



A STUDY OF ENVIRONMENTAL PROTECTIVE BEHAVIOR AMONG EDUCATORS IN RELATION TO THEIR PRO-ENVIRONMENTAL ATTITUDE

Dr. Neha Gupta

Assistant Professor
Department of Education
St. John's college Agra

Dr. Rajiv Phillip

Associate Professor
Department of Mathematics
St. John's college Agra

ABSTRACT

The objective of the study is to assess the impact of pro-environmental attitude, of educators on their environmental protective behaviour. The sample of 200 male and 200 female educators were picked up through stratified sampling method from the list of educators. Descriptive and inferential statistics techniques were also used in this study and multiple regression analysis were computed for data analysis through SPSS 16.0 version. It is concluded from the findings of the present investigation that in relation to study the gender differences in pro-environmental attitude, significant gender difference found in pro-environmental attitude, in which male educators found dominant in emotional affinity towards nature whereas female educators found dominant in pro-environmental attitude.

Further, it is concluded that pro-environmental attitude significantly influenced the environmental protective behaviour of the educators and also environmental protective behaviour of educators having high levels of pro-environmental attitude. Hence, concluded that the pro-environmental attitude of educators influenced positively and significantly their environmental protective behaviour and also it was found that there was existed significant interactional effects of pro-environmental attitude of educators on their environment protective behaviour. Further it was found that the predictors 'pro-environmental attitude', 'environmental altruism' and emotional affinity towards nature play significant role with high degree in predicting the criterion variable environment protective behaviour also all the coefficient of correlations among the independent and dependent variable of the study were found significant.

INTRODUCTION

The conditions of life on our planet- fresh air, safe drinking water, existence of stratospheric ozone-layer, biological diversity, fertile soil, birds and animals, genetic resources, priceless cultural monuments and natural heritage- are in peril as a result of wasteful outlook towards nature and natural resources. Problems like global warming, thinning of ozone layer, declining biological diversity, processes of desertification are some of the considered problems global in character and thus require global solutions. The international community has preferred to adopt frameworks for international legal restraints upon state

behaviour. The approach of community response includes measures to ensure prevention of environmental harm and the conservation and sustainable use of the natural resources. This is different from the traditional approach, which is based on seeking reparation for environmental harm by the concerned state.

Environmental Protective Behaviour

Environmental protection means protection of the nature and surroundings. Environment protection is not new in the Indian context. It existed even from the beginning of human life and mention is available in pre-historic phase too. Man cannot survive without

nature. As a result it is the duty of man to protect nature and thus environment. Hence, such type of behaviour which involves in practice of protecting the natural environment on individual, organizational or governmental levels, for the benefit of both the natural environment and humans

Pro-environmental attitude

Pro-environmental attitude which individual participation in an activity that furthers sustainable (green) practices by reducing or eliminating negative environmental impacts. These activities include reducing waste and pollution, increasing water and energy efficiency, and altering transportation patterns. In other words, pro-environmental attitude is a complex web of environmental, economic, and social elements benefiting the current situation and dictating the livelihood of future generations when taken into consideration and put into practice. Pro-environmental attitude can be, based on the knowledge of environmental science or ecology, judged according to their impact on the environment.

OBJECTIVES OF THE STUDY

To study the pro-environmental attitude of male and female educators and its impact on their environmental protective behaviour.

HYPOTHESIS OF THE STUDY

The null hypothesis will be framed in the present study as given as under-

- (a) There is no significant difference between male and female educators in relation to their pro-environmental attitude.
- (b) There is no significant effect of pro-environmental attitude of male and female

educators on their environmental protective behaviour.

METHOD OF THE STUDY

In the light of aim and objective of the present investigation, Investigator followed Ex-post facto" research method to draw the environmental protective behavior of educators in relation to their pro-environmental attitude, environmental altruism and emotional affinity towards the nature.

VARIABLES OF THE STUDY

The variables of the present study were categorized as follows:

Independent Variable: In the present study, independent variable was taken as Pro-environmental Attitude,

Dependent Variable: In the present study environmental protective behaviour was taken as dependent variable.

