

A Study on the Environmental Awareness of Students Studying at Secondary Level in Government Schools of South Sikkim

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Abstract

We all are grateful for what our environment has and is giving us for our survival. It is much needed to transfer this knowledge to younger generation and so incorporation of environmental awareness is important in school curriculum so that students are made aware and will be able to develop positive attitude towards it. Further, they will be able to gain knowledge on ways of sustaining the environment. Hence, this paper is an attempt to understand the attitude of students of Government Secondary School towards environmental protection and the level of awareness they have on the impact of environmental degradation. For this, Environment Ability Awareness Measure (EAAM) was used which was constructed and standardized by P. K. Jha (1998).

Keywords: Awareness, Environmental awareness, Secondary school students.

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I. INTRODUCTION

Environment includes everything that we need for our survival such as air, water, soil, other living organisms etc. It basically consists of following components:

- Natural component: It includes the living i.e. biotic factors and non-living i.e. abiotic factors which exist naturally. Biotic component includes plants, animals and micro-organisms whereas abiotic factors include water, air, soil, temperature, light etc.
- Human component: It includes exclusively human beings who can modify the natural components into different forms.
- Man made components: It includes all manmade structures that exist on earth, modified and built by humans such as the bridges, roads, buildings, monuments, etc. which are not natural.

Environmental awareness is an ideology that evokes the necessity and responsibility of humans to respect, protect, and preserve the natural world from its anthropogenic afflictions. Environmental awareness is to understand the fragility of our environment and the importance of its protection. It also means having knowledge and information regarding environment viz. pollution, population explosion, deforestation, energy crisis, land use etc. Environment awareness provides power to recognize the interdependence among living and non-living things; to take decisions individually and collectively and initiate for conservation of nature and natural resources; to make people aware about effective use of environmental resources.

Today due to pressures of overpopulation, industrialization, overconsumption of natural resources, advancement in technology etc. bio-physical environment is degrading.

A report in 2020, by the World Wildlife Fund found that human activity, specifically overconsumption, population growth and intensive farming, has destroyed 68% of vertebrate wildlife since 1970. The Global Assessment Report on Biodiversity and Ecosystem Services posts that roughly one million species of plants and animals face extinction from anthropogenic causes, such as expanding human land use for industrial agriculture and livestock rearing, along with overfishing.¹

Environmental education does not advocate a particular viewpoint or course of action. Rather, environmental education teaches individuals how to weigh various sides of an issue through critical

Thinking and it enhances their own problem-solving and decision-making skills. Humans have moral obligation to protect the environment and promote the sustainable development of the planet for future generations. Environmental degradation is detrimental and is jeopardising the long-term health and security of animals, plants and humans. Now more than ever, it is important that we understand the impact of our actions on the environment. In order to become more environmentally aware, we also need to take measures to protect the planet and hopefully undo some of the damage already caused by human activity.

II. REVIEW OF RELATED LITERATURE

There are number of studies that have been investigated on the environmental awareness among secondary school students. The investigator has attempted to review the existing works which are closely related with the undertaken study.

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¹WWF (2020) Living Planet Report 2020 – Bending the curve of biodiversity loss. Almond, R.E.A., Grooten M. and Peterson, T., (Eds). WWF, Gland, Switzerland.

