

**Full Length Research Paper**

Assessment of Environmental Awareness among Rural and Urban Residents in Bishnah, Jammu and Kashmir, India

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Abstract

Environmental degradation poses a major threat to the existence of humanity both in rural and urban settlements. In such a scenario, the importance and need for environmental awareness cannot be overemphasized. Present study is an attempt to assess the level of environmental awareness among rural and urban residents in Bishnah (J&K, India). Data was primarily collected using a questionnaire and analysis of collected data was done using Statistical Package for Social Sciences (SPSS, version 17.0). Significant difference was observed among gender groups, different educational and age groups. Results also revealed that the urban respondents were more aware towards the environment than rural respondents. The study concluded that with the rise in level of education, the awareness regarding environment among respondents increased.

Keywords: Awareness, Environment, Respondents, Rural, Urban.

Introduction

Environment may be defined as “total planetary inheritance and totality of resources on our planet earth”. It includes physical, biological, social, cultural and economical factors which constitute the surroundings of human being, who is both the creator and molder of the environment (Pillai, 2012). Human beings always have been tried to derive benefits from the environment to fulfill their basic needs to improve their quality of life. The overuses of natural resources caused the imbalance of nature due to which various environmental problems occurs (Ullah *et al.*, 2013).

Our environment is today on the sick bed and entire world is worried about it. There is a mindless competition for industrialization and progress for which we have exploited the environment without any thought of its consequences (Sindhu and Singh, 2014). The quality of environment is believed to have been altered significantly at an alarming rate through decreased quality of air, water, soil, wildlife extinction, and increase in frequency and intensity of natural disasters (Abbas and Singh, 2012). Environmental degradation is a major stress on community life in both rural and urban areas. In rural areas, ecological problems such as deforestation and excessive use of fertilizers can create havoc on a community in many ways. Rural people are directly linked to the environment as compared to urban dwellers. The major environmental issues in urban areas revolve around land use and transportation, the quality of water and air, solid and liquid waste management, as well as noise and the aesthetic role of the environment (Akca *et al.*, 2007). The root cause for many of these environmental problems is human activities and their interaction with the environment and these activities can be minimized by changing the relevant human behavior to reduce its environmental impacts. Environmental activists and people in general who aspire to foster a less polluted environment and promote the sustainable use of natural resources, often assume that behavior change is a function of knowledge and awareness.

The term ‘environmental awareness’ means to create general awareness regarding environmental issues and their causes by making changes in human attitude, values and necessary skills to solve environmental problems (Ali and Sinha, 2013). Many environmental problems and their consequences are the result of ignorance. Hence, there is a need to make the public aware of the environmental issues, their consequences, and the actions that have to be taken to address these issues. Various studies have been done regarding environmental awareness among different groups of the society like students and teachers (Islam, 2008; Sindhu and Singh, 2014) and slum dwellers (Kumar and Malaviya, 2015). However, no attempt was made to gauge the variations in the environmental awareness between rural and urban inhabitants. Therefore, the objective of the present study was to assess the level of environmental awareness among rural and urban residents in Bishnah (J&K, India).

Materials and Methods

The study area i.e., rural and urban areas of tehsil Bishnah of district Jammu lies between 32° 36' North latitude and 74° 54' East longitude. Total population of Bishnah is 99,239 people with 51,326 males and 47,913 females. Each rural and urban household was visited several times to establish rapport with them. One or two leaders were identified from the area. Through them the purpose of the study was explained to the people. Though the schedule was prepared in English, all questions were put in a conversation style in local language. Initial interaction included the collection of personal information e.g. age, sex, education, religion, caste, profession, family

income etc. The duration of interaction varied between 30-45 minutes. Normally the non-working days were preferred e.g. holidays because maximum members of the households were available on these days.

A self-made questionnaire was used for the assessment of environmental awareness among the respondents of one hundred rural and the same number of urban households. The environmental awareness was examined with a series of questions inquiring about their immediate environment. The questionnaire which was used to measure the environmental awareness contained twenty five multiple choice questions. Out of these questions, each question represented score of one so that total score becomes twenty five. If the respondents had selected the correct answer they were given one score, otherwise they got zero (correct answer=1 and incorrect answer=0). Respondents who scored between zero to 8 were considered to have a low awareness level, those having 9 to 16 were considered to have moderate awareness, and respondents having score between 17 to 25 were presumed to have high awareness about environment. The collected data was entered into a research database utilizing the Statistical Package for the Social Sciences (SPSS, version 17.0) under the windows computer operating system for the purpose of analysis. Each case was entered into database assigning a code to identify each participant. The significance level was 0.05. Independent sample t-test was used as a test of statistical significance. The procedure was applied to compare the means of the two independent groups of variables (rural and urban). If the observed t-test value exceeded the critical value of the results of the table, the null hypothesis (H_0) was rejected and this inferred, there was a significant difference between the two variables. For more than two groups, One-way ANOVA was applied.

