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Environmental attitude of College Students of West Bengal – A Comparative Study based on Dwelling Area and Sex

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INTRODUCTION

The term environment refers to our surrounding which includes physical, biological and socio-cultural aspects. The nonliving things like air, water, land etc. come under the physical aspects; the flora and fauna constitute the biological aspect; whereas the man-made aspects like culture, religion, customs, etc. are included under socio-cultural aspects. Environment affects the growth, development, and survival of organism. Environmental education is aimed at enhancing human knowledge about various components of environment, and making people equipped to solve existing environmental problems, and prevent new ones. It focuses on building knowledge, understanding, awareness and sensitivity about the environment, forming environmental concern, environment friendly behaviours and practices, and fostering skills to resolve environmental problems and challenges.

As conceptualized by Milfont (2007b), environmental attitude is a psychological tendency expressed by evaluative responses to the natural environment with some degree of favour or disfavour. According to Caber and Albayrak (2016), environmental attitude is the combination of beliefs in special situations in the environment, the entire environment, or the people or objects directly related to the environment. An individual with such emotions would present strong concerns about the environment, active participation in environmental protection, and motivation for improvement (López-Bonilla and López-Bonilla, 2016; Kopnina and Cocis, 2017; Hosseinnezhad, 2017b; Ogunbode et al., 2018). Gifford (2014) regarded environmental attitude as the degree of individual support for environmental affairs. Hughes et al. (2016) considered environmental attitude as an individual value regarding the entire environment that generates preference for affairs related to certain environment, e.g., caring and not caring, identity and disapproval. Being a latent construct, environmental attitude can only be inferred from overt responses, that is,

environmental behaviour (Himmelfarb, 1993). Environmental behaviour has been conceived of as a basic model for interaction between human behaviours and environment (Lumber et al., 2017. According to Pulkki et al. (2017). It involves individual actions for enhancing and improving environmental quality beyond the living space, reducing environmental damage, and maintaining natural environment for the coexistence of humans and ecology.

LITERATURE REVIEW

The current investigation aims at comparing the environmental attitude of male and female college students residing at urban, sub-urban, and rural areas of West Bengal. The following section presents a brief overview of the studies concerning these variables.

The role of attitudes in environmental behaviors remains elusive. Researchers (Allen and Ferrand, 1999; Geller, 1995; Kals et al., 1999; Mayer and Frantz, 2004) found affective factors like emotional affinity, empathy, and sympathy as essential elements in predicting pro-environmental behaviors. Much of the researches on environmental attitudes have focused on the role of socio-demographic factors in explaining differences between individuals' environmental attitudes. Arcury et al. (1987) found age as the strongest correlate to environmental attitudes. Younger people displayed more favourable attitudes toward the environment than the elderlies. Because of their lesser integration into the social system as compared to the adults, younger people are inclined to criticize the industrial and governmental policies and decisions inflicting harm to the natural environment.

Gender is another demographic variable which has been found to impact environmental attitude. Researchers have observed that females are generally more concerned about the environment than the males. Supportive evidences have been recorded separately for adults (Schahn and Holzer, 1990), young adults (Goldman et al., 2006), and children (Zelezny et al., 2000). According to McStay and Dunlap (1983), although females engaged in personal behaviors fostering environmental quality significantly more often than did males, they were slightly less likely than males to engage in public behaviors. Eagles and Demare (1999) at a week-long residential camp with 6th-grade students found no gender differences in ecologistic attitude; but the girls showed higher moralistic attitude scores as compared to the boys. Kellert (1985) also found no gender difference in ecologistic and moralistic attitudes for the American children. However, in another study by Kellert and Berry (1981), boys had higher ecologistic scores from 5th grade through 11th grade, and that continued into adulthood.

