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RESEARCH ARTICLE

ASSESSMENT OF ENVIRONMENTAL AWARENESS AND ATTITUDE AMONG INHABITANTS OF TRANSPORT NAGAR SLUM (NARWAL) JAMMU (J&K)

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ABSTRACT

The environment cannot be pollution free unless the dwelling community perceives the need for it. Providing essential services on the one hand and by educating the slum dwellers for the various environmental ethics is imperative for environmental protection. It is necessary in this respect to study the existing environmental conditions of the slum areas and to know how the concerned slum dwellers perceive about the environmental pollution. The present study is an attempt to evaluate environmental awareness and attitude among the slum dwellers. Results based upon the dwellers' responses to various questions on environmental issues revealed that majority (67.78%) of the respondents had moderate level of environmental awareness. Among different gender groups there was no significant difference, while the educational and age groups respectively indicated significant difference for environmental awareness status. Similarly majority (85.79%) of the respondents had moderate level of environmental attitude, whereas educational and age groups respectively showed a significant difference in level of environmental attitude status. However, the study concluded that with increase in education, the level of environmental awareness and attitude upsurged while younger age group had positive environmental attitude as compared to older age group.

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INTRODUCTION

The picture that conjures up in our minds, when we talk about slums, is that of a dirty, unhygienic cluster of impoverished shanties with long queues of people crowded around a solitary municipal water tap, bowling babies literally left on street corners to fend for themselves and endless cries, and found voices emanating from various corners. Most of them are engaged in eking out their daily lives needs. Though their living conditions are utterly unhygienic, gloomy, dismal and dehumanized, many of them still dream of improving the quality of their lives. In spite of poor conditions in slums, second generation residents who are not nostalgic about their rural background feel that life in slum is reasonably tolerable and city life is probably better than rural life (Kumar, 2010). The quality of human life depends upon the quality of condition of environment. The environmental conditions are created mostly by the human being themselves. Slums not only create pollution but, in fact, these slums are developed on already polluted places. Hence the slums are doubly polluted. The environment cannot be pollution free unless the dwelling community perceives the need for it and they were aware and conscious about the consequences of environmental pollution. It is in this connection essential to know about the present perception of the slum dwellers about the environmental pollution (Hema and Jamal, 2004).

Environmental problems cannot be solved solely by the biological and technological inventions because the most serious obstacles in preserving environment are related to economic growth and development. The environmental crisis is, to a significant extent, based on the people's behavior and pattern of thought. Many of the failed attempts to preserve a healthy environment resulted from the overemphasis of socio-economic or political factors and from the inadequate attention given to the non-economic values of the environment. Only after understanding the relationship between the attitudes that people have toward the environment and the factors that influence their attitude we will be able to comprehend and improve the public attitude towards nature (Tikka *et al.*, 2000). The attitude of the people finds expression in action and interaction among them. In general, it seems obvious that the most significant factor affecting environment is not the official environmental policy but the public willingness to take care of the environment and to bear the cost of minimizing the adverse impacts of their activities (Ramsay and Rickson, 1976).

Incidence

Studies regarding environmental awareness, attitude and behavior among the various groups of people like students, teachers and other different groups of the society has been done

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by some workers (Tikka *et al.*, 2000; Wahib, 2008; Aminrad *et al.*, 2010; Larijani, (2010); Ziadat, 2010) but no attempt was made so far to analyze the environmental awareness and attitude of the slum dwellers and factors which influence it. This is an attempt to know the level of environmental awareness and attitude among this deprived section of the urban society.

STUDY AREA AND METHODOLOGY

The present study area is a slum located at Transport Nagar area of Jammu city (J&K). Jammu is the winter capital of the state. The slum settlement of Transport Nagar (Narwal) area is situated approximately 3 kms away from heart of the Jammu city in south-east direction. The Transport Nagar area is dominated by commercial activities like commercial shops, garage, loading-unloading sites, godowns etc. There are also some residential complexes in the study area. The study area is located near Gladni Grid station alongside the National Highway Sidhra bypass road. This slum settlement of Transport Nagar is also known as Puli Jhuggi.

