



A Comparative Study on the Environmental Awareness And Ecological Behavior Among the Post-Graduate Students Of Mysore University

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Abstract:

This paper establishes Environmental awareness is a powerful predictor of ecological behavior. To create sustainable environment, the aim of the study is to explore and identify the components of environmental awareness that can drive the specific ecological behavior of PostGraduate students of Mysore university. Environmental awareness implies not only being knowledgeable about the environment; but also being acquainted with sets of values; attitudes and skills for addressing environment related problems. Ecological behavior is a branch of ecology concerned with the relationship between an animal's behavior and the conditions of its environment.

Keywords: Environment, Awareness, Ecology and Behavior.

1. Introduction:

The Word environment is derived from the French word „Environ „,meaning surroundings.

The environment is our basic life „support system“ and is composed of living beings surroundings physical surroundings and climate conditions. The term environment includes biotic and abiotic entities around us. Biotic refers to the world of living organisms, whereas abiotic refers to the world of living elements.

The Environment provides us the basic elements-air, water, food and land which are essential for life to flourish on the earth. Ecology is the study of the relationships between living organisms, including humans and their physical environment.

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2.Review of Related Literature:

A brief review of the relevant literature in the study area are given below-

Pai(1981) Prepared and conducted a tryout of curriculum in environmental studies for college students to help them acquire and awareness of environmental and the interrelationships, interactions and interdependence existing between biological and physical aspects of the total environmental and its allied problems.

Shahnawaj(1990) Conducted a study on Environmental awareness and Environmental attitude of Secondary and Higher Secondary School teachers and students in Rajasthan. The study revealed that:

- . 95 percent teachers and 94 percent students possessed positive environmental attitude.
- .The environmental trained teachers and untrained teachers did not differ in their attitudes.
- .Teachers had higher awareness of the environment than students.
- .Trained and untrained teachers did not differ on environmental awareness.
- .Girls possessed significantly high awareness of the environment than boys.

Rout and Agawan(2006) Conducted a study of environmental awareness and environmental attitude of students at high school level. The objectives of the study were: to known the environmental awareness and environmental attitude of the male and female students of science and non-science streams belonging to rural and urban backgrounds studying in class X of different schools of Moradabad city.

The findings are:

- .The students of science stream have more environmental awareness and Environmental attitude than the students of non-science stream.
- .The students belonging to urban background are comparatively better in terms of their environmental awareness and environmental attitude as compared to the students belonging to rural background.

Shoemaker(1977) Reveled that ecological concepts can be presented at secondary level through field exercises and that students who participate in field exercises have better understanding of ecological principles then those who do not.

Kaiser et al.(1999)posit that ecological behavior can be a „powerful predictor of ecological behavior“ and that earlier study findings were inconclusive because of omissions in structural models used to explore the attitude-behavior link. The propose a fused model that includes environmental knowledge, ecological behavior values and ecological behavior intensions as the foundations of attitudes, which they indicate can then be used to predict behavior somewhat reliably.

Danter(2005) Found that commitment of action by teachers at the end of a workshop had tremendously high level of prediction of actual implementation of ideas from the training. Cobern et al conducted a study

comparing two types of commitment strategies. The study found that individuals with stronger commitments maintained the ecological behaviors at a statistically significant level, even a year after the study period.

3. Objectives of the Study:

The framed objectives of the study are as follows

Objective 1: To assess the level of environmental awareness of Post-Graduate arts and science students of university of Mysore.

Percentage analysis was calculated to assess the environmental awareness of Post-Graduate students. The results are presented in table 3.1

Table 3.1: Table showing the percentage of Post-Graduate students of university of Mysore with respect to their levels of Environmental awareness.

Table 3.1

Levels of Environmental awareness	Criteria	Score limit	Percentage of P.G Statements	
			Frequency	Percentage
Highly Favorable	Above $m+q$	158 and above	26	26%
Favorable	Bet. $M-q$ & $m-q$	146-157	60	60%
Less Favorable	Below $m-q$	145 and below	14	14%

Table 3.1 shows that a majority 60% of Post-Graduate students were found to possess favorable environmental attitude and 14% of Post-Graduate students found to possess less favorable environmental attitude. Only 26% of Post-Graduate students possess highly environmental awareness.

Objective 2: To assess the level of Ecological behavior of Post-Graduate arts and science students of university of Mysore.

Percentage analysis was calculated to assess the ecological behavior of Post-Graduate students of university of Mysore. The results are presented in table 3.2

Table 3.2 Table showing the percentage of Post-Graduate students of university Of Mysore with respect to their levels of Ecological behavior.

Table 3.2

Levels of Ecological behaviour	Criteria	Score limit	Percentage of P.G Students Frequency	Percentage
Highly Favorable	Above $m+q$	112 and above	00	00
Moderately Favourable	Between $m-q$ & $m+q$	Between 100-111	13	13%
Less Favorable	Below $m-q$	99 and below	87	87%

Table 3.2 Shows that a majority 87% of Post-Graduate students were found to possess less favorable Ecological behavior and 13% of Post-Graduate students found to possess moderate favorable Ecological behavior.

