CHAPTER 6
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6.1 INTRODUCTION

In every research, the investigator aims to reach at sound conclusions and valid generalizations based on the analysis and interpretation of data collected. This chapter presents an overview of the study, major findings, tenability of hypotheses, conclusions of the study and suggestions for further research.

6.2 STUDY IN RETROSPECT

The present study is intended to find out the factors affecting responsible environmental behaviour of secondary school students of Kerala. The objectives, hypotheses, methodology and findings of the study are restated here.

6.2.1 Variables of the Study

In this study the investigator has been designed responsible environmental behaviour as the dependent variable. Environmental related personality variables (pastoralism, urbanism, environmental trust, and environmental adaptation), situational factors, environmental awareness, environmental attitude, intention to act, self-efficacy and barriers to action has been designed as the independent variables.

6.2.2 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.

6.2.3 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.
6.2.4 Methodology in Brief

Normative survey method was used to conduct the present study. The final sample consists of 1806 secondary school students of Kerala. The sample was taken from six districts of Kerala. For the selection of the sample stratified random sampling technique was used giving due representation to gender, type of family, family income, mother’s education level, father’s education level, locale, type of school management and enrolment in nature clubs.

6.2.5 Tools Used

The following tools were used for collecting data for the present study

1. Responsible Environmental Behaviour Scale (REBS)
2. Environment Related Personality Variables Scale (ERPVS)
3. Situational Factors Scale (SFS)
4. Environmental Awareness Inventory (EAI)
5. Environmental Attitude Scale (EAS)
6. Self- efficacy and Intention to Act Scale (SIAS)
7. Barriers to Action Scale (BAS)

6.2.6 Statistical Techniques Used

The major statistical methods used were Computation of Percentage, Significance of Difference between Means using Critical Ratio (CR), Analysis of Variance –ANOVA (F), Scheffe’s Test of Multiple Comparison, Karl Pearson’s Product Moment Correlation (r), Fisher’s Test of Significance of r (t) and Stepwise Multiple Regression.
6.3 MAJOR FINDINGS AND CONCLUSIONS OF THE STUDY

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

Out of the 1806 secondary school students of Kerala, 61.50% of students show average responsible environmental behaviour. 18.80% shows high responsible environmental behaviour and 19.70% shows low responsible environmental behaviour. Majority of the students shows average responsible environmental behavior.

6.3.2 Level of each of the Select Independent Variables of Secondary School Students of Kerala

6.3.2.1 Level of each of the environment related personality variables of secondary school students of Kerala

- From the percentage analysis it is clear that 72.70% of students have average pastoralism, 15.90% have high pastoralism and 11.40% have low pastoralism. Majority of the students have average pastoralism.

- For the personality variable urbanism, 64.80% of students have average urbanism, 22.10% have high urbanism and 13.10% have low urbanism. Majority of the students have average 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. Majority of the students have average 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. Majority of the students have average environmental trust.

6.3.2.2 Level of Situational Factors of Secondary School Students of Kerala

Level of situational factors among the secondary school students of Kerala shows that, 52.60% of students come under average level, 23.70% under high level and 23.70% under low level. Majority of the students have average score in situational factors.

6.3.2.3 Level of Environmental Awareness of Secondary School Students of Kerala

Out of the 1806 secondary school students of Kerala, 69.80% of students have average environmental awareness, 18.20% have high environmental awareness and 12.00% have low environmental awareness. Majority of the students have average environmental awareness.

6.3.2.4 Level of Environmental Attitude of Secondary School Students of Kerala

It is found that 67.80% of students have average environmental attitude, 20.50% have high environmental attitude and 11.70% have low environmental attitude. Majority of the students have average environmental attitude.

6.3.2.5 Level of Intention to Act of Secondary School Students of Kerala

Level of intention to act among the secondary school students of Kerala shows that 69.80% students come under average level, 18.20% come under high level and 12.00% come under low level. Majority of the students have average intention to act.
6.3.2.6 Level of Self-efficacy of Secondary School Students of Kerala.

It is found that 84.70% of students have average self-efficacy, 12.70% have high self-efficacy and 2.70% have low self-efficacy. Majority of the students have average self-efficacy and a very few have low self-efficacy.

6.3.2.7 Level of Barriers to Action of Secondary School Students of Kerala.

It is found 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. Majority of the students have average barriers to action.

6.3.3 Effect of Socio-demographic Characteristics on Responsible Environmental Behaviour of Secondary School Students of Kerala

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

There exists a significant effect of gender on responsible environmental behaviour and its components of secondary school students of Kerala.

- Males \((M=230.22, \ SD=62.96)\) had significantly higher responsible environmental behaviour than females \((M=216.52, \ SD=52.87)\), \(CR=4.88, \ p<.01\).
- Males \((M=119.52, \ SD=31.96)\) had significantly higher actions than females \((M=114.55, \ SD=27.25)\), \(CR=3.47, \ p<.01\).
- There is no significant difference in civic action of males \((M=21.25, \ SD=8.33)\) and females \((M=21.67, \ SD=6.87)\) \(CR=1.12, \ p>.05\).
- Males \((M=22.96, \ SD=8.18)\) had significantly higher educational action than females \((M=21.13, \ SD=7.60)\), \(CR=4.82, \ p<.01\).
• Males \((M=18.26, \text{SD}=5.40)\) had significantly higher financial action than females \((M=17.30, \text{SD}=4.29), CR=4.07, p<.01\).

• Males \((M=16.98, \text{SD}=4.43)\) had significantly higher legal action than females \((M=16.12, \text{SD}=5.16), CR=3.71, p<.01\).

• Males \((M=18.87, \text{SD}=5.37)\) had significantly higher physical action than females \((M=17.44, \text{SD}=4.95), CR=5.78, p<.01\).

• There is no significant difference in persuasion action of males \((M=21.20, \text{SD}=8.49)\) and females \((M=20.90, \text{SD}=8.19) CR=0.77, p>.05\).

• Males \((M=110.70, \text{SD}=37.95)\) had significantly higher concernment than females \((M=101.97, \text{SD}=35.86), CR=4.99, p<.01\).

6.3.3.2 Effect of Locale on Responsible Environmental Behaviour of Secondary School Students of Kerala

There exists a significant effect of locale on responsible environmental behaviour of secondary school students of Kerala.

• Rural school students \((M=257.01, \text{SD}=45.24)\) had significantly higher responsible environmental behaviour than urban school students \((M=170.41, \text{SD}=27.53), CR=50.52, p<.01\).

• Rural school students \((M=134.76, \text{SD}=19.02)\) had significantly higher actions than urban school students \((M=89.58, \text{SD}=19.89), CR=48.57, p<.01\).

• Rural school students \((M=24.31, \text{SD}=6.75)\) had significantly higher civic action than urban school students \((M=17.28, \text{SD}=6.59), CR=21.99, p<.01\).
• Rural school students ($M=25.75$, $SD=6.76$) had significantly higher educational action than urban school students ($M=16.15$, $SD=5.67$), $CR=32.63$, $p<.01$.

• Rural school students ($M=19.86$, $SD=4.23$) had significantly higher financial action than urban school students ($M=14.48$, $SD=3.70$), $CR=28.60$, $p<.01$.

• Rural school students ($M=18.69$, $SD=3.30$) had significantly higher legal action than urban school students ($M=13.19$, $SD=4.50$), $CR=26.07$, $p<.01$.

• Rural school students ($M=20.72$, $SD=4.04$) had significantly higher physical action than urban school students ($M=14.03$, $SD=3.97$), $CR=34.89$, $p<.01$.

• Rural school students ($M=25.43$, $SD=4.72$) had significantly higher persuasion action than urban school students ($M=14.45$, $SD=8.19$), $CR=32.66$, $p<.01$.

• Rural school students ($M=122.25$, $SD=35.72$) had significantly higher concernment than urban school students ($M=80.83$, $SD=21.92$), $CR=30.51$, $p<.01$.

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

There exists a significant effect of school management on responsible environmental behaviour of secondary school students of Kerala.

• Analysis of variance shows that the effect of type of school management on responsible environmental behaviour was significant $F (2, 1803) =129.09$, $p<.01$. 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 had significantly higher responsible environmental behaviour than aided school students. All the mean differences are significant at .01 level.

The effect of type of school management on components of responsible environmental behaviour was significant.

- Actions (in Total), \(F(2, 1803) = 124.97, p < .01\)
- Civic Action, \(F(2, 1803) = 128.09, p < .01\)
- Educational Action, \(F(2, 1803) = 91.04, p < .01\)
- Financial Action, \(F(2, 1803) = 39.58, p < .01\)
- Legal Action, \(F(2, 1803) = 21.98, p < .01\)
- Physical Action, \(F(2, 1803) = 40.71, p < .01\)
- Persuasion Action, \(F(2, 1803) = 109.90, p < .01\)
- Concernment (in Total), \(F(2, 1803) = 73.71, p < .01\)

This indicates that there exist significant differences among the mean scores of the three types of school management compared and a significant effect of school management on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons using Scheffe’s post hoc analysis proved the significant differences of responsible environmental behaviour in different type of school management.
6.3.3.4 Effect of Mother’s Education Level on Responsible Environmental Behaviour of Secondary School Students of Kerala.

There exists a significant effect of mother’s education level on responsible environmental behaviour of secondary school students of Kerala.

