

Relationship between Environmental attitude and Frequency of pro environmental behaviour among young adults

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Abstract:

Environmental degradation is a topic of concern all over the world now. People's attitude towards environmental protection and restoration influences their overt behavior to make this world a better place to live in. Previous research suggests that the quality of the environment depends on the level of knowledge, attitudes, values, and practices of individuals (Saari et al., 2021). This study is an ex-post facto study that aimed to understand the relationship between environmental attitude and the frequency of pro-environmental behaviour among young adults. Convenience sampling was used to collect the data. The study includes 100 participants of age range 18 to 26 years. Environmental attitude inventory (EAI) 24-items (Milfont & Duckitt, 2010) and frequency of pro environmental behavior 17-items (Whitmarsh & O'Neill, 2010) tools were used to analyse the results. Therefore, understanding the relationship between those can help us plan for increasing the focus of environmental education on construction of attitudes, which in turn would result in pro-social behaviour.

Keywords: *Environmental attitude, Pro environmental behaviour, Young adults.*

Introduction:

Environmental problems have become a serious concern for all human beings on the planet. India is both a major greenhouse gas emitter and one of the most vulnerable countries in the world to projected climate change. The country is already experiencing changes in climate and the impacts of climate change, including water stress, heat waves and drought, severe storms and flooding, and associated negative consequences on health and livelihoods. With a 1.2 billion with growing population and dependence on agriculture, India probably will be severely impacted by continuing climate change (NIC, 2009). Population aged 10-24 years accounts for 373 million (30.9%) of the 1210 million of India's population with every third person belonging to this age group. Youth- the critical phase of life, is a period of major physical, physiological, psychological and behavioural changes with changing patterns of social interactions and relationships.

Many activities or programs have been initiated or introduced by the government and nongovernment agencies in order to address climate change, global warming to prevent further deterioration of climate or global warming. Projects on tree planting and solar power have been introduced. However, these activities are not common yet, in the sense that not all people are planting trees and using solar energy.

Stern and Dietz's (1994) proposed three dimensions of environmental attitude which is based on the value orientation. Based on this value orientation, there are three environmental attitudes, and they are categorized as rooted in a concern for the self (egoistic concern), for other people (altruistic concern) or for the biosphere (biospheric concern). Jarreau (2014) argued that it is our environmental behaviors in the end; either mitigate or contribute to global climate change today. Jarreau (2014) as he quoted from Rosa and Dietz (2012) that most releases of greenhouse gases are driven by consumption of goods and services by individuals, households and organizations, and the manufacturing, transport and waste disposal that underpins that consumption. Thus, it shows how a person's environmental attitude and environmental behaviour impacted today's environmental condition.

Environmental attitude can be divided into two domains preservation and utilization of the environment. Preservation of the environment was defined by Milfont & Duckitt (2010) as "the general belief that priority should be given to preserving nature and the diversity of natural species in its original natural state, and protecting it from human use and alteration" Utilization

of the environment was defined as “the general belief that it is right, appropriate and necessary for nature and all natural phenomena and species to be used and altered for human objectives” (Milfont & Duckitt, 2010; p. 81).

Individuals focus on one’s own attitude will in turn result in action. Thus, attitude and behaviour are related in addition, when individuals feel more responsible for their own actions are more consistent with their behavior. Hence this study strives to find the relationship between environmental attitude and the frequency pro environmental behaviour among young adults.

The purpose of the study

This study focusses on to find the relationship between environmental attitudes and frequency of pro environmental behaviour among young adults. Consequently, the result will be used for educational purposes to improve environmental awareness and consequently such awareness may lead to behavioral changes toward the environment. Human beings have been thinking only of themselves as the center of the universe and looking at things around them as secondary, not important, except only if they serve the needs of human beings. Environmental consequences of such an attitude can be disastrous. The increase in temperature is getting uncontrollable, getting hotter every year. Thus, the solution to reduce global warming is going back to human beings themselves. Revisit again their attitudes and their behaviors toward the environment. By pointing out the relationship between human attitudes and human behaviors toward the environment, the young adults are expected to review again their attitudes toward the environment and hopefully change their behavior into friendly environmental behaviors.

Improving environmental attitudes and environmental behaviors of the adults will definitely bring some positive effects toward the adolescents/ students ‘environmental attitude and behaviors because the adults are the ones the adolescents look up to. It is expected that the adults will teach their children’s on how to see and to behave toward the environment. As always said the change has to start from the house which will expand to the whole society.

