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Some Correlates of Pro-environmental Behavior

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The present study is aimed at exploring the Pro-environmental Behavior of 150 1st year undergraduate college students of Kolkata. Pro-environmental Behavior is a behavior, which is generally judged in the context of the considered society in a protective way of environmental behavior or a tribute to the healthy environment. The purpose of this study was to find out if there was any significant difference across genders with respect to behavior. Further, the study aimed at finding out the relation, if any, between values, oneness belief and skepticism with pro-environmental behavior. The t-tests revealed that there was no significant difference between male and female subjects regarding Pro-environmental Behavior. However, with respect to Oneness belief, Skepticism about environment, Values for environment there were significant differences between male and female subjects. Nevertheless, Oneness belief, Skepticism about environment, Values for environment were found to be significantly correlated with Pro-environmental behavior. Linear regression analysis revealed that values for environment appeared as the only significant predictor of Pro-environmental behavior.

Keywords: Pro-environmental Behavior, Oneness belief with environment, Values for environment, Skepticism about environment.

The world has reached a state where severe environmental problems have threatened the existence of life on this planet. Stakeholders, including the civil society, have felt the need for sustainable development. To attain sustainability a sharp debate between developmentalists and environmentalists has come up throughout the world.

In developing countries like India and China, the primary priority of government is to improve citizens' living standards. Environmental problems that are included by citizens' activities have not been given enough attention. There is a paradox between the faith of traditional culture characterized by non–anthropocentrism and citizens' some unreasonable environmental behaviors (Zhang, Y., Zhang, L. H., Zhang, J., & Cheng, 2014).

Research indicates that local residents' beliefs about the inherent linkage between people and nature have been gradually weakened, especially for some young people. Their values, moral and behavioral norms have been changing (Li, Zhang, & Zhoo, 2003). Hence, they do not engage in pro-environmental behaviors unless they are aware of socioeconomic losses due to a negative environmental impact. Local residents and especially young people play a very important role in environmental conservation and sustainable development.

Pro-environmental behavior is a behavior, which is generally (or according to knowledge of environmental science) judged in the context of the considered society as a protective way of environmental behavior or as a tribute to the healthy environment. Literature on pro-environmental behaviors consists of two major streams: one focuses on socio–demographic factors and the other focuses on socio–psychological factors. A number of studies in the former stream has identified that age, gender, socioeconomic status, education, ethnicity, religion are factors underlying pro-environmental behaviors (Bernath & Roshewitz, 2008; Johnson & Johansson, 2004).

In India, studies on environmental problems have been focused on crowding. The relationship between environmental world views and perception of the local environmental problems, their risks for people and nature and the

consequences on health are the main concerns of Indian studies (Jain & Pandey, 2010).

Markowitz, Goldberg, Ashton, Lee (2012), found that there is a considerable scientific interest in the psychological correlates of pro-environmental behaviors, using a wide variety of behavior and personality measures. The study found moderate positive correlation of values for environment with environmental activities in both community sample and an undergraduate student sample. They further found that individuals' oneness with environment was fully mediated by individual's environmental attitude and connection to the nature.

Oneness Belief is the expansion of one's sense of identity to include various aspects of the world, both human and non-human. Specific indicators of feelings of interconnection with nature and future are relevant to environmental beliefs and behavior (Hoot & Friedman, 2011). In a study, Garfield, Dunlap, McCraight (2014) found that physical oneness was positively correlated with pro-environmental attitudes. Spiritual oneness was a better predictor of pro-environmental attitude than religion oneness.

Environmental values relate to values beyond self interests. Values not only represent a society's most central cultural features, but are also fundamental factors influencing individuals' attitudes, beliefs, world views, norms and behaviors (Cordano, Dunlap, Van Liere, 2010). Many studies have shown that values cannot impact pro-environmental behaviours directly, but they do so via other factors such as personal norms and environmental beliefs (Steg & Sievers, 2005). Nevertheless, research conducted by Schultz, Gouveia, Cameron, Tankha, Schmuck, & Frnek (2005), verified that there was weak and direct relationship between values and pro environmental behaviors. Jonsson, Karin & Andreas (2014) found a link between peoples' values and their behavior especially in case of environmental friendly behavior, where locus of control acts as a moderator.

