

An Associative Study of Gender and Environmental Awareness among School Children

Kang T.K.¹ and Grewak D.K.²

^{1,2}Department of Human Development, College of Home Science Punjab Agriculture University, Ludhiana, Punjab, India
E-mail: ¹tejpreet@pau.edu

Abstract—Human being is a product of organic evolution and natural environment. His very existence, survival and progress on earth depend on the quality of the environment. Environmental awareness is defined as the sum total of responses that people make to various thematic aspects of the construct environmental education. In simple terms it means knowledge and understanding of facts and concepts related to environment and consequences of various environmental problems like pollution, population explosion, deforestation, ecological disruption, energy crises etc. Environment has become the concern of all academicians, intellectuals, scientists, policy makers and government across the continents. We must understand that to improve the environment is to improve the quality of life. It is not only a question of air and water pollution. It includes elimination of diseases, hunger, malnutrition and poverty, destruction of forests, extermination of wildlife, erosion of soil and accumulation of waste. The present study was undertaken to assess the environmental awareness of 200 adolescents (100 boys and 100 girls) in the age range of 14-16 years residing in the Ludhiana district of Punjab state. Environment Attitude Scale (2001) by Taj was used to assess the level of environmental awareness among adolescents. The scale comprised of 61 items representing six areas of environment namely; population explosion, health and hygiene, polluters, wild life, forests and environmental concerns. The results of the study revealed a non significant association between environmental awareness and gender of the respondents indicating that male and female school going children have same knowledge level and understanding of different dimensions of environmental awareness.

Keywords: Environmental Awareness, Gender, Adolescents

1. INTRODUCTION

Human being is a product of organic evolution and natural environment. His very existence, survival and progress on earth depends/ on the quality of the environment. The term environment comes from the Latin word environ which is the combination of two words i.e., En (in) Viro (circle) which means to encircle or to surround. According to International Encyclopedia of Social Sciences, environment is the aggregate of all external conditions and influences affecting the life and development of an organism. Dictionary of Social Sciences defines environment as consists of all the external sources or factors to which a person or aggregate of persons are actually or potentially responsive (Dubey and Samal 1998) Thus, the

word environment refers to the surroundings, the aggregate of circumstances of an organism or group of organisms specially the combination of external or extrinsic physical conditions that affect and influence the growth and development of organisms (Sandhu and Dhillon 2005).

Man is both creature and moulder of his environment, which gives him physical sustenance and affords him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights and the right to life itself (Kumari 2001). Man is the best creativity of the God. He has the ability of transforming his surroundings while doing so he can develop and enhance the quality of life for his fellow human beings. But when heedlessly applied the same creativity can cause harm to the environment. Thus, since the beginning of the earth he benefited the earth and with same zeal caused harm also. The actions of man caused harm to the physical, social and mental health of his fellow human beings as well as disturbed the ecological balance.

In the present age the entire globe is facing severe environmental problems. The loss of forests, loss of soil productivity, decreasing reservoir of oil and natural gas, depletion of ozone layer, global warming are some of the problem of great concern for scientists and intellectuals all over the world. While over-exploitation of natural resources is responsible for some of these problems. The global problems relating to degradation of natural resources and pollution have increased dramatically. Natural resources are depleted by excessive use. Fresh water scarcity on a global scale, deforestation, degradation of coastal and marine areas, soil depletion and loss of biodiversity, are some of the problems that have become a major concern. Air and water pollution have reached such levels that have already resulted in serious health problems, as well as negative impact on the environment, and inevitably influencing prospects for long-

term economic growth (Krishnamacharyulu and Reddy 2005). Pollution is not external only like sound pollution, air pollution, water pollution, soil pollution, but also takes root internally in man's nature and activity like as health pollution, mental pollution, social pollution, economical pollution, political pollution, cultural pollution as well as education pollution. Some other problems are the direct outcome of human greed and lack of concern towards environment. This is only because of ignorance of awareness of environmental education. This imposes a question on the human awareness and attitude towards environment, which otherwise poses a threat for human existence itself (Kukreti and Gihar 2004).

Environmental awareness is defined as the sum total of responses that people make to various thematic aspects of the construct environmental education (Patel and Patel 1994). In simple terms it means knowledge and understanding of facts and concepts related to environment and consequences of various environmental problems like pollution, population explosion, deforestation, ecological disruption, energy crises etc. In the recent times, environment has become the concern of all academicians, intellectuals, scientists, policy makers and government across the continents.

