ENVIRONMENTAL AWARENESS AND ATTITUDES OF SENIOR SECONDARY SCHOOL STUDENTS IN OGUN STATE, NIGERIA

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Abstract
This study was carried out to determine the relationship between environmental awareness and attitude among secondary school students. A total of 240 respondents who were in senior secondary schools in Ijebu-North local government area of Ogun State, constituted the sample. A questionnaire instrument which contained 35 items was employed to collect the data. The results of Pearson Correlation analysis showed a significant but low relationship between environmental awareness and environmental attitude of the students. Furthermore, the t-test statistical analysis conducted on difference in environmental awareness and attitude based on gender, age and class showed that there is no difference in the environmental awareness and attitude of respondents by gender, age and class. The study recommended that environmental education should be considered as a school subject in the Nigerian education system.

Keywords: **Environment, Awareness, Attitudes, Environmental education**

INTRODUCTION

The growing environmental concern in the world and most especially in developing countries in the last two decades cannot be ignored. The environment plays an immense role in maintaining and supporting the health of all people (United Nations Environment Programme (UNEP), 2014). However, the environment continues to suffer and our planet is facing serious and complex environmental issues such as climate change, air and water pollution, loss of biodiversity, desertification, deforestation, over population, depletion of natural resources, and many others. These issues have been increasingly recognised over the last twenty-five years (UNEP, 2014).

According to Chinedu (2008) awareness is the condition of being aware and able to understand what is happening around one. In agreement with the above views, Wikipedia (2009) equates awareness with perception of, being conscious of, acquaintance with, enlightenment with, mindfulness of, and cognizance of something. In the context of this study, awareness implies understanding and knowledge of the activities and events (such as desertification, land degradation, climate change, deforestation, atmospheric and land pollution, flooding etc.) going on around one's environment.

Attitude according to Abini (2006) is an acquisitioned tendency. He further explained that pupils form attitude through either like or dislike, being favorable or unfavorable towards event(s) in the environment. Good (2001) defined attitude as a state of mental and emotional readiness to respond to previously conditioned or associated stimuli. Williams (2000) described attitude as readiness to act in a certain way expressed by person's words, gesture or facial expressions. These views are commonly seen as "action speaking louder than voice." Thus, environmental attitudes refer to people's favourable or unfavourable feelings towards the physical environment. It is the disposition of an individual or group of individuals towards good quality of environment, land degradation, climate change, deforestation, atmospheric and land pollution, flooding among others. It shows the feeling and concern an individual could have with respect to such phenomena as mentioned. With respect to the above discussion attempt has been made to increase students' awareness and attitude towards their environment.

Studies concerning secondary school students (Aydin, 2013; Ali, Endut, and Embong, 2017; Bhat, 2017; Ikyaagba, Ancha, Ojebade, Gbande, & Adia, 2018) indicate gender difference in students' attitudes toward environment. Girls were found to have more

positive attitudes toward environment and were more willing to take responsibility in environmental protection (Cavas, Tekkaya, Cakiroglu, and Kesercioglu, 2009). Data from the studies suggest a link between students' attitudes toward environment and their level of interest in learning about environmental topics. From this perspective, it is important to examine student attitudes in the evaluation of science curriculum and the development of planned behaviors (Kahriman-Ozturk et al., 2012). Therefore, it is of utmost concern that environmental concepts included in the curriculum should be evaluated. In addition, investigation of factors affecting students to be responsible individuals towards their environment may have significant results. Finally, studying students' attitudes towards environment may provide help towards the solution of environmental problems (Aydın & Cepni, 2012).

