of physical action of high level of environmental awareness (21.50) significantly differ from the mean score of physical action of average level of environmental awareness (18.36) and the mean score of physical action of low level of environmental awareness (10.89). Mean score of physical action of average
level of environmental awareness significantly differ from the mean score of physical action of low level of environmental awareness. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental awareness shows more physical action than average and low levels of environmental awareness.

The mean score of persuasion action of high level of environmental awareness (26.22) significantly differ from the mean score of persuasion action of average level of environmental awareness (21.91) and the mean score of persuasion action of low level of environmental awareness (7.97). Mean score of persuasion action of average level of environmental awareness significantly differ from the mean score of persuasion action of low level of environmental awareness. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental awareness shows more persuasion action than average and low levels of environmental awareness.

The mean score of concernment (in total) of high level of environmental awareness (135.06) significantly differ from the mean score of concernment (in total) of average level of environmental awareness (103.98) and the mean score of concernment (in total) of low level of environmental awareness (70.56). Mean score of concernment (in total) of average level of environmental awareness significantly differ from the mean score of concernment (in total) of low level of environmental awareness. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental awareness shows more concernment (in total) than average and low levels of environmental awareness.
5.4.4.7 Influence of Environmental Attitude on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable environmental attitude is compared with respect to the mean scores obtained in responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.

Table 5.67

*Number, Mean and Standard Deviation for the Scores of Responsible Environmental Behaviour in the Three Levels of Environmental Attitude*

<table>
<thead>
<tr>
<th>Environmental Attitude</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>370</td>
<td>287.31</td>
<td>46.823</td>
</tr>
<tr>
<td>Average</td>
<td>1224</td>
<td>210.31</td>
<td>45.459</td>
</tr>
<tr>
<td>Low</td>
<td>212</td>
<td>177.98</td>
<td>49.683</td>
</tr>
</tbody>
</table>

Table 5.67 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of environmental attitude.

Table 5.68

*Summary of Analysis of Variance for the Three Levels of Environmental Attitude with Respect to their Scores of Responsible Environmental Behaviour*

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>2156267.96</td>
<td>2</td>
<td>1078133.98</td>
<td>503.96**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>3857209.67</td>
<td>1803</td>
<td>2139.33</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P<.01
Analysis of variance in table 5.68 shows that the influence of environmental attitude on responsible environmental behaviour was significant $F (2, 1803) = 503.96, p < .01$. This indicates that there exists a significant influence of environmental attitude on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of environmental attitude are conducted using Scheffe’s post hoc analysis.

Table 5.69

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Environmental Attitude</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible Environmental Behaviour</td>
<td>Low</td>
<td>212</td>
<td>177.98</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1224</td>
<td>210.31</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>370</td>
<td>287.31</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed.

The mean score of responsible environmental behaviour of high level of environmental attitude (287.31) significantly differ from the mean score of responsible environmental behaviour of average level of environmental attitude (210.31) and the mean score of responsible environmental behaviour of low level of environmental attitude (177.98). Mean score of responsible environmental behaviour of average level of environmental attitude significantly differ from the mean score of responsible environmental behaviour of low level of environmental attitude. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental attitude shows more responsible environmental behaviour than average and low levels of environmental attitude.
Table 5.70

*Number, Mean, Standard Deviation and F Value for the Sores of Components of Responsible Environmental Behaviour in the Three Levels of Environmental Attitude*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Environmental Attitude</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>High</td>
<td>370</td>
<td>149.69</td>
<td>18.85</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1224</td>
<td>110.19</td>
<td>24.24</td>
<td>480.26**</td>
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<tr>
<td></td>
<td>Low</td>
<td>212</td>
<td>96.26</td>
<td>28.40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>370</td>
<td>29.44</td>
<td>5.72</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1224</td>
<td>19.10</td>
<td>6.31</td>
<td>381.35**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>212</td>
<td>21.41</td>
<td>7.19</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>High</td>
<td>370</td>
<td>29.34</td>
<td>6.22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1224</td>
<td>20.82</td>
<td>7.15</td>
<td>352.90**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>212</td>
<td>15.12</td>
<td>4.40</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>High</td>
<td>370</td>
<td>21.08</td>
<td>4.99</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1224</td>
<td>17.11</td>
<td>3.36</td>
<td>149.65**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>212</td>
<td>15.23</td>
<td>7.80</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>High</td>
<td>370</td>
<td>19.87</td>
<td>3.70</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1224</td>
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<td>17.11</td>
<td>4.34</td>
<td>146.96**</td>
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<td>Persuasion Action</td>
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<tr>
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<td>Average</td>
<td>1224</td>
<td>100.12</td>
<td>31.08</td>
<td>250.38**</td>
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<td></td>
<td>Low</td>
<td>212</td>
<td>81.71</td>
<td>27.89</td>
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</tr>
</tbody>
</table>

**P<.01
Analysis of variance in table 5.70 shows that the influence of Environmental Attitude on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803) , for actions (in total) ($F=480.26$, $p<.01$), civic action ($F=381.35$, $p<.01$), educational action ($F=352.90$, $p<.01$), financial action ($F=149.65$, $p<.01$), legal action ($F=132.24$, $p<.01$), physical action ($F=146.96$, $p<.01$), persuasion action ($F=324.06$, $p<.01$) and concernment (in total) ($F=250.38$, $p<.01$), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of environmental attitude compared, and this indicates that there exists a significant influence of environmental attitude on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of environmental attitude are conducted using Scheffe’s post hoc analysis.
Table 5.71

*Scheffe’s Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Environmental Attitude*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Environmental Attitude</th>
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<th>Subset for alpha = .01</th>
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</thead>
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</tr>
<tr>
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<td>96.26</td>
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<td>1224</td>
<td>110.19</td>
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<tr>
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<td>High</td>
<td>370</td>
<td>149.69</td>
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<td>Civic Action</td>
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<td>212</td>
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</tr>
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<td>Average</td>
<td>1224</td>
<td>21.41</td>
</tr>
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<td></td>
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<td>370</td>
<td>29.44</td>
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<td>15.12</td>
</tr>
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<td>Average</td>
<td>1224</td>
<td>20.82</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>370</td>
<td>29.34</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>212</td>
<td>15.23</td>
</tr>
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<td>1224</td>
<td>17.11</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Low</td>
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</tr>
<tr>
<td>Persuasion action</td>
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</tr>
<tr>
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<td>High</td>
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<td>28.11</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>212</td>
<td>81.71</td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Low</td>
<td>212</td>
<td>100.12</td>
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<td>Average</td>
<td>1224</td>
<td>137.62</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>370</td>
<td></td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
The mean score of actions (in total) of high level of environmental attitude (149.69) significantly differ from the mean score of actions (in total) of average level of environmental attitude (110.19) and the mean score of actions (in total) of low level of environmental attitude (96.26). Mean score of actions (in total) of average level of environmental attitude significantly differ from the mean score of actions (in total) of low level of environmental attitude. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental attitude shows more actions (in total) than average and low levels of environmental attitude.

The mean score of civic action of high level of environmental attitude (29.44) significantly differ from the mean score of civic action of average level of environmental attitude (19.10) and the mean score of civic action of low level of environmental attitude (21.41). Mean score of civic action of average level of environmental attitude significantly differ from the mean score of civic action of low level of environmental attitude. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental attitude shows more civic action than average and low levels of environmental attitude.

The mean score of educational action of high level of environmental attitude (29.34) significantly differ from the mean score of educational action of average level of environmental attitude (20.82) and the mean score of educational action of low level of environmental attitude (15.12). Mean score of educational action of average level of environmental attitude significantly differ from the mean score of educational action of low level of environmental attitude. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels
of environmental attitude shows more educational action than average and low levels of environmental attitude.

The mean score of financial action of high level of environmental attitude (21.08) significantly differ from the mean score of financial action of average level of environmental attitude (17.11) and the mean score of financial action of low level of environmental attitude (15.23). Mean score of financial action of average level of environmental attitude significantly differ from the mean score of financial action of low level of environmental attitude. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental attitude shows more financial action than average and low levels of environmental attitude.

The mean score of legal action of high level of environmental attitude (19.87) significantly differ from the mean score of legal action of average level of environmental attitude (15.75) and the mean score of legal action of low level of environmental attitude (14.79). The mean difference is significant at .01 level. Mean score of legal action of average level of environmental attitude do not significantly differ from the mean score of legal action of low level of environmental attitude. Thus it can be interpreted that students with higher levels of environmental attitude shows more legal action than average and low levels of environmental attitude.

The mean score of physical action of high level of environmental attitude (21.85) significantly differ from the mean score of physical action of average level of environmental attitude (17.11) and the mean score of physical action of low level of environmental attitude (16.75). The mean difference is significant at .01 level. Mean score of physical action of average level of environmental attitude do not
significantly differ from the mean score of physical action of low level of environmental attitude. Thus it can be interpreted that students with higher levels of environmental attitude shows more physical action than average and low levels of environmental attitude.

The mean score of persuasion action of high level of environmental attitude (28.11) significantly differ from the mean score of persuasion action of average level of environmental attitude (20.29) and the mean score of persuasion action of low level of environmental attitude (12.96). Mean score of persuasion action of average level of environmental attitude significantly differ from the mean score of persuasion action of low level of environmental attitude. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental attitude shows more persuasion action than average and low levels of environmental attitude.

The mean score of concernment (in total) of high level of environmental attitude (137.62) significantly differ from the mean score of concernment (in total) of average level of environmental attitude (100.12) and the mean score of concernment (in total) of low level of environmental attitude (81.71). Mean score of concernment (in total) of average level of environmental attitude significantly differ from the mean score of concernment (in total) of low level of environmental attitude. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of environmental attitude shows more concernment (in total) than average and low levels of environmental attitude.
5.4.4.8 Influence of Intention to Act on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable intention to act is compared with respect to the mean scores obtained in responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.

Table 5.72
Number, Mean and Standard Deviation for the Scores of Responsible Environmental Behaviour in the Three Levels of Intention to Act

<table>
<thead>
<tr>
<th>Intention to Act</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>329</td>
<td>287.10</td>
<td>49.344</td>
</tr>
<tr>
<td>Average</td>
<td>1261</td>
<td>219.34</td>
<td>43.115</td>
</tr>
<tr>
<td>Low</td>
<td>216</td>
<td>140.84</td>
<td>14.787</td>
</tr>
</tbody>
</table>

Table 5.72 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of intention to act.

Table 5.73
Summary of Analysis of Variance for the Three Levels of Intention to Act with Respect to their Scores of Responsible Environmental Behaviour

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
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<td>2825670.66</td>
<td>2</td>
<td>1412835.33</td>
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</tr>
<tr>
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<td>3187806.97</td>
<td>1803</td>
<td>1768.057</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P<.01
Analysis of variance in table 5.73 shows that the influence of intention to act on responsible environmental behaviour was significant $F(2, 1803) = 799.09, p<.01$. This indicates that there exists a significant influence of intention to act on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of intention to act are conducted using Scheffe’s post hoc analysis.

Table 5.74

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Intention to Act</th>
<th>N</th>
<th>Subset for alpha = .01</th>
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<td>140.84</td>
</tr>
<tr>
<td></td>
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<td>1261</td>
<td>219.34</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>287.10</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

The mean score of responsible environmental behaviour of high level of intention to act (287.10) significantly differ from the mean score of responsible environmental behaviour of average level of intention to act (219.34) and the mean score of responsible environmental behaviour of low level of intention to act (140.84). Mean score of responsible environmental behaviour of average level of intention to act significantly differ from the mean score of responsible environmental behaviour of low level of intention to act. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of intention to act shows more responsible environmental behaviour than average and low levels of intention to act.
Table 5.75

*Number, Mean, Standard Deviation and F Value for the Scores of Components of Responsible Environmental Behaviour in the Three Levels of Intention to Act*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Intention to Act</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
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</thead>
<tbody>
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<td>Actions (in Total)</td>
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<td>Average</td>
<td>1261</td>
<td>115.99</td>
<td>21.10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>216</td>
<td>70.28</td>
<td>11.69</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>29.91</td>
<td>5.67</td>
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</tr>
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<td>Civic Action</td>
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<td>19.82</td>
<td>6.08</td>
<td>356.50**</td>
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<td>29.26</td>
<td>6.86</td>
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<td>450.20**</td>
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<tr>
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<td>12.39</td>
<td>1.86</td>
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</tr>
<tr>
<td></td>
<td>High</td>
<td>329</td>
<td>20.89</td>
<td>5.60</td>
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<td>4.38</td>
<td>329.20**</td>
</tr>
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<td>10.25</td>
<td>2.96</td>
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</tr>
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<td>7.01</td>
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</tr>
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<td>103.35</td>
<td>31.77</td>
<td>293.08**</td>
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<td>16.67</td>
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</tbody>
</table>

**P<.01
Analysis of variance in table 5.75 shows that the influence of intention to act on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803) , for actions (in total) ($F=1001.22, p<.01$), civic action ($F=356.50, p<.01$), educational action ($F=450.20, p<.01$), financial action ($F=510.66, p<.01$), legal action ($F=329.20, p<.01$), physical action ($F=403.35, p<.01$), persuasion action ($F=728.34, p<.01$) and concernment (in total) ($F=293.08, p<.01$), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of Intention to act compared, and this indicates that there exists a significant influence of intention to act on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of Intention to act are conducted using Scheffe’s post hoc analysis.
### Table 5.76

**Scheffe’s Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Intention to Act**

<table>
<thead>
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<th>Levels of Intention to Act</th>
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</thead>
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<td>19.82</td>
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<td>137.49</td>
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</table>

Means for groups in homogeneous subsets are displayed.
The mean score of actions (in total) of high level of intention to act (149.60) significantly differ from the mean score of actions (in total) of average level of intention to act (115.99) and the mean score of actions (in total) of low level of intention to act (70.28). Mean score of actions (in total) of average level of intention to act significantly differ from the mean score of actions (in total) of low level of intention to act. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of intention to act shows more actions (in total) than average and low levels of intention to act.