Objective 3: To study the Environmental awareness of male and female Post-Graduate students of university of Mysore.

Objective 4 : To assess the level of Ecological behavior of arts and science Post-Graduate students of university of Mysore.

Objective 5 : To study the Ecological behavior of male and female Post-Graduate students of university of Mysore.

Objective 6 : To study the Ecological behavior of rural and urban Post-Graduate students of university of Mysore.

4. Hypotheses of the study:

The hypotheses tested in the study are as follows:

Hypotheses 1: There is no significant difference between arts and science Post graduate students with respect to their Environmental awareness.

Hypotheses 2: There is no significant difference between male and female Post-Graduate students with respect to their Environmental awareness.

Hypotheses 3: There is no significant difference between rural and urban Post-Graduate students with respect to their Environmental awareness.

Hypotheses 4 : There is no significant difference between arts and science Post-Graduate students with respect to their Ecological behavior.

Hypotheses 5 : There is no significant difference between male and female Post-Graduate students with respect to their Ecological behavior.

Hypotheses 6 : There is no significant difference between rural and urban Post-Graduate students with respect to their Ecological behavior.

5. Methodology: The study is based on descriptive survey method.

6. Tools used: (i) Taj Environmental awareness Scale by Dr. Hassen Taj and

(ii) Ecological behavior Scale by Kaiser et al.

7. Analysis of the data: The study deals with the testing of the following hypotheses.

Hypotheses 1: There is no significant difference in environmental awareness between arts and science Post graduate Students with respect to their environmental awareness.

□ **Table 1:** Showing mean, SD, numbers and t value with respect to environmental awareness of arts and science Post graduate students of university of Mysore.

Environmental Awareness	Stream	N	SD	Mean	t value	df	Level of sign
	Arts	38	149.55	5.55	3.003	98	Significant
	Science	61	153.65	7.18			

Tabel 1 shows that the obtained t value of 3.003 is greater than the tabled t value of 1.98 at 0.05 level of significance for df of 98.

Therefore the null hypothesis is rejected and it is concluded that there is a significance difference between arts and science Post graduate students of university of Mysore with respect to their Environmental awareness.

Hypotheses 2: There is no significant different between male and female PG students with respect to Environmental awareness

Table 2 : Showing mean, SD, numbers, t value with respect to Environmental awareness of male and female PG students.

Table 2

Environmental awareness	Gender	N	Mean	SD	t value	df	Level of sign
	Male	63	152.63	7.44	1.02	98	Not significant
	Female	37	151.18	5.65			

Table 2 shows that the obtained t value of 1.02 is less than the tabled t value of 1.98 at 0.05 level of significance for degrees of freedom of 98. Therefore the null hypotheses is accepted and it is concluded that there is no significant difference between male and female Post-Graduate students of university of Mysore with respect to Environmental awareness.

Hypotheses 3 : There is no significant difference between rural and urban Post-Graduate students with respect to Environmental awareness.

Table 3 : Showing mean, SD, numbers, t value with respect to Environmental Attitude of rural and urban Post-Graduate students.

Table 3

Environmental awareness	Locality	N	Mean	SD	t value	df	Level of sign
	Rural	66	153.50	7.06	2.513	98	significant
	Urban	34	149.76	5.81			

Table 3 Shows that the obtained t value of 2.513 is greater than the tabled „t“ value of 1.98 at 0.05 level of significance for df of 98. Therefore null hypothesis rejected and it is concluded that there is a significant difference between rural and urban Post-Graduate student of university of Mysore with respect to environmental awareness.

Hypotheses 4: There is no significant difference between arts and science Post-Graduate students with respect to Ecological behavior.

Table 4: Showing mean, standard deviation (SD), numbers, and „t“ value with respect to Environmental awareness of arts and science Post-Graduate students.

Table 4

Ecological behavior	Stream	N	Mean	SD	t value	df	Level of sign
	Arts	38	92.76	5.97	0.151	98	Not significant
	Science	61	92.57	6.14			

Table 4: Table 4 shows that the obtained „t“ value of 0.151 is less than the tabled „t“ value of 1.98 at 0.05 level of significance for degrees of freedom of 98. Therefore the null hypotheses is accepted and it is concluded that there is no significant difference between arts and science PostGraduate students of university of Mysore with respect to Ecological behavior.

Hypotheses 5: There is no significant difference between male and female Post-Graduate students with respect to Ecological behavior.

Table 5 Showing mean, numbers, „t“ value with respect to Ecological behavior of male and female Post-Graduate students.

