

ENVIRONMENTAL EDUCATION AWARENESS AMONG SENIOR SECONDARY SCHOOL TEACHERS

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ABSTRACT

The present study identifies the environmental education awareness of senior secondary school teachers in relation to type of school, gender and subject streams. Environmental Awareness Test was used for collecting data from a random sample of 200 senior secondary school teachers. Statistical techniques such as mean, standard deviation and t test were applied for analysis of data. The results revealed average level of environmental education awareness in these teachers. No significant differences were observed in environmental education awareness in relation to type of school, gender and subject streams.

Key Words: *Environmental Education Awareness, Senior Secondary Teachers and Gender.*

INTRODUCTION:

Humanity's struggle toward a better life and higher standard of living through ruthless tapping of natural resources has resulted in serious environmental problems. The need of the hour is to not only protect the environment but also to preserve it qualitatively for the future. Although many conferences, campaigns, reports have come forward after Agenda 21 of Rio Declaration 1992 at the national and international levels but still the environmental issues are global priority that remain to be solved. These can only be solved when every individual feels the intensity of the problem and starts acting towards its protection. This is possible through attitudinal change that can be brought about by education and that too by "environmental education".

The Hon'ble Supreme Court in India (22nd November, 1991) in this regard, has directed the state governments and education boards to introduce environmental education as a compulsory subject at all levels of education (school and colleges) and also entrusted the responsibility to NCERT (18th December, 2003) for preparing the syllabus for environmental education at different level of school education (class I to XII). At the primary level emphasis have to be laid upon maximum use of school and home surroundings as well as other settings in order to promote

awareness and appreciation about the local environment. At the upper primary level, children's should participate in simple projects related to different environmental issues and problems while at the secondary stage, real life situations and opportunities for community based environmental action have to be introduced. At the senior secondary level, students have to be moved to real life settings where environmental problems are a reality and accordingly an action through extension work has to be taken. Students at this level are highly receptive and dynamic thus, can be strongly motivated to understand the implications of environmental destruction and take preventive actions. It is evident from various studies that attitudes are formed at this stage of life that tends to endure (Roberts & Lang, 1985; Schuman & Scott, 1989; Steeh & Schuman, 1992).

Efforts to introduce environmental education as a subject in the school curriculum have been made but still the subject faces certain limitations with regard to its proper implementation. There is a significant discrepancy between people's attitudes and their actual behavior. The loophole surely lies in the lack of an appropriate environmental interest and attitude of the teacher towards this subject. The teacher should be aware of the environmental education aspects, only then s/he can convince the society about the urgency of environmental education and make the future generations aware of the environmental problems and their solutions. Not only s/he should develop a positive attitude but also should actually practice environmental protection behavior. This will truly help in developing similar attitudes and actions in the children also. It has been found that the teachers are not wholeheartedly ready to go beyond regular class schedules due to some constraints or so and even it becomes difficult for them to adjust the specific environmental activities in the regular course schedule (Sonowal, 2009). Taking into consideration this situation, the investigator felt a need to conduct a study to examine the environmental education awareness level among senior secondary school teachers and whether type of school, gender and subject stream have any effect on the teachers' environmental education awareness. It is possible that the results of the study can help us to take necessary actions to come forward with prolific results to enhance the efficacy of the content as well as to sustain the inner urge for desirable actions.

Review of literature reveals that Shahnawaj (1990) surveyed the environmental awareness and environmental attitudes of secondary and higher secondary school teachers and students and