Results and Discussion

An independent sample t-test was conducted to evaluate difference between gender groups regarding the environmental awareness level. The t-test in this survey between the male and female groups showed that the mean for males (16.95 ± 2.799) was more than females (14.00 ± 5.369), which shows that there was a significant difference in environmental awareness between the two groups [$t = 5.104, p = 0.00$]. It was indicated that male respondents had more environmental awareness than female respondents (Table 1).

Table 1: Independent sample t-test for comparing environmental awareness among gender groups.

	Gender	N	Mean	SD	t	df	P
Total awareness score	Male	129	16.95	2.799	5.104	198	0.00
	Female	71	14.00	5.369			

Level of significance ($p < 0.05$)

One-way ANOVA was conducted to investigate whether there was any difference in environmental awareness scores between various educational groups. According to table 2, the mean for illiterate ($n=36$), upto middle class ($n=70$) and above middle class ($n=94$) are 14.44, 15.17 and 17.00, respectively. There were significant differences in the environmental awareness score among the three levels of educational groups ($f=7.013, p=0.01$). This indicated that respondents with education level above middle class had higher level of awareness towards environment than the other two educational groups.

Table 2: One-way ANOVA for comparing environmental awareness among educational groups.

Educational level	N	Mean	SD	df	f	Sig.
Illiterate	36	14.44	3.476	2	7.013	0.01
Upto middle	70	15.17	3.971	197		
Above middle	94	17.00	4.250			

Level of significance ($p < 0.05$)

Results also showed that there was a significant difference at the $p < 0.05$ level in environmental awareness scores for the three age groups ($f=7.786, p=0.001$). One-way ANOVA indicated that the mean of total environmental awareness score for age group below 20 years (20.25 ± 3.166) was significantly different from age group 21-40 years (15.79 ± 4.110) and age group above 40 years (15.35 ± 3.962). This trend showed that younger age group respondents had more awareness towards the environment than the other two age groups (Table 3). The statistical t-test between the urban and rural respondents showed that the mean for urban respondents (17.00 ± 4.92) was more than rural respondents (14.80 ± 2.80), which showed that respondents of urban households were more aware towards the environment than rural households (Table 4).

Table 3: One-way ANOVA for comparing environmental awareness among age groups.

	Age	N	Mean	SD	df	f	Sig.
Total Environmental Awareness	1-20	12	20.25	3.166	2	7.786	0.001
	21-40	116	15.79	4.110	197		
	>40	72	15.35	3.962			

Level of significance ($p < 0.05$)

The present study revealed significant difference between both genders on environmental awareness, which was consistent with the conclusions derived by Khan *et al.* (2015). Also the results, with regard to educational groups showed statistically significant difference with respect to total environmental awareness. The possible explanation was that the respondents who had high level of education were more aware about environment than those having low education level. Several studies have previously found that higher levels of education have a positive effect on environment awareness (Arcury and Christianson, 1990). The general explanation

for this relationship is that education exposes a person to a broad range of ideas and beliefs and thus, encourages a more liberal minded perspective. Age appears to be the variable which was most strongly associated with environmental awareness (Buttel, 1992). The study showed that there was a significant difference in various responses to the questions on environmental awareness among various age groups. It was found that respondents with age group below 20 years showed more awareness about environment than higher age group. In contrast, Yun (2002) reported that younger age groups due to less experience and lower study levels may receive less information about the environmental issues than older age groups.

Table 4: Independent sample t-test for comparing environmental awareness between urban and rural areas.

	Area	N	Mean	SD	t	df	p
Total awareness score	Urban	100	17.00	4.92	3.884	198	0.00
	Rural	100	14.80	2.80			

Level of significance ($p < 0.05$)

Findings of the present study also showed that respondents living in urban area had high environmental awareness as compared to the respondents of rural area, which was in accordance to previous studies (Mohai and Twight, 1987; Buttel, 1992). One explanation for variation in rural-urban attitudes was that urban dwellers often live in and affected by polluted environment and therefore, are more aware of environmental problems than people who live in rural areas. Contrastingly, while studying differences between rural and urban environmental knowledge and actions of Kentucky River Basin residents, Arcury and Christianson (1993) reported that the environmental characteristic between rural and urban residents had no consistent differences in terms of place of living. However, they found that differences were caused due to education and income.

Conclusion

The statistical t-test between the urban and rural respondents showed that the mean for urban households was higher than rural households, indicating that respondents of urban households were more aware towards the environment than rural households. Survey between the male and female groups showed that the mean for males (16.95 ± 2.799) was higher than females (14.00 ± 5.369) showing significant difference in environmental awareness between the two groups [$t=5.104$, $p=0.00$]. A significant increase in the level of environmental awareness was observed with the rise in the level of education. One-way ANOVA showed that the mean of total environmental awareness score for age group below 20 years ($\text{mean}=20.25 \pm 3.166$) was significantly different from age group 21-40 years ($\text{mean}=15.79 \pm 4.110$) and age group above 40 years ($\text{mean}=15.35 \pm 3.962$). Thus, younger age group respondents showed more awareness towards the environment than the other two age groups.

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