The mean score of civic action of high level of intention to act (29.91) significantly differ from the mean score of civic action of average level of intention to act (19.82) and the mean score of civic action of low level of intention to act (18.39). The mean difference is significant at .01 level. Mean score of civic action of average level of intention to act do not differ significantly from the mean score of civic action of low level of intention to act. Thus it can be interpreted that students with higher levels of intention to act shows more civic action than average and low levels of intention to act.

The mean score of educational action of high level of intention to act (29.26) significantly differ from the mean score of educational action of average level of intention to act (21.61) and the mean score of educational action of low level of intention to act (12.39). Mean score of educational action of average level of intention to act significantly differ from the mean score of educational action of low level of intention to act. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of intention to act shows more educational action than average and low levels of intention to act.
The mean score of financial action of high level of intention to act (20.89) significantly differ from the mean score of financial action of average level of intention to act (18.13) and the mean score of financial action of low level of intention to act (10.39). Mean score of financial action of average level of intention to act significantly differ from the mean score of financial action of low level of intention to act. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of intention to act shows more financial action than average and low levels of intention to act.

The mean score of legal action of high level of intention to act (19.51) significantly differ from the mean score of legal action of average level of intention to act (16.76) and the mean score of legal action of low level of intention to act (10.25). Mean score of legal action of average level of intention to act significantly differ from the mean score of legal action of low level of intention to act. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of intention to act shows more legal action than average and low levels of intention to act.

The mean score of physical action of high level of intention to act (21.43) significantly differ from the mean score of physical action of average level of intention to act (18.38) and the mean score of physical action of low level of intention to act (10.89). Mean score of physical action of average level of intention to act significantly differ from the mean score of physical action of low level of intention to act. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of intention to act shows more physical action than average and low levels of intention to act.
The mean score of persuasion action of high level of intention to act (28.60) significantly differ from the mean score of persuasion action of average level of intention to act (21.29) and the mean score of persuasion action of low level of intention to act (7.97). Mean score of persuasion action of average level of intention to act significantly differ from the mean score of persuasion action of low level of intention to act. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of intention to act shows more persuasion action than average and low levels of intention to act.

The mean score of concernment (in total) of high level of intention to act (137.49) significantly differ from the mean score of concernment (in total) of average level of intention to act (103.35) and the mean score of concernment (in total) of low level of intention to act (70.56). Mean score of concernment (in total) of average level of intention to act significantly differ from the mean score of concernment (in total) of low level of intention to act. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of intention to act shows more concernment (in total) than average and low levels of intention to act.

5.4.4.9 Influence of Self-efficacy on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable self-efficacy is compared with respect to the mean scores obtained in responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.
Table 5.77

Number, Mean and Standard Deviation for the Scores of Responsible Environmental Behaviour in the Three Levels of Self-efficacy

<table>
<thead>
<tr>
<th>Self-efficacy</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>229</td>
<td>300.35</td>
<td>47.95</td>
</tr>
<tr>
<td>Average</td>
<td>1529</td>
<td>213.55</td>
<td>48.18</td>
</tr>
<tr>
<td>Low</td>
<td>48</td>
<td>128.50</td>
<td>12.50</td>
</tr>
</tbody>
</table>

Table 5.77 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of self-efficacy.

Table 5.78

Summary of Analysis of Variance for the Three Levels of Self-efficacy with Respect to their Scores of Responsible Environmental Behaviour

<table>
<thead>
<tr>
<th>Sources of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1934666.19</td>
<td>2</td>
<td>967333.10</td>
<td>427.60**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4078811.44</td>
<td>1803</td>
<td>2262.24</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P<.01

Analysis of variance in table 5.78 shows that the influence of self-efficacy on responsible environmental behaviour was significant $F (2, 1803) = 427.60$, $p<.01$. This indicates that there exists a significant influence of self-efficacy on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of self-efficacy are conducted using Scheffe’s post hoc analysis.
Table 5.79

_Scheffe’s Post Hoc Analysis for Identifying Differences of Responsible Environmental Behaviour in Different Levels of Self-efficacy_

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Self-efficacy</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Behaviour</td>
<td>Low</td>
<td>48</td>
<td>128.50</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>213.55</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>300.35</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

The mean score of responsible environmental behaviour of high level of self-efficacy (300.35) significantly differ from the mean score of responsible environmental behaviour of average level of self-efficacy (213.55) and the mean score of responsible environmental behaviour of low level of self-efficacy (128.50). Mean score of responsible environmental behaviour of average level of self-efficacy significantly differ from the mean score of responsible environmental behaviour of low level of self-efficacy. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of self-efficacy shows more responsible environmental behaviour than average and low levels of self-efficacy.
Table 5.80

*Number, Mean, Standard Deviation and F Value for the Sores of Components of Responsible Environmental Behaviour in the Three Levels of Self-efficacy*

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Self-efficacy</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>High</td>
<td>229</td>
<td>157.44</td>
<td>15.34</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>112.41</td>
<td>24.64</td>
<td>532.02**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>48</td>
<td>56.88</td>
<td>5.09</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>32.16</td>
<td>2.45</td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>Average</td>
<td>1529</td>
<td>20.31</td>
<td>6.47</td>
<td>500.93**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>48</td>
<td>8.38</td>
<td>2.42</td>
<td></td>
</tr>
<tr>
<td>Educational Action</td>
<td>High</td>
<td>229</td>
<td>31.74</td>
<td>4.02</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>20.78</td>
<td>7.17</td>
<td>330.81**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>48</td>
<td>10.62</td>
<td>1.12</td>
<td></td>
</tr>
<tr>
<td>Financial Action</td>
<td>High</td>
<td>229</td>
<td>22.28</td>
<td>4.96</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>17.26</td>
<td>4.30</td>
<td>208.71**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>48</td>
<td>10.12</td>
<td>.334</td>
<td></td>
</tr>
<tr>
<td>Legal Action</td>
<td>High</td>
<td>229</td>
<td>19.81</td>
<td>4.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>16.20</td>
<td>4.67</td>
<td>114.22**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>48</td>
<td>9.75</td>
<td>.44</td>
<td></td>
</tr>
<tr>
<td>Physical Action</td>
<td>High</td>
<td>229</td>
<td>23.01</td>
<td>3.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>17.54</td>
<td>4.89</td>
<td>146.96**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>48</td>
<td>10.12</td>
<td>.33</td>
<td></td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>High</td>
<td>229</td>
<td>28.44</td>
<td>4.94</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>20.33</td>
<td>7.99</td>
<td>188.90**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>48</td>
<td>7.88</td>
<td>1.55</td>
<td></td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>High</td>
<td>229</td>
<td>142.91</td>
<td>42.05</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>101.13</td>
<td>32.90</td>
<td>176.61**</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>48</td>
<td>71.62</td>
<td>13.74</td>
<td></td>
</tr>
</tbody>
</table>

**P<.01
Analysis of variance in table 5.80 shows that the influence of self-efficacy on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803) , for actions (in total) ($F=532.02, p<.01$), civic action ($F=500.93, p<.01$), educational action ($F=330.81, p<.01$), financial action ($F=208.71, p<.01$), legal action ($F=114.22, p<.01$), physical action ($F=146.96, p<.01$), persuasion action ($F=188.90, p<.01$) and concernment (in total) ($F=176.61, p<.01$), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of self-efficacy compared, and this indicates that there exists a significant influence of self-efficacy on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of self-efficacy are conducted using Scheffe’s post hoc analysis.
Table 5.81

Scheffe's Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Self-efficacy

<table>
<thead>
<tr>
<th>Components (in total)</th>
<th>Levels of Self-efficacy</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Actions</td>
<td>Low</td>
<td>48</td>
<td>56.88</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>112.41</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>157.44</td>
</tr>
<tr>
<td>Civic action</td>
<td>Low</td>
<td>48</td>
<td>8.38</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>20.31</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>32.16</td>
</tr>
<tr>
<td>Educational action</td>
<td>Low</td>
<td>48</td>
<td>10.62</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>20.78</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>31.74</td>
</tr>
<tr>
<td>Financial action</td>
<td>Low</td>
<td>48</td>
<td>10.12</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>17.26</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>22.28</td>
</tr>
<tr>
<td>Legal action</td>
<td>Low</td>
<td>48</td>
<td>9.75</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>16.20</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>19.81</td>
</tr>
<tr>
<td>Physical action</td>
<td>Low</td>
<td>48</td>
<td>10.12</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>17.54</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>23.01</td>
</tr>
<tr>
<td>Persuasion action</td>
<td>Low</td>
<td>48</td>
<td>7.88</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>20.33</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>28.44</td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Low</td>
<td>48</td>
<td>71.62</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1529</td>
<td>101.13</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>229</td>
<td>142.91</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
The mean score of actions (in total) of high level of self-efficacy (157.44) significantly differ from the mean score of actions (in total) of average level of self-efficacy (112.41) and the mean score of actions (in total) of low level of self-efficacy (56.88). Mean score of actions (in total) of average level of self-efficacy significantly differ from the mean score of actions (in total) of low level of self-efficacy. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of self-efficacy shows more actions (in total) than average and low levels of self-efficacy.

The mean score of civic action of high level of self-efficacy (32.16) significantly differ from the mean score of civic action of average level of self-efficacy (20.31) and the mean score of civic action of low level of self-efficacy (8.38). Mean score of civic action of average level of self-efficacy significantly differ from the mean score of civic action of low level of self-efficacy. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of self-efficacy shows more civic action than average and low levels of self-efficacy.

The mean score of educational action of high level of self-efficacy (31.74) significantly differ from the mean score of educational action of average level of self-efficacy (20.78) and the mean score of educational action of low level of self-efficacy (10.62). Mean score of educational action of average level of self-efficacy significantly differ from the mean score of educational action of low level of self-efficacy. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of self-efficacy shows more educational action than average and low levels of self-efficacy.
The mean score of financial action of high level of self-efficacy (22.28) significantly differ from the mean score of financial action of average level of self-efficacy (17.26) and the mean score of financial action of low level of self-efficacy (10.12). Mean score of financial action of average level of self-efficacy significantly differ from the mean score of financial action of low level of self-efficacy. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of self-efficacy shows more financial action than average and low levels of self-efficacy.

The mean score of legal action of high level of self-efficacy (19.81) significantly differ from the mean score of legal action of average level of self-efficacy (16.20) and the mean score of legal action of low level of self-efficacy (9.75). Mean score of legal action of average level of self-efficacy significantly differ from the mean score of legal action of low level of self-efficacy. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of self-efficacy shows more legal action than average and low levels of self-efficacy.

The mean score of physical action of high level of self-efficacy (23.01) significantly differ from the mean score of physical action of average level of self-efficacy (17.54) and the mean score of physical action of low level of self-efficacy (10.12). Mean score of physical action of average level of self-efficacy significantly differ from the mean score of physical action of low level of self-efficacy. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of self-efficacy shows more physical action than average and low levels of self-efficacy.
The mean score of persuasion action of high level of self-efficacy (28.44) significantly differ from the mean score of persuasion action of average level of self-efficacy (20.33) and the mean score of persuasion action of low level of self-efficacy (7.88). Mean score of persuasion action of average level of self-efficacy significantly differ from the mean score of persuasion action of low level of self-efficacy. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of self-efficacy shows more persuasion action than average and low levels of self-efficacy.

The mean score of concernment (in total) of high level of self-efficacy (142.91) significantly differ from the mean score of concernment (in total) of average level of self-efficacy (101.13) and the mean score of concernment (in total) of low level of self-efficacy (71.62). Mean score of concernment (in total) of average level of self-efficacy significantly differ from the mean score of concernment (in total) of low level of self-efficacy. All the mean differences are significant at .01 level. Thus it can be interpreted that students with higher levels of self-efficacy shows more concernment (in total) than average and low levels of self-efficacy.

5.4.4.10 Influence of Barriers to Action on Responsible Environmental Behaviour of Secondary School Students of Kerala

Three levels (low, average and high) formed on the basis of the independent variable barriers to action is compared with respect to the mean scores obtained in responsible environmental behaviour scale. In order to ascertain whether there exist any significant differences among the mean scores of the three categories, ANOVA was employed.
Table 5.82

*Number, Mean and Standard Deviation for the Sores of Responsible Environmental Behaviour in the Three Levels of Barriers to Action*

<table>
<thead>
<tr>
<th>Barriers to Action</th>
<th>N</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>287</td>
<td>199.68</td>
<td>24.442</td>
</tr>
<tr>
<td>Average</td>
<td>1254</td>
<td>214.76</td>
<td>56.404</td>
</tr>
<tr>
<td>Low</td>
<td>265</td>
<td>282.43</td>
<td>50.759</td>
</tr>
</tbody>
</table>

Table 5.82 shows the number, mean and standard deviation for the scores of responsible environmental behaviour in different levels of barriers to action.

