

# Pro-environmental attitude of college students of India and Bangladesh

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*Environmental change is one of the myriad pressures placed on resources and thus calls for attention. Environmental degradation is a lot more serious in developing nations, where levels of awareness of problems causing environmental hazards are lower than in developed countries. The environmental problem that the world is facing today and in the future is the consequence of the hoarded action of individual behavior. There is, therefore, a need, predominantly in developing countries, to increase pro-environmental attitudes and behaviors. Former researchers advocate that the superiority of the environment depends chiefly on the level of knowledge, attitudes, values, and practices of human beings. The present study is an attempt to determine the pro-environmental attitude of college students predominantly focusing on waste management in two countries, India and Bangladesh, based on eight different domains of attitude. For the purpose of the study, data were collected from 60 students with a structured questionnaire. Results revealed that due to rapid globalization, land distribution, and land reform, the lack of proper planning by the government and others' perceptions are hampered. This study also suggests some environmental programs where students could participate in the decision-making process in order to conserve the environment and shows the area for future research.*

**Keywords:** *Environmental degradation, waste management, pro-environmental attitude, cross cultural study*

## Introduction

The destruction of natural environments is the primary cause of environmental degradation. Humans have had a tremendous adverse effect on the land, water, and atmosphere of the earth that is far out of proportion to our participation as merely one species out of millions. We have massively exploited the planet to suit our luxury and perceived needs by using our technical abilities and dexterity. In the process, we have heavily used many of the world's natural resources, cornered other species, and left the by-products of our efforts to enhance our lifestyles in different water bodies like lakes, rivers, oceans, and various landforms around the world, on the mountains, and in the air. The Millennium Ecosystem Assessment project (Millennium Ecosystem Assessment, 2005) cites these issues as a concern. In this initiative, almost 1,400 experts from 95 different countries joined in a four-year project to

assemble a global inventory of the state of the planet's ecosystems. There were four prime conclusions:

◆ First, over the past 50 years, in attempting to meet the mounting needs for various commodities (like food, fresh water, timber, and fuel), humans have altered ecosystems a lot faster and more expansively than in any other period of time in history. For example, nearly 60 percent of ecosystem services associated with life on Earth are being disbursed unsustainably.

◆ Second, even after an upsurge in economic development and human fitness and well-being in the past 50 years, deprivation in many ecosystem services has mounted up, which has extended the risk of unexpected environmental changes and augmented poverty for some groups of people.

◆ Third, the approximation for the next 50 years in the dilapidation of ecosystem services is suggestively worse.

◆ Lastly, the project concluded that a great quantity of changes in policies, establishments, and practices

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are called for to counteract the deprivation of Earth's resources.

*Environmental research by social science disciplines*

Environmental problems have therefore become crucial topics of international debate. As this debate has amplified, many social science disciplines have been focusing on environmental research, with studies in sub-disciplines such as environmental anthropology (e.g., Little, 1999; Townsend, 2000), environmental history (e.g., Hayashida, 2005; Simmons, 1993), environmental sociology (e.g., Buttel, 1987; Dunlap & Michelson, 2002), and environmental psychology (e.g., Bechtel & Churchman, 2002; Sundstrom, Bell, Busby, & Asmus, 1996). Environmental problems are viewed as created by maladaptive human behavior (Maloney & Ward, 1973); it is thus noteworthy that they have an anthropogenic origin (Stern, 1992; Takala, 1991). Psychology, thus, can play a major role in the resolution of these problems by enhancing ecological behavior (e.g., Oskamp, 2000; Schmuck & Schultz, 2002; Schmuck & Vlek, 2003). One way to deal with environmental problems is through the study of environmental attitudes, since these may be the underlying factors for people's behavior in preserving or damaging natural resources. Accordingly, raising individuals conscious and aware of the environment came out as one of the most effective ways to solve environmental problems (Benli, Ay, and Kahramanođlu, 2011). Students are the building blocks of society, and by understanding and developing students' knowledge and awareness of environmental issues, only a better environmental picture can be presented. But this teaching should be based on knowledge of students' attitudes toward the various issues of environmental protection (Schreiner & Sjoberg, 2005). Cooper & Palmer (1998) have suggested that variations in human traditions, spiritual and religious approaches, and philosophical directions may result in different views of nature and the environment. This consequently leads to diverse motivations and attitudes towards the environment. Only after understanding the relationships between the attitudes that they possess towards the environment and the factors influencing these attitudes will we be able to come across a way of teaching that could have the opportunity of enhancing the public's attitudes towards nature.