Review of literature:

Bronfman et.al (2015) conducted a research to Understand Attitudes and Pro-Environmental Behaviors in a Chilean Community. Survey data was obtained from a statistically representative sample (N = 1537) in Santiago, Chile. Results shows that several participants displayed tendencies that favor more responsible environmental behaviors, with high environmental open access sustainability and demonstrating their ample awareness of the

consequences of failing to protect the environment. Nevertheless, the highest average scores of environmental behaviors were related to low-cost behaviors and those that imposed the fewest behavioral restrictions. In global terms, we concluded that the youngest subjects in the lowest socioeconomic group obtained the lowest scores across the pro-environmental behavior spectrum.

Kirk (2010) conducted a study on “Sustainable Environment and Pro-Environmental Behaviour”. A cross-sectional survey compares the pro-environmental behaviours, intentions, environmental knowledge, and pro-environmental orientation of occupants working in a traditionally designed building and occupants working in a LEED-ND certified building located on the University of Nebraska-Lincoln Campus. The study found that there was a visible increase in the pro-environmental variables for occupants working in a sustainable environment, however, based on the data analysis indicated that the differences were not statistically significant for any measured variables. But when it came to the environmental knowledge and environmental behaviour, the study found that there was a significant correlation between individual’s environmental knowledge and pro-environmental behaviours, as well as between individual’s pro-orientation and pro-environmental orientation.

Milfont & Duckitt (2009) conducted a research to find the validity and reliable measure to assess the structure of environmental attitudes. An anonymous questionnaire was administered to students enrolled in introductory psychology classes at the University of Auckland, New Zealand, a total of 314 (215 female and 99 male) students completed the questionnaire their ages ranged from 16 to 51. The results shows that the twelve factors were established through confirmatory factor analyses, and the EAI scales are shown to be unidimensional scales with high internal consistency, homogeneity and high test-retest reliability, and also to be largely free from social desirability.

Chan (2005) carried out a research on Environmental attitudes and behaviour of secondary school students in Hong Kong. A postal survey of 992 secondary students in Hong Kong using the Weigel and Weigel environmental concern scale was conducted to investigate their environmental attitudes which were reflected in a readiness to engage in various pro-environmental behaviours including paper recycling at school and at home and the use of less tissues and plastic bags. The Pearson correlation coefficient between environmental concern and comprehensive behavioural intention was strong and positive (0.52). The results indicated that

students expressed great concern about the environment and exhibited a strong willingness to participate in pro-environmental behaviour.

Methodology:**Research problem:**

Whether there is an relationship between environmental attitude and frequency of pro environmental behavior among young adults?

Aim:

To find the relationship between environmental attitude and frequency of pro environmental behaviour among young adults

Objectives:

1. To find the environmental attitude among young adults
2. To find the Frequency of pro-environmental behavior among young adults
3. To find the Relationship between Environmental attitude and the Frequency of pro environmental behaviour among young adults
4. To find the gender difference in environmental attitude and the Frequency of pro environmental behavior among young adults

Based on the above reviews the following hypothesis were formulated

H₁₁: There would be a significant relationship between environmental attitude and frequency of pro environmental behaviour among young adults.

H₀₂: There would be no significant gender difference in the environmental attitude and Pro environmental behaviour among young adults.

The operational definitions of the variables:

The World Health Organization (WHO) defines “adolescents” as individuals between 10 and 19 years, “youth” between 15 and 24 years, and “young people” between 10 and 24 years (Blum & Nelson-Nmari, 2004; WHO, 2015). The National Youth policy of India (2003) defines youth population as those in the age group of 15 to 35 years.

Frequency of pro environmental behavior can be defined as the number of times the person engages in a pro environmental behaviour.

Environmental attitude is “the collection of beliefs, which affect, behavioural intentions a person holds regarding environmentally related activities or issues” (Schultz, Shriver, Tabanico, & Khazian, 2004)

Sample description

A Convenience sampling was done among 101 young adults from Chennai was selected. Informed consent was obtained from the participants. The questionnaires developed by Milfont & Duckitt, (2010) and Whitmarsh & O’Neill, (2010) were used collect the data.

- **Inclusion criteria:**

- Male and female young adults
- Age group between 18- 26 years.
- Those who live in Chennai city.

- **Exclusion criteria:**

- <18 years and >26 years
- Individuals who did not complete the questionnaires.

Tools used and Description:

Milfont & Duckitt, (2010) developed a questionnaire for “Environmental attitude inventory” short version- 24 items. Its response is scored in a 7-point Likert scale. The psychometric properties of this questionnaire were tested among undergraduate students and found to be reliable ($\alpha = .83$) and valid.

Environment utilization is assessed using the following sub-scales: Conservation motivated by anthropocentric concern, Confidence in science and technology, Altering nature, Human dominance over nature, Human utilization of nature. It is evaluated by the following subdimensions: Enjoyment of nature, Support for interventionist conservation policies, Environmental movement activism, Environmental threat, Personal conservation behavior, Eco-centric concern, Support for population growth policies.