Table 5.83

*Summary of Analysis of Variance for the Three Levels of barriers to action with Respect to their Scores of Responsible Environmental Behaviour*

<table>
<thead>
<tr>
<th>Source of Variation</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1176171.560</td>
<td>2</td>
<td>588085.780</td>
<td>219.20**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>4837306.074</td>
<td>1803</td>
<td>2682.921</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.635</td>
<td>1805</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**P<.01

Analysis of variance in table 5.83 shows that the influence of barriers to action on responsible environmental behaviour was significant $F (2, 1803) = 219.20$, $p<.01$. This indicates that there exists a significant influence of barriers to action on responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences of responsible environmental behaviour in different levels of barriers to action are conducted using Scheffe’s post hoc analysis.
Table 5.84

Scheffe’s Post Hoc Analysis for Identifying Differences of Responsible Environmental Behaviour in Different Levels of Barriers to Action

<table>
<thead>
<tr>
<th>Variable</th>
<th>Levels of Barriers to Action</th>
<th>N</th>
<th>Subset for alpha = .01</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
<td>287</td>
<td>199.68</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1254</td>
<td>214.76</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>265</td>
<td>282.43</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed

The mean score of responsible environmental behaviour of low level of barriers to action (282.43) significantly differ from the mean score of responsible environmental behaviour of average level of barriers to action (214.76) and the mean score of responsible environmental behaviour of high level of barriers to action (199.68). Mean score of responsible environmental behaviour of average level of barriers to action significantly differ from the mean score of responsible environmental behaviour of high level of barriers to action. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of barriers to action shows more responsible environmental behaviour than average and low levels of barriers to action.
<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Barriers to Action</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Actions (in Total)</td>
<td>High</td>
<td>287</td>
<td>110.52</td>
<td>14.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1254</td>
<td>111.66</td>
<td>29.45</td>
<td>200.60**</td>
</tr>
<tr>
<td></td>
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<td>265</td>
<td>146.89</td>
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<td></td>
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<td>287</td>
<td>20.24</td>
<td>4.42</td>
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<td>7.46</td>
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<td>287</td>
<td>17.75</td>
<td>2.94</td>
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<tr>
<td>Financial Action</td>
<td>Average</td>
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<td>16.80</td>
<td>4.22</td>
<td>145.35**</td>
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<td>15.61</td>
<td>4.98</td>
<td>82.34**</td>
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<td>Low</td>
<td>265</td>
<td>19.43</td>
<td>4.29</td>
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<td>287</td>
<td>17.53</td>
<td>3.42</td>
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<td>177.07**</td>
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<td>7.85</td>
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<td>8.27</td>
<td>102.03**</td>
</tr>
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<td>26.99</td>
<td>5.75</td>
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</tr>
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<td></td>
<td>High</td>
<td>287</td>
<td>89.16</td>
<td>23.84</td>
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<td>Concernment (in Total)</td>
<td>Average</td>
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<td>103.10</td>
<td>34.92</td>
<td>135.50**</td>
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<td>265</td>
<td>135.53</td>
<td>41.62</td>
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</tr>
</tbody>
</table>

**P<.01
Analysis of variance in table 5.85 shows that the influence of barriers to action on components of responsible environmental behaviour was significant. The $F$ values with degrees of freedom (2,1803), for actions (in total) ($F$=200.60, $p<.01$), civic action ($F$=82.78, $p<.01$), educational action ($F$=137.11, $p<.01$), financial action ($F$=145.35, $p<.01$), legal action ($F$=82.34, $p<.01$), physical action ($F$=177.07, $p<.01$), persuasion action ($F$=102.03, $p<.01$) and concernment (in total) ($F$=135.50, $p<.01$), are significant. Component wise analysis of responsible environmental behaviour scale shows that there exist significant differences among the mean scores of the students in the three levels of barriers to action compared, and this indicates that there exists a significant influence of barriers to action on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons for identifying differences among the mean scores of components of responsible environmental behaviour in the three levels of barriers to action are conducted using Scheffe’s post hoc analysis.
Table 5.86

Scheffe’s Post Hoc Analysis for Identifying Differences in Components of Responsible Environmental Behaviour among Different Levels of Barriers to Action

<table>
<thead>
<tr>
<th>Components</th>
<th>Levels of Barriers to Action</th>
<th>N</th>
<th>Subset for alpha = .01</th>
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<tr>
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<td></td>
<td>Average</td>
<td>1254</td>
<td>111.66</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>265</td>
<td>146.89</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>287</td>
<td>20.24</td>
</tr>
<tr>
<td>Civic Action</td>
<td>Average</td>
<td>1254</td>
<td>20.67</td>
</tr>
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<td>Low</td>
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<td></td>
<td>High</td>
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<td>19.60</td>
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<td>Low</td>
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<td></td>
<td>High</td>
<td>287</td>
<td>17.75</td>
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<tr>
<td>Financial Action</td>
<td>Average</td>
<td>1254</td>
<td>16.80</td>
</tr>
<tr>
<td></td>
<td>High</td>
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<tr>
<td>Legal Action</td>
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<td>287</td>
<td>17.58</td>
</tr>
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<td></td>
<td>Low</td>
<td>265</td>
<td>19.43</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1254</td>
<td>17.09</td>
</tr>
<tr>
<td>Physical action</td>
<td>High</td>
<td>287</td>
<td>17.53</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>265</td>
<td>23.09</td>
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<td></td>
<td>Average</td>
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<td>20.50</td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>High</td>
<td>287</td>
<td>17.83</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>1254</td>
<td>20.50</td>
</tr>
<tr>
<td></td>
<td>Low</td>
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<td>26.99</td>
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<tr>
<td></td>
<td>High</td>
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</tr>
<tr>
<td>Concernment (in Total)</td>
<td>Average</td>
<td>1254</td>
<td>103.10</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>265</td>
<td>135.53</td>
</tr>
</tbody>
</table>

Means for groups in homogeneous subsets are displayed
The mean score of actions (in total) of low level of barriers to action (146.89) significantly differ from the mean score of actions (in total) of average level of barriers to action (111.66) and the mean score of actions (in total) of high level of barriers to action (110.52). The mean difference is significant at .01 level. Thus it can be interpreted that students with lower levels of barriers to action shows more actions (in total) than average and high levels of barriers to action.

The mean score of civic action of low level of barriers to action (26.74) significantly differ from the mean score of civic action of average level of barriers to action (20.67) and the mean score of civic action of high level of barriers to action (20.24). The mean difference is significant at .01 level. Thus it can be interpreted that students with lower levels of barriers to action shows more civic action than average and high levels of barriers to action.

The mean score of educational action of low level of barriers to action (28.71) significantly differ from the mean score of educational action of average level of barriers to action (20.99) and the mean score of educational action of high level of barriers to action (19.60). The mean difference is significant at .01 level. Thus it can be interpreted that students with lower levels of barriers to action shows more educational action than average and high levels of barriers to action.

The mean score of financial action of low level of barriers to action (21.95) significantly differ from the mean score of financial action of average level of barriers to action (16.80) and the mean score of financial action of high level of barriers to action (17.75). The mean difference is significant at .01 level. Thus it can
be interpreted that students with lower levels of barriers to action shows more financial action than average and high levels of barriers to action.

The mean score of legal action of low level of barriers to action (19.43) significantly differ from the mean score of legal action of average level of barriers to action (15.61) and the mean score of legal action of high level of barriers to action (17.58). Mean score of legal action of average level of barriers to action significantly differ from the mean score of legal action of high level of barriers to action. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of barriers to action shows more legal action than average and high levels of barriers to action.

The mean score of physical action of low level of barriers to action (23.09) significantly differ from the mean score of physical action of average level of barriers to action (17.09) and the mean score of physical action of high level of barriers to action (17.53). The mean difference is significant at .01 level. Thus it can be interpreted that students with lower levels of barriers to action shows more physical action than average and high levels of barriers to action.

The mean score of persuasion action of low level of barriers to action (26.99) significantly differ from the mean score of persuasion action of average level of barriers to action (20.50) and the mean score of persuasion action of high level of barriers to action (17.83). Mean score of persuasion action of average level of barriers to action significantly differ from the mean score of persuasion action of high level of barriers to action. All the mean differences are significant at .01 level.
Thus it can be interpreted that students with lower levels of barriers to action shows more persuasion action than average and high levels of barriers to action.

The mean score of concernment (in total) of low level of barriers to action (135.53) significantly differ from the mean score of concernment (in total) of average level of barriers to action (103.10) and the mean score of concernment (in total) of high level of barriers to action (89.16). Mean score of concernment (in total) of average level of barriers to action significantly differ from the mean score of concernment (in total) of high level of barriers to action. All the mean differences are significant at .01 level. Thus it can be interpreted that students with lower levels of barriers to action shows more concernment (in total) than average and high levels of barriers to action.

5.4.5 Relationship between Independent Variables and Responsible Environmental Behaviour of Secondary School Students of Kerala

To find out the extent of relationship between independent variables and responsible environmental behaviour of secondary school students, Pearson’s Product-Moment Correlation (r) is conducted. The test of significance of correlation is calculated using Fisher’s Test of Significance of r (t).

The coefficient of correlation has been verbally interpreted using the following classification suggested by Garrett (1981).

i. ‘r’ from .00 to ±.20 denotes indifferent or negligible relationship
ii. ‘r’ from ±.20 to ±.40 denotes low, definite but slight correlation
iii. ‘r’ from ±.40 to ±.70 denotes substantial or marked relationship
iv. ‘r’ from ±.70 to ±1.00 denotes high to very high relationship
5.4.5.1 Relationship between Pastoralism and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.87

<table>
<thead>
<tr>
<th>Variables</th>
<th>r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pastoralism&amp; Responsible Environmental Behaviour</td>
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<td>24.98</td>
</tr>
<tr>
<td>Pastoralism &amp;Actions (in Total)</td>
<td>.45**</td>
<td>21.28</td>
</tr>
<tr>
<td>Pastoralism &amp;Civic Action</td>
<td>.32**</td>
<td>14.15</td>
</tr>
<tr>
<td>Pastoralism &amp;Educational Action</td>
<td>.38**</td>
<td>17.34</td>
</tr>
<tr>
<td>Pastoralism &amp;Financial Action</td>
<td>.32**</td>
<td>14.50</td>
</tr>
<tr>
<td>Pastoralism &amp;Legal Action</td>
<td>.29**</td>
<td>13.11</td>
</tr>
<tr>
<td>Pastoralism &amp;Physical Action</td>
<td>.32**</td>
<td>14.55</td>
</tr>
<tr>
<td>Pastoralism &amp;Persuasion Action</td>
<td>.38**</td>
<td>17.50</td>
</tr>
<tr>
<td>Pastoralism &amp;Concernment (in Total )</td>
<td>.43**</td>
<td>20.52</td>
</tr>
</tbody>
</table>

**P<.01

From the table 5.87 it is found that the values of co-efficient of correlation between pastoralism and responsible environmental behaviour (r =.51, t = 24.98), actions (in total) (r = .45, t = 21.28), civic action (r = .32, t = 14.15), educational action (r =.38, t = 17.34), financial action (r =.32, t = 14.50), legal action (r = .29, t = 13.11), physical action (r = .32, t = 14.55), persuasion action (r = .38, t = 17.50) and concernment(in total) (r =.43, t = 20.52) are significant at .01 level. The relationships between pastoralism and responsible environmental behaviour, pastoralism and actions (in total), and pastoralism and concernment (in total) are substantial, significant and positive. There is a definite, slight and significant positive relationship between the components of action (civic action, educational action, financial action, legal action, physical action, persuasion action) and
pastoralism. All the relationships are positive and any increase in pastoralism may cause a corresponding increase in the responsible environmental behaviour.

### 5.4.5.2 Relationship between Pastoralism and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.88

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Subsamples</th>
<th>N</th>
<th>r</th>
<th>t</th>
</tr>
</thead>
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<td>.55**</td>
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</tr>
<tr>
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<td>Female</td>
<td>1045</td>
<td>.46**</td>
<td>16.59</td>
</tr>
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<td>Rural</td>
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<td>.41**</td>
<td>14.73</td>
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<td>724</td>
<td>.26**</td>
<td>7.18</td>
</tr>
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<td></td>
<td>Government</td>
<td>558</td>
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<td>866</td>
<td>.44**</td>
<td>14.28</td>
</tr>
<tr>
<td></td>
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<td>382</td>
<td>.48**</td>
<td>10.69</td>
</tr>
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<td>Below SSLC</td>
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<td>.42**</td>
<td>11.67</td>
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<td>.55**</td>
<td>21.43</td>
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<td>Above Degree</td>
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<td>.28**</td>
<td>2.77</td>
</tr>
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<td>Father’s Education Level</td>
<td>Below SSLC</td>
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<td>.48**</td>
<td>13.90</td>
</tr>
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<td>SSLC to Degree</td>
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<td>.52**</td>
<td>18.81</td>
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<td>Above Degree</td>
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<td>.45**</td>
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<td>841</td>
<td>.46**</td>
<td>14.92</td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>.56**</td>
<td>10.98</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>.41**</td>
<td>6.96</td>
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<td>.22*</td>
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<td>.52**</td>
<td>24.63</td>
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<td>.30**</td>
<td>3.53</td>
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<td>Enrolment in Nature Club</td>
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<td>.49**</td>
<td>13.60</td>
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<tr>
<td></td>
<td>No</td>
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<td>.52**</td>
<td>21.35</td>
</tr>
</tbody>
</table>

**P<.01  *P<.05
From the table 5.88, it is found that the values of co-efficient of correlation between pastoralism and responsible environmental behaviour for the select socio-demographic characteristics; gender, locale, type of school, mother’s education level, father’s education level, type of family and enrolment in nature club are significant at .01 level. The relationship for family monthly income below 1000, 1000-5000, 5000-10000, 10000-15000 is significant at .01 level. The relationship for family monthly income above 15000 is significant at .05 level. All the relationships are positive and any increase in pastoralism of the sub samples may cause an increase in responsible environmental behaviour of the sub samples.