Another factor influencing the development of pro-environmental attitude might be one's life experiences, especially, the early childhood experiences. Palmer et al. (1998) and Chawla (1998) reported that direct experience of the negative impact of human society on the environment might lead to the development of pro-environmental attitudes. As observed by Palmer et al. (1998), in many cultures, early positive experiences with nature are ranked as the primary contributor to causing pro-environmental attitudes. Children who are brought up in rich natural environments are inclined to develop positive attitudes towards the environment. Thus, both negative as well as positive experiences with nature can be a part of the formation of pro-environmental attitude.

According to Inglehart (1995), as societies become more opulent, their members are less pre-occupied with the economic struggle for survival and become free to hunt post-materialistic goals, environmental protection being one of them. Gelissen (2007) conducted cross-national research across 50 countries to test the objective problems and subjective values by comparing the willingness of adult individuals to make financial sacrifices to protect the environment. The results showed that GDP per capita to impacted people's willingness to make financial sacrifices to support the environment.

The nature of dwelling area has also been found to cause significant change in the environmental attitude of the dwellers. Tremblay and Dunlap (1977) attributed the differences in the environmental attitudes of the rural and urban dwellers to differences in the state of the natural environments they are exposed to. The differences in environmental attitudes may also be explained by the Environmental deprivation theory, which posits the roles of physical environmental conditions, for example, clean air and water and safe neighbourhood streets and parks etc. for ensuring good health and wellbeing. Being deprived of these environmental factors may create differences in attitudes toward environment among people. However, critics have mentioned that the gaps between the urban and rural dwellers in respect of psychosocial experiences are decreasing all over the world day by day, owing to mass communication, education, enhanced mobility and increasing convergence of lifestyles (Howell and Laska, 1992; Bogner and Wiseman, 1997).

METHODOLOGY

Objective of the study:

The present study aims at determining the impacts of dwelling area and sex on the environmental attitude of a sample of college students of West Bengal.

Hypotheses:

Hypothesis 1: There is no significant variation in environmental attitude of the respondents in respect of dwelling area.

Hypothesis 1a: There is no significant variation in enjoyment of nature of the respondents in respect of dwelling area.

Hypothesis 1b: There is no significant variation in support for interventionist conservation of the respondents in respect of dwelling area.

Hypothesis 1c: There is no significant variation in environmental movement activism of the respondents in respect of dwelling area.

Hypothesis 1d: There is no significant variation in conservation motivated by anthropocentric concern of the respondents in respect of dwelling area.

Hypothesis 1e: There is no significant variation in confidence in science and technology of the respondents in respect of dwelling area.

Hypothesis 1f: There is no significant variation in environmental fragility of the respondents in respect of dwelling area.

Hypothesis 1g: There is no significant variation in altering nature of the respondents in respect of dwelling area.

Hypothesis 1h: There is no significant variation in personal conservation behavior of the respondents in respect of dwelling area.

Hypothesis 1i: There is no significant variation in human dominance over nature of the respondents in respect of dwelling area.

Hypothesis 1j: There is no significant variation in human utilization of nature of the respondents in respect of dwelling area.

Hypothesis 1k: There is no significant variation in eco centric concern of the respondents in respect of dwelling area.

Hypothesis 1l: There is no significant variation in support for population growth policies of the respondents in respect of dwelling area.

Hypothesis 2: There is no significant variation in environmental attitude of the respondents in respect of sex.

Hypothesis 2a: There is no significant variation in enjoyment of nature of the respondents in respect of sex.

Hypothesis 2b: There is no significant variation in support for interventionist conservation of the respondents in respect of sex.

Hypothesis 2c: There is no significant variation in environmental movement activism of the respondents in respect of sex.

Hypothesis 2d: There is no significant variation in conservation motivated by anthropocentric concern of the respondents in respect of sex.

Hypothesis 2e: There is no significant variation in confidence in science and technology of the respondents in respect of sex.

Hypothesis 2f: There is no significant variation in environmental fragility of the respondents in respect of sex.

Hypothesis 2g: There is no significant variation in altering nature of the respondents in respect of sex.

Hypothesis 2h: There is no significant variation in personal conservation behavior of the respondents in respect of sex.

Hypothesis 2i: There is no significant variation in human dominance over nature of the respondents in respect of sex.