Cavas, et al., (2009) examined 1,260 9th grade Turkish students' attitudes toward the environment as well as interest in learning about environmental protection. The findings of this study revealed that Turkish students have favourable attitudes toward environmental issues and are ready to find solutions to environmental problems. Students' interests in learning about environmental protection issues are moderate level. Gender differences were found in environmental attitudes and interests in learning about environmental protection. Kalpana (2012) conducted a study on environmental awareness among senior secondary school students of Chandigarh. Two hundred senior secondary students from four schools of Chandigarh were sampled and administered with questionnaire. The major findings were that students from public and private schools exhibited comparable environmental awareness. Science students exhibited very high degree of environmental awareness than students in the humanities. Also, male science students exhibited higher degree of environmental awareness than female science students. Generally, no significant difference was found between male and female students. Ali, Endut, and Embong, (2017) reported low level of environmental awareness among secondary school students in Kano metropolis and attributed it to the poor knowledge of teachers concerning environmental issues. Olufemi, Andile and Murembiwa (2014) study of environmental awareness and attitudes of grade 8 and 12 students found no statistically significant differences with respect to the gender of the students. However, statistically significant differences were found with respect to age and grade students.

Despite a large volume of studies on environmental awareness and attitude in Nigeria, few of these studies focus on understanding the relationship between environmental awareness and attitude. There is, especially, dearth of studies on environmental awareness and attitudes among secondary school students in Ogun State. Therefore, this study investigated the relationship between environmental awareness and attitudes of senior secondary school students in Ijebu North Local government area, Ogun State.

This study was guided by two research hypotheses:

1) There is no significant relationship between environmental awareness and attitude of senior Secondary School students in Ijebu North local government area of Ogun State.

2) There will be no significant difference in students' environmental awareness and environmental attitudes according to the sex, age and class.

MATERIALS AND METHODS

Study Area

This study was carried out in Ijebu North Local Government area of Ogun State. The area lies in the rainforest belt between latitudes 7° 00' and 6° 55' N, longitude 3° 50' and 4° 00' E. Ago-Iwoye is a University town where Olabisi Onabanjo University is situated. Ijebu-Igbo is the headquarter town of Ijebu North Local Government area. There are 35 secondary schools with 15 public and 20 private schools in the study area.

The study adopted descriptive survey research design. The study was to determine the relationship between environmental awareness and attitudes of the students. A total of 240 questionnaires were administered to the students from six selected senior secondary schools with 40 students per school. A simple random sampling technique was used to select six (6) public secondary schools which 40 per cent of the number of public senior secondary schools in the area. The private secondary schools were not involved because of some logistic and administrative bureaucracy. The

study was conducted among students in senior secondary 1 and 2. As at the time the study was conducted the senior secondary 3 students were writing the mock examination. Forty students with twenty from each class that is (20 from SS I and 20 from SS II) were involved in the students. Only those students who volunteered to complete the questionnaire were given the opportunity to participate in the study.

Data were collected using a thirty-five items Likert scale instrument tagged Students Environmental Awareness and Attitude Scales (SEAS). The instrument contained three sections. Section A contained the personal data of the respondents such as sex, age, class, while section B measured students' awareness of environmental problems and section C contained 20 items on environmental attitude. The instruments were developed in four-point Likert scales types of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). Data obtained from the instrument were analyzed using Pearson product moment correlation and t-test statistics.

RESULTS OF THE STUDY

The demographic characteristics of the respondents show that 41.7% were male while 58.3% were female. Forty-seven percent of the respondents fall between the age of 12-15 years while 52.9% of the respondents falls between the age of 16-20 years. Fifty percent were from senior secondary One (SSI) and 50% were from senior secondary Two (SSII). The sample is a fair representative of the distribution of the population of students in secondary schools in the area.

In order to test hypothesis one, bivariate correlation analysis was conducted to test the relationship between students' environmental awareness and environmental attitude. Result of correlation as shown in Table 1 indicates that environmental awareness scores are related with environmental attitudes scores ($r = 0.151$, $p<0.01$). Thus, it can be inferred that there exists relationship between environmental awareness and environmental attitude among secondary school students, however the correlation is very low. Hence, hypothesis one is rejected.

Table 1 Environmental awareness and attitudes of students

	Environmental Awareness	**Environmental Attitude**
Environmental Awareness	1	.151*
Environmental Attitude	.151*	1

*. Correlation is significant at the 0.05 level (2-tailed).