- Analysis of variance showed that the effect of mother’s education level on responsible environmental behaviour was significant $F (2, 1803) = 39.69, p < .01$. Students with mother’s education level below SSLC obtained a mean score ($M = 237.97$) which is higher than the mean score of students with mother’s education level SSLC to degree ($M = 212.84$). 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. Thus it can be concluded that the students with mother’s education level below SSLC has higher responsible environmental behaviour.

The effect of mother’s education level on components of responsible environmental behaviour was significant.

- Actions (in Total), $F (2, 1803) = 26.07, p < .01$
- Civic Action, $F (2, 1803) = 7.41, p < .01$
- Educational Action, $F (2, 1803) = 16.49, p < .01$
- Financial Action, $F (2, 1803) = 39.58, p < .01$
- Legal Action, $F (2, 1803) = 8.75, p < .01$
• Physical Action, $F(2, 1803) = 14.75, p < .01$

• Persuasion Action, $F(2, 1803) = 75.22, p < .01$

• Concernment (in Total), $F(2, 1803) = 32.90, p < .01$

This indicates that there exist significant differences among the mean scores of mother’s education level compared and a significant effect of mother’s education level on the components of responsible environmental behaviour of secondary school students of Kerala.

Multiple comparisons using Scheffe’s post hoc analysis proved the differences of responsible environmental behaviour in mother’s education level.

6.3.3.5 Effect of Father’s Education Level on Responsible Environmental Behaviour of Secondary School Students of Kerala.

There exists a significant effect of father’s education level on responsible environmental behaviour of secondary school students of Kerala.

• Analysis of variance showed that the effect of father’s education level on responsible environmental behaviour was significant $F(2, 1803) = 76.15, p < .01$. 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.
The effect of father’s education level on components of responsible environmental behaviour was significant.

- Actions (in Total), $F(2, 1803) = 73.30, p < .01$
- Civic Action, $F(2, 1803) = 70.14, p < .01$
- Educational Action, $F(2, 1803) = 106.62, p < .01$
- Financial Action, $F(2, 1803) = 24.50, p < .01$
- Legal Action, $F(2, 1803) = 10.53, p < .01$
- Physical Action, $F(2, 1803) = 5.13, p < .01$
- Persuasion Action, $F(2, 1803) = 63.87, p < .01$
- Concernment (in Total), $F(2, 1803) = 45.28, p < .01$

This indicates that there exist significant differences among the mean scores of father’s education level compared and a significant effect of father’s education level on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons using Scheffe’s post hoc analysis proved the differences of responsible environmental behaviour in father’s education level.

6.3.3.6 Effect of Family Monthly Income on Responsible Environmental Behaviour of Secondary School Students of Kerala

There exists a significant effect of family income on responsible environmental behaviour of secondary school students of Kerala.

- Analysis of variance showed that the effect of family income on responsible environmental behaviour was significant $F(4, 1801) = 28.18, p < .01$. 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 (189.89) and 10000-15000 (197.90) have almost same responsible environmental behaviour. Similarly the students with family monthly income 5000-10000 (217.75), below 1000 (227.47) and 1000-5000 (232.48) have almost same responsible environmental behaviour.

Thus it can be concluded that students with family monthly income below 1000, 1000-5000 and 5000-10000 have more responsible environmental behaviour than the students with family monthly income above 15000 and family monthly income 10000-15000.

The effect of family monthly income on components of responsible environmental behaviour was significant.

- Actions (in Total), $F(4, 1801) = 35.15, p<.01$
- Civic Action, $F(4, 1801) = 38.87, p<.01$
- Educational Action, $F(4, 1801) = 74.28, p<.01$
- Financial Action, $F(4, 1801) = 23.21, p<.01$
- Legal Action, $F(4, 1801) = 47.34, p<.01$
- Physical Action, $F(4, 1801) = 42.59, p<.01$
- Persuasion Action, $F(4, 1801) = 29.54, p<.01$
- Concernment (in Total), $F(4, 1801) = 22.92, p<.01$
This indicates that there exist significant differences among the mean scores of different family monthly income compared and a significant effect of family monthly income on the components of responsible environmental behaviour of secondary school students of Kerala. Multiple comparisons using Scheffe’s post hoc analysis proved the differences of responsible environmental behaviour in family monthly income.

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

There exists a significant effect of type of family on responsible environmental behaviour of secondary school students of Kerala

- Students from nuclear family \((M=223.62, SD=58.61)\) had significantly higher responsible environmental behaviour than students from joint family \((M=205.47, SD=41.47), CR=4.67, p<.01\).

- Nuclear type of family students \((M=117.26, SD=30.11)\) had significantly higher actions than joint type of family students \((M=108.82, SD=16.77), CR=5.17, p<.01\).

- Nuclear type of family students \((M=21.74, SD=7.55)\) had significantly higher civic action than joint type of family students \((M=18.27, SD=6.36), CR=5.14, p<.01\).

- Nuclear type of family students \((M=22.04, SD=8.13)\) had significantly higher educational action than joint type of family students \((M=20.18, SD=3.45), CR=5.51, p<.01\).
• Nuclear type of family students ($M=17.89$, $SD=4.91$) had significantly higher financial action than joint type of family students ($M=15.27$, $SD=2.31$), $CR=11.21$, $p<.01$.

• Nuclear type of family students ($M=16.64$, $SD=4.85$) had significantly higher legal action than joint type of family students ($M=14.50$, $SD=4.85$), $CR=4.88$, $p<.01$.

• Nuclear type of family students ($M=18.15$, $SD=5.32$) had significantly higher physical action than joint type of family students ($M=16.64$, $SD=2.51$), $CR=5.97$, $p<.01$.

• Nuclear type of family students ($M=20.80$, $SD=8.48$) had significantly higher persuasion action than joint type of family students ($M=23.95$, $SD=5.11$), $CR=6.43$, $p<.01$.

• Nuclear type of family students ($M=106.35$, $SD=37.46$) had significantly higher concernment than joint type of family students ($M=96.65$, $SD=29.14$), $CR=3.60$, $p<.01$.

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

There exists a significant effect of enrolment in nature clubs on responsible environmental behaviour of secondary school students of Kerala.

• Students who enrolled in nature clubs ($M=226.72$, $SD=66.48$) had significantly higher responsible environmental behaviour than students who do not enrolled in nature clubs ($M=220.09$, $SD=52.71$), $CR=2.13$, $p<.05$. 
• There is no significant difference in actions of students who enrolled in nature clubs ($M=118.35$, $SD=31.88$) and students who do not enrolled in nature clubs ($M=115.80$, $SD=28.09$) $CR=1.67$, $p>.05$.

• Students who enrolled in nature clubs ($M=22.85$, $SD=8.00$) had significantly higher civic action than students who do not enrolled in nature clubs ($M=20.81$, $SD=7.18$), $CR=5.27$, $p<.01$.

• Students who enrolled in nature clubs ($M=22.89$, $SD=8.06$) had significantly higher educational action than students who do not enrolled in nature clubs ($M=21.41$, $SD=7.77$), $CR=3.77$, $p<.01$.

• There is no significant difference in financial action of students who enrolled in nature clubs ($M=17.94$, $SD=4.70$) and students who do not enrolled in nature clubs ($M=17.58$, $SD=4.86$) $CR=1.50$, $p>.05$.

• There is no significant difference in legal action of students who enrolled in nature clubs ($M=16.45$, $SD=4.63$) and students who do not enrolled in nature clubs ($M=16.50$, $SD=5.00$) $CR=0.12$, $p>.05$.

• There is no significant difference in physical action of students who enrolled in nature clubs ($M=17.84$, $SD=4.80$) and students who do not enrolled in nature clubs ($M=18.14$, $SD=5.36$) $CR=1.18$, $p>.05$.

• Students who enrolled in nature clubs ($M=20.38$, $SD=9.13$) had significantly higher persuasion action than students who do not enrolled in nature clubs ($M=21.35$, $SD=7.86$), $CR=2.21$, $p<.05$. 
• Students who enrolled in nature clubs \((M=108.36, \, SD=40.62)\) had significantly higher concernment than students who do not enrolled in nature clubs \((M=104.29, \, SD=35.00)\), \(CR=2.10, \, p<.05\).

6.2.4 Influence of 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) on Responsible Environmental Behaviour of Secondary School Students of Kerala

6.3.4.1 Influence of Pastoralism on Responsible Environmental Behaviour of Secondary School Students of Kerala

There exists a significant influence of pastoralism on responsible environmental behaviour of secondary school students of Kerala.

• Analysis of variance shows that the influence of pastoralism on responsible environmental behaviour was significant \(F (2, 1803) =381.42, \, p<.01\). The mean score of responsible environmental behaviour of high level of pastoralism \((M=293.25)\) significantly differ from the mean score of responsible environmental behaviour of average level of pastoralism \((M=211.37)\) and the mean score of responsible environmental behaviour of low level of pastoralism \((M=192.57)\). 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 concluded that students with higher levels of pastoralism shows more responsible environmental behaviour than average and low levels of pastoralism.
The influence of pastoralism on components of responsible environmental behaviour was significant.