Whitmarsh & O’Neill, (2010) developed a questionnaire to find the frequency of pro environmental behaviour, it consists of 14 items and scored on 5- point Likert scale. Higher the total score higher the number of times the individual is engaging in PEB.

Statistical analysis:

In the present study, descriptive statistics were used to describe to the sample characteristics and analyze the obtained data. Spearman's Rank order correlation and Mann- Whitney U test was used to find the relationship between the variables and gender difference among the participants respectively.

Results and Discussion

Table 1 shows the descriptive statistics of the participants of the study.

S.no	Total no. of participants		Age	Educational qualification		
			Mean \pm SD	Undergraduate	Postgraduate	Working
1	Male	26	22.5 \pm 2.7	13	11	2
2	Female	75	24.6 \pm 3.3	45	27	3
3	Total	101	23.0 \pm 3.0	58	37	6

This table shows the demographic details collected from the participants. The mean age of female and male were found to be close to 23, however they were more female participants than male counterparts.

Table 2 represents the mean and SD of Environmental attitude and frequency of pro environmental behaviour of the participants.

Variable	Mean \pm SD
Environmental attitude	Preservation 58 \pm 5.8
	Utilization 44 \pm 6.4
Frequency of pro environmental behaviour	64 \pm 10

This table shows that the under the domain preservation and utilization of the environment, for the maximum score of 99 and 70, participants have obtained a mean score of 58 and 44, respectively.

Table 3 shows the relationship between Environmental attitude and frequency of pro environmental behaviour of the participants.

		EA	PEB
Spearman's rho correlation	EA	1	0.25*
	PEB		1

*Significant at 0.05 level

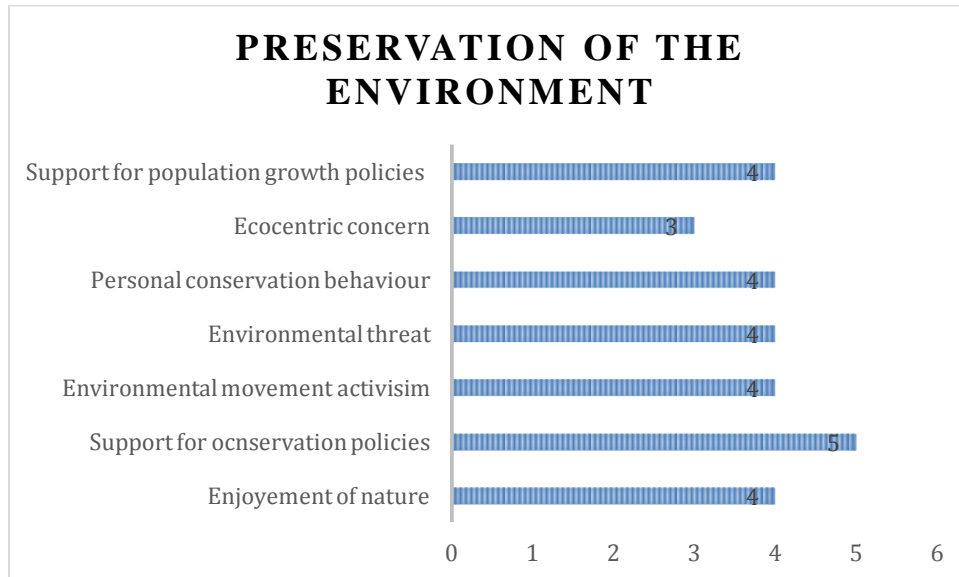
Table 3 shows that there a significant relationship ($p < 0.05$) between environmental attitude and PEB among young adults.

Table 4 shows the gender difference in EA and PEB among young adults.

Variable	Gender		Z- value	P- value
	Male	Female		
	Mean Rank	Mean Rank		
Environmental attitude				
Preservation	52.73	50.40	-0.35	0.72
Utilization	56.23	49.19	-1.05	0.29
Total EA	53.65	50.08	-0.53	0.59
Frequency of pro environmental behaviour				
	54.35	49.84	-0.67	0.49

