

Environmental Awareness of High School Students

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Abstract: “The first step towards maintaining the environment is raising people's awareness of it” (Chandra and Kumar, 2025). Therefore, this investigation was conducted to find out the environmental awareness level of high school students of Chandel District, Manipur using some dependent variables that might affect the level. The sample consist of 200 student respondents studying in class IX and X from the three randomly selected schools (one private and two government run schools) located at Chandel District, Manipur. Environmental Awareness Ability Measure scale constructed and validated by Dr. Praveen Kumar Jha was used as a tool of the research. Results indicated that 93% of the students under study possesses high and above average environmental awareness. It was concluded from the mean scores that female students, private students, class X students, day scholar students and students from joint family background were observed to be more environmentally aware from their respective counterparts. Further, the results showed the difference in the environmental awareness between class IX and X students and also between joint family background and nuclear family background students were statistically significant.

Keywords: Environmental Awareness, High School Students, Chandel District, Manipur.

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I. INTRODUCTION

“The relationship between humans and nature tends to exploit nature or the environment on a large scale” (Adriyanto et al., 2021). Many human activities involving exploitation of nature have led to significant ecological and environmental degradation. “Environmental degradation is one of the most complex and pressing global challenges of the 21st century” (Nuta et al., 2025). “The increasing population and changing lifestyles of the people contribute tremendously towards increasing environmental issues at global, regional and local level” (Narwal, 2021). “To reverse this trend, it has become increasingly obvious that people must become aware of the seriousness of the situation” (Mene and Chauhan, 2017). As the worlds faces an increasing array of environmental challenges, such as climate change, bio-diversity loss, deforestation, pollution, and the depletion of natural resources, fostering a deeper understanding of environmental systems and sustainable practices has become imperative (Barman, 2025). “Since, the present problems result largely from ignorance and different trend of continued misuse of the environment can, however, be altered by creating awareness among people of how man’s activities effect the environment for good or ill” (Sindhu and Singh, 2014). “In a world where environmental degradation is a growing concern, it’s more critical than ever for people to understand the importance of

environmental awareness and the role of education in it” (Rajeswari and Liju, 2024). “In the existing scenario, knowing, identifying, and familiarizing ourselves with our environmental surroundings has made us aware of the crucial danger that it is in” (Mahanta and Sarkar, 2023). “As global citizens, we need to develop environmental awareness to protect the environment” (Thanakhong and Kaowiwattanukul, 2024). It is widely accepted that environmental awareness leads to intentions to act on environmentally friendly behaviour. When people are aware of the environmental impacts brought by their own practices or actions, they might feel guilt for destroying their own environment (Handoyo et al., 2021). Environmentally aware citizens are widely considered a fundamental prerequisite and the essential first step towards saving the environment. True environmental awareness acts as a catalyst for behavioral change, transforming individuals from passive observers into active participants in conservation. “Environmental awareness, taking environmental responsibility and shaping environmental citizenships, as well as understanding the personal and social environmental role in the world, is an important prerequisite for a shift towards achieving sustainability of the development of environment and the world” (Mravcová, 2019). “A well-informed public is essential for achieving lasting sustainability, ensuring that future generations can enjoy a healthy planet and thriving

communities” (Bala, 2025). Environmental awareness is also crucial for a healthy environment and it plays an important role in creating a pollution-free environment (Mahanta and Sarkar, 2023). “Therefore, if we want to sustain the beautiful life which we have on earth, and wish to bequeath a clean and safe earth to our posterity, topmost importance should be given on creating environmental awareness amongst the students through environmental education” (Sahidullah, 2022). If the awareness to protect environment manifests in the form of execution, then the world will be a better place to live in (Chakraborty, 2023).

Being aware of one's surroundings is what the phrase "environmental awareness" implies. The phenomenon known as "environmental awareness" aids in the development of social groups' and individuals' sensitivity to and understanding of the environment as a whole as well as the issues that surround it (Yadav et al., 2019). Each and every one need to be made aware that we need to curb certain actions that lead to environmental degradation for the betterment of humanity since awareness can bring about desirable attitude and change in the actions of human being (Lalmangaihuali and Zohmingliani, 2021).

“The role of the schools is very critical to the development of students who are environmentally aware and environmentally conscious” (Okit and Pazaulan, 2021). Students may play an essential role in bringing about positive change in their surroundings and communities by developing a sense of responsibility and proactive citizenship (Sood, 2023). Their role would go a long way in achieving such desired goals. In order to faster their awareness towards environment, it is necessary to know what levels of awareness they possess in these areas (Shobeiri et al., 2007).