Moderate Variable: Gender

In the phase of sampling, the investigator prepared separate list of male and female educators which were selected from higher education institutions for the present study. The sample of 200 male and 200 female educators were picked up through stratified sampling method from the list of educators. The distribution of selected male and female educators in the various institutions

TOOLS OF THE STUDY

In the present investigation, The lack of standardized tools available in this field especially in India, investigator constructed scales for measuring the environmental protective behaviour, pro-environmental attitude, environmental altruism and emotional affinity towards nature in the present study

Brief description of the tools of the study

Sr.	Name of the tool	Construct by	Final item and try-out	Type	Reliability index	Validity
1	Environmental Protective Behaviour	Self construct	35	Verbal and five point rating scale	Cronbach's alpha reliability (0.843), Test-retest index of reliability (0.837)	Face and content validity
2	Pro-Environmental Attitude	Self construct	35	Verbal and five point rating scale	Cronbach's alpha reliability (0.838), Test-retest index of reliability (0.814)	Face and content validity

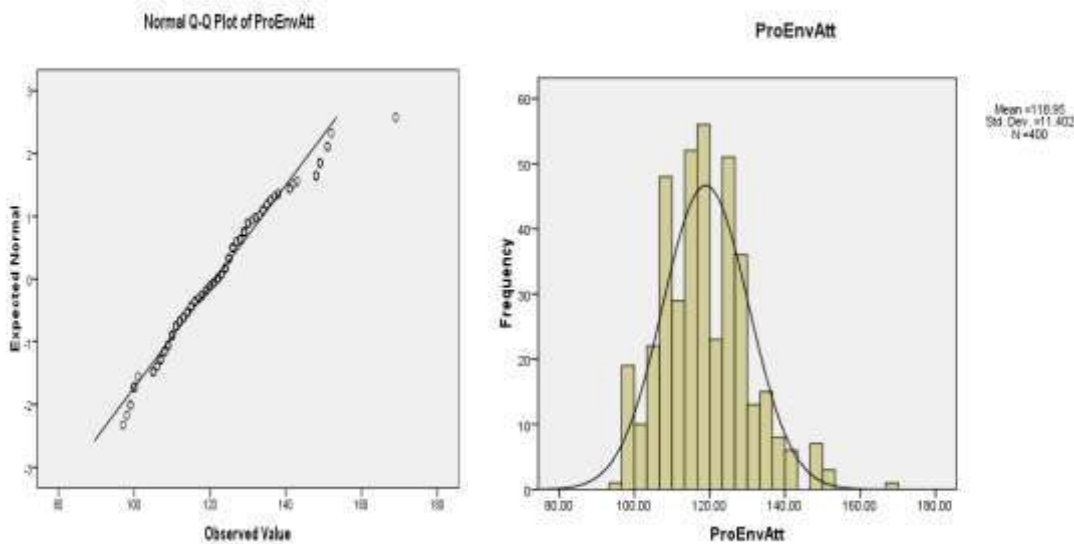
To achieve the present objective first of all investigator assess the normalization nature of distribution of scores of PEA of male and female educators.

Variable of the study	Gender	N	Sk	Ku	S-W test of normality	Normality (Y/N)
PEA	Male	200	.102	.533	.961*	Y
	Female	200	.106	.496	.967*	Y
	Both	400	.076	.312	.971*	Y

It is observed from the table 4.1.1 that the values of skewness for distribution of scores of pro-environment attitude with respect to different groups of educators (male, female and both) were found 0.102, 0.106 and 0.076 respectively and related values of kurtosis were found 0.533, 0.496 and 0.312 respectively which closed to standard values of normal probability curve. The obtained values of skewness and kurtosis for distribution of scores of pro-environment attitude with respect to different groups of educators (male, female and both) were found close to standard values (sk=0, ku=.269) of normal probability curve.

It is further observed that values of Shapiro-Wilk test of normality with respect to different groups of educators (male, female and both) were found 0.961, 0.967 and 0.971 respectively which is insignificant at 0.05 level of confidence (insignificant value of Shapiro-Wilk test shows normality of data), hence The distribution of scores of PEA with respect to different groups of educators (male, female and both) were found normalized.