**Reasons for selecting two countries**

India and Bangladesh are two southern Asian countries with similar geographical climates and environmental conditions. India is currently facing environmental crises like deforestation, soil erosion, overgrazing, desertification, air pollution from industrial effluents and vehicle emissions, water pollution from raw sewage, and runoff from agricultural pesticides. A huge and growing population is overstraining natural resources.

Bangladesh, on the other hand, is a river-centric country. The major problems faced by Bangladesh are: many people have been landless and forced to live on and cultivate flood-prone land; various waterborne diseases are prevalent in surface water; water pollution, especially in fishing areas, is a result of the use of commercial pesticides; ground water is being contaminated by naturally occurring arsenic; intermittent water shortages because of falling water tables in the northern and central parts of the country; soil degradation and erosion; deforestation, and so on. Keeping these issues in mind, this paper aims to investigate the environmental attitudes of college students in India and Bangladesh in order to avoid environmental degradation in the future.

**Literature Review**

Environmental attitudes have been defined by various psychologists. Heberlein (1981) defined it as "an organization of beliefs, including an overall evaluation, linking and disliking some aspects of the environment, the environment as a whole, or some object which has clear and direct effects on the environment, such as power plants." According to Schultz et al. (2004), "the collection of beliefs, affect, and behavioral intentions a person holds regarding environmentally related activities or issues" has been referred to as environmental attitude.

**Domains of Environmental Attitude**

There are several factors, of which cleanliness is one. Cleanliness is one of the elementary determinants of quality of life as well as the human development index (Sheethal, 2016). It is a basic requirement to ensure safe health, the environment, and the overall wellbeing of society. Unless proper, functional cleanliness is in use, complemented with the right types of hygiene behaviors, communities will be prone to repeated incidences of water and hygiene-related diseases (Chariar et al. 2011). Ademcal et al. (2018)

investigated the importance of the value of cleanliness as perceived by the students in higher education in Lithuania and Turkey. On the basis of a case study, the data was selected from the research conducted in both countries in 2011–2012 by using semi-structured interviews and qualitative research methods (Öcal, Kyburiene, & Yiittir, 2012). The study explored how students understood the value of cleanliness in both countries. The findings of the research not only demonstrated the difference in the perception of value from an idiographic and nomothetic perspective but also revealed the dependence of this perception on the society the subjects represented as well as their religion, traditions, and culture.

The second domain is safety. Safety is defined as relative freedom from aversive situations like danger, risk, injury, or loss of a person and/or property, whether created deliberately or by accident. A significant proportion (about 85%) of all waste from health-care facilities is non-hazardous waste and can be considered to be safe. It is generally similar in characteristics to municipal solid waste. More than half of all non-hazardous waste from hospitals includes paper, cardboard, and plastics, while the rest consists of discarded food, metal, glass, plastics, and wood. Gulcin Yapici et al. (2017) attempted to determine the environmental attitudes and perceived risks associated with environmental factors among the students. Results showed students' positive attitude toward the environment. It also had a moderate-level risk perception about the environment. Shahnawaj (1990) studied the environmental awareness and attitude of secondary and higher secondary teachers and students in Rajasthan and found that female students possessed significantly more awareness than males. In contrast, Tripathi (2000) reported that boys had better awareness than girls. Sabhlok Rou (1995) found that urban teachers differed significantly from rural and tribal teachers in their awareness of environmental problems related to sensitivity to environmental impact.