- **Actions (in Total),** \( F(2, 1803) = 288.54, p < .01 \)
- **Civic Action,** \( F(2, 1803) = 225.78, p < .01 \)
- **Educational Action,** \( F(2, 1803) = 187.62, p < .01 \)
- **Financial Action,** \( F(2, 1803) = 94.11, p < .01 \)
- **Legal Action,** \( F(2, 1803) = 81.41, p < .01 \)
- **Physical Action,** \( F(2, 1803) = 99.57, p < .01 \)
- **Persuasion Action,** \( F(2, 1803) = 173.22, p < .01 \)
- **Concernment (in Total),** \( F(2, 1803) = 241.17, p < .01 \)

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 using Scheffe’s post hoc analysis proved the differences among the mean scores of components of responsible environmental behaviour in the three levels of pastoralism.

### 6.3.4.2 Influence of Urbanism on Responsible Environmental Behaviour of Secondary School Students of Kerala

There exists a significant influence of urbanism on responsible environmental behaviour of secondary school students of Kerala.

- **Analysis of variance shows that the influence of urbanism on responsible environmental behaviour was significant** \( F(2, 1803) = 470.08, p < .01 \). The mean score of responsible environmental behaviour of low level of urbanism
(M=297.19) significantly differ from the mean score of responsible environmental behaviour of average level of urbanism (M=221.72) and the mean score of responsible environmental behaviour of high level of urbanism (M=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 concluded that students with lower levels of urbanism shows more responsible environmental behaviour than average and low levels of urbanism.

The influence of urbanism on components of responsible environmental behaviour was significant.

- Actions (in Total), F (2, 1803) =392.61, p<.01
- Civic Action, F (2, 1803) =263.01, p<.01
- Educational Action, F (2, 1803) =184.69, p<.01
- Financial Action, F (2, 1803) =181.68, p<.01
- Legal Action, F (2, 1803) =174.44, p<.01
- Physical Action, F (2, 1803) =221.21, p<.01
- Persuasion Action, F(2, 1803)=238.66, p<.01
- Concernment (in Total), F (2, 1803) =263.15, p<.01

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 using Scheffe’s post hoc analysis proved the
differences among the mean scores of components of responsible environmental behaviour in the three levels of urbanism.

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

There exists a significant influence of environmental adaptation on responsible environmental behaviour of secondary school students of Kerala.

- Analysis of variance shows that the influence of environmental adaptation on responsible environmental behaviour was significant $F (2, 1803) = 345.24$, $p < .01$. The mean score of responsible environmental behaviour of low level of environmental adaptation ($M = 276.08$) significantly differ from the mean score of responsible environmental behaviour of average level of environmental adaptation ($M = 231.03$) and the mean score of responsible environmental behaviour of high level of environmental adaptation ($M = 146.38$). 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 concluded that students with lower levels of environmental adaptation shows more responsible environmental behaviour than average and low levels of environmental adaptation.

The influence of environmental adaptation on components of responsible environmental behaviour was significant.

- Actions (in Total), $F (2, 1803) = 466.72$, $p < .01$
• Civic Action, \( F(2, 1803) = 81.78, \ p < .01 \)
• Educational Action, \( F(2, 1803) = 220.23, \ p < .01 \)
• Financial Action, \( F(2, 1803) = 264.07, \ p < .01 \)
• Legal Action, \( F(2, 1803) = 272.26, \ p < .01 \)
• Physical Action, \( F(2, 1803) = 289.14, \ p < .01 \)
• Persuasion Action, \( F(2, 1803) = 414.80, \ p < .01 \)
• Concernment (in Total), \( (F(2, 1803) = 135.90, \ p < .01 \)

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 using Scheffe’s post hoc analysis proved the differences among the mean scores of components of responsible environmental behaviour in the three levels of environmental adaptation.

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

There exists a significant influence of environmental trust on responsible environmental behaviour of secondary school students of Kerala.

• Analysis of variance shows that the influence of environmental trust on responsible environmental behaviour was significant \( F(2, 1803) = 418.42, \ p < .01 \). The mean score of responsible environmental behaviour of high level of environmental trust \( (M=258.77) \) significantly differ from the mean score of responsible environmental behaviour of average level of environmental trust \( (M=223.66) \) and the mean score of responsible environmental behaviour of low level of environmental trust \( (M=152.18) \). 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 concluded that students with higher levels of environmental trust shows more responsible environmental behaviour than average and low levels of environmental trust.

The influence of environmental trust on components of responsible environmental behaviour was significant.

- Actions (in Total), $F(2, 1803) = 540.01, p < .01$
- Civic Action, $F(2, 1803) = 189.45, p < .01$
- Educational Action, $F(2, 1803) = 302.58, p < .01$
- Financial Action, $F(2, 1803) = 281.60, p < .01$
- Legal Action, $F(2, 1803) = 261.05, p < .01$
- Physical Action, $F(2, 1803) = 311.84, p < .01$
- Persuasion Action, $F(2, 1803) = 374.72, p < .01$
- Concernment (in Total), $F(2, 1803) = 163.13, p < .01$

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 using Scheffé’s post hoc analysis proved the differences among the mean scores of components of responsible environmental behaviour in the three levels of environmental trust are conducted.
6.3.4.5 Influence of Situational Factors on Responsible Environmental Behaviour of Secondary School Students of Kerala

There exists a significant influence of situational factors on responsible environmental behaviour of secondary school students of Kerala.

- Analysis of variance shows that the influence of situational factors on responsible environmental behaviour was significant $F(2, 1803) = 1053.01, p < .01$. The mean score of responsible environmental behaviour of high level of situational factors ($M=280.04$) significantly differ from the mean score of responsible environmental behaviour of average level of situational factors ($M=225.51$) and the mean score of responsible environmental behaviour of low level of situational factors ($M=157.40$). 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 concluded that students with higher levels of situational factors shows more responsible environmental behaviour than average and low levels of situational factors.

The influence of situational factors on components of responsible environmental behaviour was significant.

- Actions (in Total), $F(2, 1803) = 1170.65, p < .01$
- Civic Action, $F(2, 1803) = 288.48, p < .01$
- Educational Action, $F(2, 1803) = 489.38, p < .01$
- Financial Action, $F(2, 1803) = 615.57, p < .01$
• Legal Action, $F(2, 1803) = 475.74, p < .01$
• Physical Action, $F(2, 1803) = 592.17, p < .01$
• Persuasion Action, $F(2, 1803) = 447.54, p < .01$
• Concernment (in Total), $F(2, 1803) = 386.77, p < .01$

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 using Scheffe’s post hoc analysis proved the differences among the mean scores of components of responsible environmental behaviour in the three levels of situational factors.

6.3.4.6 Influence of Environmental Awareness on Responsible Environmental Behaviour of Secondary School Students of Kerala

There exists a significant influence of environmental awareness on responsible environmental behaviour of secondary school students of Kerala.

• Analysis of variance shows that the influence of environmental awareness on responsible environmental behaviour was significant $F(2, 1803) = 638.29, p < .01$. The mean score of responsible environmental behaviour of high level of environmental awareness ($M=279.02$) significantly differ from the mean score of responsible environmental behaviour of average level of environmental awareness ($M=221.44$) and the mean score of responsible environmental behaviour of low level of environmental awareness ($M=140.84$). 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 concluded that students with higher levels of environmental awareness shows more responsible environmental behaviour than average and low levels of environmental awareness.

The influence of Environmental Awareness on components of responsible environmental behaviour was significant.

- Actions (in Total), $F(2, 1803) = 752.05, p < .01$
- Civic Action, $F(2, 1803) = 252.98, p < .01$
- Educational Action, $F(2, 1803) = 338.09, p < .01$
- Financial Action, $F(2, 1803) = 475.09, p < .01$
- Legal Action, $F(2, 1803) = 309.54, p < .01$
- Physical Action, $F(2, 1803) = 408.67, p < .01$
- Persuasion Action, $F(2, 1803) = 538.30, p < .01$
- Concernment (in Total), $F(2, 1803) = 260.56, p < .01$

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 using Scheffe’s post hoc analysis proved the differences among the mean scores of components of responsible environmental behaviour in the three levels of Environmental Awareness are conducted.
6.3.4.7 Influence of Environmental Attitude on Responsible Environmental Behaviour of Secondary School Students of Kerala

There exists a significant influence of environmental attitude on responsible environmental behaviour of secondary school students of Kerala.

- Analysis of variance shows that the influence of environmental attitude on responsible environmental behaviour was significant $F (2, 1803) = 503.96, p < .01$. The mean score of responsible environmental behaviour of high level of environmental attitude ($M=287.31$) significantly differ from the mean score of responsible environmental behaviour of average level of environmental attitude ($M=210.31$) and the mean score of responsible environmental behaviour of low level of environmental attitude ($M=177.98$). 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 concluded that students with higher levels of environmental attitude shows more responsible environmental behaviour than average and low levels of environmental attitude.

The influence of Environmental Attitude on components of responsible environmental behaviour was significant.

- Actions (in Total), $F (2, 1803) = 480.26, p < .01$
- Civic Action, $F (2, 1803) = 381.35, p < .01$
- Educational Action, $F (2, 1803) = 352.90, p < .01$
• Financial Action, $F(2, 1803) = 149.65, p < .01$

• Legal Action, $F(2, 1803) = 132.24, p < .01$

• Physical Action, $F(2, 1803) = 146.96, p < .01$

• Persuasion Action, $F(2, 1803) = 324.06, p < .01$

• Concernment (in Total), $F(2, 1803) = 250.38, p < .01$

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 using Scheffe’s post hoc analysis proved the differences among the mean scores of components of responsible environmental behaviour in the three levels of Environmental Attitude are conducted.