II. NEED & SIGNIFICANCE OF THE STUDY:

“Environmental awareness is a concern towards environment or environmental problem. In other word we can say understanding of natural system combine with how they insert with human social systems. It implies not only knowledge about environment but also attitude, values and necessary skills to solve environmental related problems. Moreover, environmental awareness is the initial step ultimately leading to the ability to carry on responsible behavior by citizens” (Bhartiya, 2017).

“The role of the schools is very critical in order to develop environmentally-aware and ecologically conscious students” (Rogayan Jr and Nebrida, 2019). “Environmental awareness at school level is most effective because students at the school level can understand it very quickly and also school education provides a vast platform for creating awareness” (Kumar, 2019).

Considering the importance of environmental awareness and its role in protection and conservation of the environment for a better world for the future, the investigators feel it imperative to conduct research in this area. Moreover, the area selected for research i.e. Chandel District of Manipur is a hilly area and initiating such type of research will help

students in gaining knowledge and love regarding their surrounding natural environment and also understand the importance and value of protecting the environment for future generations.

III. OBJECTIVES AND HYPOTHESES OF THE STUDY

➤ Objectives:

- To access environmental awareness level of high school students of Chandel District, Manipur.
- To investigate whether there is any significant difference between the environmental awareness of high school students of Chandel District, Manipur based on different variables.

➤ Hypotheses:

The following null hypotheses were framed based on the objectives mentioned above:

- Ho₁: There is no significant difference between male and female high school students in their awareness regarding environment.
- Ho₂: There is no significant difference between high school students of government and private school in their awareness about environment.
- Ho₃: There is no significant difference between class X and IX high school students in their level awareness about environment.
- Ho₄: There is no significant difference between day scholar and hosteler high school students in their level awareness about environment.
- Ho₅: There is no significant difference between high school students from nuclear family and joint family in their level awareness about environment.

IV. RESEARCH METHODOLOGY

A. Sample

Three schools (one private i.e. St. Peter's Higher Secondary School and two government viz. Model Residential School and Maha Union Government Higher Secondary School) were selected randomly from Chandel District, Manipur. A sample population of 200 high school students reading in class IX and X from these schools were selected following random sampling method.

B. Variables of the Study

➤ Independent Variables:

- Gender
- Type of school management (Government/Private)
- Standard (IX /X)
- Nature of residence (Day scholar/Hosteler)
- Type of family (Nuclear/Joint)

➤ *Dependent Variables:*

- Environmental Awareness

C. *Research Tools Used:*

The research tools used for the collection of primary data were:

➤ *Demographic Questionnaire:*

A Demographic Questionnaire was used to get the information about students’ gender, type of their school management, their current class, nature of their residence, their type of family etc.

➤ *Environmental Awareness Test:*

Environmental Awareness Ability Measure (EAAM) was used for measuring students’ environmental awareness level. The scale was developed by Dr. Praveen Kumar Jha and this test measures the awareness of high school to college level students.

D. *Procedure For Collection of Data:*

The above two different forms of questionnaires were administered to the student respondents and the responses made by them were scored, tabulated and analyzed.

E. *Statistical Tools Used:*

The statistical techniques used in this investigation were:

➤ *Descriptive Analysis:*

The percentage, means and standard deviations for all the raw scores for the entire sample and its sub-samples

➤ *Differential Analysis:*

The t-test was used to check the difference between any two means of the environmental awareness scores for every dependent variable

V. **DATA ANALYSIS, INTERPRETATION AND DISCUSSION OF RESULTS**

A. *General Discussion:*

According to the scoring norm of the original environmental awareness ability measure scale, the maximum possible score was 102 and the minimum score was 0. The maximum score of the present investigation was 90 while the minimum score was 57. The entire sample had a mean value of 83.24 with a standard deviation of 6.70.

Raw score range	Grade	Level	N	Percentage respondents
99 & above	A	Extremely high	0	0%
87 to 98	B	High	83	41.5%
75 to 86	C	Above average	103	51.5%
59 to 74	D	Average/Moderate	11	5.5%
47 to 58	E	Below average	03	1.5%
35 to 46	F	Low	0	0%
34 & below	G	Extremely low	0	0%

Among the sample of 200 student respondents, responses were categorized as follows: 41.5% high, 51.5% above average, 5.5% average or moderate, and 1.5% below average. There were no student respondents of extremely high, low and extremely low levels (See Table No. 1).

B. *Hypothesis Testing:*

The already framed hypotheses were tested using the collected raw data and the results and findings were presented. Because the sample all sizes were greater than 30, the researchers used standard t-ratio values to evaluate

significance at the 0.05 and 0.01 levels. For each hypothesis, the investigators calculated the mean, standard deviation, and t-ratio from the collected data. These calculated values were compared against standard critical values (1.96 and 2.58) to determine if the results were significant at the 0.05 or 0.01 levels.

➤ *Hypothesis No. 1:*

There is no significant difference between male and female high school students in their awareness regarding environment.