Malkus et al. (1993) examined the relationship between children's environmental attitudes and their perceived competence and locus of control in a study. Results showed that children who had an internal locus of control had more positive scores on measures of environmental attitudes than did the rest of the children. This correlation indicates that children who feel they

possess control over their own actions and can regulate their behaviors have strong pro-environmental attitudes. A pro-environmental attitude can be seen as a tension between self-interest and environmental concern (Bamberg, 2007). Substantial evidence suggests that when individuals perceive environmental importance as other-oriented rather than self-directed, they are prone to prioritizing their own benefits and discounting environmental influence in decision-making from their own perspective, especially if their moral beliefs and environmental values are weak (Antonetti et al., 2014; Chatzidakis et al., 2007).

A pro-environmental attitude can be guided by self-regulation directly, as it denotes the monitoring of one's own behavior and adapting to that behavior so that it shows one's goal or expectation (Onwezen, 2013; Villacorta, 2003). Self-regulation can also indirectly motivate pro-environmental attitudes through attitudinal factors. Individuals with more self-regulation tend to display higher pro-environmental attitudes, and as a consequence, positive attitudes may lead to individuals' positive responses to pro-environmental attitudes (Pettus et al., 1987; Warren, 2016).

From a waste management perspective, social support is the human habit of generating waste; it is their willingness to participate actively within the implementation stage and support safe and correct waste systems. Jenna R. Panter (2011) examined whether attitudes, social support, and environmental perceptions are related to active commuting behavior in children and if these relations are moderated by the distance to school. Results showed a moderating effect of distance, while attitudes were more crucial for short distances and safety concerns. Both attitudinal and environmental perceptions are related to the active commuting behaviors of children.

Reductionism helps to promote the efficient use of discarded products and resources because they have not been contaminated by hazardous waste. This saves on the cost of construction, operation, and maintenance of centralized waste treatment and disposal options. Stewart Barr (2007) developed a conceptual framework to examine three waste management practices (waste reduction, reuse, and recycling). It was assumed that environmental values, situational characteristics, and psychological factors play a major role in the prediction of waste management behavior.

Marie I. Kaiser (2011) identified three reductive methods that are of prime importance in the recent practice of the life sciences: decomposition, focusing on internal factors, and so on. Furthermore, she argued that reductive explanations in the life sciences show three features: they refer only to factors at a lower level than the phenomenon at issue, they focus on internal factors and thereby simplify the environment, and they cite only the parts of a system in isolation.

Recycling is another important domain of attitude. NurliyanaJekria et al. (2015) attempted to determine recycling behavior in Selangor among householders. Analysis revealed that environmental concern is crucial to attitude, and attitude buttresses increase environmental concern to improve recycling behavior. In 2016, Mickael Dupre conducted a study where he examined the effectiveness of displaying a persuasive message and social comparative feedback on recycling behaviors in a cafeteria. The results showed that publicly displayed social comparative feedback can enhance recycling behaviors.

Yukalang et al. (2018) suggested that a good amount of contribution can be made to solid waste reuse with the provision of planned and continuous training through educational methods and the existence of waste separation organizations. Shorofi and Arbon (2017), along with Mangiri et al. (2017), revealed in studies that demographic factors such as age, marital status, education, and occupation have a major effect on environmental attitudes. Bom et al. (2017) on the reusing of solid waste in the city of Laramie showed that 80% of people expressed their primary motivation for reusing as environmental protection, which suggested the importance of reusing and the satisfaction of individuals.

In spite of various positive effects of people's contact with nature, there is mounting evidence that indicates people's direct contact with nature is weakening (Zaradic et al., 2009; Soga & Gaston, 2016). Various reasons have been suggested for this mounting hostility from the natural world, which include increased urbanization rates, frequent use of new machines for entertainment, and the perception of nearby natural places as insecure (Clements, 2004; Tandon et al., 2012; Larson et al., 2018a). Researchers have cautioned that this lack of understanding in nature may have adverse consequences for people's pro-environmentalism (Soga & Gaston, 2016; Evans et al.,

2018; Rosa et al., 2018), which could lead to damaging consequences for the environment (Evans, 2019).

### **Method**

**Design:** A pro-environmental attitude survey questionnaire was developed and a cross sectional survey was administered. Data were collected by using randomization technique.

