

**ENVIRONMENTAL EDUCATION AWARENESS AND
ECOLOGICAL BEHAVIOUR OF FEMALE TEACHER
EDUCATORS IN RELATION TO MARITAL STATUS
AND SUBJECT STREAMS**

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Abstract

The present study tries to explore the relationship between environmental education awareness and ecological behaviour of female teacher educators in relation to demographic variables like marital status and subject streams. Results of the study reveal high environmental education awareness and average ecological behaviour. Insignificant differences are observed in environmental education awareness and ecological behaviour in relation to subject streams while significant differences are observed in environmental education awareness in relation to subject streams. A positive and significant relation exists between environmental education awareness and ecological behaviour of female teacher educators.

Keywords: Environmental education awareness, Ecological behaviour, Teacher educators, Marital Status, Subject stream.

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Introduction

Excessive and ruthless tapping of natural resources by man has led to degradation of environment. To save the earth's environment from further devastation, it becomes indispensable to make people aware about the environmental issues which will be possible only if they are properly educated. It will help them in understanding the problems, finding appropriate solutions and motivate them to work accordingly by developing such behavior.

Environmental education plays a significant role in creating environmental awareness which is the first step leading to the formation of environmental behaviour.

Environmental awareness and ecological behavior can be developed in students by teacher. The teacher training institutes play significant role in creating and developing ecological behavior in future teachers. It is the teacher educator who can inculcate knowledge, skills and commitment among future teachers for environmental issues. Environmental awareness will enable them to think objectively and act purposefully (behavior) for the solution of environmental problems. As we know teachers being mediators of change in the society have a crucial responsibility to help generate the broad social context necessary for ecological sustainable development. Thus, environment awareness induces ecological behavior.

Although there is no direct relation of knowledge to environmental actions but still it is considered as a necessary factor which act as moderator to promote pro- environmental actions (Schahn and Giesinger, 1993; quoted in Kitzmuller, 2009); Grob, (1991, quoted in Kollmuss and Agyeman, 2002); Ramsey et al., (1992); Leeming et al., (1993); Madsen, (1996); Fliegenschnee and Schelakovsky, (1998); Kaiser et al., (1999); Murphy, (2002); Meinhold and Malkus, (2005); and Schmidt, (2007). In the field of environmental education research, very few studies have investigated relationship between environmental awareness and behaviour and that too among teachers. Studies conducted by Patel and Patel, (1994); Patel and Patel, (1995); Todt, (1996); Patel, (1999); Owens, (2000); Pradhan, (2002); Duckitt and Linda (2006); Larijani, (2010); Nagra, (2010a); Saxena and Srivastava,(2012); Nagra and Singh, (2013); Nagra and K. Kaur, (2013); Nagra and I. Kaur, (2013) and Sinha and Ali (2013) focus on measuring the knowledge or awareness level of teachers while very few concentrate

towards behavioral commitment towards environmental issues or knowing the relationship between these components along with demographic variables.

Studies have significantly revealed that women are more inclined towards nature, are more emotionally bonded and show more concern for environmental problems than man and thus, are environmental stewards. They show concern for rising environmental problems by engaging themselves in environmental protection activities such as cleaning the surroundings, planting trees, switching off lights when not in use, separating out the garbage at home, proper use of water, etc. (Fliegenschnee and Schelakovsky, 1998; Lehmann 1999; Raudsepp, 2001 and Ifegbesan, 2009). Taking this situation into consideration the study has been conducted particularly on female teacher educators.

Research Design

The study was conducted on a random sample of 180 teacher educators of Hoshiarpur District. Standardized Environmental Education Awareness Test (Nagra 2010b) was used to determine the level of environmental education awareness. The reliability coefficient was found to be 0.99 and the value of suitability ranged from 0.97 to 1 which showed that the test had content validity and concurrent validity was 0.63. The test comprised of 100 multiple choice items, with four choices, related with different aspects of environment specifically areas such as biosphere, energy conservation, pollution (air, water, soil, and noise), conservation of natural resources including wild life, population, and general environmental concepts. Each correct response carried one mark and incorrect response a zero mark. Thus, the maximum score a participant could score was 100. The standardized table in the test categorized the environmental education scores as very high (68 and above), high (62-67), above average (56-61), average (47-55), below average (41-46), low (35-40) and very low (34 and below).