Skepticism or disbelief decreases environmental sensitivity. It acts as a hindrance to pro-environmental behavior (Albayrak, Caber, Moutinho & Herstein, 2011). Skepticism has a negative influence on pro-environmental behavior. At the same time, high level of skepticism significantly decreases perceived pro-environmental behavior and environmental concern.

To live a healthy life, we need to survive in a healthy environment. However, with much pollution in the environment, it seems a "never possible" dream. Thus, we need to develop pro-environmental behavior and awareness. This study concentrates on these specific variables, which have potential to develop and promote pro-environmental behavior.

Objectives:

To study the difference in students' environmental behavior, as well as values for environment, oneness with environment, and skepticism regarding environment of the college students across genders.

To study the difference and establish the relationship of students' pro-environmental behavior with values for environment, oneness with environment, and skepticism regarding environment.

To determine if values for environment, oneness with environment, and skepticism regarding environment are significant predictors of students' pro-environmental behavior among college students.

Method

Sample:

The convenient sample of the study consisted of 150 1st year undergraduates taken from different departments of eminent colleges, which are under University of Kolkata. Around 88 students were taken from the departments of pure science and 62 students were from arts and social sciences including boys (n= 78) and girls (n = 72). The age range of the participants was from 17-19 years. The students of self–support, repeaters, and with any kind of disability were not included in the sample.

Instruments:

Pro-environmental Behavior Scale of Students (Markowitz, Goldberg, Ashton, and Lee (2012), the Oneness Belief Scale

Table 1. Mean and SD values of Men and Women for Pro-environmental Behavior Scale, Values for Environment Scale, Oneness with Environment Scale, Skepticism regarding Environment Scale and the 't' values

	Men		Women		
Scales	Mean	SD	Mean	SD	t values
Pro - environmental Scale	69.54	11.47	65	10.37	1.45
Skepticism	18.54	6.06	23.64	5.44	3.09*
Oneness Belief	43.91	6.50	39.29	7.83	2.29*
Values for environment	47.77	9.64	41.07	9.1	2.5*

*P < .05; ** p< .01

(Garfield, Dunlap, & McCraight, 2014), Values for Environment Questionnaire (Zhang Y., Zhang LH., Zhang J., & Cheng S., 2014), Skepticism Scale (Tobler, 2011) were used for this study.

Pro-environmental Behavior Scale of students was developed by Markowitz, Goldberg, Ashton, and Lee in 2012. The adopted scale has 18 items, scored on a 4 point scale. The items measure various pro-environmental behaviors which students undertake in daily life. The test–retest reliability of the present sample was found to be .75. The scale has adequate content validity.

Values for Environment Scale was developed by Zhang Y., Zhang LH., Zhang J., and Cheng in 2014. The scale is based on the Value Scale developed by Stern and his colleagues. It has 12 items, with Likert type scaling. The scale measures both Altruistic values and Egoistic values. The test–retest reliability for the present sample was found to be 0.73. The test has adequate content validity.

Oneness with Environment Scale was developed by Garfield, Dunlap, and McCraight in 2012. It is an 11 item scale measuring both the Spiritual oneness belief and Physical oneness belief. The items were scored in a Likert type scaling. The scale measures both Altruistic values and Egoistic values. The test–retest reliability for the present sample was found to be 0.68. The test has adequate content validity.

Skepticism regarding Environment Scale was developed by Tobler on 2011. It is a 7-item scale measuring skepticism towards climate change and how much human behavior is responsible for it. The items were scored on a 3-point scale. The test–retest reliability for the present sample was found to be 0.64. The test has adequate content validity.

Procedure:

Firstly, formal permission was taken from departmental heads. Students were directly contacted in classrooms and were briefed about the purpose of the study and the instructions required for performing on the scales. The informed consent and demographic information of the willing participants were taken and they were asked to fill the questionnaires. After completion of questionnaires, they were thanked for their worthy cooperation.

Results

Result reveals that there is no significant difference between men and women regarding pro environmental behavior. However, in case of Values for Environment, Oneness with Environment and Skepticism regarding Environment there is a significant difference between boys and girls.