**Participants:** Participants were college students whose age ranging from 17-20 years. 30 were collected from colleges of Dhaka, Bangladesh whereas 30 data were collected from colleges of Kolkata, West Bengal, India.

**Questionnaire development:** The questionnaire was developed from existing literature, using validated questions where available. The questionnaire was designed to collect information about demographics, reported practices, and attitudes, and also included questions from 10 domains of pro-environmental attitude namely: cleanliness, safety, sensitivity to environmental impact, perceived control, self-regulation, social support, reductionism, recycling, reuse and conservation. All the domains contained 7 items each but due to low reliability and item total correlation, two domains safety and perceived control were discarded. For each participant, the following demographic data were collected: age, sex, educational qualification, department, whether they were familiar to waste segregation concept, and whether they are familiar with the institution's infrastructure for waste management. There was a total of 70 items all of which used a 5-point Likert scale (strongly agree to strongly disagree). Each domain included both positively and negatively worded items.

**Data collection:** Data was collected through randomization technique. A written instruction was provided before the questionnaire. Participants were also given oral instructions and were guided through the process. Data were collected via going to the institutions in both the countries.

**Data analysis:** Continuous and binary demographic variables were summarized by sample means and SD respectively. Single-item questions were summarized by the mean and SD of total responses along with their item-total correlations. Both the groups were compared by using the mean and SD values. To check scale reliability, Cronbach's alpha was calculated for each domain. Wilk's lambda values for each domain were

calculated to see the heterogeneity among every domain.

**Ethics:** Local ethics and site-specific governance approvals were obtained for all participating institutions. Consent forms were signed by all the participants by securing individuals' confidentialities.

### Results

Students of different departments from the participating colleges completed the questionnaire (n=60). Results indicated that the mean age of participants was 19 years out of which 87% were female respondents. 72% respondents said they were familiar to waste segregation concept, and 63% were familiar with the institution's infrastructure for waste management. No statistical differences were observed between the 2 samples in mean age, and other demographics of the participants.

### Comparative result of India and Bangladesh on the basis of eight domains

When the mean is compared between the two countries, it is seen that India has the greater means in all the domains (Table 1). The highest mean value is in conservation followed by social support and reuse. The domain of cleanliness has the least mean in case of India. The highest mean value in case of Bangladesh is for the domain of self-regulation followed by conservation and reuse. The least mean is for social support for Bangladesh. SD values are negligible in all the cases. The Cronbach's alpha values are higher than 0.50 in all of the eight domains. Other two domains had low reliability so they were discarded. Reductionism and self-regulation have a slightly higher values of Wilk's lambda being 0.37 and 0.31. However, all the other lambda values are smaller than 0.30 which indicates greater discriminatory abilities of the domains. The domain of social support shows the greatest variability followed by conservation and sensitivity to environmental impact. The F values indicate all the eight domains to be significant at 0.001 level indicating significant variances of the group means of India and Bangladesh for the domains mentioned in table 1.

### Item-wise result for eight domains

Table 2 represents item wise differential pattern of the eight domains and the MANOVA values of each item for comparison between the two countries. The table shows the total mean and SD as well as means

and SDs of every item for both the countries separately. Item total correlation was calculated to see the consistency of the items in every domain. F values show the item specific mean difference of the two countries and P values indicate the significance level. In case of cleanliness, the total mean is 2.54. Item 21 has the highest mean followed by item 11. The least mean is for item 1. Item total correlation is higher for every items except item 51. The second domain is sensitivity to environmental impact for which the total mean is 2.64. Item 43 and item 63 have the highest means while the least mean is of item 13. All the seven items have item total correlations higher than 0.50. The third domain self-regulation has a total mean of 2.56. Item 65 followed by item 49 has the highest and second highest means respectively. Item 35 has the lowest mean along with a low item total correlation value. The domain of social support consists of seven items, whose total mean is 2.73. The mean for all the items are generally found to be higher, only for item 6 the mean is 2.50. The item with the greatest mean is 36. When the item-total correlation is considered, it is observed that item 46 and 26 have lower values with respect to the others. The domain of reductionism has a total mean of 2.63 with the greatest mean of 2.97 for item 17 and the lowest mean of 2.35 for item 7. Item total correlation has found out to be higher for the most of the items other than item 67. The total mean for recycling has come to be 2.74. All the items have mean scores higher than 2.50, the highest being 2.92 for item 28 and the lowest being 2.55 for item 18. All the items have shown high item total correlation except item 18, the value being 0.36. The second last domain is reuse that comprises of 6 items with a total mean score of 2.88. All the items have mean scores more than 2.70, the highest mean is 3.08 for item 9 and the lowest mean is 2.71 for item 19. Item 59 has an item-total correlation of 0.40 being the least value. Rest of the values possess very high values for item total correlation. The last domain is conservation which has a total mean score of 2.85. Item 60 has the least mean of 2.45. The highest mean score is of 3.20 for item 50. Item-total correlation is significantly higher than 0.50 for all the items.

