

**A STUDY OF ENVIRONMENTAL AWARENESS AMONG COLLEGE
STUDENTS IN RELATION TO THEIR RESIDENCE, GENDER AND
SUBJECT STREAM**

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Abstract

The present investigation is carried out to study the Environmental Awareness among college students in relation to their residence, gender and subject stream. The sample consisted of 300 college students of Chandigarh. The investigator has used Self prepared standardized Environmental Awareness Questionnaire (EAQ) for collection of data. The data collected was processed for statistical analysis through ANOVA, t-test. Result showed students from urban areas possessed higher Environmental Awareness in comparison to rural area students. Females have more Environmental Awareness than male counterparts. Science students have more Environmental Awareness than commerce and humanities students. Female Science students have more environmental awareness than male science students. Male and female students from commerce and humanities stream do not have significant difference in their environmental awareness.

Key words: Environmental Awareness, College Students

Introduction

Today the delicate ecosystem of our earth is facing a danger of destruction on a large scale. In the name of development man has over exploited the natural resources and has polluted the environment. Several species of flora and fauna are already extinct from the surface of earth and many more are on the verge of extinction. Forests are decreasing at an alarming rate, land is losing its fertility and world climate is changing due to global warming. The major components of the biosphere including the atmosphere, the ocean, soil cover, the climate system and the range of animal and plant species have all been altered by the intensity of human exploitation of the earth's resources in the twentieth century.

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Environment includes the circumstances or conditions that surround an organism or group of organisms, or the complex of social or cultural conditions that affect an individual or community. Environmental awareness may be defined as to help the social groups and individuals to gain a variety of experiences in and acquire a basic understanding of environment and its associated problems.

Review of Literature

Researchers have tried to explore the relationship of level of environmental awareness with gender, area of residence and stream of study of students. Shailja&.Divedi (2015) results suggested that the level of environmental awareness of male and female B. Ed. student is almost same. The results further revealed that the level of environmental awareness of urban students is high as compared to rural B.Ed. Students. Ranvir (2016) study revealed that there is high level of environmental awareness among students residing in urban area as compared to students residing in rural area. Sharma(2014) through study on college students found that science stream students have higher environmental awareness as compared to Arts students. Ghosh(2014) found significant difference between rural and urban secondary school students. Sivamoorthy & Navilini. (2013) found that the level of awareness is high among the respondents irrespective of gender difference but in practice level there is difference level between genders that is males practicing more than females. Astalin(2011) reported significant difference between mean scores of arts and science students at secondary level.

Objectives of the study

1. To compare the difference in the Environmental Awareness of students in relation to their residence, gender and subject stream.
2. To study the interactional effect of gender and residence on the environmental awareness of students.
3. To study the interactional effect of gender and subject stream on the environmental awareness of students
4. To study the interactional effect of residence and subject stream on the environmental awareness of students.

Hypotheses of the study

1. There is no significant difference in the environmental awareness of students in relation to their residence, gender and the subject stream.
2. There is no significant interactional effect of gender and residence on the environmental awareness of students.
3. There is no significant Interactional effect of gender and subject stream on the environmental awareness of students.
4. There is no significant interactional effect of residence and subject stream on environmental awareness of students.

Design of the study

Descriptive Survey method was employed for the present study. To study the effect of residence, gender and subject on environmental awareness a 2x2x3 Factorial Design was used.

Sample

To test the difference in the environmental awareness (EAQ scores) of the students sample of 300 students was drawn from five randomly selected colleges of Chandigarh affiliated to Panjab University, Chandigarh. The sample of the students for studying the difference in environment awareness was distinguished as rural and urban on the basis of the residence of the students. The students were categorized as science, commerce and arts student on the basis of the stream a student has opted at the undergraduate level. The sample of the students was taken from the first year of the undergraduate class.

Tool used

An Environmental Awareness Questionnaire (EAQ) developed and standardized by the Investigator. This questionnaire possesses high content validity as its content validity was found with the help of Expert's Opinion. The reliability of the questionnaire was measured with the help of test-retest method and split-half (odd/even) method. The coefficient of correlation was found to be 0.96 which is significant at 0.01 level of significance. Further the split half (odd-even) coefficient of correlation was found to be 0.69 (significant at 0.01 level).

Results and Discussion

Hypothesis 1: There is no significant difference in the environmental awareness of students in relation to their residence, gender and the subject.

To study the main and interactional effects of residence, gender and subject on the environmental awareness of students, the researcher employed 2x2x3 Analysis of Variance, the results of which are shown in table 1

Table I: Summary of 2x2x3 ANOVA for environmental awareness of college students

S.No	Source of variation	Sum of Squares	df	Mean Square	F	Sig.
1	Residence	15.870	1	15.870	51.19	.000*
2	Gender	30.083	1	30.083	97.043	.000*
3	Subject	402.927	2	201.463	649.88	.000*
4	Residence * Gender	2.803	1	2.803	9.043	.003*
5	Gender * Subject	62.327	2	31.163	100.52	.00*
6	Residence * Subject	8.540	2	4.270	13.77	.001*
7	Residence * Gender * Subject	3.087	2	1.543	4.98	.007*
8	Error	89.280	288	.310		
9	Corrected Total	614.917	299			

* Significant at 0.05 level

From table 1 it is clear that F values for residence ($F=51.19$ & $P<.000$), gender ($F=97.043$ & $P<.000$), subject ($F=649.882$ & $P<.000$) was found to be significant.

With two dimensional interaction effect of Residence & Gender ($F=9.043$ & $P<.000$), Gender & Subject ($F=100.52$ & $P<.000$), Residence & Subject ($F=13.77$ & $P<.000$) were found to significant & three way interaction i.e. Residence * Gender * Subject ($F=4.98$ & $P<.000$) were also found to be significant at .05 level of significance.