6.3.4.8 Influence of Intention to Act on Responsible Environmental Behaviour of Secondary School Students of Kerala

There exists a significant influence of intention to act on responsible environmental behaviour of secondary school students of Kerala.

• Analysis of variance shows that the influence of intention to act on responsible environmental behaviour was significant $F(2, 1803) = 799.09, p < .01$. The mean score of responsible environmental behaviour of high level of intention to act ($M=287.10$) significantly differ from the mean score of responsible environmental behaviour of average level of intention to act ($M=219.34$) and the mean score of responsible environmental behaviour of low level of intention to act ($M=140.84$). 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 concluded that students with higher levels of intention to act shows more responsible environmental behaviour than average and low levels of intention to act.

The influence of Intention to act on components of responsible environmental behaviour was significant.

- Actions (in Total), $F (2, 1803) = 1001.22, p < .01$
- Civic Action, $F (2, 1803) = 356.50, p < .01$
- Educational Action, $F (2, 1803) = 450.20, p < .01$
- Financial Action, $F (2, 1803) = 510.66, p < .01$
- Legal Action, $F (2, 1803) = 329.20, p < .01$
- Physical Action, $F (2, 1803) = 403.35, p < .01$
- Persuasion Action, $F (2, 1803) = 728.34, p < .01$
- Concernment (in Total), $F (2, 1803) = 293.08, p < .01$

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 using Scheffe’s post hoc analysis proved the differences among the mean scores of components of responsible environmental behaviour in the three levels of Intention to act.
6.3.4.9 Influence of Self-efficacy on Responsible Environmental Behaviour of Secondary School Students of Kerala

There exists a significant influence of self-efficacy on responsible environmental behaviour of secondary school students of Kerala.

- Analysis of variance shows that the influence of self-efficacy on responsible environmental behaviour was significant $F (2, 1803) = 427.60, p < .01$. The mean score of responsible environmental behaviour of high level of self-efficacy ($M = 300.35$) significantly differ from the mean score of responsible environmental behaviour of average level of self-efficacy ($M = 213.55$) and the mean score of responsible environmental behaviour of low level of self-efficacy ($M = 128.50$). 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 concluded that students with higher levels of self-efficacy shows more responsible environmental behaviour than average and low levels of self-efficacy.

The influence of Self-efficacy on components of responsible environmental behaviour was significant.

- Actions (in Total), $F (2, 1803) = 532.02, p < .01$
- Civic Action, $F (2, 1803) = 500.93, p < .01$
- Educational Action, $F (2, 1803) = 330.81, p < .01$
- Financial Action, $F (2, 1803) = 208.71, p < .01$
- Legal Action, $F (2, 1803) = 114.22, p < .01$
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- Physical Action, $F(2,1803) = 146.96, p < .01$
- Persuasion Action, $F(2,1803) = 188.90, p < .01$
- Concernment (in Total), $F(2,1803) = 176.61, p < .01$

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 using Scheffe’s post hoc analysis proved the differences among the mean scores of components of responsible environmental behaviour in the three levels of Self-efficacy are conducted.

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

There exists a significant influence of barriers to action on responsible environmental behaviour of secondary school students of Kerala.

- Analysis of variance shows that the influence of barriers to action on responsible environmental behaviour was significant $F(2,1803) = 219.20, p < .01$. The mean score of responsible environmental behaviour of low level of barriers to action ($M = 282.43$) significantly differ from the mean score of responsible environmental behaviour of average level of barriers to action ($M = 214.76$) and the mean score of responsible environmental behaviour of high level of barriers to action ($M = 199.68$). 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.

The influence of barriers to action on components of responsible environmental behaviour was significant.

- Actions (in Total), $F(2, 1803) = 200.60, p < .01$
- Civic Action, $F(2, 1803) = 82.78, p < .01$
- Educational Action, $F(2, 1803) = 137.11, p < .01$
- Financial Action, $F(2, 1803) = 145.35, p < .01$
- Legal Action, $F(2, 1803) = 82.34, p < .01$
- Physical action $F(2, 1803) = 177.07, p < .01$
- Persuasion Action, $F(2, 1803) = 102.03, p < .01$
- Concernment (in Total) $F(2, 1803) = 135.50, p < .01$

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 using Scheffe’s post hoc analysis proved the differences among the mean scores of components of responsible environmental behaviour in the three levels of barriers to action are conducted.
6.3.5 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.

6.3.5.1 Relationship between Pastoralism and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics

The relationships between pastoralism and responsible environmental behaviour are positive and any increase in pastoralism may cause a corresponding increase in the responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.

- The value of co-efficient of correlation between pastoralism and responsible environmental behaviour is, \[ r = .51, t = 24.98, p < .01 \]
- The co-efficient of correlation between pastoralism and actions (in total) is, \[ r = .45, t = 21.28, p < .01 \]
• The co-efficient of correlation between pastoralism and civic action is,
  \[ r = .32, \ t = 14.15, \ p < .01 \]

• The co-efficient of correlation between pastoralism and educational action is,
  \[ r = .38, \ t = 17.34, \ p < .01 \]

• The co-efficient of correlation between pastoralism and financial action is,
  \[ r = .32, \ t = 14.50, \ p < .01 \]

• The co-efficient of correlation between pastoralism and legal action is,
  \[ r = .29, \ t = 13.11, \ p < .01 \]

• The co-efficient of correlation between pastoralism and physical action is,
  \[ r = .32, \ t = 14.55, \ p < .01 \]

• The co-efficient of correlation between pastoralism and persuasion action is,
  \[ r = .38, \ t = 17.50, \ p < .01 \]

• The co-efficient of correlation between pastoralism and concernment (in total) is,
  \[ r = .43, \ t = 20.52, \ p < .01 \]

All the relationships between pastoralism and responsible environmental behaviour are positive and any increase in pastoralism of the sub samples may cause a corresponding increase in their responsible environmental behaviour.

• 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.

The conclusion is substantiated by the following findings of the study.

• The co-efficient of correlation between pastoralism and responsible environmental behaviour for male \( (r = .55, t = 18.38, p < .01) \) and female \( (r = .46, t = 16.59, p < .01) \)

• The co-efficient of correlation between pastoralism and responsible environmental behaviour for rural school students \( (r = .41, t = 14.73, p < .01) \) and urban school students \( (r = .26, t = 7.18, p < .01) \)

• The co-efficient of correlation between pastoralism and responsible environmental behaviour for government \( (r = .51, t = 13.98, p < .01) \), aided \( (r = .44, t = 14.28, p < .01) \) and unaided school students \( (r = .48, t = 10.69, p < .01) \)

• The co-efficient of correlation between pastoralism and responsible environmental behaviour of the students with mother’s education level below SSLC \( (r = .42, t = 11.67, p < .01) \), SSLC to degree \( (r = .55, t = 21.43, p < .01) \) and above degree \( (r = .28, t = 2.77, p < .01) \)

• The co-efficient of correlation between pastoralism and responsible environmental behaviour of the students with father’s education level below SSLC \( (r = .48, t = 13.90, p < .01) \), SSLC to degree \( (r = .52, t = 18.81, p < .01) \) and above degree \( (r = .45, t = 7.69, p < .01) \)

• The co-efficient of correlation between pastoralism and responsible environmental behaviour of the students with family monthly income,
1000 \( (r = .60, \ t = 14.19, \ p < .01) \), 1000-5000 \( (r = .46, \ t = 14.92, \ p < .01) \), 5000-10000 \( (r = .56, \ t = 10.98, \ p < .01) \), 10000-15000 \( (r = .41, \ t = 6.96, \ p < .01) \) and above 15000 \( (r = .22, \ t = 2.30, \ p < .05) \)

- The co-efficient of correlation between pastoralism and responsible environmental behaviour of the students from nuclear type of family \( (r = .52, \ t = 24.63, \ p < .01) \) and joint type of family \( (r = .30, \ t = 3.53, \ p < .01) \)

- The co-efficient of correlation between pastoralism and responsible environmental behaviour of the students who enrolled in nature club \( (r = .49, \ t = 13.60, \ p < .01) \) and those who do not enrolled in nature club \( (r = .52, \ t = 21.35, \ p < .01) \)

6.3.5.2 Relationship between Urbanism and responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics

The relationships between urbanism and responsible environmental behaviour are negative and any increase in urbanism may cause a corresponding decrease in responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.
• The values of co-efficient of correlation between urbanism and responsible environmental behaviour is, \( r = -.66, t = 37.01, p < .01 \)

• The co-efficient of correlation between urbanism and actions (in total) is, 
  \( r = -.60, t = 31.86, p < .01 \)

• The co-efficient of correlation between urbanism and civic action is, \( r = -.35, t = 15.66, p < .01 \)

• The co-efficient of correlation between urbanism and educational action is, 
  \( r = -.45, t = 21.70, p < .01 \)

• The co-efficient of correlation between urbanism and financial action is, 
  \( r = -.46, t = 22.00, p < .01 \)

• The co-efficient of correlation between urbanism and legal action is, \( r = -.46, t = 22.25, p < .01 \)

• The co-efficient of correlation between urbanism and physical action is, 
  \( r = -.50, t = 24.72, p < .01 \)

• The co-efficient of correlation between urbanism and persuasion action is, 
  \( r = -.52, t = 26.20, p < .01 \)

• The co-efficient of correlation between urbanism and concernment (in total) is, \( r = -.55, t = 27.83, p < .01 \)

All the relationships between urbanism and responsible environmental behaviour are negative and any increase in urbanism of sub samples may cause a corresponding decrease in their responsible environmental behaviour.
• 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.

