



## AWARENESS OF ENVIRONMENTAL POLLUTION, ENVIRONMENTAL BEHAVIOR AND ACADEMIC ACHIEVEMENT OF COLLEGE STUDENTS – A CORRELATIONAL STUDY

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### ABSTRACT

*This paper is attempted to find out the relationship between Environmental pollution awareness and Environmental behavior, Environmental pollution awareness and Academic Achievement, Environmental behavior and Academic Achievement. It is a descriptive correlation study. Researchers conducted a survey on 346 sample students from college level. Two sets of questionnaire were framed for data collection. One questionnaire for measuring the Environmental pollution awareness, which consists of 25 multiple choice type questions from six dimension of pollution. Another questionnaire for measuring the Environmental behavior consist of 25 questions from six dimensions. The validity and reliability were checked by appropriate methods. Researchers constructed 15 null hypotheses for this study. Product moment method was used for estimating the correlation among different variables. After data analysis, researchers finally found positive correlation between Environmental awareness and Academic Achievement. Six null hypotheses found significant out of 15.*

**KEYWORDS:** Environmental pollution, Environmental awareness, Environmental behavior, Academic Achievement.

### 1.1 INTRODUCTION

In the present time of globalization, our natural environment and biodiversity are facing a huge negative impact by different type of pollution like – air pollution, water pollution, sound pollution, soil pollution, visual pollution, light pollution etc. Different human activities are responsible for most of the pollution. Basically we all know about the horrible future of earth, but we are not aware about the protection of our Environment and our behaviour are not at all pro-environmental towards our environment. This carelessness attitude can be harmful for the future generation. In this connection, researchers have review some literatures specially emphasize on Environmental pollution awareness and Environmental behaviour, like- Bhat, B.A.; Balkhi, M.H.; Wani, M.A.; Nusrat, Tiku, A.; Ganai, H.; & Tahira. (2016). Study on 'Environmental awareness among college students of Kashmir valley in the state of Jammu and Kashmir and their attitude towards Environmental Education'. There were four objectives in their study, viz. to find out the level of Environmental pollution awareness of college students, to find out the attitude of college students towards Environment, to find out the interest of participation in Environmental activities, and to measure the correlation among different variables. Researchers were conducted a survey on 400 sample of Kashmir valley. After data analysis, researchers revealed that, though students facing different natural ill conditions for Environmental hazards, but they are not aware towards their Environment and never interested in Environmental practice. And also found positive relationship between gender & Environmental awareness &

moderate relationship between gender & Environmental practice. In the study of Sivamoorthy, M.;Nalini,R.; &Kumar,C.S. (2013). Titled 'Environmental awareness and practices among college students' one of the objectives out of other objective is to find out the relationship between Environment & Environment friendly practice. Descriptive survey method was used for this study and finally found positive relationship between gender & Environmental awareness and moderate relationship between gender & Environment friendly practices. By inspiring this type of literature review, researchers have taken the present study.

### 1.2 OBJECTIVES OF THE STUDY:

Following are the objectives of the study:

- a) To find out the relationship between Environmental pollution awareness (EA) and Environmental behaviour (EB) of College students regarding Environmental pollution.
- b) To find out the relationship between Environmental pollution awareness (EA) and Academic achievement (AA) of College students regarding Environmental pollution.
- c) To find out the relationship between Environmental behaviour (EB) and Academic achievement (AA) of College students regarding Environmental pollution.

### 1.3 HYPOTHESIS OF THE STUDY:

Researchers framed the following null hypothesis for the present study:

**H<sub>0.1</sub>**: There is no significant relationship between EA and EB of students.

**H<sub>0.2</sub>**: There is no significant relationship between EA and AA of students.

**H<sub>0.3</sub>**: There is no significant relationship between EB and AA of students.

**H<sub>0.4</sub>**: There is no significant relationship between EA and EB of Science students.

**H<sub>0.5</sub>**: There is no significant relationship between EA and AA of Science students

**H<sub>0.6</sub>**: There is no significant relationship between EB and AA of Science students

**H<sub>0.7</sub>**: There is no significant relationship between EA and EB of Non-Science students.

**H<sub>0.8</sub>**: There is no significant relationship between EA and AA of Non-Science students.

**H<sub>0.9</sub>**: There is no significant relationship between EB and AA of Non-Science students.

**H<sub>0.10</sub>**: There is no significant relationship between EA and EB of Boys students.

**H<sub>0.11</sub>**: There is no significant relationship between EA and AA of Boys students

**H<sub>0.12</sub>**: There is no significant relationship between EB and AA of Boys students

**H<sub>0.13</sub>**: There is no significant relationship between EA and EB of Girls students.

**H<sub>0.14</sub>**: There is no significant relationship between EA and AA of Girls students.

**H<sub>0.15</sub>**: There is no significant relationship between EB and AA of Girls students.

### 1.4 METHODS OF THE STUDY

It is a Descriptive study. Researchers used survey method for data collection and analysed data in quantitative approach for identifying the correlation among EA, EB, and AA.

**1.5.1 Variables:** In this study, Researchers have considered three variables viz. Environmental pollution awareness, Environmental behaviour and Academic achievement of college students.

**1.5.2 Sample:** Researchers have collected data from 346 sample where the number of Science students are 185 (102 boys & 83 girls) and the number of Non science students are 161 (51 boys & 110 girls). Researchers have taken all the quantitative data from KalyaniMahavidyalaya.

**1.5.4 Tools:** Researchers have constructed two sets of questionnaire consisting of 25 question (each) from 6 different dimensions of pollution, like-Air, Water, sound, soil, plastic & visual. One questionnaire is prepared for measuring Environmental awareness, where Researchers used selection type test scoring key. And the questionnaire is prepared for measuring Environment friendly behaviour, where 5 point scale was used as answer key. Researchers have also collected Academic performance of students accompanied with the awareness measuring questionnaire.

**1.5.5 Statistical procedure:**

Researchers have used correlation for measuring the relation among EA & EB, EA&AA, EB&AA of college students. 0.01 & 0.05 level of significant are considered for testing the research hypotheses. Data was collected according four different strata, like Science & Non Science, Boys & Girls.

**1.5 ANALYSIS AND INTERPRETATION**

Researchers applied product moment method for finding the correlation between Environmental awareness & Environmental behaviour; Environmental awareness & Academic achievement; and Environmental behaviour & Academic achievement. Interpretation of data are presented below according to the research hypothesis.

**H<sub>0.1</sub>:** There is no significant relationship between EA and EB of students.

**TABLE: 1 Correlation value between EA& EB of students**

| Dimension                | df  | Correlation | Remark        |
|--------------------------|-----|-------------|---------------|
| EA& EB of total students | 346 | 0.06        | Insignificant |

Here, the calculated value of correlation is 0.06. This value is less than the table value at 0.05 level & 0.01 level. Therefore the correlation value is insignificant and the null hypothesis is accepted. Hence it can be said that there is no significant correlation between EA and EB of students.

**H<sub>0.2</sub>:** There is no significant relationship between EA and AA of students.

**TABLE: 2 Correlation value between EA& AA of students**

| Dimension                | df  | Correlation | Remark      |
|--------------------------|-----|-------------|-------------|
| EA& AA of total students | 346 | 0.21        | Significant |

Here, the calculated value of correlation is 0.22. This value is not less (greater) than the table value at 0.05 level & 0.01 level. Therefore the correlation value is significant and the null hypothesis is rejected. Hence it can be said that there is significant correlation between EA and AA of students.

**H<sub>0.3</sub>:** There is no significant relationship between EB and AA of students.

**TABLE: 3 Correlation value between EB & AA of students**

| Dimension                | df  | Correlation | Remark        |
|--------------------------|-----|-------------|---------------|
| EB& AA of total students | 346 | 0.05        | Insignificant |

Here, the calculated value of correlation is 0.05. This value is less than the table value at 0.05 level & 0.01 level. Therefore the correlation value is insignificant and the null hypothesis is accepted. Hence it can be said that there is no significant correlation between EB& AA of students.

**H<sub>0.4</sub>:** There is no significant relationship between EA and EB of Science students.

**TABLE: 4 Correlation value between EA& EB of Science students**

| Dimension                        | df  | Correlation | Remark        |
|----------------------------------|-----|-------------|---------------|
| EA& EB of total Science students | 183 | 0.09        | Insignificant |

Here, the calculated value of correlation is 0.09. This value is less than the table value at 0.05 level & 0.01 level. Therefore the correlation value is insignificant and the null hypothesis is accepted. Hence it can be said that there is no significant correlation between EA& EB of Science students.