Hypothesis 2j: There is no significant variation in human utilization of nature of the respondents in respect of sex.

Hypothesis 2k: There is no significant variation in eco centric concern of the respondents in respect of sex.

Hypothesis 2l: There is no significant variation in support for population growth policies of the respondents in respect of sex.

Hypothesis 3: There is no significant variation in environmental attitude of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3a: There is no significant variation in enjoyment of nature of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3b: There is no significant variation in support for interventionist conservation of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3c: There is no significant variation in environmental movement activism of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3d: There is no significant variation in conservation motivated by anthropocentric concern of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3e: There is no significant variation in confidence in science and technology of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3f: There is no significant variation in environmental fragility of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3g: There is no significant variation in altering nature of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3h: There is no significant variation in personal conservation behavior of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3i: There is no significant variation in human dominance over nature of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3j: There is no significant variation in human utilization of nature of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3k: There is no significant variation in eco centric concern of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 3l: There is no significant variation in support for population growth policies of the respondents in respect of interaction between dwelling area and sex.

Hypothesis 4: Urban and sub urban college students do not differ significantly in respect of environmental attitude.

Hypothesis 5: Sub urban and rural college students do not differ significantly in respect of environmental attitude.

Hypothesis 6: Rural and urban college students do not differ significantly in respect of environmental attitude.

Hypothesis 7: Male and female college students do not differ significantly in respect of environmental attitude.

Tools:

To verify the hypotheses, the following tools were used:

- General information schedule developed by the present investigators
- The Short version of Environmental Attitude Scale (EAS-S) (Milfont and Duckitt, 2010)

General Information Schedule

This questionnaire developed by the present investigators contains items regarding various demographic variables, such as, age, sex, mother language, educational qualification, discipline studied, residential locality, and duration of stay at the present locality.

Environmental Attitude Scale

The short version of Environmental attitude Scale (EAI-S) developed by Milfont and Duckitt (2010) assesses individuals' beliefs regarding the natural environment, its management and factors affecting its quality across 12 dimensions or facets, namely, enjoyment of nature, support for interventionist conservation policies, environmental movement activism, conservation motivated by anthropocentric concern, confidence in science and technology, environmental fragility, altering nature, personal conservation behaviour, human dominance over nature, human utilization of nature, eco-centric concern, and support for population growth policies. EAS-S comprises a total number of 72 items, each sub-scale consisting of 6 items. It is a 7-point scale with response categories ranging from 1 (strongly disagree) to 7 (strongly agree). High score indicates favourable attitude towards environment.

Test-retest reliability coefficients of the 12 sub-scales of EAS-S range from 0.62 for the "conservation motivated by anthropocentric concern" sub-scale to 0.90 for the "personal conservation behaviour" sub-scale with an average of 0.82. The mean inter-item correlations have been found to range from 0.22 for the "conservation motivated by anthropocentric concern" sub-scale to 0.67 for the "environmental movement activism" sub-scale, with an average of 0.47. These results indicate adequate internal consistency and homogeneity of all of the EAI-S sub-scales.

Sample:

The present sample consisted of male and female college students residing at urban, sub urban and rural areas of West Bengal. Initially, a considerable number of colleges situated at Kolkata city and different districts of West Bengal, namely, Jalpaiguri, Maldah, Bankura, Murshidabad, Purba Medinipur, Paschim Medinipur, Howrah, North 24 Paraganas and South 24 Parganas were considered for the availability of subjects and data collection. The representatives of the management of those colleges were contacted for getting permission to collect data from their students. Data were collected from the students of 4 colleges situated at urban areas, and 7 colleges located at sub urban areas. Finally, 106 students residing in the urban

area, 95 students dwelling in the sub urban regions, and 100 students inhabiting at different villages of West Bengal (rural area) were considered as the respondents of the present study based on the following criteria.