Two questionnaires were used for the study. The first questionnaire was used to measure the environmental awareness among the slum dwellers which can be defined as concern for what is happening in the environment. The environmental awareness was examined with a series of questions inquiring about the local environment. The second questionnaire was used to measure environmental attitude which can be defined as acquisition of values, feelings, and motivation towards the environment (Aminard *et al.*, 2010). The questionnaire which was used to measure the environmental awareness, contained 20 multiple choice questions. Out of the twenty questions that were given, each question represents to have score of one so that total score becomes twenty. If the respondents had selected the correct answer they were given one score, otherwise they got zero score (correct answer=1 and incorrect answer=0). Respondents who scored between 0 to 6 were considered to have a low awareness level, those having 7 to 13 were considered to have moderate awareness, and respondents having score between 14 to 20 were presumed to have high awareness about environment.

In the questionnaire about environmental attitude measurement, the Likert scale of measurement was used for every statement on environmental attitude on a five point scale. For the purpose of counting score, score 5 (strongly agree) to 1 (strongly disagree) was assigned to each positive statement (agreement with the statement was considered as favourable response), while for negative statements (agreement with the statement was considered as unfavourable response) the scoring was reversed i.e. 1 for strongly agree and 5 for strongly disagree. According to the composite score of responses out of twenty questions, level of environmental attitude was classified in three categories viz., low, medium and high. Each statement was having score of 5 and there were five levels of agreements in each question, thus the total score was 100. Respondents who scored between 0 to 33.33 were considered as having as low attitude, those who scored between 33.34 to 66.66 have

moderate attitude and respondents having score between 66.67 to 100 were interpreted as having high attitude towards 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 significant level was 0.05. Independent samples 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 (male and females). 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 that there was a significant difference between the two variables. For more than two groups, One Way ANOVA was applied.

RESULT AND DISCUSSION

Environmental awareness is defined as understanding of the natural system combined with how they interact with man's social system. We must be committed to initiate action based upon knowledge and understanding. Level of awareness reflects behavior, capacity and understanding of the importance of environment. Majority of the respondents (68.78%) had score indicating moderate level of basic environmental awareness (7-13), 31.22% of the individual had high level (14-20) while no one in the study area had shown low level (1-6) of basic environmental awareness (Fig. 1). However, the mean basic environmental awareness score of the slum dwellers was 12.57. The questionnaire for analyzing the environmental awareness was prepared by taking into consideration the educational status of slum dwellers.

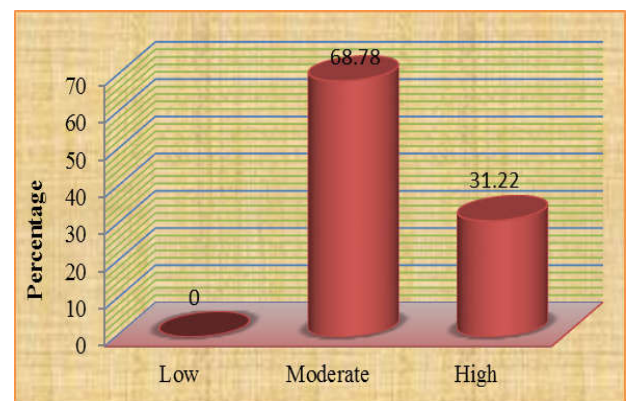


Fig 1 Level of environmental awareness among respondents.