**H<sub>0.5</sub>:** There is no significant relationship between EA and AA of Science students

**TABLE: 5 Correlation value between EA& AA of Science students**

| Dimension                        | df  | Correlation | Remark        |
|----------------------------------|-----|-------------|---------------|
| EA& AA of total Science students | 183 | 0.03        | Insignificant |

Here, the calculated value of correlation is 0.03. This value is less than the table value at 0.05 level & 0.01 level. Therefore the correlation value is insignificant and the null hypothesis is accepted. Hence it can be said that there is no significant correlation between EA& AA of Science students.

**H<sub>0</sub>6:**There is no significant relationship between EB and AA of Science students

**TABLE: 6 Correlation value between EB& AA of Science students**

| Dimension                        | df  | Correlation | Remark        |
|----------------------------------|-----|-------------|---------------|
| EB& AA of total Science students | 183 | -0.09       | Insignificant |

Here, the calculated value of correlation is -0.09. This value is less than the table value at 0.05 level & 0.01 level. Therefore the correlation value is insignificant and the null hypothesis is accepted. Hence it can be said that there is no significant correlation between EB & AA of Science students.

**H<sub>0</sub>7:**There is no significant relationship between EA and EB of Non-Science students.

**TABLE: 7 Correlation value between EA& EB of Non-Science students**

| Dimension                            | df  | Correlation | Remark        |
|--------------------------------------|-----|-------------|---------------|
| EA& EB of total Non-Science students | 161 | 0.001       | Insignificant |

Here, the calculated value of correlation is 0.001. This value is less than the table value at 0.05 level & 0.01 level. Therefore the correlation value is insignificant and the null hypothesis is accepted. Hence it can be said that there is no significant correlation between EA& EB of Non-Science students.

**H<sub>0</sub>8:**There is no significant relationship between EA and AA of Non-Science students.

**TABLE: 8 Correlation value between EA& AA of Non-Science students.**

| Dimension                             | df  | Correlation | Remark      |
|---------------------------------------|-----|-------------|-------------|
| EA& AA of total Non-Science students. | 161 | 0.22        | Significant |

Here, the calculated value of correlation is 0.22. This value is not less (greater) than the table value at 0.05 level & 0.01 level .Therefore the correlation value is significant and the null hypothesis is rejected. Hence it can be said that there is significant correlation between EA& AA of Non-Science students.

**H<sub>0</sub>9:** There is no significant relationship between EB and AA of Non-Science students.

**TABLE: 9 Correlation value between EB& AA of Non-Science students**

| Dimension                            | df  | Correlation | Remark      |
|--------------------------------------|-----|-------------|-------------|
| EB& AA of total Non-Science students | 161 | 0.29        | Significant |

Here, the calculated value of correlation is 0.29. This value is not less (greater) than the table value at 0.05 level & 0.01 level .Therefore the correlation value is significant and the null hypothesis is rejected. Hence it can be said that there is significant correlation between EB& AA of Non-Science students.

**H<sub>0</sub>10:**There is no significant relationship between EA and EB of Boys students.

**TABLE: 10 Correlation value between EA& EB of Boys students**

| Dimension                     | df  | Correlation | Remark        |
|-------------------------------|-----|-------------|---------------|
| EA& EB of total Boys students | 153 | 0.13        | Insignificant |

Here, the calculated value of correlation is 0.13. This value is less than the table value at 0.05 level & 0.01 level .Therefore the correlation value is insignificant and the null hypothesis is accepted. Hence it can be said that there is no significant correlation between EA& EB of Boys students.

**H<sub>0</sub>11:**There is no significant relationship between EA and AA of Boys students

**TABLE: 11 Correlation value between EA& AA of Boys students**

| Dimension                     | df  | Correlation | Remark      |
|-------------------------------|-----|-------------|-------------|
| EA& AA of total Boys students | 153 | 0.27        | Significant |

Here, the calculated value of correlation is 0.27. This value is not less (greater) than the table value at 0.05 level & 0.01 level .Therefore the correlation value is significant and the null hypothesis is rejected. Hence it can be said that there is significant correlation between EA& AA of Boys students.