Investigator also plotted the graphical characteristics of distribution of scores of PEA of male and female educators through graphs 4.1.01, 4.1.02 and 4.1.03 shown as under:



The normal Q-Q plot is graphical method of assessing normality of distribution of the scores. The scatter should lie as close to the line as possible with no obvious pattern coming away from the line for the data to be considered normally distributed. It is observed from normal Q-Q plot for PEA with respect to different sample units, the scatters were found close to line.

Investigator obtained histogram with NPC from the scores of pro-environment attitude of male, female and both sample units in which X-axis shows the range of the scores for the pro-environment attitude and Y-axis indicates their frequencies of the scores. Maximum frequencies of data related to pro-environment attitude male, female and both educators were found under the shape of normal probability

curve, which shows the normal distribution of data in relation to PEA of educators. Through observing the graphical representation, it is found that the scores of PEA of educators were distributed in shape of normal probability curve.

In the next part of the present objective, investigators analysed and compare the Pro-environmental attitude of male and female educators and presented as below:

C. Comparative analysis of PEA of male and female educators

In this part of the objective, investigator obtained the mean values and standard deviation for the PEA of male and female educators and to compare the mean values of male and female educators in relation to their PEA through executing Critical Ratio

(CR-value). The obtained value of mean, standard deviation and critical ratio for the data of PEA of male

and female educators shown in the table 4.1.2 as under:

Variable of the study	Gender	N	M	S.D.	CR-value	Level of significance
Pro-environmental attitude	Male	200	121.44	12.40	4.466	0.01
	Female	200	166.46	9.71		

It is observed from the table 4.1.2 that the mean value of PEA of male and female groups of educators were found 121.44 and 166.46 respectively and related values of standard deviation were found 12.40 and 9.71 respectively. The mean value of PEA of female educators was found greater than mean value of PEA of male educators. CR-values was calculated to study the significant difference in mean values of PEA between male and female educators and found 4.466 which was significant at 0.01 level of confidence. Hence, there was found significant difference in PEA

of male and female educators. Thus, null hypothesis "There will be no significant difference between male and female educators in relation to their PEA" is rejected on the basis of result.

D. Study of impact of PEA of educators on their EPB.

In the part of this objective, investigator obtained the analysis of variance (F-value) for studying the impact of PEA of educators on their EPB. The summary table (table 4.1.3) of analysis of variance cited as under:

Table 4.1.3: ANOVA Summary table for independent effect of PEA of educators on their EPB

Source	Type III Sum of Squares	df	Mean Square	F-value	Level of Significance
PEA	17251.836	2	8625.918	76.854	0.01
Error	44558.164	397	112.237		
Total	6780274.000	400			
Corrected Total	61810.000	399			

a. R Squared = .279 (Adjusted R Squared = .275)

It is observed from the table 4.1.3 that F-value is found 76.854 which is significant at 0.01 level of confidence in relation to impact of PEA of educators on their EPB. The table shows that degree of freedom for pro- environmental attitude of the educators which indicates high, average and low levels of pro-environmental attitude of educators. It can be concluded that after observing the summary table of ANOVA, the EPB of educator significantly varied with their levels of PEA. Hence, PEA significantly influenced the EPB of the educators. Thus, the null hypothesis "There will be no significant effect of EA of male and female educators on their EPB" is rejected on the basis of results as shown in the table 4.1.3.

The F-value is found significant as shown in the table, its means that EPB of educator significantly varied with their levels of PEA. The researcher therefore, needs to compare the pairs of data groups using certain procedures which are capable of examining two data sets at a time. For this purpose, a post-hoc test (LSD Method) is suitable statistical technique for multi comparison between groups. Post-hoc test analysis has been shown in table 4.1.4.

Table 4.1.4: Post-Hoc Analysis for multi-comparison of EPB of educators in relation to high, average and low levels of their PEA.

Levels of PEA		Mean Difference	Std. Error	CR-value	Level of Significance
LSD Method	Average	-5.7769*	1.28354	4.51	0.01
	Low				
	High	-17.8335*	1.47654	12.13	0.01
	Average				
	Low	5.7769*	1.28354	4.51	0.01
	High	-12.0565*	1.29992	9.34	0.01
High					
Low	17.8335*	1.47654	12.13	0.01	
Average					
High	12.0565*	1.29992	9.34	0.01	

*. The mean difference is significant at the .05 level.

