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Environmental Awareness among Students of Panjab University, Chandigarh



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Abstract

Environment defined as the sum total of the conditions both, biotic and abiotic, living and non-living of a geographical area is the key determinant of our living conditions. We all have some knowledge about the environment, but is it sufficient to deal with the environmental problems that we are facing today. Knowing about the environment, environmental conditions and environmental problems is not complete without proper knowledge of the solution to these problems. With the aim to access the level of awareness about the environment of the students of Panjab University, Chandigarh the present study is conducted. Study was conducted using the questionnaire in which several aspect of environment awareness was tested of the students. The study found that there is very little difference among the arts and science students but there is significant difference among the students when we compare them on the basis of their gender. Females were found more aware about their environment than males. The study presents a clear picture of the awareness level of the students studying in higher education institution.

Keywords: Environment, Environmental Awareness, Environmental Degradation and Pollution.

Introduction

Environment as we know includes both living and non-living objects in our surroundings. Our environment provides us essential resources such as air, soil and water to full fill our daily needs. Environment is an important aspect of our survival on the planet. We as humans need to be aware about our surroundings as we are the most dominating species on the earth which have technology and brain power to modify our environment and to change it to a significant level. Importance of environmental awareness and environmental education was identified by the Hon'ble Supreme court of India as it directed that the environmental education should be made compulsory subject at all level (Sengupta, 2010).

The term Environmental Awareness has broader implication. It is in general defined as the awareness about the environment but on the other side it also includes the attitude, values, actions, and knowledge base and skill set of people to solve complicated environmental problems. In simple words environmental awareness is just a preliminary step which ultimately leads to developing the ability of the people to manage and solve environmental problems in a sustainable way (Sengupta, 2010).

With the development of new technologies and new ways to modify the environment degradation of natural resources has been occurring at large scale. The common people need to be educated that we are not degrading our environment only we are degrading ourselves and putting our future in danger. In order to involve people in management and conservation of environment we need to educate them about the current status and future sustainable methods.

United Nations (1992) organised conference on Environment and Development followed by Earth Summit on Sustainable Development have focused on the issues of global environment and highlighted the problems of environment to the people. Ministry of Environment, Forest and Climate Change initiated National Environment Awareness Campaign in 1986 in which they provided assistance to Non-government organisations (NGOs), Schools, Colleges, Universities, Research Institutions, government departments etc. (National Environmental Awareness Campaign, 2014). It

E: ISSN No. 2349-9435

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is not possible to achieving goal of sustainable environment unless the local people participate in the conservation and management process.

To sum up it can be inferred that in order to make our planet environmentally sustainable we need to make the entire population environmentally educated. The focus of environmental education should be to improve the quality of environment, making people aware about the environmental problems and methods of conservation, and creating such atmosphere that people themselves start participating in the conservation and management activities. All this can be achieved only if we know the present level of awareness of the people about their environment. Panjab University being a premier institute of education in the northern region have various departments teaching environment as one of their elective subject. So it is expected that the students of the university will be more aware about the environmental problems and their solution in general.

Review of Literature

Environmental awareness among the general public have always been key intrust area for the researchers. Students being the future of the nation and society have attracted researcher to access their level of awareness. Various studies have been carried out at both local and regional level. Some important studies have been discussed here under the current theme.

Cuven and Sulun (2017) have analysed the awareness levels among the pre service teachers towards renewable energy sources. Primary survey was conducted and about 196 respondents were questioned. The results show that the knowledge level varies within the departments but the level of awareness level did not vary. It was also found that the level of awareness among the teachers is positively correlated with their teaching experience. The study suggested frequent workshops and tanning of pre service teachers and it should be made compulsory element of their teaching assignments.

Mahood, et.al. (2017) investigated awareness among students of Bahrain University science students about the global warming. For the purpose 143 science students were interviewed evaluated using a questionnaire method. The focus was on accessing the awareness of students on three aspects of global warming i.e. causes impacts and solutions. The study found significance difference between the first year and final year students. The biology students were found to be most knowledgeable that can be linked to their syllabus. The study concluded and suggested that the portion of environmental awareness should be added to every stream of the students.