Environmental awareness also means to help social groups and individuals to acquire awareness of and sensitivity to the total environment and its allied problems. The importance of environmental awareness cannot be over emphasized. We must understand that to improve the environment is to improve the quality of life. It is not only a question of air and water pollution. It includes elimination of diseases, hunger, malnutrition, and poverty, destruction of forests, extermination of wildlife, erosion of soil and accumulation of waste.

Environment is the habitat for all living things, including human, animals as well as plants. It is very important to know and appreciate the existence of this nature, and realize its existence that is closely related to human's life. On the other hand, human's activity is an act or manner that is based on emotion and humans characteristic itself. The emotion and the characteristic emerge differently according to the aspect of education, economy, social and spiritual. This is why education is very important in shaping the moral values and consciousness within human self towards their surroundings, as education includes knowledge and awareness of individual towards the significance of environment. The main hurdle in protecting the environment in India today is that there is a lack of scientific knowledge and will to act. Thus, the awareness towards the protection and conservation should be developed within each human self, so that they can prevent themselves from ruining the chain of biology. Besides, he will make an effort to protect and conserve this nature once he realizes his responsibility towards his surrounding. Within the context of students, their awareness towards the importance of environment is able to protect this earth from the entire pollution (Hassan *et al* 2009). As the problem is one, of the people, for the people and by the people, a proper

understanding and support of the people will go a long way in carrying out anti-pollution measures.

Present situation demands the development of attitudes that help students to acquire a set of values and feelings of concern for the environment and motivation and commitment to participate in environmental maintenance and improvement (Engleson 1985). Young students as future citizens must know their environment, its uses and how to preserve and conserve it. There is no doubt that attention to environment was overdue and it is time to commit ourselves to look after it with all possible means. It is a moral imperative and prerequisite for environment sustainability. We must remember that man is an integral part of environment. It is, therefore, essential to remember that by our habit of ignoring environmental issues, the issues will not end rather they will persist and will cost tremendous harm on the next generation. So it is more important that how the public feels about the environment. Values and awareness about environment demands a cognitive map defining specific course of collective action to save the environment. As a cultural universal mankind depends on nature to survive (Snow and Noe 1990). Some civilizations have accepted the natural environment as the gift of God and started excessive consumption of the natural resources which ultimately led to the exhaustion of natural resources. Thus, it becomes necessary to develop awareness and positive attitude in people towards environment since their adolescence. Adolescent stage is the stage of storm and strife. In this age effects are perennial. Adolescent children are highly sensitive to issues related with environment (Kukreti and Gihar 2004). The role of students/adolescents would go a long way in achieving such desired goals. The whole society, especially the students should realize that the peaceful environment is the main element within human's life. Each of them should know and believe that by concern towards the environment, we can bring the harmony within human's life, society and nation itself. Besides, the appreciation towards the gift of God needs a responsibility and realization from every human being.

With reference to the above-mentioned details the present research was framed to study the association between gender and environmental awareness among school children.

2. METHODOLOGY

The present study was carried out in Ludhiana district of Punjab state. The sample for the study consisted of 200 school children, equally distributed over both the sexes (100 boys and 100 girls) in the age range of 14-16 years from various co-educational rural and urban Government High and Senior Secondary schools. The sample was selected by using multistaged sampling procedure. Environment Attitude Scale (2001) by Taj was used to assess the level of environmental awareness of the adolescents. This scale measures the overall environmental awareness of the respondents besides their awareness on six aspects of environment i.e. population explosion, health and hygiene, polluters, wild life, forests and

environmental concerns. The scale consisted of 61 items to be rated on four point rating scale.

3. RESULTS AND DISCUSSION

Table 1 Association between different levels of awareness regarding health and hygiene with gender among school children

Health & Hygiene	Total (N=200)	Male (n=100)	Female (n=100)
Low	77 (38.50)	39 (39.00)	38 (38.00)
Average	75 (37.50)	37 (37.00)	38 (38.00)
High	48 (24.00)	24 (24.00)	24 (24.00)
$\chi^2 = 0.03^{NS}$			

Figures in parentheses indicate percentage

NS - Non significant

Table 1 presents the association between different levels of awareness regarding health & hygiene with the gender. In case of total sample 38.50 per cent respondents were having low level of awareness regarding health & hygiene, followed by 37.50 per cent in average and 24.00 per cent in high level respectively. In case of males, 39.00 per cent of respondents had low health & hygiene awareness followed by 37.00 per cent in average and 24.00 per cent in high category. In case of females, 38.00 per cent of respondents were in low category, again 38.00 per cent had average and 24.00 per cent were having high category of health & hygiene awareness. A non-significant association existed between different levels of health & hygiene awareness with gender as calculated χ^2 value was found to be 0.03.