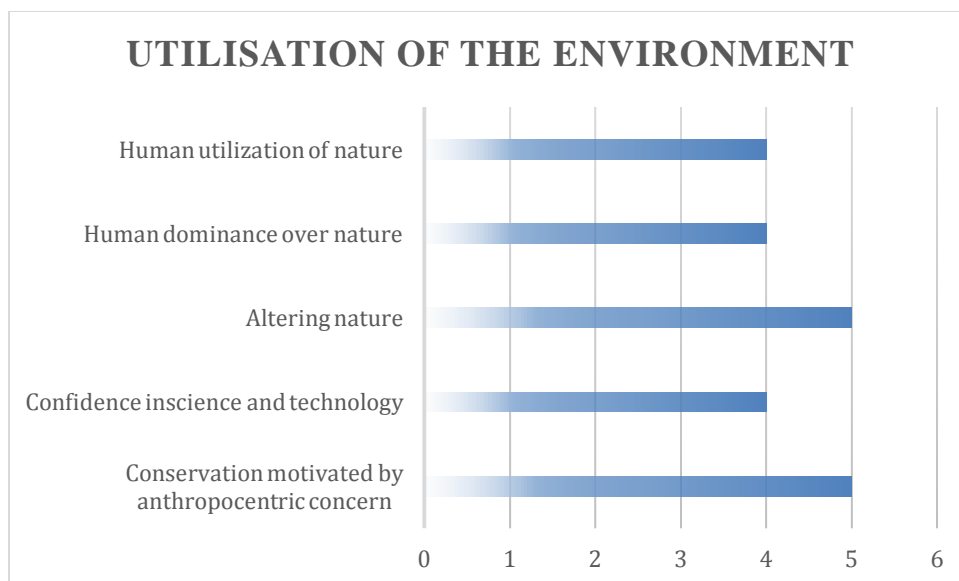
This table shows the gender difference in EA and PEB among the participants. Male participants seem to have higher mean rank than female in both EA and PEB.

Graph 1 shows the average environmental attitude in each category of the preservation of the environment domain.



The above graph shows that on average participants agreed on all the sub-domains of preservation of environment expect eco-centric concerns, where they have established a neutral stance.

Graph 2 shows the average environmental attitude in each category of the Utilization of the environment domain.



This graph shows on average participants lie on the positive side in all sub-domains of Utilization of the environment including altering nature and conservation motivated by anthropocentric concern, indicating that people superficially talk and care about environment but rarely engaging in actions to help them. This can be inferred that participants have rated the questionnaire unreservedly enlisted genuine responses.

Discussion:

As per the national sample survey (NSS) (2007-08) 32.8 percent of youth group attend educational institutions and 46 percent (2004-05) employed. However, in the obtained sample the participants were not equally distributed with respect to education qualification. The mean age of female and male were found to be close to 23, however they were more female participants than male counterparts.

Table 2 shows that the under the domain preservation and utilization of the environment, for the maximum score of 99 and 70, participants have obtained a mean score of 58 and 44, respectively. Which indicates that the participants attitude towards preservation of the environment lie on towards the positive side of the spectrum than the other. For a maximum score of 85, participants have obtained an average of 64, indicating that more participants are engaging in pro environmental behavior like switching off lights, drive economically, reusing objects and saving water.

Table 3 shows that there a significant relationship ($p < 0.05$) between environmental attitude and PEB among young adults. These results are in line with Bronfman et.al (2015) and Kirk (2010) findings. They explained that environmental knowledge and environmental behaviour, found to be significantly related to pro-environmental behaviours, this can be further explained by Kaiser and Schuettler (2003) explained environmental preservation and utilization with an altruistic conception of values and utilitarian conception. Milfont and Duckitt (2010) also demonstrated that the environmental preservation dimension is associated with the relationship with nature, social desirability, ecological behavior, a favorable relationship with sustainable development, the belief that economic growth cannot be everlasting, a prodemocratic attitude and transcendence. On the other hand, utilization of the environment is associated with social dominance, authoritarianism, economic liberalism, and religious observance. Therefore, indicating that change in one's attitude can in turn result in overt actions.

Table 4 shows the gender difference in EA and PEB among the participants. Male participants seem to have higher mean rank than female in both EA and PEB. However, there were no significant gender difference observed with the participants, indicating adequate intervention strategies for bringing attitudinal change among the general population can benefit both the groups.

Limitations:

1. The sample size is small hence the result cannot be generalized.
2. The concerned variables can be influenced by other factors like, culture, socio-economic status and individual characteristics.
3. Frequency of PEB were self- rated, so there might be discrepancies in the actual response and those reported.

Implications

1. It provides insight on how environmental attitude is related to PEB.
2. The schools need to include environmental training or seminars for the students and to include environmental ethics in the curriculum.
3. Further, the result of the study will be used to formulate school's policies related to garbage and energy management, where starting at the earliest possible.
4. Educational focus on awareness about the value of the resources and encouragement to find alternative source of energy with eco-centric concern e.g., Reusable water filtration device,
5. Further research should explore the relationship of the variables among diverse sample of young adults, with different background to allow generalisation ability of the findings.
6. It is also important to study the influence of other factors like social norms, the role models and mentors and the everyday life experiences - positive experiences or observation of destruction of valued places in fostering pro-environmental attitudes.

Conclusions:

- 1) The environmental attitude and frequency of pro-environmental behavior found to lie on the positive side of the spectrum towards environmental sustainability.

- 2) There was a significant positive relationship between environmental attitude and frequency of pro-environmental behavior among young adults.
- 3) There was no gender difference in attitude and pro- environmental behavior among young adults.

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