### Item wise comparative result of India and Bangladesh

In case of cleanliness, aesthetic encouragement (item 11) has the highest mean for India while for

Bangladesh this item received the lowest mean. All the other items except for item 41 have greater means for India than Bangladesh. Out of seven items, F values of the first four items namely, item 1, 11, 21 and 31 are significant at 0.001 level whereas the other three items are not significant. Item 63 of sensitivity to environmental domain has the highest mean in case of India while for Bangladesh the highest mean is of item 43. Item 3 for Bangladesh and item 13 for India have the lowest means. However, all the mean values for India are greater than the mean values for Bangladesh. F values are significant for all the seven items at 0.001 level except for item 53 which is significant at 0.1 level. For self-regulation, change in lifestyle to reduce damage (item 63) has the highest mean in case of India while the lowest mean is of item 25 which has the highest mean for Bangladesh while item 15 has the lowest mean. Three items namely item 15, 49 and 65 are significant at 0.001 level, item 45 is significant at 0.1 while the other items are not significant. The mean values for the domain social support are higher in case of India than Bangladesh. Regular environment awareness program (item 26) has the highest mean and plantation of trees (item 66) has the lowest mean for India whereas for Bangladesh authority providing little fund to conserve environment (item 46) has the highest mean and item 6 has the lowest mean score. All the items in this domain have significantly variances between the group means at 0.001 level except for

item 26 and 46 which are significant at 0.1 level. In case of reductionism domain, ineffective use of area has the highest mean for India while inconvenient waste segregation has the lowest mean. For Bangladesh, flats accommodating more people (item 17) has the highest mean score while item 7 got the lowest mean. Only ineffective use of area (item 67) has no significant variance between the mean scores while four items are significant at 0.001 level and two items are significant at 0.1 level. Item 18 in case of recycling has the highest mean for India while item 8, 28 and 58 have the same lowest mean score. In case of Bangladesh, item 38 and 58 have the same highest mean score and item 8 has the lowest mean score. All the seven items have significant variance between the group means at 0.001 level except for item 18 which is significant at 0.1 level. In case of reuse, item 59 has the highest mean while item 39 has the lowest mean for India. For Bangladesh, item 9 has the highest mean whereas item 29 and 59 have the same lowest mean score. Item 59 has no significant variance between the group means. The other five items are significant at 0.001 level. In case of the last domain, namely conservation, the highest mean is for item 50 and item 20 has the lowest mean for India while the result is reversed in case of Bangladesh. All the eight items of this domain has significant variance between the group means of India and Bangladesh.

**Table 1**  
**Differential pattern of pro-environment attitude between the two countries**

DOMAINS	INDIA		BANGLADESH		Alpha	Wilk's lambda	F (df=1,58)
	MEAN	SD	MEAN	SD			
CLEANLINESS	2.84	0.59	2.25	0.79	0.61	0.26	48.89*
SENSITIVITY TO ENVIRONMENTAL IMPACT	3.02	0.61	2.26	0.87	0.76	0.20	101.59*
SELF REGULATION	2.83	0.61	2.41	0.77	0.55	0.31	42.59*
SOCIAL SUPPORT	3.29	0.64	2.18	0.85	0.73	0.18	187.96*
REDUCTIONISM	2.99	0.65	2.27	0.78	0.70	0.37	70.94*
RECYCLING	3.21	0.57	2.21	0.77	0.79	0.21	166.71*
REUSE	3.26	0.63	2.38	0.75	0.77	0.25	146.02*
CONSERVATION	3.36	0.61	2.39	0.79	0.82	0.19	202.45*

