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A study of environmental awareness and scientific attitude of under graduate students in relation to rural and urban areas

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Abstract
The present study has been conducted to investigate the environmental awareness of under graduate students. Result of the unmindful exploitation of natural resources by human being. There is an urgent need to create environmental awareness among all human beings to conserve, protect and nurture our environmental resources. Consequently the study was conducted on a random sample of 600 under graduate students. The environmental awareness ability measure by P.K. Jha and scientific attitude scale A. Grawal was used collect data. While t-test was used for statistical analysis**.** The finding of the study indicated that the environmental awareness was found better in rural than urban under graduate students and the Scientific attitude was found better in rural than urban under graduate students.

Keywords: environmental awareness, scientific attitude

1. Introduction
Education systems worldwide are trying to build a scientific temper in children and scientific literacy in society. The attitude of Indian students towards science is changing because of feeling that science can solve our national problems of over population, mass illiteracy, abysmal ignorance, backwardness and low-standards of living. Science is all pervasive. Modern societies exist on the basis of science. Science is intimately related to the means of production, communication and transportation. Even economics and politics have to depend on scientific factors such as productivity from land or from industry. Therefore, everyone in every walk of life must know certain quantum of science and technology. The fact of today may not be fact of tomorrow and theories may also undergo changes but there can be going away from the scientific method.

Nature provides a limited freedom to man for conducting his exploitation activities. Man is a part of nature and hence cannot exert control over nature on the basis of his face-will. When he tries to break the natural laws of nature he is bound to face the serious consequences.

Nature is capable of providing man with everything that he needs not only of self-sustenance, but also for making his life fully comfortable. Since from Vedic times nature and humankind (i.e. Prakriti and Purusha) form an inseparable part of the life support system. This system has five elements fire, air, land, water, flora and fauna which are interconnected and interrelated. If there is deterioration in any one, it affects the other four elements and mural environment at large. It was generosity of Mother Nature to allow man free access to her valuable resources. However, man's desire for joy and comforts has led him to exploit nature's free goods to the extent of reducing its natural capacities for self-stabilization. Since, the dawn of civilization man has tried to excel itself by conquering nature. He has done so either for his development or for the sake of enjoyment. In this process he has affected his surroundings very badly. It is an established fact that economic stability vides the basis for development in other walks of life. Economic development is secured through increase in agricultural and industrial production. While doing so, many causes disturbance in the biosphere, affects its constitution without having regard to its replenishment. There are certain substances in the nature, e.g., coal, petroleum, minerals, etc. which are exploited by the man but he has not found their substitutes to maintain the natural equilibrium, with the result that the composition of environment is badly affected. In the process of development, man has done much damage to forests, wild life, land surface, water resources and to atmosphere. Man has developed in fact but only at the cost of his environment, the effect of which is looming large on his head.

Environment is a broad concept encompassing the whole range of diverse surroundings in which we perceive experience and react to events and changes. It includes the land, water, vegetation, air and the whole gamut of the social order includes the physical and ecological environment. It concerns man's ability to adapt both physically and mentally to the continuing change in environment.

2. Objectives
The present paper is aimed at achieving the following objectives:

1. To compare the environmental awareness of rural and urban under graduate students.

2. To compare the scientific attitude of rural and urban under graduate students.

3. Hypotheses

1. There is no significant difference between environmental awareness of rural and urban under graduate students.
2. There is no significant difference between scientific attitude of rural and urban under graduate students.

4. Tools used

The tools employed for collection of the data mentioned above included the following:

1. Environmental Awareness Ability Measure (EAAM) by Dr. Praveen Kumar Jha.
2. Science Attitude Scale (SAS) by Avinash Grawal.

5. Methodology

The population is the group of interests to the researcher, the group to which he/she would like the result of the study to be generalizable. The defined population has at least one characteristic that differentiates it from other groups. The population that the researcher would ideally like to generalized to is referred to as the target population the population that the researcher can realistically select from is referred to as the accessible or available, population is generally a realistic choice not an Idealistic one. All the students of B.A. (Bachelor of Arts), B.Sc. (Bachelor of Science), B.Com. (Bachelor of Commerce) of Lucknow District of Uttar Pradesh (India) Constitute the population of the present study.

The selection of the sample in the present investigation has done by going through two stages. The first stage involved the selection of institutions from the list of more than fifty institutions of the district. The researcher used random sampling technique to draw the sample. The selection of the institutions was done keeping in mind the maximum representation of the population of the study. In the second stage sampling, the representative sample of the study was selected through purposive and stratified random sampling technique. The data were collected from graduate students. The total numbers of participants were 600. Out of 600, 200 students of each (i.e. B.A., B.Sc., and B.Com.).

6. Following statistical techniques were used for analyzing the data

1. Computation of means and standards deviations.
2. Use of the t-test for measuring the significance of the difference between means.