Filippos Zachariou, Iro Voulgari, Eline Tsami and Sotirios Bersimis (2019) conducted a study to explore the attitudes of secondary education students towards environmental problems and environmental education in Viotia Prefecture in Greece. Data were collected 1059 numbers of students. The major findings indicated that the more aware of the environmental problems the students were, the more willing they were to participate in environmental education programmes. Md. Mohmood Alam (2018) undertook a study to ascertain the environmental of senior secondary school students in Sambal district, U.P. This study revealed a significant difference in environmental awareness of senior secondary school students across gender. Neeru Rathee & Suman Thakran (2017) conducted a study to examine the environmental awareness among secondary school students of Rohtak district, Haryana. This study found that there exists no significant difference in environmental awareness of rural and urban secondary school students. Also, it found that there exists no significant difference in environmental awareness of male and female secondary school students. Kuldeep Singh Katoch (2017) studied environmental awareness and attitude of school students towards environment in Shimla. This study deduced that both male and female have equal awareness towards environment and female students are having better attitude towards environment than male students. Seyide Eroglu, Oktay Bektas and Aysegul Tarkin (2016) conducted a study to explore perceptions of 10th graders towards environmental issues. Data were collected from 5 high school students through semi structured interviews and analyzed by doing content analysis. This study revealed that students have misconception towards the issues of global warming, greenhouse effects, ozone layer depletion and acid rain. Poonam Pandey (2014) undertook a study on environmental awareness ability of higher secondary school students of Ahmadabad district of Gujarat. Types of schools were considered as granted and non-granted and urban and rural. No significance difference was found in the environmental awareness ability with respect to the type of school and with locale.

III. NEED AND JUSTIFICATION OF THE STUDY

The investigator attempt to carry out this research work with an aim to understand the attitude of secondary school students towards environmental protection and the level of awareness they have on the impact of environmental degradation.

IV. OPERATIONAL DEFINITION OF KEY TERMS USED

- i. **Secondary level students:** Students studying in classes IX and X are referred as secondary school students.
- ii. **Awareness:** Awareness is the knowledge that something exists. It is an understanding of a situation or a subject at the present time based on information or experience.

- iii. **Environmental awareness:** Environmental awareness is to understand the fragility of environment and the importance of its protection.

V. OBJECTIVES OF THE STUDY

1. To find out the extent of environmental awareness of students studying at secondary level in South Sikkim.
2. To find out the difference in environmental awareness among secondary level students of South Sikkim with respect to their locale.
3. To find out the difference in environmental awareness among secondary level students of South Sikkim with respect to their sex.
4. To give probable suggestions and recommendations.

VI. NULL HYPOTHESES

1. There exists no significant difference in environmental awareness among secondary level students of South Sikkim with respect to their locale.
2. There exists no significant difference in environmental awareness among secondary level students of South Sikkim with respect to their sex.

VII. DELIMITATION OF THE STUDY

The present study is delimited to 80 secondary school students (either studying in classes IX or X) where 20 were female and 20 were male students. These students were selected from 40 schools located in rural and 40 schools located in urban locale in South Sikkim.

VIII. METHODOLOGY

Descriptive survey method has been applied to conduct the present study. Population consist of students studying in classes IX and X in various secondary and senior secondary government schools in South Sikkim. Sample of 80 students were drawn out randomly from the population.

Tool used to collect data was Environmental Awareness Ability Measure (EAAM) constructed and standardized by Praveen Kumar Jha (1998). Collected data were analysed by applying Pearson's Coefficient of Correlation.

IX. ANALYSIS AND INTERPRETATION OF DATA

Data analysis and their interpretation are as follows as per objectives and null hypotheses of the study:

1. *The extent of environmental awareness of students studying at secondary level in South Sikkim.*

Mean score was used for each variables to determine the extent of environmental awareness among the sample. The values of standard deviation were used to measure the dispersion of scores in distribution. The t-value (critical ration) was calculated to test the significance of difference in the means of environmental awareness scores for the samples.

Table 1: Classification of Environmental Awareness of Students Studying at Secondary Level in South Sikkim, (N=80)

C.I	F	Statistics	Score Range	z-score Range	No.	%	Grade	Level
101 – 110	1	N = 80	90 & above	+2.01 & above	7	8.75	A	Extremely high
91 – 100	6		87 to 98	+1.26 to 2.00	3	3.75	B	High
81 – 90	32	M = 78.14	75 to 86	+0.51 to 1.25	49	61.25	C	Above average
71 – 80	25		59 to 74	-0.50 to +0.50	17	21.25	D	Average/ moderate
61 – 70	12	SD = 9.61	47 to 58	-1.25 to 0.51	4	5	E	Below average
51 – 60	4		35 to 46	-2.00 to -1.26	0	0	F	Low
			34 & below	-2.01 & below	0	0	G	Extremely low
Σ = 10	80				80	100		