The conclusion is substantiated by the following findings of the study.

• The co-efficient of correlation between urbanism and responsible environmental behaviour for male \((r = -0.65, t = 23.56, p < .01)\) and female \((r = -0.66, t = 28.53, p < .01)\)

• The co-efficient of correlation between urbanism and responsible environmental behaviour for rural school students \((r = -0.28, t = 9.51, p < .01)\) and urban school students \((r = -0.64, t = 22.32, p < .01)\)

• The co-efficient of correlation between urbanism and responsible environmental behaviour for government \((r = -0.67, t = 21.28, p < .01)\) aided \((r = -0.72, t = 30.58, p < .01)\) and unaided school students \((r = -0.31, t = 6.36, p < .01)\)

• The co-efficient of correlation between urbanism and responsible environmental behaviour of the students mother’s education level below SSLC \((r = -0.48, t = 13.84, p < .01)\), SSLC to degree \((r = -0.71, t = 33.45, p < .01)\) and above degree \((r = -0.53, t = 5.91, p < .01)\)

• The co-efficient of correlation between urbanism and responsible environmental behaviour of the students father’s education level below
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SSLC \((r=-.66, t=21.91, p<.01)\), SSLC to degree \((r=-.70, t=30.31, p<.01)\) and above degree \((r=-.28, t=4.37, p<.01)\)

- The co-efficient of correlation between urbanism and responsible environmental behaviour of the students with family monthly income, below 1000 \((r=-.68, t=17.74, p<.01)\), 1000-5000 \((r=-.60, t=21.95, p<.01)\), 5000-10000 \((r=-.66, t=14.19, p<.01)\), 10000-15000 \((r=-.76, t=18.04, p<.01)\) and above 15000 \((r=-.42, t=4.71, p<.01)\)

- The co-efficient of correlation between urbanism and responsible environmental behaviour of the students from nuclear type of family \((r=-.66, t=35.63, p<.01)\) and joint type of family \((r=-.71, t=11.53, p<.01)\)

- The co-efficient of correlation between urbanism and responsible environmental behaviour of the students who enrolled in nature club \((r=-.66, t=21.43, p<.01)\) and those who do not enrolled in nature club \((r=-.66, t=30.16, p<.01)\)

6.3.5.3 Relationship between Environmental Adaptation and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics

The relationships between environmental adaptation and responsible environmental behaviour are negative and any increase in environmental adaptation may cause a corresponding decrease in responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.

- The co-efficient of correlation between environmental adaptation and responsible environmental behaviour is, \( r = -.69, \ t = 40.94, \ p < .01 \)
- The co-efficient of correlation between environmental adaptation and actions (in total) is, \( r = -.70, \ t = 41.40, \ p < .01 \)
- The co-efficient of correlation between environmental adaptation and civic action is, \( r = -.45, \ t = 21.28, \ p < .01 \)
- The co-efficient of correlation between environmental adaptation and educational action is, \( r = -.62, \ t = 33.21, \ p < .01 \)
- The co-efficient of correlation between environmental adaptation and financial action is, \( r = -.53, \ t = 26.27, \ p < .01 \)
- The co-efficient of correlation between environmental adaptation and legal action is, \( r = -.50, \ t = 24.39, \ p < .01 \)
- The co-efficient of correlation between environmental adaptation and physical action is, \( r = -.53, \ t = 26.48, \ p < .01 \)
- The co-efficient of correlation between environmental adaptation and persuasion action is, \( r = -.55, \ t = 28.12, \ p < .01 \)
- The co-efficient of correlation between environmental adaptation and concernment (in total) is, \( r = -.53, \ t = 26.34, \ p < .01 \)
All the relationships between environmental adaptation and responsible environmental behaviour are negative and any increase in environmental adaptation of sub samples may cause a corresponding decrease in their responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.

- The co-efficient of correlation between environmental adaptation and responsible environmental behaviour for male ($r =-.77$, $t =33.46$, $p<.01$) and female($r=-.62$, $t =25.25$, $p<.01$)

- The co-efficient of correlation between environmental adaptation and responsible environmental behaviour for rural school students ($r=-.34$, $t =12.08$, $p<.01$) and urban school students ($r=-.55$, $t =17.79$, $p<.01$)

- The co-efficient of correlation between environmental adaptation and responsible environmental behaviour for government ($r=-.66$, $t =21.00$, $p<.01$) aided ($r =-.74$, $t =32.05$, $p<.01$) and unaided school students ($r =-.34$, $t =6.95$, $p<.01$)

- The co-efficient of correlation between environmental adaptation and responsible environmental behaviour of the students with mother’s education
level below SSLC ($r = -.62, t = 20.14, p < .01$), SSLC to degree ($r = -.71, t = 32.89, p < .01$) and above degree ($r = -.64, t = 7.79, p < .01$)

- The co-efficient of correlation between environmental adaptation and responsible environmental behaviour of the students with father’s education level below SSLC ($r = -.66, t = 21.91, p < .01$), SSLC to degree ($r = -.75, t = 34.66, p < .01$) and above degree ($r = -.23, t = 3.88, p < .01$)

- The co-efficient of correlation between environmental adaptation and responsible environmental behaviour of the students with family monthly income, below 1000 ($r = -.81, t = 25.97, p < .01$), 1000-5000 ($r = -.66, t = 25.58, p < .01$), 5000-10000 ($r = -.59, t = 11.71, p < .01$), 10000-15000 ($r = -.62, t = 12.10, p < .01$) and above 15000 ($r = -.662, t = 8.99, p < .01$)

- The co-efficient of correlation between environmental adaptation and responsible environmental behaviour of the students from nuclear type of family ($r = -.69, t = 38.77, p < .01$) and joint type of family ($r = -.78, t = 14.40, p < .01$)

- The co-efficient of correlation between environmental adaptation and responsible environmental behaviour of the students who enrolled in nature club ($r = -.66, t = 21.48, p < .01$) and those who do not enrolled in nature club ($r = -.72, t = 36.42, p < .01$)

6.3.5.4 Relationship between Environmental Trust and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics
The relationships between environmental trust and responsible environmental behaviour are positive and any increase in environmental trust may cause a corresponding increase in the responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.

- The co-efficient of correlation between environmental trust and responsible environmental behaviour is, $r = .49, t = 23.75, p < .01$

- The co-efficient of correlation between environmental trust and actions (in total) is, $r = .54, t = 27.39, p < .01$

- The co-efficient of correlation between environmental trust and civic action is, $r = .41, t = 19.09, p < .01$

- The co-efficient of correlation between environmental trust and educational action is, $r = .45, t = 21.28, p < .01$

- The co-efficient of correlation between environmental trust and financial action is, $r = .38, t = 17.61, p < .01$
• The co-efficient of correlation between environmental trust and legal action is, $r = .35, t = 15.97, p < .01$

• The co-efficient of correlation between environmental trust and physical action is, $r = .42, t = 19.94, p < .01$

• The co-efficient of correlation between environmental trust and persuasion action is, $r = .43, t = 20.06, p < .01$

• The co-efficient of correlation between environmental trust and concernment (in total) is, $r = .33, t = 14.85, p < .01$

All the relationships between environmental trust and responsible environmental behaviour are positive and any increase in environmental trust of the sub samples may cause a corresponding increase in their responsible environmental behaviour.

• 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.

The conclusion is substantiated by the following findings of the study.

• The co-efficient of correlation between environmental trust and responsible environmental behaviour for male ($r = .51, t = 16.29, p < .01$) and female ($r = .47, t = 17.06, p < .01$)
• The co-efficient of correlation between environmental trust and responsible environmental behaviour for rural school students \((r = .28, \: t = 9.59, \: p < .01)\) and urban school students \((r = .20, \: t = 5.46, \: p < .01)\)

• The co-efficient of correlation between environmental trust and responsible environmental behaviour for government \((r = .47, \: t = 12.56, \: p < .01)\), aided \((r = .46, \: t = 15.10, \: p < .01)\) and unaided school students \((r = .28, \: t = 5.69, \: p < .01)\)

• The co-efficient of correlation between environmental trust and responsible environmental behaviour of the students with mother’s education level below SSLC \((r = .39, \: t = 10.58, \: p < .01)\), SSLC to degree \((r = .53, \: t = 20.39, \: p < .01)\) and above degree \((r = .38, \: t = 3.87, \: p < .01)\)

• The co-efficient of correlation between environmental trust and responsible environmental behaviour of the students with father’s education level below SSLC \((r = .46, \: t = 13.20, \: p < .01)\), SSLC to degree \((r = .48, \: t = 16.87, \: p < .01)\) and above degree \((r = .25, \: t = 3.92, \: p < .01)\)

• The co-efficient of correlation between environmental trust and responsible environmental behaviour of the students with family monthly income, below 1000 \((r = .50, \: t = 11.04, \: p < .01)\), 1000-5000 \((r = .52, \: t = 17.45, \: p < .01)\), 5000-10000 \((r = .46, \: t = 8.32, \: p < .01)\), 10000-15000 \((r = .37, \: t = 6.18, \: p < .01)\) and above 15000 \((r = .36, \: t = 3.91, \: p < .01)\)

• The co-efficient of correlation between environmental trust and responsible environmental behaviour of the students from nuclear type of family \((r = .49, \: t = 23.05, \: p < .01)\) and joint type of family \((r = .38, \: t = 4.68, \: p < .01)\)
• The co-efficient of correlation between environmental trust and responsible environmental behaviour of the students who enrolled in nature club ($r = .47, t = 12.91, p < .01$) and those who do not enrolled in nature club ($r = .50, t = 20.03, p < .01$)

6.3.5.5 Relationship between Situational Factors and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics

The relationships between situational factors and responsible environmental behaviour are positive and any increase in situational factors may cause a corresponding increase in the responsible environmental behaviour.