Table 2 presents the summary of the t-test analysis conducted to test for significant difference in environmental awareness and environmental attitude of the students with respect to gender, age and class. For environmental awareness, the mean score) of male secondary school students is (M= 54.52; SD= 5.67) while the mean score of female secondary school students (53.54, SD= 6.07). The calculated t-value is 1.263 which is not significant at 0.05 levels. For environmental attitudes the mean score) of male secondary school students is (M = 51.23; SD= 9.37) while the mean score of female secondary school students (49.62, SD= 8.27) and the calculated t-value is (t = 1.412; *p*-value 0.159). Based on these results, the null hypothesis which stated that there are no significant differences are accepted. This implied that male and female students possessed same level of environmental awareness and also do not differ in their attitudes to the environment.

With respect to class, the analysis shows that there is no significant difference in the environmental awareness (t = 0.043; *p* value = 0.966) and environmental attitude (t = 2.468; *p* value = 0.005) between the SS1 and SS2 students. The p-value of both environmental awareness and attitude are greater than the 0.05 level of significance, thus the null hypothesis is not rejected.

On age, result reveals that there is no significant difference in the environmental awareness as well as environmental attitude between age (12-15yrs) and (16-20yrs) of students. Both environmental awareness (t = .165; $p > .05$) and environmental attitudes (t = -1.477; $p > .05$) are greater than 0.05 level of significance so in both cases, we did not reject the null hypothesis. There are no differences in both awareness and attitude by age groups. The implication is that age is not significant in determining the environmental awareness and attitudes among students

Table 2 Environmental awareness scale and environmental attitudes of students based on gender, class and age

		Awareness		Attitude	
		Mean	Std D	Mean	Std D
Sex					
	Male (n = 100)	54.52	5.67	51.23	9.37
	Female (n = 140)	53.54	6.07	49.62	8.27
	Statistics	t = 1.263; *p* = .208		t = 1.412; *p* = .159	
Class					
	SS1(n = 120)	53.96	6.71	51.88	8.95
	SSII (n = 120)	53.93	5.03	48.68	8.30
	Statistics	t = 0.043; *p* = .966		t = 2.868; *p* = .005	
Age					
	12-15yrs (n = 113)	54.01	5.66	49.41	8.13
	16-20yrs (n = 127)	53.88	6.15	51.08	9.25
	Statistics	t = .165; *p* = .869		t = -1.477; *p* = .141	

DISCUSSION

This study reports the relationship between environmental awareness and attitudes of senior secondary schools. According to research hypothesis one, there was a significant a positive relationship between environmental awareness and environmental attitude of secondary school students in Ijebu North Local Government area of Ogun State, Nigeria. This mean that students environmental attitudes are function of their level of environmental awareness. This result is corroborated by findings of Sengupta, Das, & Maji, (2010) that which reported positive significant relationship between two variables (environmental awareness and environmental attitude in the study. The results also find support in Ali (2015) study who found that there exists relationship between environmental awareness and environmental attitude among secondary school students. Furthermore, Kumud (2014) showed that there is positive and strong relation between the environmental awareness and environmental attitude.

On hypothesis two, the following conclusion were drawn: there is no significant difference between environmental awareness and environmental attitude of male and female students. The finding concurs with Sultana, Hossen and Khatun (2017), study that found was no significant different between male and female students' environmental awareness and attitude. It also finds support in Bhim and Jayanta (2010) in their study indicated that no significance difference was found between boys' and girls' students. In the same view, Kumund (2014) also found that there is no significance difference in the environmental awareness and attitudes between male and female.

Furthermore, from the result of table 2, no significance difference was found between age groups. The result is in agreement with the result of Aminrad, Sayed, Sharifa Zarina, and Sakari (2013) study where it was concluded that age is not significant in determining the environmental awareness level among students. However, the finding negated Auwalu (2015) study who found significance difference in the environmental awareness of secondary school students of different age group.

In addition, no significant difference was also recorded in environmental awareness and environmental attitude of SS One and SS Two. It was in variance Olufemi, Andile and Murembiwa (2014) that found significant difference in environmental awareness and attitudes of in terms of grade level. Their study found that students in Grade 12 had more awareness than those in Grade 8. Similarly, Alp, Ertepinar Tekkaya, and Yilmaz (2006) have been reported significant difference with regards to grade level.