### 5.4.5.3 Relationship between Urbanism and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.89

*Value and t Value of Whole Sample (N=1806) for Urbanism and Responsible Environmental Behaviour and its Components*

<table>
<thead>
<tr>
<th>Variables</th>
<th>r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urbanism &amp; Responsible Environmental Behaviour</td>
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<td>37.01</td>
</tr>
<tr>
<td>Urbanism &amp; Actions (in Total)</td>
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<td>31.86</td>
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<td>Urbanism &amp; Civic Action</td>
<td>-.35**</td>
<td>15.66</td>
</tr>
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<td>-.46**</td>
<td>22.25</td>
</tr>
<tr>
<td>Urbanism &amp; Physical Action</td>
<td>-.50**</td>
<td>24.72</td>
</tr>
<tr>
<td>Urbanism &amp; Persuasion Action</td>
<td>-.52**</td>
<td>26.20</td>
</tr>
<tr>
<td>Urbanism &amp; Concernment (in Total)</td>
<td>-.55**</td>
<td>27.83</td>
</tr>
</tbody>
</table>

**P<.01
From the table 5.89 it is found that the values of co-efficient of correlation between urbanism and responsible environmental behaviour \( r = -0.66, t = 37.01 \), actions (in total) \( r = -0.60, t = 31.86 \), civic action \( r = -0.35, t = 15.66 \), educational action \( r = -0.45, t = 21.70 \), financial action \( r = -0.46, t = 22.00 \), legal action \( r = -0.46, t = 22.25 \), physical action \( r = -0.50, t = 24.72 \), persuasion action \( r = -0.52, t = 26.20 \) and concernment (in total) \( r = -0.55, t = 27.83 \) are significant at .01 level. The relationships between urbanism and responsible environmental behaviour, urbanism and actions (in total), and urbanism and concernment (in total) are substantial, significant and negative. The relationships between educational action, financial action, legal action, physical action, persuasion action, and urbanism are also substantial, significant and negative. There is a definite, slight and significant negative relationship between civic action and urbanism. All the relationships are negative and any increase in urbanism may cause a corresponding decrease in responsible environmental behaviour.
### 5.4.5.4 Relationship between Urbanism and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.90  
*r* Value and *t* Value of Socio-demographic Characteristics for the Variable Urbanism and Responsible Environmental Behaviour

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Sub samples</th>
<th>N</th>
<th><em>r</em></th>
<th><em>t</em></th>
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<tbody>
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<td>Gender</td>
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<td>Government</td>
<td>558</td>
<td>-.67**</td>
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</tr>
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<td>866</td>
<td>-.72**</td>
<td>30.58</td>
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<td>-.66**</td>
<td>21.91</td>
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<td>358</td>
<td>-.68**</td>
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<td>21.95</td>
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<td>5000-10000</td>
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<td>-.76**</td>
<td>18.04</td>
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<td>Above 15000</td>
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<td>4.71</td>
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<td>30.16</td>
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**P<.01
From the table 5.90, it is found that the values of co-efficient of correlation between urbanism and responsible environmental behaviour for the select socio-demographic characteristics (gender, locale, type of school, mother’s education level, father’s education level, family income, type of family and enrolment in nature club) are significant at .01 level. All the relationships are negative and any increase in urbanism of sub samples may cause a decrease in responsible environmental behaviour of subsamples.

5.4.5.5 Relationship between Environmental Adaptation and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.91

<p>|r Value and t Value of Whole Sample(N=1806) for Environmental Adaptation and Responsible Environmental Behaviour and its Components|</p>
<table>
<thead>
<tr>
<th>Variables</th>
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<tbody>
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<td>40.94</td>
</tr>
<tr>
<td>Environmental Adaptation &amp;Actions (in Total)</td>
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<td>41.40</td>
</tr>
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<td>Environmental Adaptation &amp;Civic Action</td>
<td>-.45**</td>
<td>21.28</td>
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<td>Environmental Adaptation &amp;Educational Action</td>
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<td>33.21</td>
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<td>26.27</td>
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<td>-.50**</td>
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<td>Environmental Adaptation &amp;Physical Action</td>
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<td>26.48</td>
</tr>
<tr>
<td>Environmental Adaptation &amp;Persuasion Action</td>
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</tr>
<tr>
<td>Environmental Adaptation &amp;Concernment (in Total)</td>
<td>-.53**</td>
<td>26.34</td>
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</tbody>
</table>

**P<.01
From the table 5.91 it is found that the values of co-efficient of correlation between environmental adaptation and responsible environmental behaviour ($r = -.69, t = 40.94$), actions (in total) ($r = -.70, t = 41.40$), civic action ($r = -.45, t = 21.28$), educational action ($r = -.62, t = 33.21$), financial action ($r = -.53, t = 26.27$), legal action ($r = -.50, t = 24.39$), physical action ($r = -.53, t = 26.48$), persuasion action($r = -.55, t = 28.12$) and concernment (in total) ($r = -.53, t = 26.34$) are significant at .01 level. There is a substantial, significant negative relationship between responsible environmental behaviour and environmental adaptation, actions (in total) and environmental adaptation, concernment (in total) and environmental adaptation, and the components of action (civic action, educational action, financial action, legal action, physical action, persuasion action) and environmental adaptation. All the relationships are negative and any increase in environmental adaptation may cause a corresponding decrease in responsible environmental behaviour.
5.4.5.6 Relationship between Environmental Adaptation and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.92

*r Value and t Value of Socio-demographic Characteristics for the Variable Environmental Adaptation and Responsible Environmental Behaviour*

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Sub samples</th>
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<th>t</th>
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</thead>
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<td>761</td>
<td>- .77**</td>
<td>33.46</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>- .62**</td>
<td>25.25</td>
</tr>
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<td>Rural</td>
<td>1082</td>
<td>- .34**</td>
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<td></td>
<td>Urban</td>
<td>724</td>
<td>- .55**</td>
<td>17.79</td>
</tr>
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<td>Government</td>
<td>558</td>
<td>- .66**</td>
<td>21.00</td>
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<td>866</td>
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<td>32.05</td>
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<td>6.95</td>
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<td>- .62**</td>
<td>20.14</td>
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<td>SSLC to Degree</td>
<td>1078</td>
<td>- .71**</td>
<td>32.89</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>- .64**</td>
<td>7.79</td>
</tr>
<tr>
<td>Father’s Education Level</td>
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<td>634</td>
<td>- .66**</td>
<td>21.91</td>
</tr>
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<td></td>
<td>SSLC to Degree</td>
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<td>Above Degree</td>
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<td>- .23**</td>
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<td></td>
<td>Below 1000</td>
<td>358</td>
<td>- .81**</td>
<td>25.97</td>
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<td></td>
<td>1000-5000</td>
<td>841</td>
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<td>5000-10000</td>
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<td>- .69**</td>
<td>38.77</td>
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<td>Joint</td>
<td>132</td>
<td>- .78**</td>
<td>14.40</td>
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<tr>
<td>Enrolment in Nature Club</td>
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<td>- .66**</td>
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<td>36.42</td>
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</table>

**P < .01**
From the table 5.92, it is found that the values of co-efficient of correlation between environmental adaptation and responsible environmental behaviour for all the select socio-demographic characteristics (gender, locale, type of school, mother’s education level, father’s education level, family income, type of family and enrolment in nature club) are significant at .01 level. All the relationships are negative and any increase in environmental adaptation of sub samples may cause a decrease in responsible environmental behaviour of subsamples.

5.4.5.7 Relationship between Environmental Trust and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.93

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</tr>
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<td>Environmental Trust &amp; Legal Action</td>
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<td>15.97</td>
</tr>
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<td>Environmental Trust &amp; Persuasion Action</td>
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<td>Environmental Trust &amp;Concernment (in Total)</td>
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**P<.01
From the table 5.93 it is found that the values of co-efficient of correlation between environmental trust and responsible environmental behaviour \((r = .49, t = 23.75)\), actions (in total) \((r = .54, t = 27.39)\), civic action \((r = .41, t = 19.09)\), educational action \((r = .45, t = 21.28)\), financial action \((r = .38, t = 17.61)\), legal action \((r = .35, t = 15.97)\), physical action \((r = .42, t = 19.94)\), persuasion action \((r = .43, t = 20.06)\) and concernment (in total) \((r = .33, t = 14.85)\) are significant at .01 level. There is a substantial, significant positive relationship between responsible environmental behaviour and environmental trust, actions (in total) and environmental trust. There is a definite, slight and significant positive relationship between concernment (in total) and environmental trust. While considering the components of action, there exist a significant substantial positive relationship between civic action, educational action, physical action, persuasion action, and environmental trust. There is a definite, slight and significant positive relationship between financial action, legal action and environmental trust. All the relationships are positive and any increase in environmental trust may cause a corresponding increase in the responsible environmental behaviour.
### 5.4.5.8 Relationship between Environmental Trust and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.94: $r$ Value and $t$ Value of Socio-demographic Characteristics for the Variable Environmental Trust and Responsible Environmental Behaviour

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Sub samples</th>
<th>N</th>
<th>r</th>
<th>t</th>
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<td>.47**</td>
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<td>.20**</td>
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<td>Government</td>
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<td>5.69</td>
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<td>.39**</td>
<td>10.58</td>
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<td>.53**</td>
<td>20.39</td>
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<td>.38**</td>
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<td>Father’s Education Level</td>
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<td>3.91</td>
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<td>.49**</td>
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<td>.38**</td>
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**P<.01
From the table 5.94, it is found that the values of co-efficient of correlation between environmental trust and responsible environmental behaviour for all the select socio-demographic characteristics (gender, locale, type of school, mother’s education level, father’s education level, family income, type of family and enrolment in nature club) are significant at .01 level. All the relationships are positive and any increase in environmental trust of sub samples may cause an increase in responsible environmental behaviour of subsamples.

5.4.5.9 Relationship between Situational Factors and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.95

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**P<.01

From the table 5.95 it is found that the values of co-efficient of correlation between total situational factor and responsible environmental Behaviour ($r = .80$, $t$
= 56.05), actions (in total) ($r = .83, t = 63.45$), civic action ($r = .57, t = 29.70$), educational action ($r = .68, t = 39.07$), financial action ($r = .63, t = 34.73$), legal action ($r = .57, t = 29.47$), physical action ($r = .67, t = 38.33$), persuasion action ($r = .66, t = 37.41$) and concernment (in total) ($r = .58, t = 30.48$) are significant at .01 level. There is a significant high positive relationship between responsible environmental behaviour and situational factor, actions (in total) and situational factor. There is a significant substantial positive relationship between concernment (in total) and situational factor. While considering the components of action, there exist a significant substantial positive relationship between civic action, educational action, financial action, legal action, physical action, persuasion action and situational factor. It is also found that the values of co-efficient of correlation between components of situational factor and responsible environmental behaviour, actions (in total), components of actions, and concernment (in total) are significant at .01 level. All the relationships are positive and any increase in situational factor may cause a corresponding increase in the responsible environmental behaviour.
5.4.5.10 Relationship between Situational Factors and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.96

*r Value and t Value of Socio-demographic Characteristics for the Variable Situational Factors and Responsible Environmental Behaviour*

<table>
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<th>Socio-demographic Characteristics</th>
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</tbody>
</table>

**P < .01
From the table 5.96, it is found that the values of co-efficient of correlation between situational factors and responsible environmental behaviour for all the select socio-demographic characteristics (gender, locale, type of school, mother’s education level, father’s education level, family income, type of family and enrolment in nature club) are significant at .01 level. All the relationships are positive and any increase in situational factors of sub samples may cause an increase in responsible environmental behaviour of subsamples.

5.4.5.11 Relationship between Environmental Awareness and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.97

$r$ Value and $t$ Value of Whole Sample ($N=1806$) for Environmental Awareness and Responsible Environmental Behaviour and its Components

<table>
<thead>
<tr>
<th>Variables</th>
<th>$r$</th>
<th>$t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Awareness &amp; Responsible Environmental Behaviour</td>
<td>.55**</td>
<td>28.26</td>
</tr>
<tr>
<td>Environmental Awareness &amp; Actions (in Total)</td>
<td>.58**</td>
<td>30.16</td>
</tr>
<tr>
<td>Environmental Awareness &amp; Civic Action</td>
<td>.39**</td>
<td>18.10</td>
</tr>
<tr>
<td>Environmental Awareness &amp; Educational Action</td>
<td>.43**</td>
<td>20.34</td>
</tr>
<tr>
<td>Environmental Awareness &amp; Financial Action</td>
<td>.46**</td>
<td>22.00</td>
</tr>
<tr>
<td>Environmental Awareness &amp; Legal Action</td>
<td>.39**</td>
<td>17.83</td>
</tr>
<tr>
<td>Environmental Awareness &amp; Physical Action</td>
<td>.42**</td>
<td>19.83</td>
</tr>
<tr>
<td>Environmental Awareness &amp; Persuasion Action</td>
<td>.53**</td>
<td>26.41</td>
</tr>
<tr>
<td>Environmental Awareness &amp; Concernment (in Total)</td>
<td>.40**</td>
<td>18.70</td>
</tr>
</tbody>
</table>

**P<.01
From the table 5.97 it is found that the values of co-efficient of correlation between environmental awareness and responsible environmental behaviour \((r = .55, t = 28.26)\), actions (in total) \((r = .58, t = 30.16)\), civic action \((r = .39, t = 18.10)\), educational action \((r = .43, t = 20.34)\), financial action \((r = .46, t = 22.00)\), legal action \((r = .39, t = 17.83)\), physical action \((r = .42, t = 19.83)\), persuasion action \((r = .53, t = 26.41)\) and concernment (in total) \((r = .40, t = 18.70)\) are significant at .01 level. There is a substantial, significant positive relationship between responsible environmental behaviour and environmental awareness, actions (in total) and environmental awareness, concernment (in total) and environmental awareness. While considering the components of action, there exist a significant substantial positive relationship between educational action, financial action, physical action, persuasion action and environmental awareness. There is a definite, slight and significant positive relationship between civic action, legal action and environmental awareness. All the relationships are positive and any increase in environmental awareness may cause a corresponding increase in the responsible environmental behaviour.
### 5.4.5.12 Relationship between Environmental Awareness and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.98

*r Value and t Value of Socio-demographic Characteristics for the Variable Environmental Awareness and Responsible Environmental Behaviour*

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Sub samples</th>
<th>Number</th>
<th>r</th>
<th>t</th>
</tr>
</thead>
<tbody>
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<td><strong>Gender</strong></td>
<td>Male</td>
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<td>.64**</td>
<td>22.89</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>.48**</td>
<td>17.67</td>
</tr>
<tr>
<td><strong>Locale</strong></td>
<td>Rural</td>
<td>1082</td>
<td>.38**</td>
<td>13.34</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>.79**</td>
<td>34.16</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>.62**</td>
<td>18.58</td>
</tr>
<tr>
<td><strong>Type of School</strong></td>
<td>Aided</td>
<td>866</td>
<td>.55**</td>
<td>19.26</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>.23**</td>
<td>4.59</td>
</tr>
<tr>
<td><strong>Mother’s Education Level</strong></td>
<td>Below SSLC</td>
<td>638</td>
<td>.40**</td>
<td>10.88</td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>.59**</td>
<td>23.91</td>
</tr>
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<td></td>
<td>Above Degree</td>
<td>90</td>
<td>.54**</td>
<td>6.03</td>
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<tr>
<td><strong>Father’s Education Level</strong></td>
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<td>.60**</td>
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<td>SSLC to Degree</td>
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<td>.56**</td>
<td>20.78</td>
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<td></td>
<td>Above Degree</td>
<td>230</td>
<td>.16*</td>
<td>2.38</td>
</tr>
<tr>
<td><strong>Family Income</strong></td>
<td>Below 1000</td>
<td>358</td>
<td>.58**</td>
<td>13.36</td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>.62**</td>
<td>22.89</td>
</tr>
<tr>
<td></td>
<td>5000-10000</td>
<td>263</td>
<td>.59**</td>
<td>11.68</td>
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<td></td>
<td>10000-15000</td>
<td>240</td>
<td>.34**</td>
<td>5.67</td>
</tr>
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<td></td>
<td>Above15000</td>
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<td>.84**</td>
<td>15.57</td>
</tr>
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<td><strong>Type of Family</strong></td>
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<td>.57**</td>
<td>28.29</td>
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<td>Joint</td>
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<td>.50**</td>
<td>6.62</td>
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<td><strong>Enrolment in Nature Club</strong></td>
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<td></td>
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<td>.53**</td>
<td>21.57</td>
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</tbody>
</table>

*P<.01  *P<.05
From the table 5.98 it is found that the values of co-efficient of correlation between environmental awareness and responsible environmental behaviour for the select Socio -demographic characteristics (gender, locale, type of school, mother’s education level, family monthly income, type of family and enrolment in nature club) are significant at .01 level. The relationship for father’s education level below SSLC and SSLC to degree is significant at .01 level. The relationship for father’s education level above degree is significant at .05 level. All the relationships are positive and any increase in environmental awareness of the sub samples may cause an increase in responsible environmental behaviour of the sub samples.