• 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.

The conclusion is substantiated by the following findings of the study.

• The co-efficient of correlation between situational factors and responsible environmental behaviour is, $r = .80, t = 56.05, p < .01$
• The co-efficient of correlation between situational factors and actions (in total) is, \( r = .83, t = 63.45, p < .01 \)

• The co-efficient of correlation between situational factors and civic action is, \( r = .57, t = 29.70, p < .01 \)

• The co-efficient of correlation between situational factors and educational action is, \( r = .68, t = 39.07, p < .01 \)

• The co-efficient of correlation between situational factors and financial action is, \( r = .63, t = 34.73, p < .01 \)

• The co-efficient of correlation between situational factors and legal action is, \( r = .57, t = 29.47, p < .01 \)

• The co-efficient of correlation between situational factors and physical action is, \( r = .67, t = 38.33, p < .01 \)

• The co-efficient of correlation between situational factors and persuasion action is, \( r = .66, t = 37.41, p < .01 \)

• The co-efficient of correlation between situational factors and concernment (in total) is, \( r = .58, t = 30.48, p < .01 \)

All the relationships between situational factors and responsible environmental behaviour are positive and any increase in situational factors of the sub samples may cause a corresponding increase in their responsible environmental behaviour.

• 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.

The conclusion is substantiated by the following findings of the study.

- The co-efficient of correlation between situational factors and responsible environmental behaviour for male \((r = .83, t = 41.00, p < .01)\) and female \((r = .76, t = 37.88, p < .01)\)

- The co-efficient of correlation between situational factors and responsible environmental behaviour for rural school students \((r = .49, t = 18.72, p < .01)\) and urban school students \((r = .54, t = 17.10, p < .01)\)

- The co-efficient of correlation between situational factors and responsible environmental behaviour for government \((r = .81, t = 32.11, p < .01)\) aided \((r = .81, t = 40.75, p < .01)\) and unaided school students \((r = .45, t = 9.93, p < .01)\)

- The co-efficient of correlation between situational factors and responsible environmental behaviour of the students with mother’s education level below SSLC \((r = .75, t = 28.77, p < .01)\), SSLC to degree \((r = .81, t = 45.97, p < .01)\) and above degree \((r = .61, t = 7.18, p < .01)\)

- The co-efficient of correlation between situational factors and responsible environmental behaviour of the students with father’s education level below SSLC \((r = .79, t = 32.72, p < .01)\), SSLC to degree \((r = .82, t = 43.44, p < .01)\) and above degree \((r = .37, t = 5.98, p < .01)\)

- The co-efficient of correlation between situational factors and responsible environmental behaviour of the students with family monthly income, below
1000 ($r = .85$, $t = 30.57$, $p < .01$), 1000-5000 ($r = .76$, $t = 34.41$, $p < .01$), 5000-10000 ($r = .76$, $t = 18.72$, $p < .01$), 10000-15000 ($r = .80$, $t = 20.57$, $p < .01$) and above15000 ($r = .81$, $t = 13.85$, $p < .01$)

- The co-efficient of correlation between situational factors and responsible environmental behaviour of the students from nuclear type of family ($r = .80$, $t = 53.77$, $p < .01$) and joint type of family ($r = .79$, $t = 14.69$, $p < .01$)

- The co-efficient of correlation between situational factors and responsible environmental behaviour of the students who enrolled in nature club ($r = .80$, $t = 32.27$, $p < .01$) and those who do not enrolled in nature club ($r = .80$, $t = 46.10$, $p < .01$)

6.3.5.6 Relationship between Environmental Awareness and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics

The relationships between environmental awareness and responsible environmental behaviour are positive and any increase in environmental awareness may cause a corresponding increase in the responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.

- The co-efficient of correlation between environmental awareness and responsible environmental behaviour is, \( r = .55, t = 28.26, p < .01 \)
- The co-efficient of correlation between environmental awareness and actions (in total) is, \( r = .58, t = 30.16, p < .01 \)
- The co-efficient of correlation between environmental awareness and civic action is, \( r = .39, t = 18.10, p < .01 \)
- The co-efficient of correlation between environmental awareness and educational action is, \( r = .43, t = 20.34, p < .01 \)
- The co-efficient of correlation between environmental awareness and financial action is, \( r = .46, t = 22.00, p < .01 \)
- The co-efficient of correlation between environmental awareness and legal action is, \( r = .39, t = 17.83, p < .01 \)
- The co-efficient of correlation between environmental awareness and physical action is, \( r = .42, t = 19.83, p < .01 \)
- The co-efficient of correlation between environmental awareness and persuasion action is, \( r = .53, t = 26.41, p < .01 \)
- The co-efficient of correlation between environmental awareness and concernment (in total) is, \( r = .40, t = 18.70, p < .01 \)
All the relationships between environmental awareness and responsible environmental behaviour are positive and any increase in environmental awareness of the sub samples may cause a corresponding increase in their responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.

- The co-efficient of correlation between environmental awareness and responsible environmental behaviour for male ($r = .64$, $t = 22.89$, $p < .01$) and female ($r = .48$, $t = 17.67$, $p < .01$)
- The co-efficient of correlation between environmental awareness and responsible environmental behaviour for rural school students ($r = .38$, $t = 13.34$, $p < .01$) and urban school students ($r = .79$, $t = 34.16$, $p < .01$)
- The co-efficient of correlation between environmental awareness and responsible environmental behaviour for government ($r = .62$, $t = 18.58$, $p < .01$) aided ($r = .55$, $t = 19.26$, $p < .01$) and unaided school students ($r = .23$, $t = 4.59$, $p < .01$)
• The co-efficient of correlation between environmental awareness and responsible environmental behaviour of the students with mother’s education level below SSLC \((r = .40, \ t = 10.88, \ p < .01)\), SSLC to degree \((r = .59, \ t = 23.91, \ p < .01)\) and above degree \((r = .54, \ t = 6.03, \ p < .01)\)

• The co-efficient of correlation between environmental awareness and responsible environmental behaviour of the students with father’s education level below SSLC \((r = .60, \ t = 19.10, \ p < .01)\), SSLC to degree \((r = .56, \ t = 20.78, \ p < .01)\) and above degree \((r = .16, \ t = 2.38, \ p < .05)\)

• The co-efficient of correlation between environmental awareness and responsible environmental behaviour of the students with family monthly income, below 1000 \((r = .58, \ t = 13.36, \ p < .01)\), 1000-5000 \((r = .62, \ t = 22.89, \ p < .01)\), 5000-10000 \((r = .59, \ t = 11.68, \ p < .01)\), 10000-15000 \((r = .34, \ t = 5.67, \ p < .01)\) and above 15000 \((r = .84, \ t = 15.57, \ p < .01)\)

• The co-efficient of correlation between environmental awareness and responsible environmental behaviour of the students from nuclear type of family \((r = .57, \ t = 28.29, \ p < .01)\) and joint type of family \((r = .50, \ t = 6.62, \ p < .01)\)

• The co-efficient of correlation between environmental awareness and responsible environmental behaviour of the students who enrolled in nature club \((r = .61, \ t = 18.63, \ p < .01)\) and those who do not enrolled in nature club \((r = .53, t = 21.57, \ p < .01)\)
6.3.5.7 Relationship between Environmental Attitude and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics

The relationships between environmental attitude and responsible environmental behaviour are positive and any increase in environmental attitude may cause a corresponding increase in the responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.

- The co-efficient of correlation between environmental attitude and responsible environmental behaviour is, $r = .64$, $t = 35.19$, $p<.01$
- The co-efficient of correlation between environmental attitude and actions (in total) is, $r = .66$, $t = 37.21$, $p<.01$
- The co-efficient of correlation between environmental attitude and civic action is, $r = .49$, $t = 23.81$, $p<.01$
- The co-efficient of correlation between environmental attitude and educational action is, $r = .62$, $t = 33.65$, $p<.01$
- The co-efficient of correlation between environmental attitude and financial action is, $r = .41$, $t = 19.37$, $p<.01$
The co-efficient of correlation between environmental attitude and legal action is, $r = .47, t = 22.62, p<.01$

The co-efficient of correlation between environmental attitude and physical action is, $r = .48, t = 23.56, p<.01$

The co-efficient of correlation between environmental attitude and persuasion action is, $r = .48, t = 23.43, p<.01$

The co-efficient of correlation between environmental attitude and concernment (in total) is, $r = .47, t = 22.74, p<.01$

All the relationships are positive and any increase in environmental attitude of sub samples may cause an increase in responsible environmental behaviour of subsamples.

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.

The conclusion is substantiated by the following findings of the study.