It is observed from the table 4.1.4 which indicating that mean difference of mean value EPB of educators between their low and average levels of PEA was found -5.7769 which is also significant at 0.01 level of confidence and in the same way, mean value difference of EPB of educators between their low and high levels of PEA was found -17.8335 which is also significant at 0.01 level of confidence and further mean difference of EPB of educators between their average and high levels of PEA was found -12.8335 which is significant at 0.01 level of confidence. Hence, it can be concluded that the mean value of the EPB of educators having high level of PEA was found greater and significantly differ than the mean value of educators having average and low level of PEA and also the mean value of the EPB of educators having average level of PEA was found greater and significantly differ than the mean value of educators having low level of PEA. Further, it is concluded that the PEA of educators influenced positively and significantly on their environmental protective behaviour.

CONCLUSION OF THE STUDY

The investigator calculated value of skewness and kurtosis and also performed Shapiro-Wilk test of normality to assess the normalization characteristics of PEA of male and female educators. The values of skewness for distribution of scores of pro-environmental attitude with respect to different groups of educators (male, female and both) were found 0.102, 0.106 and 0.076 respectively and related values of kurtosis were found 0.533, 0.496 and 0.312 respectively which closed to standard values of normal probability curve. It is further observed that Shapiro-Wilk test of normality with respect to different groups of educators (male, female and both) were found 0.961, 0.967 and 0.971 respectively which is insignificant at 0.05 levels. Therefore, it can be concluded that distribution of scores of PEB for with respect to different groups of educators (male, female and both) were found normalized.

The mean values of PEA of male and female groups educators were found 121.44 and 166.46 respectively and related values of Standard deviation were found 12.40 and 9.71 respectively. The mean value of PEA for female educators was found greater than mean value of PEA for male educators. CR-values is calculated to study the significant difference in mean values of pro-environment attitude between male and female educators and found 4.466 which is significant at 0.01 level. Therefore, it can be concluded that the significant difference in PEA of male and female educators.

In relation to impact of PEA of educators on their PEB, F-value is found 76.854 which are significant at 0.01 level. Therefore, PEA significantly influenced the PEB of the educators.

Post Hoc analysis was performed by investigator and indicated that the mean value of the PEB of educators having high level of PEA is found greater and significantly differ than the mean value of educators having average and low level of PEA and also the mean value of the PEB of educators having average level of PEA is found greater and significantly differ than the mean value of educators having low level of PEA, hence the PEA of educators influenced positively and significantly their PEB.

REFERENCES

1. Abramson, Paul R., and Ingelhart, Ronald. (1995). *Value Change in Global Perspective. An Arbor: University of Michigan Press, Social Science Quarterly.* 88(7):824-219.
2. Andrew, Darnton. (2004). *Promoting environmental behaviour : existing evidence to inform better policy making.* *Environment and Behaviour.* 31,178-202
3. Archnaneji (2013). *The interface between international trade and environmental protection : a legal study social science quarterly.* 70(4):793-808
4. Bixler, R D., & Floyd, M. F. (1997). *Nature Is Scary, Disgusting, And Uncomfortable.* *Environment and Behavior,* 29(4),443-467.

5. Burbuck, Mark. E. (2012). *Personal characteristic preceding pro-environmental behaviour*
6. /that improve surface water quality. *Environment and Behavior*. 41(5), 715-740
7. Daniel C. Esty and Meria H., Ivanova (2003). *Globalization and environmental protection a global governance perspective social science quarterly* .78(1):24-29
8. David Popp (1999). *Altruism and the demand for environmental quality.*” *Environment and Behavior*. 41(5), 715-740
9. Dawn Drake (2009). *Some challenges in motivating pro-environment behaviour* *Environment and Behavior*. 41(5),715-740
10. Debra,S. (2010) *Environmental Attitudes, Knowledge, Intentions and Behaviors Among College Students*. *Environment and Behavior*. 39(4), 474-493
11. Defra (2008). *A Framwork for pro-environmental behaviour* *Environment and Behavior*. 41(5),715-740
12. Dutcher, T. S., Finley, J. C., Luloff, A. E., & Johnson, J. B. (2007). *Connectivity with nature as a measure of environmental values . social science quarterly* .78(1):24-29