found that 95% teachers and 94% students possessed positive environmental attitudes. Patel and Patel (1994) examined the environmental awareness of 120 primary school teachers of standards I to IV and found that male teachers with long school experience, in urban areas, are more aware about the environmental education. Patel and Patel (1995) in a study of 100 secondary school teachers found no significant difference in environmental awareness of teachers with high and low experiences. Pradhan (2002) analyzed the environmental awareness among secondary school teachers and found that teachers working in secondary schools had low awareness about environmental problems. There was a significant difference in environmental awareness between social science, language and science teachers, and rural and urban teachers, while male and female teachers showed no such differences. Shaila (2003) studied the effect of background variables on the environmental attitude of secondary school teachers and found that there is no significant difference between male and female teachers with regard to their environmental awareness and depicted no significant difference between arts and science teachers. Dhillon and Sandhu (2005) conducted a study to assess environmental education awareness among elementary school teachers and found that there was significant difference in environmental education awareness between urban and rural school teachers. No significant difference was observed in the environmental education awareness between male and female teachers and significant difference was found among teacher with respect to their subject specialization. Shobeiri et. al. (2006) conducted a study of influence of gender and type of school on environmental attitude of teachers in Iran and India and found that genders do have significant influence on environmental awareness of school teachers. Significant difference showed that science and social science subject teachers have higher level of environmental education awareness than languages subject school teachers. Likewise, the sciences subject school teachers have higher environmental education awareness than social sciences subject school teachers. Larijani and Yeshodhara (2008) studied the environmental attitude of Indian and Iranian higher primary school teachers in various components and found that Iranian teachers had most favourable attitude in all the components except in Wildlife. Only in Wildlife, Indian teachers had most favourable attitude as compared to their Iranian counterparts. Male and female teachers differed significantly in most of the factors except population explosion, and total attitude scores.

Nagra (2010) identified the environmental education awareness among school teachers in relation to level of school, residential background, gender and subject specialization. Analysis of variance results revealed significant variation in the environmental education awareness level of school teachers in relation to their level, residential background and subject specialization. However, no significant variation was observed in relation to the gender of school teachers. The above literature review reveals that most of the studies had concentrated upon the elementary or secondary level teachers and very rarely any study has concentrated upon senior secondary level teachers thus, the present study has been taken.

HYPOTHESES:

1. There will be average environmental education awareness among senior secondary school teachers.
2. There will be no significant difference in the environmental education awareness among senior secondary school teachers in relation to type of school.
3. There will be no significant difference in the environmental education awareness among senior secondary school teachers in relation to gender.
4. There will be no significant difference in the environmental education awareness among senior secondary school teachers in relation to subject stream.

METHOD:

Sample:

The study was conducted on a random sample of 200 senior secondary school teachers selected randomly from the detailed list of all the government and private senior secondary schools of the Hoshiarpur city.

Tools:

Environmental education awareness level was measured by using Environmental Education Awareness Test by Vipinder Nagra. The test is standardized and consists of 100 items with four options and the respondent has to choose the correct one. The reliability coefficient is found to

be 0.99 and the value of suitability ranges from 0.97 to 1 which shows that the test has content validity and concurrent validity is 0.63.

Statistical Techniques:

The data collected through the tool was subjected to statistical analysis and results were drawn out. Mean and Standard deviation of the total sample and relevant sub samples was computed and group comparisons were done by applying t tests.

RESULTS:

The classification of total sample (N=200) as well as the sub samples on the basis of environmental education awareness is shown in Table 1. 28% of teachers fall in the category of very high environmental awareness, about 13% in the range of high environmental awareness, 11% in above average range, 14% in the range of below average, 13% in below average, 5% in low range and 17% in very low range.

Table 1. Classification of Senior Secondary School Teachers on the Basis of Environmental Education Awareness Level

Groups	Very High	High	Above Average	Average	Below Average	Low	Very Low
	68 & above	62-67	56-61	47-55	41-46	35-40	34 & below
Total sample	56	25	22	28	25	10	34
Govt.	29	10	11	18	14	4	14
Private	27	15	11	10	11	6	20
Male	26	9	12	18	13	5	17
Female	30	16	10	10	12	5	17
Science	36	11	10	10	10	5	18
Art	20	14	12	18	15	5	16

Table 2. Comparisons of Total Sample and Sub Samples for Environmental Education Awareness

<i>Sub- Samples</i>	<i>Total (N)</i>	<i>Mean (M)</i>	<i>Standard deviation (σ)</i>	<i>t-value</i>
Total Sample	200	55.05	16.22	
Government	100	55.6	16.55	0.08
Private	100	55.4	18.49	
Male	100	53.9	16.7	1.30
Female	100	57.1	18.2	
Science	100	56.2	19.6	0.87
Art	100	54.0	16.1	

The data from Table 2 highlight that the mean calculated for the whole sample is 55.05 and standard deviation is 16.2. The mean score of the total sample (N=200) falls in the average range level which suggests that senior secondary school teachers have average environmental education awareness level. The Hypothesis 1 formulated in this context is therefore, accepted.