5.4.5.13 Relationship between Environmental Attitude and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.99

*r Value and t Value of Whole Sample (N=1806) for Environmental Attitude and Responsible Environmental Behaviour and its Components*

<table>
<thead>
<tr>
<th>Variables</th>
<th>r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Attitude &amp; Responsible Environmental Behaviour</td>
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<td>35.19</td>
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<tr>
<td>Environmental Attitude &amp;Actions (in Total)</td>
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<td>.49**</td>
<td>23.81</td>
</tr>
<tr>
<td>Environmental Attitude &amp; Educational Action</td>
<td>.62**</td>
<td>33.65</td>
</tr>
<tr>
<td>Environmental Attitude &amp; Financial Action</td>
<td>.41**</td>
<td>19.37</td>
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<td>.48**</td>
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</tr>
<tr>
<td>Environmental Attitude &amp; Persuasion Action</td>
<td>.48**</td>
<td>23.43</td>
</tr>
<tr>
<td>Environmental Attitude &amp;Concernment (in Total)</td>
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<td>22.74</td>
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</table>

**P<.01
From the table 5.99 it is found that the values of co-efficient of correlation between environmental attitude and responsible environmental Behaviour ($r = .64$, $t = 35.19$), actions (in total) ($r = .66$, $t = 37.21$), civic action ($r = .49$, $t = 23.81$), educational action ($r = .62$, $t = 33.65$), financial action ($r = .41$, $t = 19.37$), legal action ($r = .47$, $t = 22.62$), physical action ($r = .48$, $t = 23.56$), persuasion action ($r = .48$, $t = 23.43$) and concernment (in total) ($r = .47$, $t = 22.74$) are significant at .01 level. There is a substantial, significant positive relationship between responsible environmental behaviour and environmental attitude, actions (in total) and environmental attitude, concernment (in total) and environmental attitude, and the components of action (civic action, educational action, financial action, legal action, physical action, persuasion action) and environmental attitude. All the relationships are positive and any increase in environmental attitude may cause a corresponding increase in responsible environmental behaviour.
5.4.5.14 Relationship between Environmental Attitude and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.100
r Value and t Value of Socio-demographic Characteristics for the Variable Environmental Attitude and Responsible Environmental Behaviour

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Sub samples</th>
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<th>r</th>
<th>t</th>
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</thead>
<tbody>
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<td>.70*</td>
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<tr>
<td></td>
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<td>1045</td>
<td>.57*</td>
<td>22.23</td>
</tr>
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<td>Rural</td>
<td>1082</td>
<td>.49*</td>
<td>18.62</td>
</tr>
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<td></td>
<td>Urban</td>
<td>724</td>
<td>.53*</td>
<td>16.97</td>
</tr>
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<td></td>
<td>Government</td>
<td>558</td>
<td>.76**</td>
<td>28.01</td>
</tr>
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<td>866</td>
<td>.43**</td>
<td>13.96</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
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<td>.72**</td>
<td>26.47</td>
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<tr>
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<td>SSLC to Degree</td>
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<td>.62**</td>
<td>25.99</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>.43**</td>
<td>4.43</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>634</td>
<td>.73**</td>
<td>26.70</td>
</tr>
<tr>
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<td>SSLC to Degree</td>
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<td>.55**</td>
<td>20.24</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>.41**</td>
<td>6.81</td>
</tr>
<tr>
<td></td>
<td>Below 1000</td>
<td>358</td>
<td>.74**</td>
<td>20.88</td>
</tr>
<tr>
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<td>1000-5000</td>
<td>841</td>
<td>.65**</td>
<td>25.04</td>
</tr>
<tr>
<td>Family Income</td>
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<td>263</td>
<td>.65**</td>
<td>14.00</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
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<td>9.71</td>
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<td>Father’s Education Level</td>
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<td>1674</td>
<td>.65**</td>
<td>35.16</td>
</tr>
<tr>
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<td>Joint</td>
<td>132</td>
<td>.38**</td>
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<td>No</td>
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<td>.56**</td>
<td>23.64</td>
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</tbody>
</table>

**P<.01

From the table 5.100, it is found that the values of co-efficient of correlation between environmental attitude and responsible environmental behaviour for all the select socio-demographic characteristics (gender, locale, type of school, mother’s education level, father’s education level, family income, type of family and enrolment in nature club) are significant at .01 level. All the relationships are positive and any increase in environmental attitude of sub samples may cause an increase in responsible environmental behaviour of subsamples.
5.4.5.15 Relationship between Intention to Act and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.101

<table>
<thead>
<tr>
<th>Variables</th>
<th>r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention to Act &amp; Responsible Environmental Behaviour</td>
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<td>31.77</td>
</tr>
<tr>
<td>Intention to Act &amp; Actions (in Total)</td>
<td>.62**</td>
<td>33.21</td>
</tr>
<tr>
<td>Intention to Act &amp; Civic Action</td>
<td>.48**</td>
<td>22.99</td>
</tr>
<tr>
<td>Intention to Act &amp; Educational Action</td>
<td>.49**</td>
<td>24.00</td>
</tr>
<tr>
<td>Intention to Act &amp; Financial Action</td>
<td>.48**</td>
<td>22.99</td>
</tr>
<tr>
<td>Intention to Act &amp; Legal Action</td>
<td>.42**</td>
<td>19.66</td>
</tr>
<tr>
<td>Intention to Act &amp; Physical Action</td>
<td>.40**</td>
<td>18.32</td>
</tr>
<tr>
<td>Intention to Act &amp; Persuasion Action</td>
<td>.51**</td>
<td>25.32</td>
</tr>
<tr>
<td>Intention to Act &amp; Concernment (in Total)</td>
<td>.44**</td>
<td>21.11</td>
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</table>

**P<.01

From the table 5.101, it is found that the values of co-efficient of correlation between intention to act and responsible environmental behaviour ($r = .60, t = 31.77$), actions (in total) ($r = .62, t = 33.21$), civic action ($r = .48, t = 22.99$), educational action ($r = .49, t = 24.00$), financial action ($r = .48, t = 22.99$), legal action ($r = .42, t = 19.66$), physical action ($r = .40, t = 18.32$), persuasion action ($r = .51, t = 25.32$) and concernment (in total) ($r = .44, t = 21.11$) are significant at .01 level. There is a substantial, significant positive relationship between responsible environmental behaviour and intention to act, actions (in total) and intention to act, concernment (in total) and intention to act, and the components of action (civic action, educational action, financial action, legal action, physical action, persuasion action) and intention to act. All the relationships are positive and any increase in intention to act may cause a corresponding increase in responsible environmental behaviour.
5.4.5.16 Relationship between Intention to Act and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.102
\textit{r} Value and \textit{t} Value of Socio-demographic Characteristics for the Variable Intention to Act and Responsible Environmental Behaviour

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Sub samples</th>
<th>N</th>
<th>r</th>
<th>t</th>
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</thead>
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<td>.45&quot;</td>
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<td>Urban</td>
<td>724</td>
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<td>.62&quot;</td>
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<td>.66&quot;</td>
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<td>22.88</td>
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<td></td>
<td>Above Degree</td>
<td>230</td>
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<td>.76&quot;</td>
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<td>6.01</td>
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<td></td>
<td>Above15000</td>
<td>104</td>
<td>.84&quot;</td>
<td>15.57</td>
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<td>942</td>
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<td>Above Degree</td>
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<td>358</td>
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<td>Above Degree</td>
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<td>.39&quot;</td>
<td>6.47</td>
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<td></td>
<td>Below 1000</td>
<td>358</td>
<td>.76&quot;</td>
<td>22.41</td>
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<td>1000-5000</td>
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<td>23.07</td>
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</table>

**p<.01

From the table 5.102, It is found that the values of co-efficient of correlation between intention to act and responsible environmental behaviour for all the select socio-demographic characteristics (gender, locale, type of school, mother’s education level, father’s education level, family income, type of family and enrolment in nature club) are significant at .01 level. All the relationships are
positive and any increase in intention to act of sub samples may cause an increase in responsible environmental behaviour of subsamples.

5.4.5.17 Relationship between Self-efficacy and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.103

<table>
<thead>
<tr>
<th>Variables</th>
<th>r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy &amp; Responsible Behaviour</td>
<td>.57*</td>
<td>29.70</td>
</tr>
<tr>
<td>Self-efficacy &amp; Actions (in Total)</td>
<td>.58**</td>
<td>30.16</td>
</tr>
<tr>
<td>Self-efficacy &amp; Civic Action</td>
<td>.53**</td>
<td>26.90</td>
</tr>
<tr>
<td>Self-efficacy &amp; Educational Action</td>
<td>.51**</td>
<td>24.92</td>
</tr>
<tr>
<td>Self-efficacy &amp; Financial Action</td>
<td>.41**</td>
<td>19.26</td>
</tr>
<tr>
<td>Self-efficacy &amp; Legal Action</td>
<td>.35**</td>
<td>15.66</td>
</tr>
<tr>
<td>Self-efficacy &amp; Physical Action</td>
<td>.37**</td>
<td>17.07</td>
</tr>
<tr>
<td>Self-efficacy &amp; Persuasion Action</td>
<td>.41**</td>
<td>19.20</td>
</tr>
<tr>
<td>Self-efficacy &amp; Concernment (in Total)</td>
<td>.43**</td>
<td>20.40</td>
</tr>
</tbody>
</table>

**P<.01

From the table 5.103, it is found that the values of co-efficient of correlation between self-efficacy and responsible environmental behaviour \( r = .57, t = 29.70 \), actions (in total) \( r = .58, t = 30.16 \), civic action \( r = .53, t = 26.90 \), educational action \( r = .51, t = 24.92 \), financial action \( r = .41, t = 19.26 \), legal action \( r = .35, t = 15.66 \), physical action \( r = .37, t = 17.07 \), persuasion action \( r = .41, t = 19.20 \) and concernment (in total) \( r = .43, t = 20.40 \) are significant at .01 level. There is a substantial, significant positive relationship between responsible environmental behaviour and self-efficacy, actions (in total) and self-efficacy, concernment (in total) and self-efficacy. While considering the components of action, there exist a significant substantial positive relationship between civic action, educational action, financial action, persuasion action, and self-efficacy. There is a definite, slight and significant
positive relationship between legal action, physical action, and self-efficacy. All the relationships are positive and any increase in self-efficacy may cause a corresponding increase in the responsible environmental behaviour.

5.4.5.18 Relationship between Self-efficacy and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.104

\( r \) Value and \( t \) Value of Socio-demographic Characteristics for the Variable Self-efficacy and Responsible Environmental Behaviour

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Sub samples</th>
<th>N</th>
<th>( r )</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>761</td>
<td>.68**</td>
<td>25.48</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>.45**</td>
<td>16.55</td>
</tr>
<tr>
<td>Locale</td>
<td>Rural</td>
<td>1082</td>
<td>.50**</td>
<td>18.77</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>.76**</td>
<td>31.32</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>.59**</td>
<td>17.05</td>
</tr>
<tr>
<td>Type of School</td>
<td>Aided</td>
<td>866</td>
<td>.55**</td>
<td>19.16</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>.45**</td>
<td>9.96</td>
</tr>
<tr>
<td>Mother’s Education Level</td>
<td>Below SSLC</td>
<td>638</td>
<td>.56**</td>
<td>17.05</td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>.61**</td>
<td>25.05</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>.64**</td>
<td>7.92</td>
</tr>
<tr>
<td>Father’s Education Level</td>
<td>Below SSLC</td>
<td>634</td>
<td>.57**</td>
<td>17.35</td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>.57**</td>
<td>21.49</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>.41**</td>
<td>6.87</td>
</tr>
<tr>
<td></td>
<td>Below 1000</td>
<td>358</td>
<td>.74**</td>
<td>20.64</td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>.55**</td>
<td>19.03</td>
</tr>
<tr>
<td>Family Income</td>
<td>5000-10000</td>
<td>263</td>
<td>.55**</td>
<td>10.69</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>.13*</td>
<td>1.96</td>
</tr>
<tr>
<td></td>
<td>Above15000</td>
<td>104</td>
<td>.85**</td>
<td>16.51</td>
</tr>
<tr>
<td>Type of Family</td>
<td>Nuclear</td>
<td>1674</td>
<td>.57**</td>
<td>28.66</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>.54**</td>
<td>7.39</td>
</tr>
<tr>
<td>Enrolment in Nature</td>
<td>Yes</td>
<td>600</td>
<td>.57**</td>
<td>16.96</td>
</tr>
<tr>
<td>Club</td>
<td>No</td>
<td>1206</td>
<td>.58**</td>
<td>24.45</td>
</tr>
</tbody>
</table>

\(*P<.05 \quad **P<.01\)

From the table 5.104, it is found that the values of co-efficient of correlation between self-efficacy and responsible environmental behaviour for the select socio-demographic characteristics (gender, locale, type of school, mother’s education
level, father’s education level, type of family and enrolment in nature club) are significant at .01 level. The relationship for family monthly income below 1000, 1000-5000, 5000-10000, above 15000 is significant at .01 level. The relationship for family monthly income 10000-15000 is significant at .05 level. All the relationships are positive and any increase in self-efficacy of the sub samples may cause an increase in responsible environmental behaviour of the sub samples.