Li, et. al. (2017) attempted to analyse the awareness of local public regarding the global environmental management technologies. The study found that carob dioxide capture; utilisation and geological storage technology have constructive environmental benefits but as the general public is made aware about the high environmental risks their

level of acceptance decreases. Study also stressed that government agencies paly important role in environmental awareness.

Noorhosseini, et. al. (2017) highlighted the fact how urban areas are polluting the water bodies around the world due to the low level of environmental awareness. For the study dat was collected from the local residents using questionnaire. The study focused on identifying the key locations and factors of pollution in the region. It was found that almost three fifth of the population have moderate level of awareness. only one fifth of the total population had high and just four present were found to be having very high environmental levels. The study concluded that community level participation of local residents is must for sustainable environmental management that can be promoted with regular awareness camps.

Altuntas and Turan (2018) developed a scale to access awareness level of environment among the school going students. The study utilized both quantitative and qualitative methods to get clear picture of the scene. The study was conducted with the aim to access and improve the awareness level of secondary school students. A five point liker scale was used to study awareness of the students. Six hundred students (both male and female) were given the questionnaire and responses were analysed and tabulated and thirty students were then interviewed. The study concluded that majority of the students were having intermediate level of awareness. High correlation was found between their cognitive and affective awareness.

Objective of the Study

Keeping in mind the above discussion the present study is intended to study the on campus students in the light of following objectives: to study the level of environmental awareness among the post graduate students in Panjab university, Chandigarh. Secondly, to assess the difference in the awareness level of the students about their surrounding environment in respect to their gender and the stream they are studying in.

Methodology

Sample

Every study needs to have a good methodology in order to capture the real world phenomenon. For the present study student population of the institution were selected from the two streams i.e. Arts and Science. Samples were selected using simple random sampling techniques and convenience sampling techniques keeping in mind their gender. Equal samples from both the steams were selected (Arts -106, Science-106) and further within the streams equal number of males (N-106) and Females (N-106).

Tools and Techniques

Structured questionnaire was used to access the level of awareness among the students. For the present study "Environmental Awareness Ability Test" (EAAT) developed by Dr. Praveen Kumar Jha, containing fifty one questions was used to measure the extent and degree of awareness of students about environment. The reliability of the present

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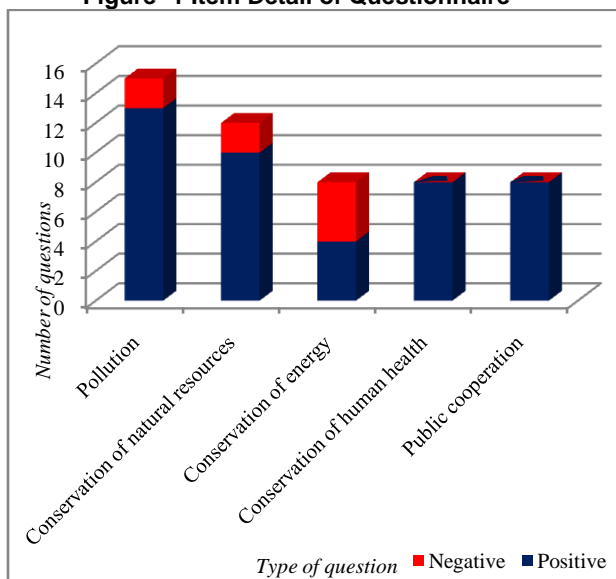
questionnaire was calculated. The split half reliability was 0.61 whereas in K-R method it was found to be 0.84. Following table shows the theme wise distribution of questions in the questionnaire.

Table-1 Showing Items Wise Details of Questionnaire

Sr. No.	Environmental Aspects	Number of items		
		Positive	Negative	Total
1.	Pollution	13	02	15
2.	Conservation of natural resources	10	02	12
3.	Conservation of energy	04	04	08
4.	Conservation of human health	08	-	08
5.	Public cooperation	08	-	08
Total items		43	08	51

The course of procedure for the present investigation research was duly planned. All the tests were administered personally to each participant after providing clear instructions. After the data collection scoring was done and Mean, S.D and t-value were calculated to gain the characteristics of the results and to interpret it

Figure- 1 Item Detail of Questionnaire



Results and Discussion

The survey conducted for the present investigation from the students of Panjab Univerity, Chandigarh yielded interesting results. All the results are shown in the form of tables and graphs.