Selection criteria

i) Those aged from 19 to 22 years were considered as the subjects.

ii) Only those belonging to the Bengali community were considered as the subjects.

iii) The urban group of subjects consisted of those residing in Kolkata and Howrah cities, and studying at the colleges located at urban areas; whereas the respondents belonging to the sub urban and rural groups were the inhabitants of the sub urban and rural localities respectively, and were studying at different sub urban colleges situated at the selected districts of West Bengal.

iv) The respondents were considered irrespective of sex.

v) Those with a minimum stay of five years in their present residential locations were considered as the subjects.

vi) Only those who were willing to participate in the study were considered.

Data collection and Scoring:

With prior permission from the college authorities, data were collected from the subjects following a pre-arranged programmed schedule. The data sheet of everyone was scrutinized so that no item remained unattempted by the concerned subject. Thereafter, the data were tabulated and scored following the standard scoring key.

Statistical analysis of data:

In order to depict a typical picture of the general characteristic feature of the participants, descriptive statistics like mode values and percentages were calculated for each category of respondents, namely, the college students dwelling at urban, sub urban and rural areas.

Two-way analysis of variance was used for analyzing the impacts of sex, dwelling area and the interaction between them on the respondents' environmental attitude. Moreover, t test was used to find out the difference between urban and sub urban, urban and rural, sub urban and rural and male and female students in respect of environmental attitude.

RESULTS AND DISCUSSION

Table 1: General characteristics of male and female college students dwelling in urban, sub urban, and rural areas

General Characteristics	Dwelling area		
	Urban	Sub urban	Rural
1. Age in years (mode value)	21	19	20
2. Sex (%)			
Male	16.61	14.95	17.27
Female	18.604	16.61	15.94
3. Educational qualification (%)			
Semester 1/2	8.3	7.3	9.96
Semester 3/4	6.64	7.3	13.28
Semester 5/6	13.28	8.97	18.27
Semester 7/8	6.64	0	0
4. Discipline (%)			
Humanities	11.56	3.98	11.62
Pure Science	5.64	7.3	8.97
Bio Science	7.3	2.65	5.98
Social Science	5.98	4.65	10.63
Commerce	2.65	1.66	2.99
Others	1.46	2.99	1.99
5. Residence under the jurisdiction of (%)			
Municipal Corporation	35.21	31.56	0
Gram Panchayat	0	0	33.23
6. Locality of residence (%)	35.21	31.56	33.23

Table-1 depicts the typical characteristic features of the male and female college students, dwelling in urban, sub urban and rural areas of West Bengal. The respondents were aged between 19 and 21 years. The students studying different disciplines, namely, humanities, pure science, bio science, social science, commerce, and professional course like engineering participated in the study. The students from all the semesters had been selected as the sample. Almost equal numbers of participants were selected from each of the dwelling locations, namely, urban (35.21%), sub urban (31.56%), and rural (33.23%). All the participants

had been found staying at their respective locations since birth, and had certainly encountered several pros and cons of living in those areas.

Table 2: F ratios based on Environmental attitude scores of urban, sub urban and rural college students (male and female)

Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	193511.011	2	96755.51	F_1= 126.92***
Sex	40508.93	1	40508.93	F_2= 53.14***
Interaction between dwelling area and sex	4189.16	2	2094.58	F_3= 2.75**

** Significant at 0.05 level, *** significant at 0.01 level

Table 2 shows the main effects of the two independent variables, namely, dwelling area (A), and sex (B), and the interaction effect of dwelling area and sex on environmental attitude of the subjects. It is evident from the findings that environmental attitudes of the concerned college students have varied significantly in respect of their dwelling locations, and sex. The effect of interaction of these two factors on the subjects' environmental attitudes has also been significant. The findings lead toward rejection of the hypotheses 1, 2 and 3 respectively.

The significant F ratio concerning dwelling area conforms to the explanation provided by Tremblay and Dunlap (1977), that is, the discrepancy in environmental attitudes of the rural and urban residents may be attributed to the differences in the dwellers' life experiences, originating from exposure to different natural environments, and the postulate of Environmental deprivation theory.