The co-efficient of correlation between environmental attitude and responsible environmental behaviour for male ($r = .70, t = 27.31, p<.01$) and female ($r = .57, t = 22.23, p<.01$)

The co-efficient of correlation between environmental attitude and responsible environmental behaviour for rural school students ($r = .49, t = 18.62, p<.01$) and urban school students ($r = .53, t = 16.97, p<.01$)
Summary, Conclusions and Suggestions

- The co-efficient of correlation between environmental attitude and responsible environmental behaviour for government ($r = .76, t = 28.01, p < .01$) aided ($r = .43, t = 13.96, p < .01$) and unaided school students ($r = .46, t = 10.02, p < .01$).

- The co-efficient of correlation between environmental attitude and responsible environmental behaviour of the students with mother’s education level below SSLC ($r = .72, t = 26.47, p < .01$), SSLC to degree ($r = .62, t = 25.99, p < .01$) and above degree ($r = .43, t = 4.43, p < .01$).

- The co-efficient of correlation between environmental attitude and responsible environmental behaviour of the students with father’s education level below SSLC ($r = .73, t = 26.70, p < .01$), SSLC to degree ($r = .55, t = 20.24, p < .01$) and above degree ($r = .41, t = 6.81, p < .01$).

- The co-efficient of correlation between environmental attitude and responsible environmental behaviour of the students with family monthly income, below 1000 ($r = .74, t = 20.88, p < .01$), 1000-5000 ($r = .65, t = 25.04, p < .01$), 5000-10000 ($r = .65, t = 14.00, p < .01$), 10000-15000 ($r = .42, t = 7.24, p < .01$) and above 15000 ($r = .69, t = 9.71, p < .01$).

- The co-efficient of correlation between environmental attitude and responsible environmental behaviour of the students from nuclear type of family ($r = .65, t = 35.16, p < .01$) and joint type of family ($r = .38, t = 4.67, p < .01$).

- The co-efficient of correlation between environmental attitude and responsible environmental behaviour of the students who enrolled in nature club ($r = .73, t = 26.43, p < .01$) and those who do not enrolled in nature club ($r = .56, t = 23.64, p < .01$).
6.3.5.8 Relationship between Intention to Act and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics

The relationships between intention to act and responsible environmental behaviour are positive and any increase in intention to act may cause a corresponding increase in the responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.

- The co-efficient of correlation between intention to act and responsible environmental behaviour is, \( r = .60, t = 31.77, p < .01 \)

- The co-efficient of correlation between intention to act and actions (in total) is, \( r = .62, t = 33.21, p < .01 \)

- The co-efficient of correlation between intention to act and civic action is, \( r = .48, t = 22.99, p < .01 \)

- The co-efficient of correlation between intention to act and educational action is, \( r = .49, t = 24.00, p < .01 \)

- The co-efficient of correlation between intention to act and financial action is, \( r = .48, t = 22.99, p < .01 \)
• The co-efficient of correlation between intention to act and legal action is, \\
\[ r = .42, \ t = 19.66, \ p < .01 \]

• The co-efficient of correlation between intention to act and physical action is, \[ r = .40, \ t = 18.32, \ p < .01 \]

• The co-efficient of correlation between intention to act and persuasion action is, \[ r = .51, \ t = 25.32, \ p < .01 \]

• The co-efficient of correlation between intention to act and concernment (in total) is, \[ r = .44, \ t = 21.11, \ p < .01 \]

All the relationships are positive and any increase in intention to act of subsamples may cause an increase in responsible environmental behaviour of subsamples.

• 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.

The conclusion is substantiated by the following findings of the study.

• The co-efficient of correlation between intention to act and responsible environmental behaviour for male \( (r =.71, \ t =27.94, \ p < .01) \) and female \( (r =.45, \ t =16.09, \ p < .01) \)

• The co-efficient of correlation between intention to act and responsible environmental behaviour for rural school students \( (r =.43, \ t =15.56, \ p < .01) \) and urban school students \( (r =.81, \ t =36.85, \ p < .01) \)
• The co-efficient of correlation between intention to act and responsible environmental behaviour for government \((r = .58, t = 17.01, p < .01)\), aided \((r = .56, t = 19.76, p < .01)\) and unaided school students \((r = .44, t = 9.63, p < .01)\).

• The co-efficient of correlation between intention to act and responsible environmental behaviour of the students with mother’s education level below SSLC \((r = .51, t = 14.87, p < .01)\), SSLC to degree \((r = .62, t = 26.06, p < .01)\) and above degree \((r = .66, t = 8.18, p < .01)\).

• The co-efficient of correlation between intention to act and responsible environmental behaviour of the students with father’s education level below SSLC \((r = .57, t = 17.58, p < .01)\), SSLC to degree \((r = .60, t = 22.88, p < .01)\) and above degree \((r = .39, t = 6.47, p < .01)\).

• The co-efficient of correlation between intention to act and responsible environmental behaviour of the students with family monthly income, below 1000 \((r = .76, t = 22.41, p < .01)\), 1000-5000 \((r = .62, t = 23.07, p < .01)\), 5000-10000 \((r = .47, t = 8.58, p < .01)\), 10000-15000 \((r = .36, t = 6.01, p < .01)\) and above 15000 \((r = .84, t = 15.57, p < .01)\).

• The co-efficient of correlation between intention to act and responsible environmental behaviour of the students from nuclear type of family \((r = .60, t = 30.99, p < .01)\) and joint type of family \((r = .57, t = 8.01, p < .01)\).

• The co-efficient of correlation between intention to act and responsible environmental behaviour of the students who enrolled in nature club \((r = .57, t = 17.14, p < .01)\) and those who do not enrolled in nature club \((r = .62, t = 27.13, p < .01)\).
6.3.5.9 Relationship between Self-Efficacy and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics

The relationships between self-efficacy and responsible environmental behaviour are positive and any increase in self-efficacy may cause a corresponding increase in the responsible environmental behaviour.

- 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.

The conclusion is substantiated by the following findings of the study.

- The values of co-efficient of correlation between self-efficacy and responsible environmental behaviour is, \( r = .57, t = 29.70, p<.01 \)
- The values of co-efficient of correlation between self-efficacy and actions (in total) is, \( r = .58, t = 30.16, p<.01 \)
- The values of co-efficient of correlation between self-efficacy and civic action is, \( r = .53, t = 26.90, p<.01 \)
- The values of co-efficient of correlation between self-efficacy and educational action is, \( r = .51, t = 24.92, p<.01 \)
• The values of co-efficient of correlation between self-efficacy and financial action is, $r = .41$, $t = 19.26$, $p < .01$

• The values of co-efficient of correlation between self-efficacy and legal action is, $r = .35$, $t = 15.66$, $p < .01$

• The values of co-efficient of correlation between self-efficacy and physical action is, $r = .37$, $t = 17.07$, $p < .01$

• The values of co-efficient of correlation between self-efficacy and persuasion action is, $r = .41$, $t = 19.20$, $p < .01$

• The values of co-efficient of correlation between self-efficacy and concernment (in total) is, $r = .43$, $t = 20.40$, $p < .01$

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.

• 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.

The conclusion is substantiated by the following findings of the study.
• The co-efficient of correlation between self-efficacy and responsible environmental behaviour for male \( (r = .68, t = 25.48, p < .01) \) and female \( (r = .45, t = 16.55, p < .01) \)

• The co-efficient of correlation between self-efficacy and responsible environmental behaviour for rural school students \( (r = .50, t = 18.77, p < .01) \) and urban school students \( (r = .76, t = 31.32, p < .01) \)

• The co-efficient of correlation between self-efficacy and responsible environmental behaviour for government \( (r = .59, t = 17.05, p < .01) \) aided \( (r = .55, t = 19.16, p < .01) \) and unaided school students \( (r = .45, t = 9.96, p < .01) \)

• The co-efficient of correlation between self-efficacy and responsible environmental behaviour of the students with mother’s education level below SSLC \( (r = .56, t = 17.05, p < .01) \), SSLC to degree \( (r = .61, t = 25.05, p < .01) \) and above degree \( (r = .64, t = 7.92, p < .01) \)

• The co-efficient of correlation between self-efficacy and responsible environmental behaviour of the students with father’s education level below SSLC \( (r = .57, t = 17.35, p < .01) \), SSLC to degree \( (r = .57, t = 21.49, p < .01) \) and above degree \( (r = .41, t = 6.87, p < .01) \)

• The co-efficient of correlation between self-efficacy and responsible environmental behaviour of the students with family monthly income, below 1000 \( (r = .74, t = 20.64, p < .01) \), 1000-5000 \( (r = .55, t = 19.03, p < .01) \), 5000-10000 \( (r = .55, t = 10.69, p < .01) \), 10000-15000 \( (r = .13, t = 1.96, p < .05) \) and above 15000 \( (r = .85, t = 16.51, p < .01) \)
• The co-efficient of correlation between self-efficacy and responsible environmental behaviour of the students from nuclear type of family \((r = .57, t = 28.66, p < .01)\) and joint type of family \((r = .54, t = 7.39, p < .01)\).

• The co-efficient of correlation between self-efficacy and responsible environmental behaviour of the students who enrolled in nature club \((r = .57, t = 16.96, p < .01)\) and those who do not enrolled in nature club \((r = .58, t = 24.45, p < .01)\).