The ecological behaviour was assessed by using self constructed and standardized Ecological Behaviour Scale. The scale consisted of 20 items listed on 5-point Likert scale. A score of 5 was given to the option strongly agree, 4 to option agree, 3 to option undecided, 2 to option disagree and 1 to strongly disagree for all the items. The scale consisted of items related with Green consumer behaviour, Waste reduction behaviour and Conservation behaviour. The reliability coefficient by test- retest method was found to be 0.93. The scale possessed content validity because statement was selected based on unanimity of experts on content accuracy,

conceptualization and distribution of statements over different dimensions. The ecological behaviour scores were categorized as strong (above 70), moderate (50-70) and weak (below 50) ecological behaviour.

The data collected through the tools was subjected to statistical analysis and results were drawn out.

Results and Conclusions

Mean, standard deviation of the total sample and relevant sub samples was computed and differences between groups were calculated by applying t tests. Pearson's coefficient of correlation was applied to find the correlation between environmental education awareness and ecological behaviour of the total sample as well as the sub samples.

Table -1. Test of Significant Difference for Environmental Education Awareness and Ecological Behaviour

Groups	Environmental Education Awareness					Ecological Behaviour		
	Total (N)	Sub-Samples	Mean (M)	Standard deviation (σ)	t-value	Mean (M)	Standard deviation (σ)	t-value
Total	180	--	62.59	18.82	--	76.44	10.37	--
Marital Status	120	Married	61.24	19.44	1.4	76.70	10.95	0.44
	60	Unmarried	65.29	17.34		75.91	9.14	
Subject streams	60	Science	71.75	19.40		77.68	9.16	1.13
	120	Humanities	58.00	13.67	4.90**	75.82	10.90	

** Significant at 0.01 level

Results in Table-1 highlight that the total mean score of sample for environmental education awareness falls in high level category and the mean scores of total sample for

ecological behaviour fall in moderate level category (compared from tools used). This suggests that female teacher educators of Hoshiarpur district possess high level of environmental education awareness and moderate ecological behaviour. Results of studies by Aminrad et al (2012) are also consistent with the present study.

The comparison of mean scores of married and unmarried female teacher educators is insignificant at 0.01 level in both environmental education awareness and ecological behaviour ($t=1.4$ and 0.44 respectively) (Table-1). This reveals marital status does not affect the environmental education awareness and ecological behaviour of female teacher educators.

Likewise, table -1 also shows that the mean scores of science and humanities female teacher educators are significant ($t=4.90$) at 0.01 level for environmental education awareness. This suggests that science teachers have significantly higher environmental education awareness than humanities female teacher educators. Results of studies conducted by Owens, (2000); Pardhan, (2002); Sandhu and Dhillon, (2005); Nagra, (2010a); Astalin, (2011); Saha, (2012); Nagra and I. Kaur (2013) and Singh et al (2014) are consistent with results of present study depicting higher environmental awareness among science teachers in comparison to humanities teachers. While the mean scores for ecological behaviour were found to be insignificant ($t=1.13$) suggesting that subject streams does not affect the ecological behavior of female teacher educators.

Table- 2. Coefficient of Correlation between Environmental Education Awareness and Ecological behaviour of Secondary Teachers

Variable (N=180)	r
Environmental Education Awareness	.312
Ecological Behaviour	

The coefficient of correlation (r) between environmental education awareness and ecological behaviour for the total sample ($N=180$) was found to be positive and significant (Table 2). Therefore, the two variables are functionally related i.e., the mean environmental education awareness is related to ecological behaviour and vice versa indicating that increase in environmental education awareness will correspondingly increase the ecological behaviour

and vice versa. Although the relation is not directly confirmed by various theories but somewhere indirectly in conjugation with other factors this relation do exists. However, results of Sengupta et.al (2010), Saxena & Srivastava (2012) and Sinha & Ali (2013) are consistent with the present study.

Educational Implications

To achieve a good quality of life on earth for all living beings, it is essential to educate mankind and spread awareness about environment and sustainable development. Teachers need to be exposed to real environment situations to bring about change in attitude and behaviour (Murdoch 2012). In this regard, government, academicians, policy holders, politicians, and administrators must stress not just upon teaching and training of environment related content and activities but must also vigorously implement them in teacher training programmes, both pre- service and in-service. To conclude, the need of the society demands linking of theory with practice, its effective implementation in solving environmental problems ranging from local to global level. Only then awareness can is transformed into actions.

The limitation of this study is that the results cannot be generalized for other female teacher educators of the State. But for sure, it provides insights on what the current groups of female teacher educators know about environmental issues and how they act. It is suggested that for future studies it can be extended to other schools of the State incorporating teacher's attitude and other demographic variables.

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