The finding concerning significant variation in environmental attitude in respect of sex is contradicted by the research observations of Eagles and Demare (1999) and of Kellert (1985). Eagles and Demare (1999) reported no differences in ecologistic attitude toward environment among the 6th-grade students in respect of sex. Kellert (1985) too found no gender difference in ecologistic and moralistic attitudes for children.

Table 3: F ratios based on dimension wise Environmental attitude scores of urban, sub urban and rural college students (male and female)

Dimension-1 Enjoyment of nature				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	2596.31	2	1298.155	F_1= 30.85***
Sex	207.21	1	207.21	F_2= 4.97***
Interaction between dwelling area and sex	306.97	2	153.48	F_3= 3.65***
Dimension-2 Support for interventionist conservation				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	2867.08	2	1433.54	F_1= 37.83***
Sex	819.367	1	819.367	F_2= 21.62***
Interaction between dwelling area and sex	178.468	2	89.234	F_3= 2.354**
Dimension-3 Environmental movement activism				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	3114.10	2	1557.05	F_1= 43.18***
Sex	77.84	1	77.84	F_2= 2.16*
Interaction between dwelling area and sex	320.70	2	160.35	F_3= 4.45***
Dimension-4 Conservation motivated by anthropocentric concern				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	194.76	2	97.38	F_1= 2.31**
Sex	1075.58	1	1075.58	F_2= 25.51***
Interaction between dwelling area and sex	267.35	2	133.68	F_3= 3.17***
Dimension-5 Confidence in science and technology				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	1295.05	2	647.52	F_1= 18.34***
Sex	132.47	1	132.47	F_2= 3.752**

Interaction between dwelling area and sex	340.49	2	170.24	$F_{3=}$ 4.82***
Dimension-6 Environmental fragility				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	1443.44	2	721.72	$F_{1=}$ 21.64***
Sex	58.86	1	58.86	$F_{2=}$ 1.77*
Interaction between dwelling area and sex	393.46	2	196.73	$F_{3=}$ 5.89***
Dimension-7 Altering nature				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	1111.806	2	555.9	$F_{1=}$ 15.31***
Sex	220.54	1	220.54	$F_{2=}$ 6.07***
Interaction between dwelling area and sex	1123.95	2	561.97	$F_{3=}$ 15.48***
Dimension-8 Personal conservation behaviour				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	2860.4	2	1430.2	$F_{1=}$ 38.03***
Sex	5.72	1	5.72	$F_{2=}$ 0.152*
Interaction between dwelling area and sex	612.42	2	306.21	$F_{3=}$ 8.14***
Dimension-9 Human dominance over nature				
Sources of variance	Sum of square	Degrees of freedom	variance	F-ratio
Dwelling area	185.54	2	92.77	$F_{1=}$ 3.05**
Sex	304.29	1	304.29	$F_{2=}$ 9.99***
Interaction between dwelling area and sex	428.38	2	214.19	$F_{3=}$ 7.03***
Dimension-10 Human utilization of nature				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	88.46	2	44.23	$F_{1=}$ 1.07*
Sex	300.65	1	300.65	$F_{2=}$ 7.29***

Interaction between dwelling area and sex	429.007	2	214.5	$F_{3=}$ 5.203***
Dimension-11 Eco centric concern				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	2589.92	2	1294.96	$F_{1=}$ 38.31***
Sex	246.69	1	246.69	$F_{2=}$ 7.29***
Interaction between dwelling area and sex	464.68	2	232.34	$F_{3=}$ 6.87***
Dimension-12 Support for population growth policies				
Sources of variance	Sum of square	Degrees of freedom	Variance	F-ratio
Dwelling area	3197.505	2	1598.752	$F_{1=}$ 39.52***
Sex	364.96	1	364.96	$F_{2=}$ 9.02***
Interaction between dwelling area and sex	238.92	2	119.46	$F_{3=}$ 2.95**

*Difference insignificant, ** significant at 0.05 level, *** significant at 0.01 level