CONCLUSION

From the results of this, it can be study concluded that there is significant relationship between environmental awareness and environmental attitude. It was also inferred that there is no difference in the environmental awareness and environmental attitudes of respondents in gender, age and class. Students have equal awareness level of the environment and attitude towards the environment. Based on these conclusions, it recommended that environmental education should be considered as a school subject in the Nigerian education system.

REFERENCES

Abini, D.C. (2006). *Attitude Formation. London*: St. Park Books Limited.

Aydın, F., & Cepni, O. (2012). Investigation of elementary school students' attitudes toward environment in terms of some variables. *Journal of Dicle University Ziya Gokalp*, 18, 189-207.

Ali, A. R., (2015). Environmental awareness level amongst secondary school students in Terengganu, Malaysia based on different variables. *International Journal of Education and Research*, 3(3), 135-152.

Ali, A.R., Endut, A. & Embong, R. (2017). Investigating the environmental awareness level of secondary school students: Effects of race, school type, and location. *Journal of Science and Technology*, 9(4), 30-36.

Alp E, Ertepinar H, Tekkaya, C, & Yilmaz A (2006). A study on children's environmental knowledge and attitudes: The effect of grade level and gender. *International Research in Geographical and Environmental Education*, 15, 210-223

Aminrad, Z., Sayed, Z., Sharifa Zarina, H. A. & Sakari, M. (2013). Relationship between awareness, knowledge and attitudes towards environmental education among secondary school students in Malaysia. *World Applied Science Journal*, 22(9), 1326

Aydin, R. (2013). Environmental awareness and attitude towards environment of secondary school students. *International Journal of Environmental and Science Education*, 1(1), 65-77.

Bhat, B. A. (2017). A study of environmental awareness among secondary school students in relation to caste, class of study in Anantnag District. *International Journal of Indian Psychology*, 5, (1), DIP: 18.01.071/20170501,

Bhim, C.M. & Jayanta, M. (2010). A comparative study of environmental awareness among secondary school students in relation to gender and residential background. *Sikshachintan*, 4, 17-21

Cavas, B., Cavas, P., Tekkaya, C., Cakiroglu, J., & Kesercioglu, T. (2009). Turkish students' views on environmental challenges with respect to gender: an analysis of ROSE data. *Science Education International*, 20(1, 2), 69-78.

Good, T.I. (2001). *Basic concepts of attitude.* New York: Kriston Publishers company.

Kalpana, T. (2012). A study of environmental awareness among senior secondary school students of Chandigarh. *International indexed and Referred Research Journal*, 4(38), 16-22.

Kose, A.N. (20l5). *Environment awareness and attitude towards environment of male and female class v students of Chandigarh, Haryana and Punjab P.U*. Department of Education, M.Ed. Dissertation.

Kumud, G. (2014). Environmental awareness among secondary school students of Golaghat District in the State of Asam and their attitude towards environmental education. *IOSR Journal of Humanities and Social Science*, 19(3), 30-34.

Olufemi C. A., Andile, M. & Murembiwa S. M. (2014). Students' and teachers' awareness of and attitude towards environmental pollution: A multivariate analysis using biographical variables. *Journal of Human Ecology*, 45(2), 167-175

Sengupta, M., Das, J. & Maji, P. K. (2010). Environmental awareness and environment related behaviour of Twelfth Grade students in Kolkata: Effects of stream and gender. *Anwesa*, 5, 1- 8.

Ugulu, I, Sahin, M & Baslar, S. (2013). High school students' environmental attitude: Scale development and validation. *International Journal of Education Science*, 5(4), 415-424

United Nations Environment Programme (UNEP)(2014). UNEP Year book: *Emerging issues in our global environment.* United Nations Environment Programme, Nairobi, Kenya

Wikipedia (2009). *Awareness.* From Wikipedia, the free encyclopedia. Retrieved from www.wikipedia/search/engine/org

Yousif, A. & Bhuttia, S. (2012). Secondary school attitude towards environmental issues in Karachi Pakistan. *International Journal of Scientific& engineering Research*, 3(7), 12-17.