Table 2. Inter Correlations among Pro-environmental behavior, Values for environment, Oneness belief with environment and skepticism regarding environment

Variables	2	3	4
1. Pro - environmental behavior	.68 *	.53*	-.19*
2. Values for environment		.51*	-.27*
3. Oneness belief			-.26*
4. Skepticism			

*p < .05, **p <.01

Result reveals that Values for environment

Table 3. Linear Regression Analysis for Predictor of Pro-environmental behavior

Variables	β	t	Significance level	R	Adjusted R^2	F value with significance
Constant		3.488	.001	.344	.062	2.096*
Skepticism	.143	.989	.328			
Oneness belief	.030	.213	.832			
Values for environment	.356	2.484**	.017			

*p<.05, **p<.01

is a significant predictor of pro-environmental behavior while all other variables namely, oneness belief with environment and skepticism about environment could not predict pro-environmental behavior significantly.

Discussion

Personal attributes and individual variables such as gender, political affiliation, religion, education and marital status have been considered to explain pro-environmental behavior (Melgar & Rossi, 2012). Education, Ideology, and Individual Attributes do play an important role in the pro–environmental behavior (Melgar, Mussio & Rossi, 2013). Moral attitudinal factor towards pro-environmental behavior was a significant factor along with education (Buta, Brennan, & Holland, 2013). The first objective of the research was that there is a gender difference in environmental behavior, values for environment, oneness with environment, and skepticism regarding environment among students. By using t-test, it is revealed that there is no significant gender difference in environmental behavior among students. However, there is a significant gender difference in values for environment, oneness with environment, and skepticism regarding environment of the college students. While girls are more skeptical regarding environment, boys' values for environment and oneness belief with environment are more. The finding is partially in accordance with the previous studies.

Several studies have shown that people who give priority to collective or self–transcendent values are more willing to engage in different forms of altruistic, cooperative, or pro–environmental behavior than people who give priority to individual or self-enhancement value (Karp, 1996). The overall pattern of relations between values and pro–environmental behavior was confirmed by Nordlunal and Garvill, (2002). Oneness belief may prove to the first measure of spirituality and oneness with nature, to be consistently and positively associated with pro–environmental attitudes (Garfield, Dunlap, & McCright, 2008). The inherent unity of all phenomena, or oneness, is with spiritual and physical oneness with nature. Skepticism or powerlessness is negatively related with acquisition of more knowledge for environmental friendly behavior and acts as a hindrance towards positivity; they negate human behavior as the cause of natural calamities. Skepticism, thus acts upon decision (Bulkeley, 2000).

By using correlation method, it is proved that pro-environmental behavior has a significant positive relationship with values for environment, and oneness belief with environment, but a significant negative relationship with skepticism regarding environment. Students who scored high on values for environment scale and oneness belief scale showed more environmentally aware behavior and students who scored less on skepticism scale, scored higher on pro-environmental scale. Thus, the second objective is in accordance with the previous studies.

In order to check the third objective, which is to find if values for environment, oneness with environment, and skepticism regarding environment would be a significant predictor of students' pro-environmental behavior, linear regression was done. Results reveal that only values for environment is a significant predictor of pro-environmental behavior. The reason behind this may be values for environment, which can make people aware of other people's suffering and at the same time feels a responsibility of alleviating this suffering and thus, pro-

environmental behavior initiates. The other two variables namely, oneness belief with environment and skepticism about environment could not predict pro-environmental behavior significantly.

Conclusion

The results depicted that while there is no significant gender difference in pro-environmental behavior among students, there is a significant gender difference in values for environment, oneness with environment, and skepticism regarding environment of the college students. It also indicates that while Oneness belief with environment and Skepticism regarding environment is significantly correlated with pro-environmental behavior, only values for environment acted as a significant predictor of pro-environmental behavior. Some results were in line with the results of past researches, while some others were not because of cultural differences and certain other external and internal factors.

The study revealed that when individuals subscribe to values beyond their immediate own interests, i.e. self-transcendent, pro-social, altruistic or biosphere values, they are likely to engage in pro-environmental behavior. Indian culture and traditions also focuses on moral obligations to act pro-environmentally. "The Self" Indian's believe, is "microsm in macrosm". This common bond enlivens everything existing in universe. The emphasis is on the intrinsic importance of nature for humanity. It may be suggested that in addition to environmental education, if we add value education in our curriculum, students may become more environmentally aware and will engage more in pro-environmental behavior.

There are certain factors which could not be controlled and weakened the result of the study. Results obtained from 150 students cannot be generalized over the whole population. Furthermore, the data was gathered from only few institutes of University of Calcutta, and this limitation can also affect the generalizability of results.

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