Table-2: Students Falling Under Various Levels of Environment Awareness

S. No.	Score of Students	Number of Students	Percent of Students
1	Below 20	10	4.72
2	21-35	42	19.81
3	Above 35	160	75.47
Total		212	100.00

Source: Field Work, 2017

Figure-2 Level of Environmental Awareness among Students

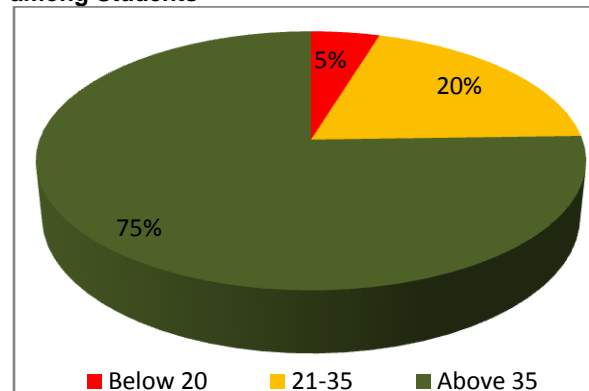


Table-2 shows the total number of students falls under the various levels of environment awareness test viz. below average (less than 10), average (from 21-35) and above average (more than 35). It was found that less than five per cent (n=10) of the total students were lacking in knowledge about the environment. Approximately one fifth (n=42) of the students were having moderate level of awareness about their surroundings. Majority of the students i.e. 160 (75.47 per cent) were having good knowledge of the environment and its determinants.

Table-3: Comparison with Respect to Various Streams on Environment Awareness

Streams	Number	Mean	Std. Deviation	t	p-value
Arts	106	41.18	5.17	1.41	p>0.05
Science	106	42.26	4.44		

** . T-value significant at the 0.01 level (p<0.01)

*. t-value significant at the 0.05 level (p<0.05)

Figure 3 Mean Difference of Awareness level among Students

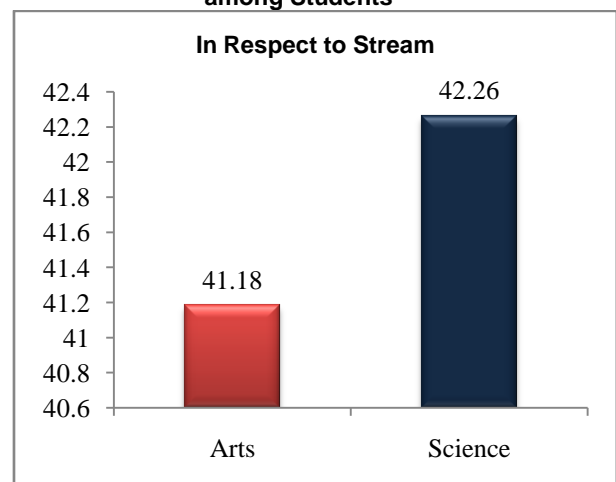


Table-3 is showing mean difference on environment awareness among students belonging to arts and science streams. It was found that no statistical difference emerged on environment awareness among arts and science students (t=1.41, p>0.05). However mean score of science students (42.26) emerged to be slightly higher than arts students (41.18) with S.D. 5.17 and 4.44 respectively.

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Table-4: Comparison with Respect to Gender on Environment Awareness

Gender	N	Mean	Std. Deviation	t	p-value
Female	106	43.2	4.29	2.57*	p<0.05
Male	106	40.28	4.94		

** t-value significant at the 0.01 level (p<0.01)

* t-value significant at the 0.05 level (p<0.05)

Figure- 4 Mean Difference of Awareness level among Students

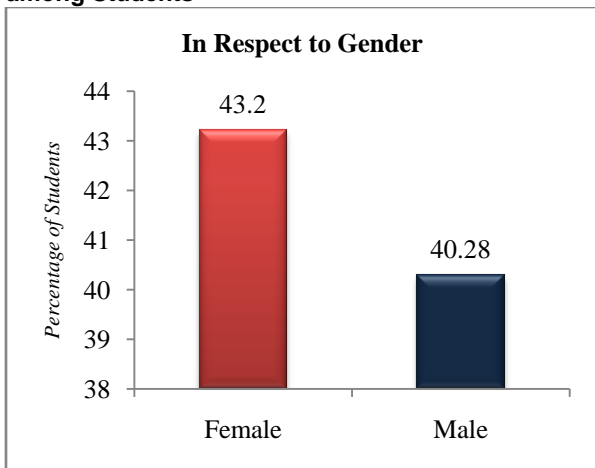


Table-4 is showing comparison among gender on environment awareness. Results showed statistically significant difference among male and female students (t=2.57*, p<0.05). Mean score for females emerged to be 43.2 (S.D=4.29) and for males found to be 40.28 (S.D=4.94). Mean scores indicated that females students were more aware about environment than male students.