Results from Table 2 highlight the comparison between government and private school teachers with respect to their environmental awareness. It is evident from the table that there exists no significant difference between government and private teachers ($t= 0.08$; $p>.01$) in their environmental awareness. This insignificant result shows that both government and private senior secondary school teachers are equally aware about environment. Hence, hypothesis 2 is accepted.

Table 2 also represents the comparisons between male and female teachers with respect to their environmental awareness. It is evident from table that there exists no significant difference between male and female teachers ($t= 1.30$; $p > .01$) in their environmental awareness. This insignificant result shows that both male and female teachers have almost equal environmental awareness. Hence, hypothesis 3 is accepted.

Similarly, Table 2 also represents the comparison between science and art teachers with respect to their environmental awareness. Results depict that there exists no significant difference between science and art teachers ($t= 0.87$ $p >.01$) in their environmental awareness. This insignificant result concludes that both science and art teachers have almost equal environmental awareness. Hence, hypothesis 4 is accepted.

CONCLUSIONS AND DISCUSSION:

The senior secondary school teachers of Hoshiarpur city possess average awareness towards environmental education. The reason behind the average environmental education awareness level of senior secondary school teachers can be attributed to the fact that environmental education has been introduced as a compulsory subject in the curriculum right from the primary level and the teachers remain in touch with the environmental content while teaching this subject. They thus, seek ample knowledge and information about environmental concepts, its importance, problems and solutions.

There is no significant difference in the environmental education awareness among senior secondary school teachers with respect to type of school. The teachers in both government and private schools are equally aware about environmental concepts as the schools, whether government or private, follow same environmental education curriculum. The teachers have easy access to sources that help them update their knowledge through radio, television, magazines, newspapers, journals, internet, etc. The results of the study conducted by Gupta (1997) are also in line with the findings of the present study.

There is no significant difference in the environmental education awareness among senior secondary school teachers with respect to gender. The main reason for almost equal environmental awareness of male and female teachers can be due to the reason that teachers

irrespective of gender have access to similar type of opportunities to update their awareness regarding environmental issues. The subject being part of the curriculum provides opportunity for the teachers also to learn and to participate in environment oriented activities. Studies conducted by Arcury et al., (1987), Mohai, (1991), Pardhan (2002), Shaila (2003), Lavega (2004) and Dhillon and Sandhu (2005) also found no significant effect of gender on the environmental concerns.

There is no significant difference in the environmental education awareness among senior secondary school teachers with respect to stream. Environmental education is an interdisciplinary subject drawing relevant attention and concern from various fields. The content of the subject is not just limited to science stream but is also part of other subjects also. Thus, both science and art teachers are able to get information about environmental issues in a similar way. Studies conducted by Shaila (2003) also highlight that streams do not have significant difference upon environmental attitude. However, studies conducted by Pardhan (2002), Dhillon and Sandhu (2005), and Nagra (2010) reveal that stream do have significant effect upon environmental education awareness.

EDUCATIONAL IMPLICATIONS:

To achieve a good quality of life on earth for all living beings, it is essential to educate humankind and spread awareness about environment and sustainable development. Teacher is an effective tool in this regard. If the teacher is aware only then s/he can make the students aware about the environmental issues, their effects and solutions and can imbibe in them environmental ethics. The teachers themselves can explore environmental issues and their solutions; can also do a lot of readings with the help of information technology to increase their knowledge about global and local environmental concepts. The government must restructure and enrich both in-service and pre- service teacher education programmes with environmental awareness activities. More and more lectures, seminars, courses, debates, declamations, posters and painting, essay writing competitions, innovation from disposed items, or reciting environment related poetry, celebrating environmental days or week can be introduced in this regard.

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