Table 2  
Item-wise differential pattern

Domains	Item no.	Statement's description	Total Mean	Total SD	Item-total r	India		Bangladesh		India vs. Bangladesh		
						Mean	SD	Mean	SD	F (df=1, 58)	P	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
Cleanliness	1	Furniture position disruption	2.36	0.6	0.48	2.66	0.47	2.06	0.73	13.89	0.001	
	11	aesthetic encouragement	2.72	0.72	0.67	3.40	0.67	2.03	0.76	53.86	0.001	
	21	loss of goods	2.82	0.74	0.65	3.20	0.66	2.43	0.81	25.27	0.001	
	31	Is expensive	2.53	0.71	0.61	2.90	0.71	2.16	0.71	18.93	0.001	
	41	Is time consuming	2.60	0.77	0.59	2.53	0.57	2.66	0.96	0.66	NS	
	51	increase in productivity	2.38	0.63	0.33	2.60	0.49	2.16	0.77	0.63	NS	
TOTAL	61	Malodour free	2.41	0.65	0.42	2.56	0.50	2.26	0.81	0.03	NS	
			2.54	0.68		2.84	0.59	2.25	0.79			
	Sensitivity to environmental impact	3	Caring for animals	2.61	0.83	0.64	3.36	0.61	1.86	1.04	46.13	0.001
		13	global warming reduction by saving plants	2.33	0.66	0.53	2.63	0.55	2.03	0.76	12.07	0.001
		23	indifferent to killing pets	2.45	0.80	0.60	2.66	0.66	2.23	0.94	8.13	0.001
		33	use of dustbins cleans environment	2.79	0.70	0.78	3.13	0.63	2.46	0.76	41.65	0.001
43		indifferent to deforestation	2.90	0.92	0.68	3.30	0.70	2.50	1.14	16.54	0.001	
53		necessary compassion towards animals	2.47	0.73	0.54	2.53	0.63	2.40	0.83	3.7	0.1	
TOTAL	63	inconvenience of solar energy	2.90	0.57	0.71	3.50	0.70	2.30	0.63	68.33	0.001	
			2.64	0.74		3.02	0.61	2.26	0.87			
	Self-regulation	5	Dubious environment change	2.50	0.81	0.54	2.63	0.56	2.36	1.06	1.47	NS
		15	Change in ways of living	2.32	0.57	0.58	2.60	0.62	2.00	0.58	18.39	0.001
		25	stick to an environment beneficial plan	2.75	0.71	0.44	2.26	0.58	2.90	0.80	1.57	NS
		35	look for solution to environmental problem	2.23	0.72	0.29	2.90	0.71	2.20	0.85	0.49	NS
45		hard time setting environment related goals	2.27	0.72	0.52	3.33	0.60	2.50	0.73	3.87	0.1	
49		change in lifestyle to reduce damage	2.90	0.59	0.68	3.46	0.68	2.46	0.59	56.84	0.001	
TOTAL	65	willing to consider ways to make a better environment	2.95	0.75	0.57	3.30	0.53	2.43	0.83	35.07	0.001	
			2.56	0.69		2.83	0.61	2.41	0.77			