5.4.5.19 Relationship between Barriers to Action and Responsible Environmental Behaviour of Secondary School Students of Kerala

Table 5.105
r Value and t Value of Whole Sample (N=1806) for Barriers to Action, Dimensions of Barriers to Action and Responsible Environmental Behaviour and its Components

<table>
<thead>
<tr>
<th>Variables</th>
<th>r Values</th>
<th>External Barriers</th>
<th>Internal Barriers</th>
<th>Total Barriers to Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Civic Action</td>
<td>r</td>
<td>-.49**</td>
<td>-.37**</td>
<td>-.46**</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>24.13</td>
<td>17.18</td>
<td>22.13</td>
</tr>
<tr>
<td>Educational Action</td>
<td>r</td>
<td>-.48**</td>
<td>-.54**</td>
<td>-.54**</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>23.30</td>
<td>27.61</td>
<td>27.04</td>
</tr>
<tr>
<td>Financial Action</td>
<td>r</td>
<td>-.41**</td>
<td>-.36**</td>
<td>-.40**</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>18.93</td>
<td>16.23</td>
<td>18.76</td>
</tr>
<tr>
<td>Legal Action</td>
<td>r</td>
<td>-.36**</td>
<td>-.29**</td>
<td>-.35**</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>16.28</td>
<td>13.11</td>
<td>15.66</td>
</tr>
<tr>
<td>Physical Action</td>
<td>r</td>
<td>-.55**</td>
<td>-.38**</td>
<td>-.50**</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>28.19</td>
<td>17.72</td>
<td>24.52</td>
</tr>
<tr>
<td>Persuasion Action</td>
<td>r</td>
<td>-.59**</td>
<td>-.43**</td>
<td>-.54**</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>31.04</td>
<td>20.40</td>
<td>27.61</td>
</tr>
<tr>
<td>Actions(in Total)</td>
<td>r</td>
<td>-.64**</td>
<td>-.54**</td>
<td>-.63**</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>35.85</td>
<td>27.25</td>
<td>34.28</td>
</tr>
<tr>
<td>Concernment (in Total)</td>
<td>r</td>
<td>-.51**</td>
<td>-.43**</td>
<td>-.50**</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>25.05</td>
<td>20.06</td>
<td>24.26</td>
</tr>
<tr>
<td>Responsible Environmental Behaviour</td>
<td>r</td>
<td>-.65**</td>
<td>-.55**</td>
<td>-.64**</td>
</tr>
<tr>
<td></td>
<td>t</td>
<td>36.82</td>
<td>27.90</td>
<td>35.19</td>
</tr>
</tbody>
</table>

** Significant at .01 level
From the table 5.105, it is found that the values of co-efficient of correlation between total barriers to action and responsible environmental Behaviour ($r = -.64, t = 35.19$), actions (in total) ($r = -.63, t = 34.28$), civic action ($r = -.46, t = 22.13$), educational action ($r = -.54, t = 27.04$), financial action ($r = -.40, t = 18.76$), legal action ($r = -.35, t = 15.66$), physical action ($r = -.50, t = 24.52$), persuasion action ($r = -.54, t = 27.61$) and concernment (in total) ($r = -.50, t = 24.26$) are significant at .01 level. There is a significant substantial negative relationship between responsible environmental behaviour and barriers to action, actions (in total) and situational factor, concernment (in total) and situational factor. While considering the components of action, there exist a significant substantial negative relationship between civic action, educational action, financial action, physical action, persuasion action and situational factor. There is a significant slight negative relationship between legal action and barriers to action. It is also found that the values of co-efficient of correlation between responsible environmental behaviour, actions (in total), components of actions, concernment (in total) and components of barriers to action are significant at .01 level. All the relationships are negative and any increase in barriers to action may cause a corresponding decrease in the responsible environmental behaviour.
### 5.4.5.20 Relationship between Barriers to Action and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Subsamples

Table 5.106

*r Value and t Value of Socio-demographic Characteristics for the Variable Barriers to Action and Responsible Environmental Behaviour*

<table>
<thead>
<tr>
<th>Socio-demographic Characteristics</th>
<th>Sub samples</th>
<th>N</th>
<th>r</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>761</td>
<td>-0.55**</td>
<td>18.38</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>1045</td>
<td>-0.71**</td>
<td>32.93</td>
</tr>
<tr>
<td>Locale</td>
<td>Rural</td>
<td>1082</td>
<td>-0.45**</td>
<td>16.75</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
<td>724</td>
<td>-0.43**</td>
<td>12.83</td>
</tr>
<tr>
<td></td>
<td>Government</td>
<td>558</td>
<td>-0.68**</td>
<td>22.11</td>
</tr>
<tr>
<td>Type of School</td>
<td>Aided</td>
<td>866</td>
<td>-0.57**</td>
<td>20.18</td>
</tr>
<tr>
<td></td>
<td>Unaided</td>
<td>382</td>
<td>-0.47**</td>
<td>10.27</td>
</tr>
<tr>
<td></td>
<td>Below SSLC</td>
<td>638</td>
<td>-0.56**</td>
<td>17.05</td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>1078</td>
<td>-0.69**</td>
<td>31.36</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>90</td>
<td>-0.69**</td>
<td>8.89</td>
</tr>
<tr>
<td>Mother’s Education Level</td>
<td>Below SSLC</td>
<td>634</td>
<td>-0.67**</td>
<td>22.87</td>
</tr>
<tr>
<td></td>
<td>SSLC to Degree</td>
<td>942</td>
<td>-0.62**</td>
<td>24.23</td>
</tr>
<tr>
<td></td>
<td>Above Degree</td>
<td>230</td>
<td>-0.38**</td>
<td>6.24</td>
</tr>
<tr>
<td></td>
<td>Below 1000</td>
<td>358</td>
<td>-0.52**</td>
<td>11.58</td>
</tr>
<tr>
<td></td>
<td>1000-5000</td>
<td>841</td>
<td>-0.62**</td>
<td>23.07</td>
</tr>
<tr>
<td>Family Income</td>
<td>5000-10000</td>
<td>263</td>
<td>-0.74**</td>
<td>18.04</td>
</tr>
<tr>
<td></td>
<td>10000-15000</td>
<td>240</td>
<td>-0.85**</td>
<td>25.21</td>
</tr>
<tr>
<td></td>
<td>Above15000</td>
<td>104</td>
<td>-0.67**</td>
<td>9.21</td>
</tr>
<tr>
<td>Type of Family</td>
<td>Nuclear</td>
<td>1674</td>
<td>-0.63**</td>
<td>33.52</td>
</tr>
<tr>
<td></td>
<td>Joint</td>
<td>132</td>
<td>-0.83**</td>
<td>17.30</td>
</tr>
<tr>
<td>Enrolment in Nature Club</td>
<td>Yes</td>
<td>600</td>
<td>-0.67**</td>
<td>22.31</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1206</td>
<td>-0.64**</td>
<td>28.90</td>
</tr>
</tbody>
</table>

**Significant at .01 level"
From the table 5.106, it is found that the values of co-efficient of correlation between barriers to action and responsible environmental behaviour for all the select socio-demographic characteristics (gender, locale, type of school, mother’s education level, father’s education level, family income, type of family and enrolment in nature club) are significant at .01 level. All the relationships are negative and any increase in barriers to action of sub samples may cause a decrease in responsible environmental behaviour of subsamples.

5.4.6 Determination of the Relative Contributions of Factors (Select Independent Variables and Select Socio-demographic Characteristics) to the Prediction of Responsible Environmental Behaviour of Secondary School Students of Kerala– Analysis Using Multiple Regression

5.4.6.1 Determination of the Relative Contributions of Select Independent Variables to the Prediction of Responsible Environmental Behaviour of Secondary School Students of Kerala

To find out the potential of the select independent variables integrated for predicting the dependent variable responsible environmental behaviour, a stepwise multiple regression technique was conducted. The selected independent variables are Pastoralism, Urbanism, Environmental Adaptation, Environmental Trust, Situational Factors, Environmental Awareness, Environmental Attitude, Intention to Act, Self-efficacy and Components of Barriers to action (External barriers and Internal Barriers).

The analysis has been done with the help of SPSS 20 software and the details are presented in the following pages. Based on the $p$-value of $F$ (probability of $F$), SPSS starts by entering the variable with the smallest $p$-value; at the next step again the variable (from the list of variables not yet in the equation) with the smallest $p$-
value for $F$ and so on. Variables already in the equation are removed if their $p$-value becomes larger than the default limit due to the inclusion of another variable. The method terminates when no more variables are eligible for inclusion or removal. This method is based on both probability-to-enter (FIN) and probability to remove (FOUT). The criteria of entering and removing a variable is (criteria: probability-of-f-to-enter $\leq .050$, probability-of-f-to-remove $\geq .100$). The mean and standard deviation of the select independent variables and total responsible environmental behaviour is presented in the table 5.107.

Table 5.107
Descriptive Statistics of the Select Independent Variables and Total Responsible Environmental Behaviour

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>$y$  Total Responsible Environmental Behaviour</td>
<td>222.29</td>
<td>57.720</td>
<td>1806</td>
</tr>
<tr>
<td>$x_1$ Pastoralism</td>
<td>31.76</td>
<td>4.765</td>
<td>1806</td>
</tr>
<tr>
<td>$x_2$ Urbanism</td>
<td>26.77</td>
<td>6.916</td>
<td>1806</td>
</tr>
<tr>
<td>$x_3$ Environmental Adaptation</td>
<td>30.43</td>
<td>2.605</td>
<td>1806</td>
</tr>
<tr>
<td>$x_4$ Environmental Trust</td>
<td>29.59</td>
<td>2.397</td>
<td>1806</td>
</tr>
<tr>
<td>$x_5$ Situational Factor</td>
<td>73.22</td>
<td>32.395</td>
<td>1806</td>
</tr>
<tr>
<td>$x_6$ Environmental Awareness</td>
<td>13.42</td>
<td>4.936</td>
<td>1806</td>
</tr>
<tr>
<td>$x_7$ Environmental Attitude</td>
<td>85.10</td>
<td>26.305</td>
<td>1806</td>
</tr>
<tr>
<td>$x_8$ Intention to Act</td>
<td>28.49</td>
<td>5.356</td>
<td>1806</td>
</tr>
<tr>
<td>$x_9$ Self- efficacy</td>
<td>37.72</td>
<td>13.033</td>
<td>1806</td>
</tr>
<tr>
<td>$x_{10}$ External Barriers</td>
<td>28.14</td>
<td>5.276</td>
<td>1806</td>
</tr>
<tr>
<td>$x_{11}$ Internal Barriers</td>
<td>26.94</td>
<td>4.455</td>
<td>1806</td>
</tr>
</tbody>
</table>
Model summary of stepwise regression for all the 13 models/steps are given in the table 5.108

Table 5.108

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.797a</td>
<td>.636</td>
<td>.636</td>
<td>34.840</td>
</tr>
<tr>
<td>2</td>
<td>.831b</td>
<td>.690</td>
<td>.689</td>
<td>32.165</td>
</tr>
<tr>
<td>3</td>
<td>.845c</td>
<td>.715</td>
<td>.714</td>
<td>30.853</td>
</tr>
<tr>
<td>4</td>
<td>.850d</td>
<td>.722</td>
<td>.721</td>
<td>30.467</td>
</tr>
<tr>
<td>5</td>
<td>.851e</td>
<td>.725</td>
<td>.724</td>
<td>30.335</td>
</tr>
<tr>
<td>6</td>
<td>.852f</td>
<td>.726</td>
<td>.725</td>
<td>30.249</td>
</tr>
<tr>
<td>7</td>
<td>.853g</td>
<td>.728</td>
<td>.726</td>
<td>30.187</td>
</tr>
<tr>
<td>8</td>
<td>.854b</td>
<td>.729</td>
<td>.727</td>
<td>30.131</td>
</tr>
<tr>
<td>9</td>
<td>.854i</td>
<td>.729</td>
<td>.727</td>
<td>30.133</td>
</tr>
<tr>
<td>10</td>
<td>.854j</td>
<td>.730</td>
<td>.729</td>
<td>30.074</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Situational Factor
b. Predictors: (Constant), Situational Factor, Urbanism
c. Predictors: (Constant), Situational Factor, Urbanism, Intention to Act
d. Predictors: (Constant), Situational Factor, Urbanism, Intention to Act, Environmental Attitude
e. Predictors: (Constant), Situational Factor, Urbanism, Intention to Act, Environmental Attitude, External Barriers
f. Predictors: (Constant), Situational Factor, Urbanism, Intention to Act, Environmental Attitude, External Barriers, Environmental Awareness
g. Predictors: (Constant), Situational Factor, Urbanism, Intention to Act, Environmental Attitude, External Barriers, Environmental Awareness, Pastoralism
h. Predictors: (Constant), Situational Factor, Urbanism, Intention to Act, Environmental Attitude, External Barriers, Environmental Awareness, Pastoralism, Environmental Adaptation
i. Predictors: (Constant), Situational Factor, Urbanism, Environmental Attitude, External Barriers, Environmental Awareness, Pastoralism, Environmental Adaptation
j. Predictors: (Constant), Situational Factor, Urbanism, Environmental Attitude, External Barriers, Environmental Awareness, Pastoralism, Environmental Adaptation, Environmental Trust
k. Dependent variable: Total Responsible Environmental Behaviour
The R-square is the proportion of variation in the dependent variable (overall responsible environmental behaviour) that is explained by the eight independent variables. It is expressed as a percentage. So 73 percent of the variation in overall responsible environmental behaviour can be explained by eight independent variables in the model.