**6.3.5.10 Relationship between Barriers to Action and Responsible Environmental Behaviour of Secondary School Students of Kerala for the Total Sample and Relevant Socio-demographic Characteristics**

The relationships between barriers to action and responsible environmental behaviour are negative and any increase in barriers to action may cause a corresponding decrease in responsible environmental behaviour.

• 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.
The conclusion is substantiated by the following findings of the study.

- The values of co-efficient of correlation between barriers to action and responsible environmental behaviour is, $r = -.64$, $t = 35.19$, $p < .01$
- The values of co-efficient of correlation between barriers to action and actions (in total) is, $r = -.63$, $t = 34.28$, $p < .01$
- The values of co-efficient of correlation between barriers to action and civic action is, $r = -.46$, $t = 22.13$, $p < .01$
- The values of co-efficient of correlation between barriers to action and educational action is, $r = -.54$, $t = 27.04$, $p < .01$
- The values of co-efficient of correlation between barriers to action and financial action is, $r = -.40$, $t = 18.76$, $p < .01$
- The values of co-efficient of correlation between barriers to action and legal action is, $r = -.35$, $t = 15.66$, $p < .01$
- The values of co-efficient of correlation between barriers to action and physical action is, $r = -.50$, $t = 24.52$, $p < .01$
- The values of co-efficient of correlation between barriers to action and persuasion action is, $r = -.54$, $t = 27.61$, $p < .01$
- The values of co-efficient of correlation between barriers to action and concernment (in total) is, $r = -.50$, $t = 24.26$, $p < .01$

All the relationships are negative and any increase in barriers to action of subsamples may cause a decrease in responsible environmental behaviour of subsamples.
• 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.

The conclusion is substantiated by the following findings of the study.

• The co-efficient of correlation between barriers to action and responsible environmental behaviour for male ($r = -.55$, $t = 18.38$, $p < .01$) and female ($r = -.71$, $t = 32.93$, $p < .01$)

• The co-efficient of correlation between barriers to action and responsible environmental behaviour for rural school students ($r = -.45$, $t = 16.75$, $p < .01$) and urban school students ($r = -.43$, $t = 12.83$, $p < .01$)

• The co-efficient of correlation between barriers to action and responsible environmental behaviour for government ($r = -.68$, $t = 22.11$, $p < .01$) aided ($r = -.57$, $t = 20.18$, $p < .01$) and unaided school students ($r = -.47$, $t = 10.27$, $p < .01$)

• The co-efficient of correlation between barriers to action and responsible environmental behaviour of the students with mother’s education level below SSLC ($r = -.56$, $t = 17.05$, $p < .01$), SSLC to degree ($r = -.69$, $t = 31.36$, $p < .01$) and above degree ($r = -.69$, $t = 8.89$, $p < .01$)

• The co-efficient of correlation between barriers to action and responsible environmental behaviour of the students with father’s education level below
SSLC ($r = -0.67$, $t = 22.87$, $p < 0.01$), SSLC to degree ($r = -0.62$, $t = 24.23$, $p < 0.01$) and above degree ($r = -0.38$, $t = 6.24$, $p < 0.01$)

- The co-efficient of correlation between barriers to action and responsible environmental behaviour of the students with family monthly income, below 1000 ($r = -0.52$, $t = 11.58$, $p < 0.01$), 1000-5000 ($r = -0.62$, $t = 23.07$, $p < 0.01$), 5000-10000 ($r = -0.74$, $t = 18.04$, $p < 0.01$), 10000-15000 ($r = -0.85$, $t = 25.21$, $p < 0.01$) and above15000 ($r = -0.67$, $t = 9.21$, $p < 0.01$)

- The co-efficient of correlation between barriers to action and responsible environmental behaviour of the students from nuclear type of family ($r = -0.63$, $t = 33.52$, $p < 0.01$) and joint type of family ($r = -0.83$, $t = 17.30$, $p < 0.01$)

- The co-efficient of correlation between barriers to action and responsible environmental behaviour of the students who enrolled in nature club ($r = -0.67$, $t = 22.31$, $p < 0.01$) and those who do not enrolled in nature club ($r = -0.64$, $t = 28.90$, $p < 0.01$)
6.3.6 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

6.3.6.1 Determination of the Relative Contributions of Select Independent Variables (Environment Related Personality Variables, Situational Factors, Environmental Awareness, Environmental Attitude, Intention to Act, Self-Efficacy and Components of Barriers to Action (External Barriers and Internal Barriers) to the Prediction of Responsible Environmental Behaviour of Secondary School Students of Kerala

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.

- 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,

$(X_5) =$ Situational Factor

$(X_2) =$ Urbanism

$(X_7) =$ Environmental Attitude

$(X_{10}) =$ External Barriers
Thus it can be concluded that,

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

6.3.6.2 Determination of the Relative Contributions of Select Socio-Demographic Characteristics to the Prediction of Responsible Environmental Behaviour of Secondary School Students of Kerala

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 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,

\((x_3) = \text{Locale(dummy for Urban)}\)
Thus it can be concluded 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 10000to15000 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.

6.3.6.3 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

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.

- The prediction equation for responsible environmental behaviour using the factors (independent variables and socio-demographic characteristics) can be written as

$$y = 151.385 + .438 x_5 - 1.145 x_2 - 34.074 x_{14} + .359 x_7 + 2.194 x_6 - 6.987 x_{12} + .851 x_1 + 3.734 x_{22} - 14.087 x_{18} - 19.734 x_{21}$$

Where,

$(x_5) =$ Situational Factor

$(x_2) =$ Urbanism

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

$(x_7) =$ Environmental Attitude

$(x_6) =$ Environmental Awareness
Thus it can be concluded that,

- For a unit increase in the predictor variable, situational factor, responsible environmental behaviour (y) 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 (y) 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 (y) 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 (y) 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 (y) 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 (y) 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 above15000, responsible environmental behaviour (y) 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 (y) decreases by 19.374 units when the effects of other predictor variables are held constant.

6.4 TENABILITY OF HYPOTHESES

Establishing the tenability of hypotheses is an integral part of research. Based on the findings of the study the investigator made an attempt to find out the tenability of the hypotheses and found that all the three hypotheses are fully substantiated.

The tenability of hypotheses in this study is given below:

The first hypothesis, “there exists significant effect of select socio-demographic characteristics on responsible environmental behaviour of secondary school students of Kerala”, is accepted based on the findings of the study.
The second hypothesis, “there exists significant influence of each of the select independent variables on responsible environmental behaviour of secondary school students of Kerala”, is accepted based on the findings of the study.

The third hypothesis, “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”, is accepted based on the findings of the study.

6.5 IMPLICATIONS AND SUGGESTIONS BASED ON THE STUDY

The following suggestions are put forwarded based on the findings of the present study

- It has been found in the present study that the number of secondary school students who show high responsible environmental behavior is very less. The future of the nation rests in the hands of these children. If they are average or low in their responsible environmental behaviour, future of the country will not be a promising one especially in the field of environmental protection. So it is necessary to select strategies with action plans for modifying the behaviour of our students through planned strategies of environmental education.

- It has been found that students who enrolled in nature clubs had significantly higher responsible environmental behaviour than students who do not enrolled in nature clubs. Only one third of the total secondary school students have their enrolment in nature or eco clubs. Every school must have a nature club and compulsory enrollment of all the students in that club. Governments
need to ensure that schools are able to play a leading role in environmental education.

- It is found that there is no significant difference in actions of students who enrolled in nature clubs and students who do not enrolled in nature clubs. But students who enrolled in nature clubs had significantly higher concernment than students who do not enrolled in nature clubs. This indicates a need for including more participatory programmes in the regular activities of nature clubs in the secondary schools.

- Every school must be promoted to conduct nature camps in their locality to become aware of their natural environment and environmental issues to act responsibly. Thus, they can reduce their external barriers through these actions which will increase their responsible environmental behaviour.

- Developing packages to empower secondary school student’s responsible environmental behaviour giving special emphasis to their socio-demographic and cultural backgrounds.

- The teachers have a crucial role in the modification of behaviour of the students. So, education for sustainable development must be a compulsory part of the teacher education curriculum. Hence the teachers can coordinate and confirm the active participation of each and every student in the club activities.

- The present curriculum must be restructured so as to transmit the components of sustainable development to ensure the student’s responsible environmental behaviour to a higher level.
• Allow time in the school time table exclusively for nature club activities.

• Environment education must be compulsory for all disciplines in teacher education programmes. It must not be an elective only for science disciplines.

• Government should take necessary steps to start state and district level environmental education centers to coordinate environmental education programmes in the schools.

• Government should allocate adequate funds for the proper functioning of the nature and eco clubs in schools.

6.6 SUGGESTIONS FOR FURTHER RESEARCH

The following suggestions are made for further research based on the present study

• The present study is conducted among the secondary school students. It can be studied in students at other levels of Education.

• The present study had selected students from six districts of Kerala. This study can be repeated on a state wide sample.

• A study to develop a package to empower the secondary school student’s responsible environmental behaviour can be conducted.

• A study can be made much more extensive by incorporating certain factors like leadership styles, creativity that affects responsible environmental behaviour.
• An experimental study may be conducted to find out the effectiveness of teacher education programmes in strengthening the responsible environmental behaviour of the teacher educators.

• It may be valuable to study the responsible environmental behaviour of the students and people belonging to different regions and cultures.