Domains	Item no.	Statement's description	Total Mean	Total SD	Item-total r	India		Bangladesh		India vs. Bangladesh	
						Mean	SD	Mean	SD	F (df=1, 58)	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Social support	6	Improved care by organization's initiative	2.50	0.59	0.82	3.46	0.57	1.70	0.65	108.12	0.001
	16	Providing proper cleaning equipment	2.88	0.74	0.67	3.26	0.64	2.30	0.91	35.07	0.001
	26	regular environment awareness program	2.65	0.82	0.36	3.53	0.57	2.03	0.99	2.88	0.1
	36	regular provided dustbins	2.90	0.75	0.70	2.90	0.70	2.26	0.92	45.13	0.001
	46	little fund to conserve environment	2.63	0.76	0.26	3.33	0.54	2.36	0.82	3.84	0.1
	54	carry out Government's recommendation to control global warming	2.82	0.63	0.73	3.20	0.66	2.30	0.71	40.68	0.001
	66	plantation of trees	2.75	0.80	0.71	2.83	0.60	2.30	0.94	20.66	0.001
<b>TOTAL</b>			2.73	0.72		3.29	0.64	2.18	0.85		
Reductionism	7	roof, balcony windows for gardening	2.35	0.74	0.65	3.26	0.70	1.86	0.89	25.7	0.001
	17	flats accommodate more people	2.97	0.78	0.67	3.26	0.66	2.67	0.86	24.34	0.001
	27	money to support solar energy	2.73	0.68	0.72	2.80	0.80	2.20	0.71	42.92	0.001
	37	shopping malls are better	2.45	0.69	0.64	3.33	0.53	2.10	0.58	11.97	0.01
	47	different waste bins for different sections	2.88	0.64	0.73	2.93	0.69	2.43	0.76	27.43	0.001
	57	segregation of waste is inconvenient	2.59	0.73	0.52	2.53	0.74	2.26	0.77	3.11	0.1
	67	ineffective use of area	2.45	0.82	0.22	3.50	0.61	2.36	0.89	0.25	NS
<b>TOTAL</b>			2.63	0.73		2.99	0.65	2.27	0.78		
Recycling	8	money saving	2.65	0.72	0.82	2.73	0.66	1.80	0.84	25.7	0.001
	18	hectic and inconvenient	2.55	0.75	0.36	3.50	0.61	2.36	0.85	3.79	0.1
	28	prevents buying new materials	2.92	0.7	0.75	2.73	0.66	2.00	0.71	29.98	0.001
	38	plastic recycling helps	2.76	0.73	0.72	3.10	0.69	2.43	0.84	52.69	0.001
	48	institution lacking in facilities	2.89	0.62	0.67	3.40	0.63	2.16	0.67	37.27	0.001
	58	reduces productivity and quality	2.8	0.67	0.71	2.73	0.66	2.43	0.76	27.79	0.001
	68	disgusts to see recyclable things thrown away	2.58	0.64	0.62	3.10	0.69	2.16	0.67	17.96	0.001
<b>TOTAL</b>			2.74	0.69		3.21	0.57	2.21	0.77		
Reuse	9	excited to use old goods	3.08	0.76	0.74	3.40	0.63	2.43	1.04	39.39	0.001
	19	resource preserving	2.71	0.62	0.72	3.36	0.57	2.30	0.73	42.39	0.001
	29	protects environment	2.85	0.64	0.78	3.30	0.55	2.06	0.69	67.66	0.001
	39	though cheap, not preferred	2.96	0.61	0.76	3.10	0.49	2.67	0.50	39.53	0.001
	59	no use of plastics even if no alternatives	2.8	0.66	0.40	3.50	0.50	2.06	0.64	2.44	NS
	69	using bottles to water plants	2.86	0.74	0.67	3.36	0.59	2.30	0.92	25.63	0.001
<b>TOTAL</b>			2.88	0.67		3.26	0.63	2.38	0.75		



Domains	Item no.	Statement's description	Total Mean	Total SD	Item-total r	India		Bangladesh		India vs. Bangladesh	
						Mean	SD	Mean	SD	F (df=1, 58)	P
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Conservation	10	lowers standard of living	2.89	0.77	0.50	3.40	0.71	2.53	0.93	9.65	0.001
	20	conserve though sufferings of human welfare	2.84	0.56	0.80	2.53	0.56	2.66	0.56	72.85	0.001
	30	restricts development of new medicines	2.81	0.75	0.70	3.36	0.61	2.56	0.86	35.63	0.001
	40	protected for plants and animals than humans	2.98	0.74	0.69	3.20	0.56	2.40	0.79	35.28	0.001
	50	indifferent to save water	3.2	0.79	0.58	3.63	0.63	2.10	0.94	26.37	0.001
	56	taking care of plants	2.81	0.76	0.69	3.43	0.68	2.36	0.87	23.79	0.001
	60	intend to save natural resources	2.45	0.6	0.68	3.23	0.63	2.46	0.62	47.43	0.001
70	find ways to conserve power	2.84	0.64	0.74	3.26	0.64	2.40	0.72	35.65	0.001	
TOTAL			2.85	0.70		3.36	0.61	2.39	0.79		