Table 5.109  
*Result of ANOVA*  

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>4388204.18</td>
<td>8</td>
<td>548525.52</td>
<td>606.48</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>1625273.45</td>
<td>1797</td>
<td>904.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

j. Predictors: (Constant), Situational Factor, Urbanism, Environmental Attitude, External Barriers, Environmental Awareness, Pastoralism, Environmental Adaptation, Environmental Trust  
k. Dependent variable: Total Responsible Environmental Behaviour  

The summary of ANOVA for all the 10 models/steps are given in the Appendix XLI and the summary of ANOVA of the model/step10 are represented in the table 5.109. All the models have a greater $F$ value than the table values at 0.01 level. This suggests that the predictor variables included in the model is also significant in predicting the dependent variable. The table 5.109 shows whether the proportion of variance explained in the table 5.108 is significant. It also tells whether the overall effect of the eight independent variables on overall responsible environmental behaviour is significant. The overall model explained 73 percent of variance in overall responsible environmental behaviour, which was revealed to be statistically significant, $F (8, 1797) = 606.48, p< .000$. Hence, it is concluded that
the overall model is statistically significant, or that the variables included in the model have a significant combined effect on the dependent variable.

Table 5.110

<table>
<thead>
<tr>
<th>Coefficients $^k$</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>267.970</td>
<td>25.642</td>
<td>10.450</td>
<td>.000</td>
</tr>
<tr>
<td>Situational Factor ($X_5$)</td>
<td>.728</td>
<td>.043</td>
<td>.408</td>
<td>17.034</td>
</tr>
<tr>
<td>Urbanism ($X_2$)</td>
<td>-1.722</td>
<td>.162</td>
<td>-.206</td>
<td>-10.598</td>
</tr>
<tr>
<td>Environmental Attitude ($X_7$)</td>
<td>.265</td>
<td>.040</td>
<td>.121</td>
<td>6.675</td>
</tr>
<tr>
<td>External Barriers ($X_{10}$)</td>
<td>-.910</td>
<td>.213</td>
<td>-.083</td>
<td>-4.277</td>
</tr>
<tr>
<td>Environmental Awareness ($X_6$)</td>
<td>1.449</td>
<td>.187</td>
<td>.124</td>
<td>7.759</td>
</tr>
<tr>
<td>Pastoralism ($X_1$)</td>
<td>.731</td>
<td>.203</td>
<td>.060</td>
<td>3.595</td>
</tr>
<tr>
<td>Environmental Adaptation ($X_3$)</td>
<td>-1.937</td>
<td>.481</td>
<td>-.087</td>
<td>-4.027</td>
</tr>
<tr>
<td>Environmental Trust ($X_4$)</td>
<td>-1.132</td>
<td>.400</td>
<td>-.047</td>
<td>-2.832</td>
</tr>
</tbody>
</table>

k. Dependent Variable: Total Responsible Environmental Behaviour

The coefficients of model/step 10 for the included variables in the stepwise regression are represented in the table 5.110. The summaries of coefficients of all the 10 models/steps are given in the Appendix XLII. The B coefficients of the variables in the model show the relative contribution of the predictor variables to the dependent variable responsible environmental behaviour. Some of the variables are excluded from the stepwise regression analysis. The excluded variables with their significance level are represented in the table 5.111.
Table 5.111

Excluded Variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Beta In</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Intention to Act</td>
<td>.025</td>
<td>.831</td>
<td>.406</td>
</tr>
<tr>
<td>Self -efficacy</td>
<td>-.011</td>
<td>-.491</td>
<td>.624</td>
</tr>
<tr>
<td>Internal Barriers</td>
<td>-.032</td>
<td>-1.495</td>
<td>.135</td>
</tr>
</tbody>
</table>

The variables intention to act, self-efficacy and internal barriers are excluded from the regression equation. The predictors in the final model are (Constant), Situational Factor \((x_5)\), Urbanism \((x_2)\), Environmental Attitude \((x_7)\), External Barriers \((x_{10})\), Environmental Awareness \((x_6)\), Pastoralism \((x_1)\), Environmental Adaptation \((x_3)\) and Environmental Trust \((x_4)\). The relative contribution \((B\) coefficients\) of these included predictor variables to the dependent variable Responsible Environmental Behaviour are given in the table 5.110. Thus the prediction equation for responsible environmental behaviour using select independent variables can be written as

\[
y = 267.970 + .728x_5 - 1.722x_2 + .265x_7 - .910x_{10} + 1.449x_6 + .731x_1 - 1.937x_3 - 1.132x_4
\]

Where,

\((x_5) = \text{Situational Factor}\)
\((x_2) = \text{Urbanism}\)
\((x_7) = \text{Environmental Attitude}\)
\((x_{10}) = \text{External Barriers}\)
\((x_6) = \text{Environmental Awareness}\)
\((x_1) = \text{Pastoralism}\)
\((x_3) = \text{Environmental Adaptation}\)
\((x_4) = \text{Environmental Trust}\)
\(y = \text{Responsible environmental behaviour}\)
This equation interprets that

- For a unit increase in the predictor variable \((x_5)\), \(y\) increases by .728 units when the effects of other predictor variables \((x_2, x_7, x_{10}, x_6, x_1, x_3, \text{ and } x_4)\) are held constant.

- For a unit increase in the predictor variable \((x_2)\), \(y\) decreases by 1.722 units when the effects of other predictor variables \((x_5, x_7, x_{10}, x_6, x_1, x_3, \text{ and } x_4)\) are held constant.

- For a unit increase in the predictor variable \((x_7)\), \(y\) increases by .265 units when the effects of other predictor variables \((x_5, x_2, x_{10}, x_6, x_1, x_3, \text{ and } x_4)\) are held constant.

- For a unit increase in the predictor variable \((x_{10})\), \(y\) decreases by .910 units when the effects of other predictor variables \((x_5, x_2, x_7, x_6, x_1, x_3, \text{ and } x_4)\) are held constant.

- For a unit increase in the predictor variable \((x_6)\), \(y\) increases by 1.449 units when the effects of other predictor variables \((x_5, x_2, x_7, x_{10}, x_1, x_3, \text{ and } x_4)\) are held constant.

- For a unit increase in the predictor variable \((x_1)\), \(y\) increases by .731 units when the effects of other predictor variables \((x_5, x_2, x_7, x_{10}, x_6, x_3, \text{ and } x_4)\) are held constant.

- For a unit increase in the predictor variable \((x_3)\), \(y\) decreases by 1.937 units when the effects of other predictor variables \((x_5, x_2, x_7, x_{10}, x_6, x_1, \text{ and } x_4)\) are held constant.

- For a unit increase in the predictor variable \((x_4)\), \(y\) decreases by 1.132 units when the effects of other predictor variables \((x_5, x_2, x_7, x_{10}, x_6, x_1, \text{ and } x_3)\) are held constant.
5.4.6.2 Determination of the Relative Contributions of Select Socio-Demographic Characteristics to the Prediction of Responsible Environmental Behaviour of Secondary School Students of Kerala

Multiple regression analysis is used to determine the relative contributions of select socio-demographic characteristics to the prediction of responsible environmental behaviour of secondary school students of Kerala. The socio-demographic characteristics included for regression are; Gender (dummy for females) \((x_1)\), Type of Family (dummy for joint type of family) \((x_2)\), Locale (dummy for urban) \((x_3)\), Enrolment in Nature Club (dummy for non enrolment) \((x_4)\), Monthly Family Income (dummy for 1000 to 5000) \((x_5)\), Monthly Family Income (dummy for 5000 to 10000) \((x_6)\), Monthly Family Income (dummy for 10000 to 15000) \((x_7)\), Monthly Family Income (dummy for above 15000) \((x_8)\), Mother’s Education Level (dummy SSLC to degree) \((x_9)\), Mother’s Education Level (dummy for above degree) \((x_{10})\), Father’s Education Level (dummy SSLC to Degree) \((x_{11})\), Father’s Education Level (dummy for above degree) \((x_{12})\), Type of Management (dummy for government) \((x_{13})\) and Type of Management (dummy for unaided) \((x_{14})\).

Model summary of stepwise regression for all the 7 models/steps are represented in the table 5.112.
Table 5.112

*Model Summary of Stepwise Regression*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.735</td>
<td>.541</td>
<td>.541</td>
<td>39.118</td>
</tr>
<tr>
<td>2</td>
<td>.743</td>
<td>.553</td>
<td>.552</td>
<td>38.628</td>
</tr>
<tr>
<td>3</td>
<td>.751</td>
<td>.563</td>
<td>.563</td>
<td>38.169</td>
</tr>
<tr>
<td>4</td>
<td>.754</td>
<td>.569</td>
<td>.568</td>
<td>37.952</td>
</tr>
<tr>
<td>5</td>
<td>.756</td>
<td>.571</td>
<td>.570</td>
<td>37.853</td>
</tr>
<tr>
<td>6</td>
<td>.758</td>
<td>.575</td>
<td>.573</td>
<td>37.713</td>
</tr>
<tr>
<td>7</td>
<td>.758</td>
<td>.574</td>
<td>.573</td>
<td>37.709</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Locale (dummy for Urban)
b. Predictors: (Constant), Locale (dummy for Urban), Mother’s Education Level (dummy for above degree)
c. Predictors: (Constant), Locale (dummy for Urban), Mother’s Education Level (dummy for above degree), Gender (dummy for females)
d. Predictors: (Constant), Locale (dummy for Urban), Mother’s Education Level (dummy for above degree), Gender (dummy for females), Monthly Family Income (dummy for 5000 to 10000)
e. Predictors: (Constant), Locale (dummy for Urban), Mother’s Education Level (dummy for above degree), Gender (dummy for females), Monthly Family Income (dummy for 5000 to 10000), Monthly Family Income (dummy for 10000 to 15000)
f. Predictors: (Constant), Locale (dummy for Urban), Mother’s Education Level (dummy for above degree), Gender (dummy for females), Monthly Family Income (dummy for 5000 to 10000), Monthly Family Income (dummy for 10000 to 15000), Monthly Family Income (dummy for 10000 to 5000)
g. Predictors: (Constant), Locale (dummy for Urban), Mother’s Education Level (dummy for above degree), Gender (dummy for females), Monthly Family Income (dummy for 10000 to 15000), Monthly Family Income (dummy for 10000 to 5000)
h. Dependent Variable: Responsible Environmental Behaviour

The R-square is the proportion of variation in the dependent variable (overall responsible environmental behaviour) that is explained by the five socio-demographic characteristics. It is expressed as a percentage. So 57.4 percent of the
variation in overall responsible environmental behaviour can be explained by five socio-demographic characteristics in the model.

Table 5.113

Result of ANOVA\(^h\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>3453867.68</td>
<td>5</td>
<td>690773.54</td>
<td>485.77</td>
<td>.000(^g)</td>
</tr>
<tr>
<td>Residual</td>
<td>2559609.95</td>
<td>1800</td>
<td>1422.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(g\). Predictors: (Constant), Locale (dummy for Urban), Mother’s Education Level (dummy for above degree), Gender (dummy for females), Monthly Family Income (dummy for 10000 to 15000), Monthly Family Income (dummy for 1000 to 5000)

\(h\). Dependent Variable: Responsible Environmental Behaviour

The summary of ANOVA for all the 7 models/steps are given in the Appendix XLIII and the summary of ANOVA of the model/step7 are represented in the table 5.113. All the models have a greater F value than the table values at .01 level. This suggests that the predictor variables included in the model is also significant in predicting the dependent variable. The overall model explained 57.4 percent of variance in overall responsible environmental behaviour, which was revealed to be statistically significant, \(F (5, 1800) = 485.77, p < .000\). Hence, it is concluded that the overall model is statistically significant, or that the socio-demographic characteristics included in the model have a significant combined effect on the dependent variable.
The coefficients of model/step 7 for the included socio-demographic characteristics in the stepwise regression are represented in the table 5.114. The summary of coefficients of all the 7 models/steps is given in the Appendix XLIV.

The B coefficients of the socio-demographic characteristics in the model show the relative contribution of the predictor variables to the dependent variable responsible environmental behaviour. All other socio-demographic characteristics are excluded from the stepwise regression analysis.
Thus the prediction equation for responsible environmental behaviour using select socio-demographic characteristics can be written as

\[ y = 272.142 - 90.144x_3 - 27.495x_{10} - 9.127x_1 - 17.789x_7 - 10.086x_5 \]

Where,

- \((X_3)\) = Locale (dummy for Urban)
- \((X_{10})\) = Mother’s Education Level (dummy for above degree)
- \((X_1)\) = Gender (dummy for females)
- \((X_7)\) = Monthly Family Income (dummy for 10000 to 15000)
- \((X_5)\) = Monthly Family Income (dummy for 1000 to 5000)

\(y\) = Responsible Environmental Behaviour

This equation interprets that

- For every unit increase in the locale urban, we expect a 90.144 unit decrease in responsible environmental behaviour, holding all other variables constant. Thus it can be interpreted that, for urban students, the predicted responsible environmental behaviour score would be almost 90 units lower than for rural students.

- While predicting responsible environmental behaviour score, a student with mother’s education level above degree will generate almost 27 units less than the other students with all other levels of mother’s education, holding all other variables constant.

- For every unit increase in females, we expect a 9.127 unit decrease in responsible environmental behaviour, holding all other variables constant.
Thus it can be interpreted that, for females, the predicted responsible environmental behaviour score would be almost 9 units lower than for males.

- While predicting responsible environmental behaviour score, a student with monthly family income 10000 to 15000 will generate almost 18 units less than the other students with all other levels of monthly family income, holding all other variables constant. Similarly, a student with monthly family income 1000 to 5000 will generate almost 10 units less than the other students with all other levels of monthly family income, holding all other variables constant.