The above table shows that:

- None of the students fall under the category of low and extremely low environmental awareness level.
 - Least numbers of student are having high, extremely high and below average environmental awareness level, 3.75%, 8.75% and 5% respectively.
 - There are 21.25% of students who are having average/moderate environmental awareness level.
 - Followed by 61.25% of students who falls under the category of above average environmental awareness level.
2. *Difference in environmental awareness among secondary level students of South Sikkim with respect to their locale.*

Table 2: Showing the Difference in Environmental Awareness among Secondary Level Students of South Sikkim with respect to their Locale

Component	Variable involved	N	M	SD	Mean Difference (D)	Computed t-value	Table t-value	Significant level (α) = 0.05
Environmental awareness	Urban	40	75.28	11.27	-5.72	-2.848	.007	NS*
	Rural	40	81.00	6.58				

*not significant

The above table shows that null hypothesis is accepted, hence there is no significant difference in environmental awareness among students studying at secondary level with respect to their locale.

3. *Difference in environmental awareness among secondary level students of South Sikkim with respect to their sex.*

Table 3: Showing the Difference in Environmental Awareness among Secondary Level Students of South Sikkim with respect to their Sex

Component	Variable involved	N	M	SD	Mean Difference (D)	Computed t-value	Table t-value	Significant level (α) = 0.05
Environmental awareness	Girls	40	78.42	6.57	-5.41	2.99	.767	NS*
	Boys	40	77.85	11.98				

*not significant

The above table shows that null hypothesis is accepted, hence there is no significant difference in environmental awareness among students studying at secondary level with respect to their sex.

X. FINDINGS AND DISCUSSION

The major findings of the study are:

- Majority of the students are having 'above average' environmental awareness level and none of them are having 'extremely low' or 'low' environmental awareness level.
- Locality does not significantly contribute towards the environmental awareness of students studying at secondary level. This study contradicts the research conducted in Rohtak, Haryana by Neeru Rathee and Suman Thakaran (2017). Whereas, it agrees with the research done in Moradabad, Uttar Pradesh by Md. Mahmood Alam (2018).
- Being a boy or a girl does not make much difference in environmental awareness of students studying at secondary level. This study contradicts the research conducted in Rohtak, Haryana by Neeru Rathee and Suman Thakaran (2017) and also with the research done in Moradabad, Uttar Pradesh by Md. Mahmood Alam (2018). Whereas, it agrees with the research done in Shimla Himachal Pradesh by Kuldeep Singh Katoch (2017).

XI. SUGGESTIONS

Some of the suggestions for improving the environmental awareness among secondary school students are as follows:

- The efforts given by the government and the teachers in imparting environmental education and environmental awareness among students in schools are quite satisfactory but need to make it more effective by following up the programmes every now and then.
- Approaches of teaching environmental science in schools should be more learner-centred involving constructive, participatory, integrated and problem solving methods.
- More involvement of students in environmental awareness programs is suggested through environmental clubs in schools, NGOs, etc. More exposure to the impact of environmental degradation should be given to students through field trips or by showing documentaries frequently.
- Students should be motivated towards participating and practicing environmental friendly activities such as cleanliness and plantation drives, bringing environmental awareness among the common mass, practicing 5Rs i.e. Reduce, Reuse, Recycle, Recover, Refuse, while managing wastes, observation of World Environment Day, etc. They must always be encouraged to conserve and value the natural resources.

XII. CONCLUSION

We must understand that to improve the environment is to improve the quality of life. It is not only a question of air and water pollution but includes the elimination of diseases, hunger, malnutrition, poverty, destruction of forests, extermination of wildlife, erosion of soil and accumulation of wastes. In order to achieve these, environmental awareness among the students who are the future generation is a must.

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