In order to evaluate whether there is any difference between the gender groups (males and females) regarding the basic environmental awareness level, an independent t-test was conducted. The results of the t-test between the male's and female's awareness showed that mean score of male respondents (12.95) was more than the mean score of female respondents (12.19). It was observed that there was no significant difference between the basic environmental awareness level among male and female respondents ($t=2.213$ (219), $p=0.115$). As the value of p was greater than 0.05 so we fail to reject the null hypothesis (H_0) and thus there was no

significant difference between the gender group (Table 1). To analyze the relationship of education with the level of environmental awareness, one way ANOVA was conducted. The respondents were categorized into different educational groups (illiterate, up to middle and above middle level). Table 2 shows that the mean basic environmental awareness score of the illiterate respondents was 11.48 (n=111), respondents who studied up to middle level showed environmental awareness score of 12.69 (n=70) and those respondents whose educational qualification was above middle level had mean environmental awareness score of 15.49 (n=40).

The table also revealed that there was significant difference in the environmental awareness score among the three different level of educational groups { $F_{(2,218)} = 52.562, p = 0.000$ }. The mean basic environmental awareness score increased with the level of education i.e. 11.48, 12.69, 15.49 for the illiterate, up to middle and above middle level educated respondents, respectively. The more educated the respondent, the more was the level of environmental awareness. The trend proves the fact that education enhances the level of awareness as the educated respondents were more in contact with print media and other sources of information.

One way ANOVA was conducted for comparing basic environmental awareness between different age groups (Table 3). Results showed that there was a significant difference ($p < 0.05$) in basic environmental awareness scores of the three age levels { $F_{(2,218)} 4.524, p = 0.012$ }.

For the age group I (17-25 years, n=62) mean score was 13.34, for age group II (26-34 years, n=71) the mean score was 12.52 and for the age group III (above 35 years, n=88) the mean environmental awareness score was 12.09. The highest level of environmental awareness was reported in age group I (13.34). The basic environmental awareness level score of age group II and age group III did not differ much and was lower than group I. This indicates that the younger age group was more aware about basic environmental awareness due to the fact that they were comparatively more in contact with media and available information.

Attitude towards the environment has been defined as the beliefs and feelings that individuals have towards the environment. In this research, the concept of environmental attitude is defined as the values, commitment, motivation and affection concerning nature and environmental issues. Majority of respondents achieved a moderate level (85.97%) of environmental attitude, others (14.03%) had a score that indicated a high level of environmental attitude while there was no respondent who had low level of environmental attitude (Fig 2). This showed that the respondents had moderate level of attitude towards the environment. The t-test was used to compare the environmental attitude between the gender groups (males and females). The t-test showed that mean attitude score for males (n=113) and females (n=108) was 61.93 and 57.96, respectively, which indicated a significant difference between the group of males and females in environmental attitude { $t = 5.214(219), p = 0.004$ } (Table 4).

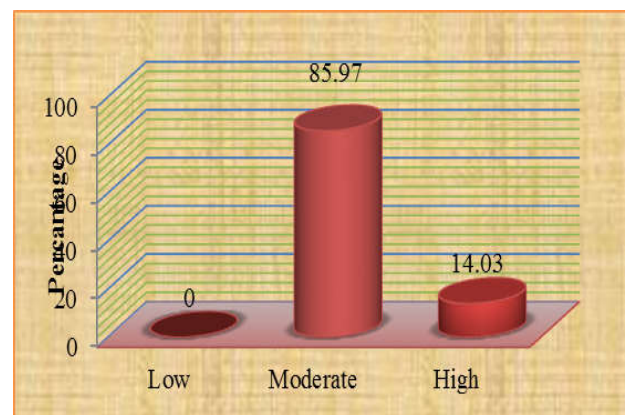


Fig 2 Level of environmental attitude among respondents.

One Way ANOVA was conducted to investigate whether there was any difference in environmental attitude score between the different educational groups. Table 5 shows that average environmental attitude score of group I (illiterate, n=111) was 58.45, whereas for group II (up to middle class, n=70) it was 60.46.