### Discussion

The aim of the present study was to investigate pro-environmental attitudes of college students of India and Bangladesh and in order to do that ten domains were selected out of which two domains namely safety and perceived control were discarded due to low reliability and item-total correlation. In case of cleanliness, the mean score has found to be greater for India than Bangladesh and item-wise differential pattern suggests that cleanliness maintaining aesthetics were favored by the college students of India. However, this was not the case for the students of Bangladesh as the mean score of this item has been found to be the lowest according to their responses. It can suggest that in India, people might perceive cleanliness as a virtue. Again, students in Bangladesh have considered cleanliness to be time consuming as they got the highest mean score for this item while the converse is true for students in India. This has resulted in an overall lower mean score for students in Bangladesh. In case of sensitivity to environmental impact, use of dustbins to clean environment has a higher mean. It is noteworthy that Indian college students have perceived solar energy to be inconvenient. It may be because of the fact that solar energy is expensive and is weather dependent. Both the countries students are also found to be indifferent towards deforestation. It may be due to rapid globalization, the land distribution and reform is a major issue nowadays which might have caused the indifference. Students of India have shown a willingness to change their lifestyle in order to reduce environmental damage while students of Bangladesh have got a lowest score in this item. However, Indian students have also responded to have a hard time setting environment related goals and stick to an environment beneficial plan. In today's speeding world, as comfortable lifestyle is desired by everyone, it may so happen that students do not perceive the hostile effects of the environmental damage and due to lack of proper awareness, they find it difficult to understand what is beneficial for the environment. In case of reductionism, both the countries' students have reported ineffective use of area to be a problem. Both the countries' economy suggest a shift towards industrialization. As a result, land reform is taking place but due to improper planning it may have been ineffective in most of the cases. Students of India have perceived different waste bins for different sections to be beneficial whereas students of Bangladesh have got a lower mean score for this. It may be due to the fact that the concept of waste segregation may be novel to Bangladeshi students, so their perception is different in this case. The

domain of recycling suggests that students on one hand have perceived recycling to be hectic and inconvenient while on the other hand, they are disgusted to see recyclable things thrown away. They have also reported institutions not having proper recycling facilities. It may suggest that even if they are interested to recycle, because of proper infrastructure they find the procedure to be inconvenient. The domain of reuse have also displayed similar result. They have perceived plastics to be harmful and not use it even if no substitutes are available. No significant difference between two countries' means has been found in this item. Indian students have responded reuse to be resource preserving and be a catalyst to protect environment. However, this was not the case for students of Bangladesh. It might again be due lack of awareness of over utilization of natural resources. In case of the last domain, conservation Indian students have suggested that conservation lowers standard of living and also showed indifference towards saving water which may contribute to recent incident of scarcity of water in India. This is often attributed to lack of proper Governmental planning and awareness among the people. On the contrary, students of Bangladesh have perceived this domain better and they have suggested to conserve even after knowing human welfare will suffer. Governments of both the countries should provide proper infrastructure and develop better planning in order to save environment. Proper implementation of planning is also necessary to conserve environment. Classroom curricula should incorporate different beneficial program so that students become aware of the environment. Beside these, different environment awareness program can be held where students may share their own views and participate in the decision-making process in order to reduce environmental degradation. However, due to time constraint and unavailability of data, the sample size was small in case of the present study. A more detailed analysis could have been done if the sample size was larger. Future research should incorporate a larger sample size where urban, semi-urban as well as rural population will be taken into account and zone wise detailed analysis would be done. Different streams of college students can be taken into consideration to see a detailed picture.

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