5.4.6.3 Determination of the Relative Contributions of Factors (Select Independent Variables and Select Socio-Demographic Characteristics) to the Prediction of Responsible Environmental Behaviour of Secondary School Students of Kerala

Multiple regression analysis is used to determine the relative contributions of factors to the prediction of responsible environmental behaviour of secondary school students of Kerala. The independent variables and socio-demographic characteristics selected for multiple regression is given in the table 5.115
Table 5.115

Select Independent Variables and Socio-demographic Characteristics for Multiple Regression

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Total Responsible Environmental Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variables</td>
<td>x_1 Pastoralism</td>
</tr>
<tr>
<td></td>
<td>x_2 Urbanism</td>
</tr>
<tr>
<td></td>
<td>x_3 Environmental Adaptation</td>
</tr>
<tr>
<td></td>
<td>x_4 Environmental Trust</td>
</tr>
<tr>
<td></td>
<td>x_5 Situational Factor</td>
</tr>
<tr>
<td></td>
<td>x_6 Environmental Awareness</td>
</tr>
<tr>
<td></td>
<td>x_7 Environmental Attitude</td>
</tr>
<tr>
<td></td>
<td>x_8 Intention to Act</td>
</tr>
<tr>
<td></td>
<td>x_9 Self-efficacy</td>
</tr>
<tr>
<td></td>
<td>x_{10} External Barriers</td>
</tr>
<tr>
<td></td>
<td>x_{11} Internal Barriers</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Model summary of stepwise regression for all the 14 models/steps are given in the Appendix XLV and the Model summary of stepwise regression for the model/step14 are represented in the table 5.116.
Table 5.116

*Model Summary of Stepwise Regression*

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>.866^a</td>
<td>.750</td>
<td>.749</td>
<td>28.915</td>
</tr>
</tbody>
</table>

n. Predictors: (Constant), Situational Factor, Urbanism, Locale (dummy for Urban), Environmental Attitude, Environmental Awareness, Gender (dummy for females), Pastoralism, Father’s Education Level (dummy SSLC to Degree), Monthly Family Income (dummy for above15000), Mother’s Education Level (dummy for above degree)

o. Dependent Variable: Responsible Environmental Behaviour

The R-square is the proportion of variation in the dependent variable (overall responsible environmental behaviour) that is explained by the ten variables. It is expressed as a percentage. So 75 percent of the variation in overall responsible environmental behaviour can be explained by ten variables in the model.

Table 5.117

*Result of ANOVA*

<table>
<thead>
<tr>
<th>Model-14</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>4512744.36</td>
<td>10</td>
<td>451274.44</td>
<td>539.76</td>
<td>.000^a</td>
</tr>
<tr>
<td>Residual</td>
<td>1500733.27</td>
<td>1795</td>
<td>836.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>6013477.63</td>
<td>1805</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

n. Predictors: (Constant), Situational Factor, Urbanism, Locale (dummy for Urban), Environmental Attitude, Environmental Awareness, Gender (dummy for females), Pastoralism, Father’s Education Level (dummy SSLC to Degree), Monthly Family Income (dummy for above15000), Mother’s Education Level (dummy for above degree)

o. Dependent Variable: Responsible Environmental Behaviour

The summary of ANOVA for all the 14 models/steps are given in the Appendix XLVI and the summary of ANOVA of the model/step14 are represented in the table 5.117. All the models have a greater F value than the table values at .01
level. This suggests that the predictor variables included in the model is also significant in predicting the dependent variable.

The overall model explained 75 percent of variance in overall responsible environmental behaviour, which was revealed to be statistically significant, $F (10, 1795) = 539.76, p < .000$. Hence, it is concluded that the overall model is statistically significant, or that the factors (independent variables and socio-demographic characteristics) included in the model have a significant combined effect on the dependent variable.

Table 5.118

<table>
<thead>
<tr>
<th>Model-14</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>151.385</td>
<td>9.774</td>
<td>15.489</td>
<td>.000</td>
</tr>
<tr>
<td>Situational Factor ($x_3$)</td>
<td>.438</td>
<td>.047</td>
<td>.246</td>
<td>9.322</td>
</tr>
<tr>
<td>Urbanism ($x_2$)</td>
<td>-1.145</td>
<td>.164</td>
<td>-.137</td>
<td>-6.958</td>
</tr>
<tr>
<td>Locale (dummy for Urban) ($x_{14}$)</td>
<td>-34.074</td>
<td>2.932</td>
<td>-.289</td>
<td>-11.622</td>
</tr>
<tr>
<td>Environmental Attitude ($x_7$)</td>
<td>.359</td>
<td>.038</td>
<td>.164</td>
<td>9.432</td>
</tr>
<tr>
<td>Environmental Awareness ($x_6$)</td>
<td>2.194</td>
<td>.183</td>
<td>.188</td>
<td>11.994</td>
</tr>
<tr>
<td>Gender (dummy for females) ($x_{12}$)</td>
<td>-6.987</td>
<td>1.450</td>
<td>-.060</td>
<td>-4.820</td>
</tr>
<tr>
<td>Pastoralism ($x_1$)</td>
<td>.851</td>
<td>.198</td>
<td>.070</td>
<td>4.290</td>
</tr>
<tr>
<td>Father’s Education Level (dummy SSLC to Degree) ($x_{22}$)</td>
<td>3.734</td>
<td>1.445</td>
<td>.032</td>
<td>2.584</td>
</tr>
<tr>
<td>Monthly Family Income (dummy for above15000) ($x_{18}$)</td>
<td>-14.087</td>
<td>3.178</td>
<td>-.057</td>
<td>-4.433</td>
</tr>
<tr>
<td>Mother’s Education Level (dummy for above degree) ($x_{21}$)</td>
<td>-19.734</td>
<td>3.312</td>
<td>-.074</td>
<td>-5.958</td>
</tr>
</tbody>
</table>

o. Dependent Variable: Responsible Environmental Behaviour
The coefficients of model/step 14 for the included factors in the stepwise regression are represented in the table 5.118. The summaries of coefficients of all the 14 models/steps are given in the Appendix XLVII. The B coefficients of the factors (independent variables and socio-demographic characteristics) in the model show the relative contribution of the predictor variables to the dependent variable responsible environmental behaviour. Thus the prediction equation for responsible environmental behaviour using the factors (independent variables and socio-demographic characteristics) can be written as

\[
y = 151.385 + .438 \times_5 - 1.145 \times_2 - 34.074 \times_{14} + .359 \times_7 + 2.194 \times_6 - 6.987 \times_{12} + .851 \times_1 \\
+ 3.734 \times_{22} - 14.087 \times_{18} - 19.734 \times_{21}
\]

Where,

\( (x_5) = \) Situational Factor

\( (x_2) = \) Urbanism

\( (x_{14}) = \) Locale (dummy for Urban)

\( (x_7) = \) Environmental Attitude

\( (x_6) = \) Environmental Awareness

\( (x_{12}) = \) Gender (dummy for females)

\( (x_1) = \) Pastoralism

\( (x_{22}) = \) Father’s Education Level (dummy SSLC to Degree)

\( (x_{18}) = \) Monthly Family Income (dummy for above 15000)

\( (x_{21}) = \) Mother’s Education Level (dummy for above degree)
This equation interprets that

- For a unit increase in the predictor variable, situational factor, responsible environmental behaviour increases by .438 units when the effects of other predictor variables are held constant.

- For a unit increase in the predictor variable, urbanism, responsible environmental behaviour decreases by 1.45 units when the effects of other predictor variables are held constant.

- For urban students, the predicted responsible environmental behaviour score would be almost 34.074 units lower than for rural students, when the effects of other predictor variables are held constant.

- For a unit increase in the predictor variable, environmental attitude, responsible environmental behaviour increases by .359 units when the effects of other predictor variables are held constant.

- For a unit increase in the predictor variable, environmental awareness, responsible environmental behaviour increases by 2.194 units when the effects of other predictor variables are held constant.

- For females, the predicted responsible environmental behaviour score would be almost 6.987 units lower than for males, when the effects of other predictor variables are held constant.

- For a unit increase in the predictor variable, Pastoralism, responsible environmental behaviour increases by .851 units when the effects of other predictor variables are held constant.
• For a unit increase in the predictor variable, father’s education level SSLC to degree, responsible environmental behaviour increases by 3.734 units when the effects of other predictor variables are held constant.

• For a unit increase in the predictor variable, monthly family income above 15000, responsible environmental behaviour decreases by 14.087 units when the effects of other predictor variables are held constant.

• For a unit increase in the predictor variable, mother’s education level SSLC to degree, responsible environmental behaviour decreases by 19.374 units when the effects of other predictor variables are held constant.

5.5 CONCLUSION AND DISCUSSION

The present study revealed that only about nineteen percent of secondary school students of Kerala show high responsible environmental behaviour. All of the select socio-demographic characteristics (gender, locale, type of school management, mother’s education level, father’s education level, monthly income of the family, type of family and enrolment in nature clubs) have significant effect of on responsible environmental behaviour of secondary school students of Kerala. In the present study males had significantly higher responsible environmental behaviour than females. Many studies reported the similar results (Oweini & Houri, 2006; Theodori & Luloff, 2002). As indicated in the meta-analysis of research on ERB of Hines, Hungerford & Tomera (1987), female students were observed to more likely engage in responsible environmental behaviour than the males did. Gifford, Hay and Boris (1983) reported non-significant relationship between gender and actual behaviour.
The present study indicates that rural school students had significantly higher responsible environmental behaviour than urban school students. Leftridge and James (1980) reported rural and urban population differences with regard to environmental and ecological perceptions. The study of Arcury (1993) also reported no significant effect of rural-urban differences on action by controlling for socio-demographic variables (age, income, gender and education).

It was found that responsible environmental behaviour of unaided school students were significantly higher than the government school students and aided school students. Similar studies revealed that students in private schools showed high level environmental sensitivity (Kaya & Turan, 2005) and environmental attitudes (Tuncer, Ertepinar, Tekkay, & Sungur, 2005) which contributes to the development of ERB (Marcinkowski, 2001).

From the study it was found that Students with mother’s education level below SSLC have higher responsible environmental behaviour and students with father’s education level below SSLC had significantly higher responsible environmental behaviour than the students with father’s education level SSLC to degree. Study of Makki, Abd-el-Khalick, Boujaoude (2003) with Lebanese students coming from man-dominated culture, students with more educated father had higher environmental knowledge. But, their knowledge level was not associated with mother’s education level. Similarly, Alp, Ertepınar, Tekkaya, & Yılmaz, (2008) and Gambro and Swiztky (1994) reported significant effect of father’s education level on student environmental knowledge, but not of mother’s education level. On the other hand, Sagır, Aslan, & Cansaran, (2008) could not observe any significant effect of
neither mother’s nor father’s education level on students’ environmental knowledge and attitudes.

Although the parents with high income might be expected to provide more educational opportunities and resources (e.g. book, magazines and CDs regarding the environment) to their children and expects high responsible environmental behaviour. But the present study found that the student with their family monthly income below 1000, 1000-5000 and 5000-10000 shows more responsible environmental behaviour than the students with family monthly income above 15000 and family monthly income 10000-15000.

Students who enrolled in nature clubs had significantly higher responsible environmental behaviour than students who do not enrolled in nature clubs. The findings are in line with similar results. Leeming, Dwyer, Porter, & Cobern, (1993) reviewed the outcome research in environmental education and reported that participation in nature-related activities led the students to appreciate the nature and accept the environmental issues. Students’ curiosity about and involvement in the natural activities could develop individuals’ sense of responsibility and motivation to take environmental action (Erdoğan & Mısırlı, 2007). Matthews and Riley (1995) concluded that development of the environmental responsibility can be best realized in the outdoors, which are natural settings that increases interest towards the natural environment and allows to individuals participate actively in outdoor activities.

Consistent with the literature, the present study revealed that there exists significant influence of each of the select independent variables (environment related personality variables (Pastoralism, Urbanism, Environmental Adaptation,
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and Environmental Trust), Situational Factors, Environmental Awareness, Environmental Attitude, Intention to Act, Self-efficacy and Barriers to Action) on responsible environmental behaviour of secondary school students of Kerala. It’s also found that there exists significant relationship between each of the select independent variables (Environment Related Personality Variables (Pastoralism, Urbanism, Environmental Adaptation, and Environmental Trust), Situational Factors, Environmental Awareness, Environmental Attitude, Intention to Act, Self-efficacy and Barriers to Action) and Responsible Environmental Behaviour of Secondary School Students of Kerala for the total sample and relevant socio-demographic characteristics. Significant relationship between attitude and behaviour was observed in several researches either positively (Chan, 1996; Makki, Abd-el-Khalick, & Boujaoude, 2003). Willingness to take environmental action (intention) was the variable which contributed to the variance of ERB. This was also confirmed with the existing literature in that intention is one of the best psychological predictors of ERB (Barr, 2007; Bogner & Wilhelm, 1996; Cottrell & Graefe, 1997; Fishbein & Ajzen, 1975; Harland, Skatts & Wilke, 1999; Hines, Hungerford & Tomera (1987); Hsu, 1997; Hsu & Roth, 1998, 1999; Kaiser, Ranney, Terry & Bowler, 1999; Kaiser, Wölfing & Fuhrer, 1999; Lindstrom & Johnsson, 2003).

The prediction equation for responsible environmental behaviour using the factors suggests that situational factors (independent variables and socio-demographic characteristics), urbanism, Locale (dummy for Urban), environmental Attitude, environmental Awareness, gender (dummy for females), Pastoralism, Father’s Education Level (dummy SSLC to Degree), Monthly Family Income (dummy for above15000) and Mother’s Education Level (dummy for above degree)
contributes to Responsible Environmental Behaviour. A substantial amount of research has identified various demographic characteristics as salient correlates explaining individuals’ willingness to act environmentally (Hines, Hungerford & Tomera (1987); Dietz, Stern, & Guagnano, 1998). Environmental attitudes and the social-dimension variables, societal beliefs, external barriers, and some other socio-demographic factors were not found to be significant in the study (Hsu, 2003).

The influences of situational and/or personality factors produce overt behaviour; attitudes or beliefs would develop in order to justify the patterns of behaviour adopted (Weigel, 1983). The general findings of this study demonstrate some imperative implications for both hypothetical exploration and the quest for environmental education.