Table 2: Association between different levels of awareness about wild life with gender among school children

Wild Life	Total (N=200)	Male (n=100)	Female (n=100)
Low	70 (35.00)	35 (35.00)	35 (35.00)
Average	82 (41.00)	40 (40.00)	42 (42.00)
High	48 (24.00)	25 (25.00)	23 (23.00)
$\chi^2 = 3.74^{NS}$			

Figures in parentheses indicate percentage

NS - Non significant

Table 2 shows the association between different levels of awareness about wildlife with gender. Results revealed that 35.00 per cent of respondents had low level of wild life awareness, followed by 41.00 per cent having average and 4.00 per cent having high level. In case of males, 40.00 per cent of respondents had average level of awareness about wild life, while 35.00 per cent were in low and 25.00 per cent were in high category. Similarly, it was observed that in females 42.00 per cent respondent were exhibiting average level of

wild life awareness. Non- followed by 35.00 per cent in low category and 23.00 per cent in the high category of wild life awareness significant association ($\chi^2 = 3.74$) existed between different levels of wild life awareness with locale.

Table 3: Association between different levels of forests' awareness among school children with gender

Forests	Total (N=200)	Male (n=100)	Female(n=100)
Low	66 (33.00)	34 (34.00)	32 (32.00)
Average	93 (46.50)	45 (45.00)	48 (48.00)
High	41 (20.50)	21 (21.00)	20 (20.00)
$\chi^2 = 0.18^{NS}$			

Figures in parentheses indicate percentage

NS - Non significant

Table 3 presents the association between different levels of awareness regarding forests' with gender. It was found that 33.00 per cent of respondents had low level of forests awareness followed by 46.50 per cent in average and 20.50 per cent were in high level category. In case of males 45.00 per cent respondents had average level of forests awareness, followed by 34.00 per cent in low and 21.00 per cent in high category. In females, 48.00 per cent were in average category, followed by 32.00 per cent and 20.00 per cent having low and high level of forests awareness respectively. Non-Significant association existed between different awareness levels regarding forests with gender as calculated χ^2 value was found to be 0.18.

Table 4: Association between different levels of awareness regarding polluters with gender among school children

Polluters	Total (N=200)	Male (n=100)	Female(n=100)
Low	70 (35.00)	38 (38.00)	32 (32.00)
Average	65 (32.50)	33 (33.00)	32 (32.00)
High	65 (32.50)	29 (29.50)	36 (36.00)
$\chi^2 = 1.28^{NS}$			

Figures in parentheses indicate percentage

NS - Non significant

Table 4 shows the association between different level of awareness regarding polluters with gender. Results indicated that there were 35.00 per cent of total respondents having low level of awareness regarding polluters followed by 32.50 per cent having average and 32.50 per cent having high level. In case of males, 38.00 per cent respondents had low level of polluters awareness, while 33.00 per cent were in average and 29.00 per cent in high category, where as in females, 36.00 per cent of respondents had high level of polluters awareness followed by 32.00 per cent in average category and 32.00 per cent of the respondents were in low category. Non-significant association ($\chi^2 = 1.28$) between different levels of awareness regarding polluters with gender existed.

Table 5: Association between different levels of awareness regarding population explosion with gender among school children

Health & Hygiene	Total (N=200)	Male (n=100)	Female(n=100)
Low	81 (40.50)	41 (41.00)	40 (40.00)
Average	69 (34.50)	32 (32.00)	37 (37.00)
High	50 (25.00)	27 (27.00)	23 (23.00)
$\chi^2 = 0.69^{NS}$			

Figures in parentheses indicate percentage

NS - Non significant

Table 5 shows the association between different levels of awareness regarding population explosion with gender. Results revealed that 40.50 per cent of total respondents had low level of awareness regarding population explosion followed by 34.50 per cent respondents in average and 25.00 per cent of the respondents in high category. As far as males were concerned, 41.00 per cent of respondents reported low level of environmental awareness, followed by 32.00 per cent respondents in average and 27.00 per cent in high category. In females, 40.00 per cent of respondents had low level of population explosion awareness, while 37.00 per cent were in average and 23.00 per cent were in high category. A non-significant association ($\chi^2 = 0.69$) was observed between different levels of population explosion awareness with gender.