Table 1 t-test for comparing environmental awareness between gender groups

	Gender	N	Mean	Std. Deviation	t	df	p
Total awareness score	Males	113	12.95	2.741	2.213	219	0.115
	Females	108	12.19	2.281			

Level of significance ($p < 0.05$)

Table 2 One way ANOVA for comparing environmental awareness between educational groups

Educational level	N	Mean	Std. Deviation	df	F	Sig
Illiterate (group I)	111	11.48	1.848	2, 218	52.562	0.000
Up to Middle (group II)	70	12.69	2.075			
Above middle (group III)	40	15.49	2.736			

Level of significance ($p < 0.05$)

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

	Age (years)	N	mean	Std. Deviation	df	F	Sig
Total environmental awareness	17-25 (group I)	62	13.34	2.685	2, 218	4.524	0.012
	26-34 (group II)	71	12.52	2.460			
	35 and above (group III)	88	12.09	2.419			

Level of significance ($p < 0.05$)

So the average score of group I was less than the average score of group II. Group III (above middle class, n=40) had the highest average environmental attitude score of 63.45 {F_(2,218) =11.611, p=0.000}. As the value of p was less than 0.001 this indicated that there is a significant difference in the environmental attitude of the respondents of different educational groups. It is clear that environmental attitude increased with rise in educational level.

Table 6 shows the statistically significant difference at the p<0.05 level in environmental attitude score for the three age groups {F_(2,218) =5.923, p= 0.003}. Average environmental attitude score of the age group I (17-25 years, n=62) was 62.15. Age group II (26-34 years, n= 71) had average environmental attitude score 58.94, while age group III (above 35 years, n=88) had average environmental attitude score of 59.32. The age group I showed high environmental attitude as compared to age group II and III. This means that the younger generation had more environmental attitude level as compared to the older generation.

Table 4 t-test for comparing environmental attitude between gender groups

Total attitude Score	Gender	N	Mean	Std. Deviation	t	df	P
	males	113	61.93	6.465	5.214	219	0.004
	females	108	57.96	4.652			

Level of significance (p< 0.05)

Table 5 One way ANOVA for comparing environmental attitude among educational groups

Educational level	N	Mean	Std. Deviation	df	F	Sig
Illiterate (group I)	111	58.45	5.282	2, 218	11.611	0.000
Up to Middle (group II)	70	60.46	5.487			
Above middle (group III)	40	63.45	7.093			

Level of significance (p< 0.05)

Table 6 One way ANOVA for comparing environmental attitude among age groups

	Age (years)	N	mean	Std. Deviation	df	F	Sig
Total environmental Attitude	17-25 (group I)	62	62.15	7.113	2, 218	5.923	0.003
	26-34 (group II)	71	58.94	4.736			
	35 and above (group III)	88	59.32	5.660			

Level of significance (p< 0.05)

CONCLUSION

The overall basic environmental awareness about various environmental issues was moderate among the slum dwellers denoting that they had an adequate level of basic environmental awareness. There was no significant difference between the basic environmental awareness score of male and female respondents, although the average environmental awareness score of males (12.95) was slightly higher than females (12.19). A significant increase in the level of basic environmental awareness was observed with the rise in the level of education. When the basic environmental awareness of different age groups was compared it was found that the younger age group showed more score than the other two groups.

Moderate environmental attitude was observed among the slum dwellers which was not very encouraging. There was a significant difference in the environmental attitude of the males and females. The average environmental attitude score of males (61.93) was more than the females (57.96). A significant difference in the level of environmental attitude was observed within the different educational groups among the respondents.

It was reported that the level of environmental attitude increased with rise in the educational status of the slum dwellers. When the environmental attitude of different age groups was compared, a significant difference was reported among different age groups. The younger age group showed high environmental attitude as compared to respondents of the older age group.

Environmental pollution appears to be a necessary evil of the human activity. Environmental awareness, perception and education play a significant role in the management of environment for reducing pollution. The level of amenability and responsiveness in safeguarding the environment from pollutants depends upon the extent to which the citizens understand and appreciate the value of environment for health and happiness. It is in this respect essential to make the present slums tolerably livable by providing essential services on the one hand and by educating the slum dwellers for the various environmental ethics.

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