Group	N	Mean	Standard Deviation	T-Ratio	Significance
Male	100	82.58	7.37	1.393	Insignificant at both 0.05 and 0.01 levels of significance.
Female	100	83.89	5.90		

Comparison of mean scores indicated that female high school students tend to have a slightly higher level of environmental awareness compared to their male counterparts. However, the calculated t-ratio of 1.393 was smaller than the critical values of 1.96 and 2.58, indicating statistical insignificance at both the 0.05 and 0.01 levels. Therefore, it could be concluded that male and female high

school students did not differ in their environmental awareness level and so the hypothesis framed regarding gender of high school students of Chandel District, Manipur was retained (See Table No. 2).

➤ *Hypothesis No. 2:*

There is no significant difference between high school students of government and private school in their awareness about environment.

Group	N	Mean	Standard Deviation	T-Ratio	Significance
Government School	100	83.20	8.39	0.074	Insignificant at both 0.05 and 0.01 levels of significance.
Private School	100	83.27	4.44		

It could be deduced from the above Table No. 3 that the calculated t-ratio value of was 0.074, suggesting that there was no significant difference in environmental awareness level of high school students of government run and private run schools in the Chandel District of Manipur. Therefore, the hypothesis framed regarding the comparison between high

school students of government and private schools was also retained.

➤ *Hypothesis No. 3:*

There is no significant difference between class X and IX high school students in their level awareness about environment.

Group	N	Mean	Standard Deviation	T-Ratio	Significance
Class X	100	86.04	4.60	6.523	Significant at both 0.05 and 0.01 levels of significance.
Class IX	100	80.43	7.29		

It was evident from the value of t-ratio calculated for the comparison of environmental awareness level between high school students of class X and IX that their difference was statistically significant. The mean scores further indicated that class X high school students were more environmentally aware compared with class IX students of the studied district;

therefore, the hypothesis framed in this regard was rejected (See Table No. 4).

➤ *Hypothesis No. 4:*

There is no significant difference between day scholar and hosteler high school students in their level awareness about environment.

Group	N	Mean	Standard Deviation	T-Ratio	Significance
Day Scholar	80	81.60	6.29	0.063	Not significant at 0.05 and 0.01 levels of significance.
Hosteler	65	81.54	5.35		

The mean scores of day scholars and hostellers high school indicated that day scholar students were slightly more environmentally aware than those residing in the hostel; however, the t-test result suggests that this difference was not statistically significant at either level of significance. So, there was no strong evidence to conclude that a significant difference in the environmental awareness between day scholar and hosteler high school students of Chandel District,

Manipur. Again, the hypothesis framed for comparison between day scholars and hostellers students stands accepted (See Table No. 5).

➤ *Hypothesis No. 5:*

There is no significant difference between high school students from nuclear family and joint family in their level awareness about environment.

Group	N	Mean	Standard Deviation	T-ratio	Significance
Nuclear Family	78	81.78	6.52	2.505	Significant at 0.05 level but not significant at 0.01 level.
Joint Family	122	84.16	6.67		

It was noticed from the mean scores of above Table No. 6 that students from joint family were more environmentally aware than students from nuclear family. Also, the t-test result indicated that environmental awareness level was significantly different between the two groups at the 0.05 level, but not at the 0.01 level. So, it could be concluded that there was slight significance between students from joint family and students from nuclear family background with respect to their level of environmental awareness.

VI. MAJOR FINDINGS

- 41.5% of high students of Chandel District, Manipur showed high environmental awareness.
- Environmental awareness was above average among 51.5% of the student respondents.
- 5.5% of student respondents had an average or moderate environmental awareness.

- Only 1.5% of the student respondents showed below average level of environmental awareness.
- None of the high school students in Chandel District, Manipur, exhibited extremely high, low, or extremely low levels of environmental awareness.
- Environmental awareness of female high school students was more as compared to male high school students of Chandel District, Manipur but their levels of difference was not statistically significant.
- No significant difference was observed in the environmental awareness of high school students from government and private schools, although mean scores suggested slightly higher awareness among private school students.
- Significantly, class X high school students were more environmentally aware when compared with class IX of Chandel District, Manipur.
- Insignificant difference of environmental awareness was observed between day scholar students and hostelers, though day scholars were more environmentally aware than hostelers as indicated by their mean scores.
- A slight difference in the level of environmental awareness was observed between students from joint families and those from nuclear families, with students from joint family backgrounds showing a comparatively higher level of awareness.

VII. CONCLUSION

The present investigation assessed environmental awareness of high school students located at Chandel District, Manipur. Although the overall findings indicated a higher environmental awareness level among high school students in this hilly district under study, the investigators feel there is still need to conduct further research in this field in the study area so that students can translate their awareness into concrete actions that benefit the environment and society.

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