Table 3 makes it evident that in eight out of twelve dimensions of environmental attitude, namely, enjoyment of nature, support for interventionist conservation policies, conservation motivated by anthropocentric concern, confidence in science and technology, altering nature, human dominance over nature, eco-centric concern, and support for population growth policies, the respondents have significantly differed in respect of dwelling location, sex, and the interaction between dwelling area and sex. Therefore, hypotheses 1a, 2a, 3a, 1b, 2b, 3b, 1c, 3c, 1d, 2d, 3d, 1e, 2e, 3e, 1f, 3f, 1g, 2g, 3g, 1h, 3h, 1i, 2i, 3i, 2j, 3j, 1k, 2k, 3k, 1l, 2l and 3l are rejected.

In three dimensions, namely, environmental movement activism, environmental fragility, and personal conservation behaviour an insignificant effect of sex has been reported. Therefore, hypotheses 2c, 2f and 2h are accepted. The current findings indicate that the belief about the negative impacts of misdeeds of humans on environment, conviction in human contribution for environmental protection, and personal initiative for conservation of environmental resources are independent of sex.

In the dimension of human utilization of nature, the dwelling area has not made a significant effect. Therefore, hypothesis 1j is accepted. Human utilization of nature refers to the belief concerning prioritization

of economic growth and development over environmental protection and vice versa. Nowadays, the urban and countryside are somehow merged (Howell and Laska, 1992; Bogner and Wiseman, 1997), due to globalization, technological advancement, and increased communication through social networking. It may, therefore, be assumed that the attitude of people toward human utilization of nature does not get affected by their dwelling location.

Table 3: Environmental attitude scores of urban and sub urban college students and their comparison

Urban (N=106)		**Sub urban (N=95)**		**t-value**
Mean	**SD**	**Mean**	**SD**	
309.83	33.15	284.16	18.19	6.9***

High score indicates favourable environmental attitude; ***significant at 0.01 level

Table 3 indicates that the urban and sub urban college students have differed significantly in terms of their environmental attitude scores, with the urban subjects being on the higher side, showing greater degree of favourableness in environmental attitude than their sub urban counterparts. The finding speaks in favour of rejection of hypothesis 4.

Table 4: Environmental attitude scores of suburban and rural college students and their comparison

Sub urban (N=95)		**Rural (N=100)**		**t-value**
Mean	SD	Mean	SD	
284.16	18.19	346.73	35.26	15.68***

High score indicates favourable environmental attitude; *** significant at 0.01 level

Table 4 shows that a substantially significant difference exists between sub urban and rural students' environmental attitude. Therefore, hypothesis 5 is rejected. The rural students have also displayed more favourable attitudes toward environment as compared to the sub urban ones, as evident from the greater average score of the former group than the latter.

Table 5: Environmental attitude scores of rural and urban college students and their comparison

Rural (N=100)		**Urban (N=106)**		**t-value**
Mean	**SD**	**Mean**	**SD**	
346.73	35.26	309.83	33.15	7.73***

High score indicates favourable environmental attitude; *** significant at 0.01 level

Table 5 depicts a highly significant difference between the environmental attitudes of rural and urban college students. Therefore, hypothesis 6 is rejected. Moreover, the rural students have been found to possess more favourable attitude toward environment than their urban counterparts.

It is evident from the findings presented in Tables 3, 4 and 5 that the rural dwellers have more favourable attitudes toward their environment as compared to both urban and sub urban inhabitants. The urban residents, however, hold greater pro-environmental attitudes than the sub urban ones. It may, therefore, be assumed that as the rural participants live in proximity with the nature, they lead satisfying and fulfilling life experiences, and consequently develop a favourable attitude toward the environment. As observed by Palmer et al. (1998), opportunity to grow up in rich natural environments develops positive attitudes towards the environment, and that has perhaps been the case with the present group of rural inhabitants.