Table 5

Ecological behavior	Gender	N	Mean	SD	t value	df	Level of sign
	Male	63	93.34	6.29	1.633	98	Not significant
	Female	37	91.32	5.41			

Table 5: Showing that obtained „t“ value of 1.633 is less than the tabled „t“ value of 1.98 at 0.05 level of significant for df of 98. Therefore null hypotheses accepted and it is concluded that there is no significant difference between male and female Post-Graduate students of university of Mysore with respect to Ecological behavior.

Hypotheses 6: There is no significant difference between rural and urban Post-Graduate students with respect to Ecological behavior.

Table 6 Showing mean, numbers, „t“ value with respect to Ecological behavior of rural and urban Post-Graduate students.

Table 6

Ecological behavior	Locality	N	Mean	SD	t value	df	Level of sign
	Rural	66	92.96	5.88	0.852	98	Not significant
	Urban	34	91.88	6.33			

Table 6: Showing that obtained „t“ value of 0.852 is less than the tabled „t“ value of 1.98 at 0.05 level of significant for df of 98. Therefore null hypotheses accepted and it is concluded that there is no significant difference between rural and urban Post-Graduate students of university of Mysore with respect to Ecological behavior.

Table 7: showing variables, r value

Variables	r value
Environmental awareness and Ecological behavior	0.387

From the above table it was found that there is a positive low correlation between Environmental awareness and-Ecological behaviors

8. Major finding of the study:

- A Majority 60% of Post graduate students was found to possess favorable environmental awareness and 14 percentages of Post-Graduate students possess less favorable environmental awareness. Only 26 percentages of Post-Graduate students possess highly favorable environment awareness.
- A Majority 87% of Post graduate students were found to possess a less favorable Ecological Behavior. And 13% Post-Graduate students were found to possess highly favorable Ecological behavior.
- No significant difference was found between Arts and science Post-Graduate students about Environmental awareness.
- No significant difference was found between Arts and science Post-Graduate students about Ecological behavior.
- There is a positive low correlation between Environmental awareness and Ecological behavior.

9. Educational Implications:

- Provide factual information to students which will lead to the understanding of the intricate system of Ecological balance and man's place in it (Environmental awareness).
- Ozone depletion: Chlorofluorocarbons or CFCs are the main cause of ozone layer depletion .These are released by solvents, spray aerosols ,refrigerators, air conditioners fire extinguishers etc . The molecules of chlorofluorocarbons in the stratosphere are broken down by ultraviolet radiations and release chlorine atoms.
- Greenhouse effect: Carbon dioxide and water vapour absorb infrared radiations coming to the earth and partly reflect it back to the earth's surface. Due to this, the surface of the earth gets heated up. This phenomenon is called the greenhouse effect. The major greenhouse gases are Carbon dioxide, Methane, Water, Nitrous oxide, Ozone and Chlorofluorocarbons.
The major causes of the greenhouse effect are.
- Burning of fossile fuels, deforestation, farming and livestock production all contribute to the greenhouse effect. Industries and factories also play a major rle in the release of greenhouse gases.

- Global Warming: It is the phenomenon of a gradual increase in the average temperature of the Earth's atmosphere. The main cause for this environmental issues is the increased volumes of greenhouse gases such as carbon dioxide and methane released by the burning of fossil fuels, emissions from the vehicles, industries and other human activities.
- Acid Rain: Acid Rain, as the name suggests, can be said as the precipitation of acid in the form of rain in the simplest manner. When atmospheric pollutants like oxides of nitrogen and sulphur react with rainwater and come down with the rain, then this results in Acid rain. Effects of Acid Rain, Acid rain is very harmful to agriculture, plants, and animals. It washes away all nutrients which required for the growth and survival of plants. It causes respiratory issues in animals and humans. When acid rain falls down and flows into the rivers and ponds it affects the aquatic ecosystem. Acid rain also damages the buildings and monuments made up of stones and metals.
- Develop a concern and respect of environmental awareness and ecological behavior of Post-Graduate students.
- Inform students as to how they can play an effective role in protecting the environment.
- Help them acquire the skills for identifying and solving environmental problems.
- This should be enforced compulsorily through restructuring the curriculum and transaction mode, which again demands right attitude, awareness and action behavior towards environment conservation.
- The findings of the study reveal that majority of Post-Graduate students possess an average ecological behavior. It means that they feel the existence of this problem but do not take it very serious.
- Therefore environment education should be introduced at the levels both in formal as well as non formal.
- It should be introduced as a separate subject in schools as well as in colleges as per supreme court judgment as directed (December 19, 2003)

10. Conclusion:

Based on the analyses and findings the study concluded that there is a significant difference between Arts and Science Post-Graduate students of university of Mysore with respect to their Environmental awareness. There is no significant difference between Arts and Science Post-Graduate students of university of Mysore with respect to their Ecological behavior. It was found that there is a positive low correlation between Environmental awareness and Ecological behavior arts and science Post-Graduate students of university of Mysore.

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