Table-5: Interaction Effect of stream and gender on environment awareness

Source	Sum of Squares	df	Mean Square	F	p-value
Streams	29.008	1	29.008	1.381	>0.05
Gender	5922.075	1	5922.075	282.00**	<0.01
Streams * Gender	118.008	1	118.008	5.62*	<0.05
Corrected Total	8505.125	119			

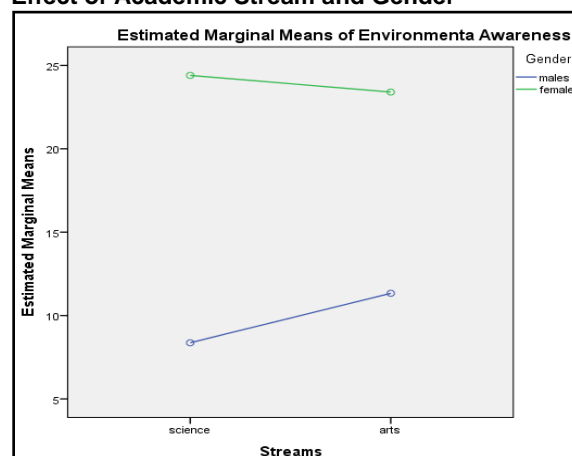
R Squared = .714 (Adjusted R Squared = .706)

** f-value significant at the 0.01 level (p<0.01)

* f-value significant at the 0.05 level (p<0.05)

Table-5 showed the interaction effect of gender and academic stream on environmental awareness. Results indicated that main effect of stream come out to be insignificant (f=1.38,p>0.05) whereas the main effect of gender emerges to be significant (f=282.00**,p<0.01). Overall findings of the present investigation indicated that there is statistically significant interaction of streams and gender on environment awareness among students (f=5.62*, p<0.05).

Figure- 5 Graphical representation of Interaction Effect of Academic Stream and Gender



Overall the present investigation highlighted the peculiarity of gender and academic streams about the level of knowledge and awareness about the problems, management and solution of environmental problems among students. From the above discussion it can be stated that female students are more aware about their environment than the male students where as academic stream exert no effect on environment awareness among students.

Conclusion

The analysis of the data obtained from the campus of Panjab University using "Environmental Awareness Test" about the awareness and knowledge of their environment have been presented here in the conclusions. The study have found that majority of the population have far better awareness level (mean-41.74) than the basic criteria of environmental awareness (mean-35.70) thus it is evident that the students of the university are well aware of the environmental elements. Secondly, there is significant difference between the male and female students about the environmental awareness whereas very little difference is found in the arts and science students. It can be inferred that overall females are much aware about their environment irrespective of their stream.

The basic reasons about the pattern seen here are the social fabric of our society. The females are supposed to be take care of the household activities such as cleaning, cooking, hygiene, health etc. and children. Due to which they are given proper training at household level about the management, maintenance and conservation of resources such as water, food, electricity etc. On the other side the males are supposed to be the bread winners of the house. They do not need to go thru such regress training about their surrounds and resource conservation. The basic nature of the males becomes ignorant towards the conservation and utilization of the resources.

In case of the stream of the students it can be said that both the streams have performed well in the test and have very little difference among them. The difference is negligible between arts and science students. It is because environmental education is

E: ISSN No. 2349-9435

made compulsory at the graduation level. It is one of the compulsory subjects which a student has to clear in order to get a degree. Due to which there is almost no difference among different streams.

To sum up it can be inferred from the study that at present times the education of environmental awareness is yielding positive results that can be seen in as majority of students scoring above thirty five marks in the test. Whereas due to the social conditions and fabric of our society the female are better trained to conservation and management of our environmental resources

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