7. Results and Analysis

7.1(a).Comparison of mean environmental awareness of rural and urban under graduate students:

Table 1: Comparison of mean environmental awareness of rural and urban under graduate students:

Variable	N	Mean	SD	S EM	t-value df-598	Significant
URBAN	300	37.12	6.567	.379	3.874*	Significant at 0.01 level
RURAL	300	39.57	6.631			

*significant at 0.01 level

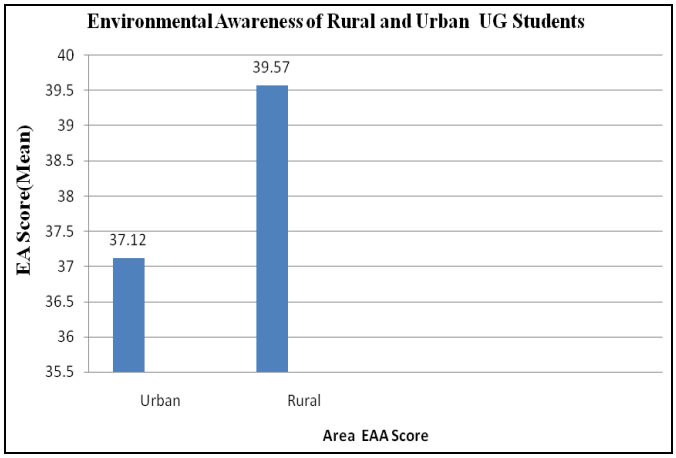

Fig 1: Graphical Presentation of environmental awareness of rural and urban under graduate students.

The table 1 shows that the mean and Standard Deviation of the environmental awareness score of urban graduate students are 37.12 and 6.567 respectively. The environmental awareness score of rural under graduate students are 39.57 and 6.631 respectively. The degree of freedom is 598. The calculated t value is 3.874 and the tabulated t- value at 0.01 level of significance is 2.59. So the calculated t-value is more than the tabulated t-value. It means that the environmental awareness of urban and rural under graduate students differ significantly. The results shows that mean score of environmental awareness of rural under graduate students is greater than the mean score of environmental awareness of urban undergraduate students. It further indicates that the environmental awareness of rural students is higher than the urban students. The comparison of environmental awareness and scientific attitude between rural and urban undergraduate students was done with the use of t-test. In both the comparison difference of mean scores of environmental awareness and scientific attitudes was found significant. Therefore the hypothesis which states that there is no significant difference in the environmental awareness and scientific attitude of rural and urban under graduate students shall be rejected. It mean that environmental awareness and scientific attitude of rural and urban under graduate students differ to each other. The Graphical Presentation of mean environmental awareness of rural and urban under graduate students is given in fig 1. Thus the first hypothesis stating that "there is no significant difference between environmental awareness of rural and urban under graduate students" was rejected at 0.01 level of significance.

7.2(b) Comparison of mean scientific attitude of rural and urban under graduate students:

Table 2: Comparison of mean scientific attitude of rural and urban under graduate students:

Variable	N	Mean	SD	SEM	t-value	significant
URBAN	300	50.35	10.201	.589	3.93*	Significant at 0.01 level
RURAL	300	51.12	10.176			

*Significant at 0.01 level

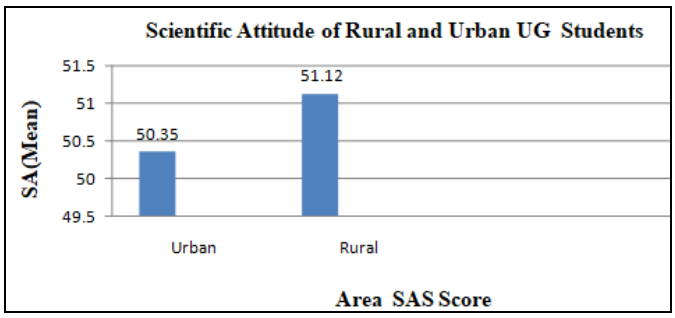

Fig 8: Graphical Presentation of scientific attitude of rural and urban under graduate students.

The table 2 shows that the mean and Standard Deviation of the scientific attitude score of urban graduate students are 50.35 and 10.201 respectively. The scientific attitude score of rural under graduate students are 51.12 and 10.176 respectively. The degree of freedom is 589. The calculated t value is 3.93 and the tabulated t-value at 0.01 level of significance is 2.59. So the calculated t-value is more than the tabulated t-value. It means that the scientific attitude of urban and rural under graduate students differ significantly.

The results shows that mean score of scientific attitude of rural under graduate students is greater than the mean score of scientific attitude of urban undergraduate students. If further indicates that the scientific attitude of rural students is higher than the urban students. This shows that the rural undergraduate students have more exposure to the scientific attitude. The Graphical Presentation of mean scientific attitude of rural and urban under graduate students is given in fig 2. Thus the second hypothesis stating that "there is no significant difference between scientific attitude of rural and urban under graduate students" was rejected at 0.01 level of significance.

8. Finding of the study

1. The statistical analysis for comparing the environmental awareness of rural and urban under graduate students reveals that the difference of mean scores of the environmental awareness of both rural and urban students is significant. Therefore the environmental awareness of students differ to each other. It was also found that the rural students are more aware of their environment as compare to the urban under graduate students.
2. There was significant difference between the scientific attitude of rural and urban under graduate student. It means the scientific attitude of rural and urban under graduate students differ to each other. This result also showed that the scientific attitudes of rural students were higher than the urban students.

9. References

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