The urban dwellers, on the other hand, live in an economically affluent society, which is somewhat detached and distant from the natural environment. In spite of that, they have been observed to hold greater pro-environmental attitude as compared to their sub urban counterparts. This may be explained with Inglehart's (1995) theory, that is, as societies become more affluent, their members become less pre-occupied with the economic struggle for survival; and become free to pursue with post-materialistic goals. Environmental protection is one such goal. Moreover, the degradation of environmental quality in the urban settings might have generated awareness amongst the dwellers, leading to acquisition of favourable attitudes toward the environment.

The sub urban area bridges the gap between urban and rural localities, and shares some of the qualities of both. Simultaneous with the growth and development of science, technology, trade and commerce there has also been an enormous explosion of human population in modern Indian society. The high growth in population vis-à-vis the changes in the life styles of human beings have turned people to be city oriented; and agriculture which was previously the main engagement of people has gradually given way to occupations in the fields of industry, trade and commerce. All these factors have made a large section of the populace rushing to the cities thereby creating tremendous and unmanageable space problems. Dwelling space getting scarcer, there is little possibility for horizontal expansion of the cities to facilitate accommodation of such perennial flow of people. As a remedial measure, the city limits are being expanded for subsequent inclusion of the contiguous suburbs within the ambits of the cities. The sub urban residents, neither enjoy the facilities of city life to the fullest; nor can they satisfy themselves by living near the natural environment, as the rural people.

Moreover, they must keep themselves busy with the challenges and upheavals of the livelihood. All these might have been the reasons underlying the sub urban respondents' lesser pro-environmental attitudes in comparison to the rural and urban ones.

Table 6: Environmental attitude scores of male and female college students and their comparison

Male (N=147)		Female (N=154)		t-value
Mean	**SD**	**Mean**	**SD**	
325.86	41.94	302.66	32.92	5.324***

High score indicates favourable environmental attitude; *** significant at 0.01 level

Table 6 presenting the sex-based comparison of the college students' environmental attitudes reflects that the male and female respondents have significantly differed, concerning the said variable. The finding leads toward rejection of hypothesis 7. Table 6 further indicates that, the male students are more favourable in their attitudes toward environment as compared to the females, as the former group has scored higher, on an average, than the latter.

The significantly greater pro-environmental attitude amongst the male college students as compared to their female counterparts (Table 6) does not conform to the research findings of Goldman et al. (2006), Zelezny et al. (2000), Eagles and Demare (1999), McStay and Dunlop (1993), and Schahn and Holzer (1990). All the investigators found the females, irrespective of age levels, to be more perturbed about the environmental issues than males. However, the research observation of Kellert and Berry (1984) is in support of the present finding. The researchers stated that, boys had higher ecologistic scores from 5th grade through 11th grade, and that continued into adulthood.

CONCLUSION

Environmental protection and restoration are some of the major challenges faced by our society, nowadays. The present study has explored the roles of dwelling location and sex in the context of shaping environmental attitudes of the college students. Though the urban-rural divide is fading rapidly these days, the present groups of inhabitants have still differed in respect of their attitudes toward environment. The participants being a small cross section of the larger population have represented the environmental attitudes of today's youths. The finding hints towards the need for inculcating the awareness about environmental problems, and the importance of finding solutions to such problems in the minds of children from the grass root level, for the sake of promoting and maintaining a sustainable environment, and to make our mother earth a better place for

living. To obtain a unified and sustainable society, two types of actions are needed. First, it is essential to make people aware of the actions that make environmental problems worse and, also to define the behaviour that helps to prevent and mitigate these problems. Second, a good context for action must be provided to the inhabitants.

Several governments have undertaken the task of addressing much of this challenge by establishing policies and standards to regulate the impacts of human activity. Environmental protection and restoration efforts, however, depend not only on the schemes implemented by regulatory bodies, but also on the daily choices made by individuals; how they behave toward the environment; what they consume; or what they are willing to give up. Therefore, studying pro-environmental attitudes and behaviours, the factors that determine them, and the correlates of environmentally sustainable attitude is a fundamental part of understanding the true potential to foster more sustainable development.

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