Table 6: Association between different levels of awareness regarding environmental concerns with gender among school children

Environmental concerns	Total (N=200)	Male (n=100)	Female (n=100)
Low	75 (38.00)	40 (40.00)	35 (35.00)
Average	61 (30.50)	30 (30.00)	31 (31.00)
High	64 (32.00)	30 (30.00)	34 (34.00)
$\chi^2 = 0.60^{NS}$			

Figures in parentheses indicate percentage

NS - Non significant

Table 6 depicts the association between different levels of awareness regarding environmental concerns with gender. A non-significant association ($\chi^2 = 20.60$) existed between different levels of environmental concerns with gender. It was found that 38.00 per cent of respondents perceived low level of environmental concerns followed by 30.50 per cent in average and 32.00 per cent in high category. The table further depicts that in case of males, 40.00 per cent of respondents had low level of environmental concerns, while 30.00 per cent had average and 30.00 per cent had high level of environmental concerns where as in females, it was found that 35.00 per cent of the respondents had low level of environmental concerns followed by 34.00 per cent having high and 31.00 per cent having average level of awareness regarding environmental concerns.

Table 7: Association between different levels of overall environmental awareness with gender among school children

Environmental concerns	Total (N=200)	Male (n=100)	Female (n=100)
Low	67 (33.50)	36 (36.00)	31 (31.00)
Average	70 (35.00)	32 (32.00)	38 (38.00)
High	63 (31.50)	32 (32.00)	31 (31.00)
$\chi^2 = 0.90^{NS}$			

Figures in parentheses indicate percentage

NS - Non significant

The present table (Table 7) deals with association between overall environmental awareness with gender. It was found that 33.50 per cent of respondents perceived low level of environmental awareness, where as 35.00 per cent had average and 31.50 per cent had high level of environmental awareness. Further it was found that, in males 36.00 per cent of respondents had low level of environmental awareness followed by 32.00 per cent in average and 32.00 per cent in high category. In case of females, 38.00 per cent of respondents reported average level of environmental awareness, 31.00 per cent reported low level of environmental awareness and 31.00 per cent reported high level of environmental awareness. A non-significant association ($\chi^2 = 0.90$) existed between different levels of environmental awareness and gender.

Similar results were highlighted by an earlier study where non significant gender differences were found between male and females across various dimensions of environmental awareness (Kang and Grewal 2014).

4. CONCLUSION

Results of the present study revealed a non-significant association between gender and different levels of various dimensions of environmental awareness i.e. health and hygiene, wild life, forests, polluters, population explosion and environmental concerns. Thus gender is not a factor affecting environmental awareness of school children. The main reason for almost equal level of environmental awareness of boys and girls is that they are studying together in same teaching learning environment of the schools and receiving same type of input. So a future comparative study could be planned to include children belonging to different socio-economic status families and studying in govt. as well as public schools.

REFERENCES

- [1] A Dubey and B Samal (1998) Environmental awareness among women. *Indian Psychological Review*, 50, 1, pp. 50-56.
- [2] A Hassan, H Juahir and N S Jamaludin (2009) The level of environmental awareness among students to fulfill the aspiration of national philosophy of education. *American Journal of Scientific Research*, 5, pp. 50-58.
- [3] A Kumari Krishna (2001) Consulting Editor: ICFAI University, Hyderabad.

-
- [4] B R Kukreti and S Gihar (2004) Effect of video-intervention strategy on the environmental attitude of secondary students. *Psycho-Lingua*, 34, 1, pp. 17-22.
- [5] D G Patel and N A Patel (1994) Environmental awareness of the primary school teachers. *The Progress of Education*, 18, 11, p. 234-236.
- [6] Engleson (1985) The development and retention of environmental attitudes in elementary school children. *Journal of Environmental Education*, 15, 3, pp. 33-36.
- [7] H Taj (2001) Environmental Attitude scale, Nandini Enterprises, Agra.
- [8] R Snow and F P Noe (1990) Hispanic cultural influence on environmental concern. *Journal of Environment Education*, 21(2):27.
- [9] T K Kang and D K Grewal (2014) Locale and gender as determinants of environmental awareness among school children in G C Mishra (ed) *Environmental Sustainability: Concepts, Principles, Evidences and Innovations*. New Delhi: Excellent Publishing House: 383-389.
- [10] V Krishnamaracharyalu and G S Reddy (2005) Environmental education: Aims and objectives of environmental education, *Importance of Environment Education*. Hyderabad: Neelkamal Publications Pvt. Ltd.
- [11] V Sandhu and J Dhillon (2005) Environmental education awareness among elementary school teachers. *Shikhya Khoj Patra*, 4, pp. 32-36.