Hypothesis 2: There is no significant interactional effect of gender and residence on the environmental awareness of students.

To study the interactional effects of gender and residence on the environmental awareness of students, the researcher consulted table 1 F-value for interaction between gender and residence was calculated to be 9.043 which is significant at 0.05 level, Hence the null hypothesis 2 is rejected. This implies that there is interactional effect of gender and residence on the environmental awareness of the students. To verify the result researcher further employed t-test.

Table 2: Mean, SD and t-value of awareness scores of males and females from urban and rural locality.

Gender	Residence	N	Mean	Std. Deviation	Std. Error Mean	t	Df	P value
Male	Urban	75	1.80	0.94	0.11	1.888	148	.061
	Rural	75	1.53	0.78	0.09			
Female	Urban	75	2.63	1.98	0.23	2.281	148	.024*
	Rural	75	1.97	1.49	0.17			

* Significant at 0.05 level

From table 2 it is clear that t-value is ($t=1.888$ & $p>.05$) is non significant on the mean EAQ scores of rural and urban males at .05 level. Hence rural and urban males have no significant difference in their environmental awareness. The t- value is significant for the mean EAQ scores of rural and urban females ($t=2.281$ & $p<.05$) at .05 level. Urban females have more significant environmental awareness than rural females.

Hypothesis 3: There is no significant Interactional effect of gender and subject on the environmental awareness of students.

Table-1 depicts F-value (for interaction between gender and subject) 100.52, which is significant at 0.05 level of significance so, the hypothesis 3 is **rejected**. It means that there is

significant interactional effect of gender and subject on the environmental awareness of the students

Table 3: t-values for male and female students of different streams

	Residence	N	Mean	Std. Deviation	Std. Error Mean	t	df	P value
Sc	Male	50	2.66	0.59	0.08	12.544	98	.000*
	Female	50	4.58	0.91	0.13			
Com	Male	50	1.06	0.31	0.04	.581	98	.562
	Female	50	1.12	0.66	0.09			
Humanities	Male	50	1.28	0.57	0.08	.659	98	.511
	Female	50	1.20	0.64	0.09			

* Significant at 0.05 level

From table 3 above it is clear that science subject ($t=12.544$ & $p<.05$) has significant effect on EAQ scores of male and female students where as commerce ($t=.581$ & $p>.05$) and Humanities subjects ($t=.659$ & $p>.05$) have non-significant effect on the corresponding scores of male and female students at 0.05 level. Mean EAQ scores of female science students (4.58) was more as compared to mean of male science students (2.66) whereas for commerce and Humanities subjects almost the same mean difference on EAQ scores of male and female students were obtained. Therefore, it can be concluded that science subject has more significant effect on environmental awareness of female students as compared to effect on environmental awareness of male students.

Hypothesis 4: There is no significant interactional effect of residence and subject on environmental awareness of students.

Table 1 exhibits F-value for interaction between residence and subject that was calculated to be 13.77 which is significant at 0.05 level of significance so the hypothesis 4 is rejected. It

means that there exists significant interactional effect of residence and subject on the environmental awareness of students.

To verify this result the researcher further employed t-test. The results are shown in table 4

Table 4:t-values for different groups of students

	Residence	N	Mean	Std. Deviation	Std. Error Mean	t	df	P value
Sci	Urban	50	.9600	.92494	.13081	.551	98	.583
	Rural	50	1.0600	.89008	.12588			
Com	Urban	50	1.7200	1.08872	.15397	4.854	98	.000*
	Rural	50	.8800	.55842	.07897			
Art	Urban	50	1.8600	1.06924	.15121	3.404	98	.001*
	Rural	50	1.2200	.78999	.11172			

* Significant at 0.05 level

From table 4, it is clear that the science subject has non significant effect on rural and urban students ($t=.551$ & $p>.05$) at 0.05 level where as commerce ($t=4.854$ & $p<.05$) & Humanities ($t=3.404$ & $p<.05$) subjects have significant effect on the EAQ scores of rural and urban students at 0.05 level. Mean EAQ scores of urban students is more in case commerce (1.72) & Humanities (1.86) subjects than that for rural students {commerce(.88) & Humanities (1.22)}. Hence it is assumed that urban students of commerce and humanities streams have more environmental awareness than rural students of commerce and humanities streams.

Conclusions on the basis of analysis of EAQ scores

- 1. On the basis of Residence:** Students from urban areas possessed higher Environmental Awareness in comparison to the students from rural area. Urban female students have more environmental awareness than the rural female students. Rural and urban male students do not differ in their environmental awareness
- 2. On the basis of Gender** Female students have more environmental awareness than male students.

- 3. On the basis of Subject Stream:** Science students have more Environmental Awareness than commerce and humanities students. Female science students have more environmental awareness than male science students. Male and female students from commerce and humanities stream do not have significant difference in their environmental awareness scores. Rural and urban science students do not have significant different in their environmental awareness. Commerce and humanities streams have more significant effect on environmental awareness of urban students than that of rural students.

Educational implications of the study

Today the environmental degradation is matter of great concern. The present study will help the policy makers, curricular planners, administrators and the teachers to improve the effectiveness of the Environmental Education programmes at higher levels. Strong Environmental Education Policies should be made keeping in mind the national as well as local specific needs of the country. The researcher recommends that environmental science should be made compulsory in colleges. The teachers should play a key role in promoting environmental awareness among students. Further the students can be sensitized by adding the more practical programmes like symposia, seminars, conferences, workshops and also lectures about environment and its importance.

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