**H<sub>0</sub>.12:** There is no significant relationship between EB and AA of Boys students

**TABLE: 12 Correlation value between EB and AA of Boys students**

| Dimension                     | df  | Correlation | Remark        |
|-------------------------------|-----|-------------|---------------|
| EB& AA of total Boys students | 153 | 0.08        | Insignificant |

Here, the calculated value of correlation is 0.08. This value is less than the table value at 0.05 level & 0.01 level .Therefore the correlation value is insignificant and the null hypothesis is accepted. Hence it can be said that there is no significant correlation between EB and AA of Boys students.

**H<sub>0</sub>.13:**There is no significant relationship between EA and EB of Girls students.

**TABLE: 13 Correlation value between EA and EB of Girls students.**

| Dimension                       | df  | Correlation | Remark        |
|---------------------------------|-----|-------------|---------------|
| EA &EB of total Girls students. | 193 | 0.10        | Insignificant |

Here, the calculated value of correlation is 0.10. This value is less than the table value at 0.05 level & 0.01 level .Therefore the correlation value is insignificant and the null hypothesis is accepted. Hence it can be said that there is no significant correlation between EA and EB of Girls students.

**H<sub>0</sub>.14:**There is no significant relationship between EA and AA of Girls students.

**TABLE: 14 Correlation value between EA and AA of Girls students**

| Dimension                      | df  | Correlation | Remark      |
|--------------------------------|-----|-------------|-------------|
| EA& AA of total Girls students | 153 | 0.26        | Significant |

Here, the calculated value of correlation is 0.26. This value is not less (greater) than the table value at 0.05 level & 0.01 level .Therefore the correlation value is significant and the null hypothesis is rejected. Hence it can be said that there is significant correlation between EA and AA of Girls students

**H<sub>0</sub>.15:**There is no significant relationship between EB and AA of Girls students.

**TABLE: 15 Correlation value between EB and AA of Girls students**

| Dimension                      | df  | Correlation | Remark      |
|--------------------------------|-----|-------------|-------------|
| EB& AA of total Girls students | 153 | 0.17        | Significant |

Here, the calculated value of correlation is 0.26. This value is not less (greater) than the table value at 0.05 level. Therefore the correlation value is significant at 0.05 level and the null hypothesis is rejected. Hence it can be said that there is significant correlation between EB and AA of Girls students.

**1.6 FINDINGS OF THE STUDY:**

After considering the hypotheses testing, the researcher finally found that –

- There is no significant relationship between Environmental awareness and Environmental behaviour of students.
- There is significant relationship between Environmental awareness and Academic Achievement of students.
- There is no significant relationship between Environmental awareness and Environmental behaviour of students.
- There is no significant relationship between Environmental awareness and Academic Achievement of science students.
- There is no significant relationship between Environmental awareness and Academic Achievement of science students.

- There is no significant relationship between Environmental behaviour and Academic Achievement of science students.
- There is no significant relationship between Environmental behaviour and Environmental behaviour of Non-science students
- There is significant relationship between Environmental awareness and Academic Achievement of Non-science students.
- There is significant relationship between Environmental behaviour and Academic Achievement of Non-science students.
- There is no significant relationship between Environmental awareness and Environmental behaviour of boys.
- There is significant relationship between Environmental awareness and Academic Achievement of boys.
- There is no significant relationship between Environmental behaviour and Academic Achievement of boys.
- There is no significant relationship between Environmental awareness and Environmental behaviour of girls.
- There is significant relationship between Environmental awareness and Academic Achievement of girls.
- There is significant relationship between Environmental behaviour and Academic Achievement of girls.

### 1.7 CONCLUSION

Present study calculates the relationship between Environmental pollution awareness and Environmental behaviour, Environmental awareness and Academic Achievement, and also relationship between Environmental behaviour & Academic Achievement. After statistical data analysis, researchers revealed six (6) positive correlation out of 15 hypotheses. Researchers did not find any relationship between Environmental pollution awareness and Environmental Behaviour of college students from any stream or gender. But, they found positive correlation between Environmental pollution awareness and Academic Achievement of college students. They found positive correlation in case of total students, total Non-science students, total boys, and total girls. Only, in the case of total science students, there was no correlation between Environmental pollution awareness and Academic Achievement. Researchers also found positive correlation between Environmental behaviour & Academic Achievement in the case of total Non-science students and total girls. Chandler, K.; & Swartzentruber, M. (2011). In the study on 'A correlation study of nature awareness and science achievement' and found positive relationship between Environmental awareness and Academic grade of science subject. This finding is as similar as present study. In this sense, this study is relevant in present context. .

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