

The Influence of Environmental Education on the Behaviour of Senior Secondary School Students in Port Harcourt, Nigeria

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Abstract

This work is aimed at investigating the influence of environmental education on students' environmental behaviour Port Harcourt, Rivers State. The cross sectional survey research design was adopted for this research. A sample size of 880 from five local government areas formed the respondents for this study. Six research questions and six hypotheses were designed for the study. The questionnaire for Environmental Education and Attitude of secondary school students (EEATSSS) and Academic Performance Test (APT) on Environmental Education were designed to elicit data that was analyzed using percentage, mean, standard deviation, charts, graphs, correlation and z-test. The study revealed that students' awareness of environmental issues with respect to waste disposal, their knowledge of environmental education, and awareness of climate change were all significantly related with students environmental attitude at respective correlation coefficients of 0.252, 0.399, and 0.428. Environmental attitude of female students were found to be higher than those of male. Also the study recommends introduction of environmental education not only into secondary school curriculum, but at the early stage even of primary education. The study also encourages synergy between local governments, state, federal and the international community on the concept of climate change and its concomitant negative effects.

Keywords: *Environment, environmental education, climate change, greenhouse gases*

Introduction

The ecosystem is man's home which needs to be guarded jealously. Therefore, his livelihood and survival is dependent on the environment where he lives. The earth environment provides man with his sustenance, medicines and also protects him from the sun's harmful rays. Man needs to explore the environment for agricultural, industrial, commercial and technological reasons which lead to man's interaction with the environment hence degradation and system imbalance may occur. Sarkar (2011) observed that the world is perturbed by several environmental problems caused by man's irresponsible environmental behaviour, such as deforestation, burning fossil fuel, bush burning, and use of pesticides in agriculture, emission of gases into the atmosphere, felling of trees, improper sanitation use of non-biodegradable polythene and solid waste disposal and so on. Climate change has been responsible for intense heat on the biosphere causing heat in the classrooms thereby hindering students' concentration as they study in the classroom. It also causes flooding of the compounds and classrooms during the rainy season. In some cases, roads to the schools and houses of the

students were flooded thereby causing academic breakdown and relocation of students. Serhat (2012) opines that gender, socio-economic status and school type have an average critical thinking skills level in environmental education. Pooley and O'Connor (2014) suggested that for environmental educators interested in changing environmental attitudes, emotions and beliefs, rather than knowledge; need to be targeted as sources of information on which to base their environmental programs. Similarly, Aminrad, Zakaria and Hadi (2011) concluded that increasing age and levels of education have effect on increasing of environmental awareness and attitude. Sarkar (2011) discovered that generally students from both the urban and rural areas showed favourable environmental attitudes where girls have appreciably higher levels of environmental attitudes than the boys. This research also showed that rural girls had the highest level of environmental attitudes comparing among others. Environmental attitude has been observed to be of big concern in environmental education research (DiEnno & Hilton, 2005; Lee, 2008; Ridener, 1997; Eagles & Demare, 1999). According to Bradley, Waliczek & Zajicek (1999), studies showed that young people have more environmentally sensitive attitudes as they are affected easily and need to make provisions to environmental problems resulting from present day actions. According to the Bangladeshi ministry of environment and forest (2001), the country is confronted with environmental issues such as pollution, deforestation, salinity, urbanization, global warming and climate change. These problems require the younger generation having requisite knowledge, skill and attitude of the environment (Sarkar & Ara, 2007).

Sarkar (2011) examined secondary students' environmental attitudes in Bangladesh by employing a standardized environmental attitude scale. This applied the use of 15 questions rated on a 5-Likert type scale from 1 (strongly disagree) to 5 (strongly agree). Mittelstaedt, Sanker and VanderVeer (1999) opined that both boy and girl students were involved as some studies found significant sex variation in students' environmental attitudes. Eagles and Demare (1999) showed that long term media and family interferences are essential factors for emerging environmental attitudes. Ewert and Baker (2001) are of the opinion that there may be a lacuna between environmental attitudes and behaviours. This would encourage them to become environmentally friendly as observed (Orlu, 2011). Hence man needs to understand that his welfare depends upon his proper management and use of the natural resources. That is why Nwizu and Alozie (2013) opined that the changes man introduced into the social, political and economic order has altered the imbalance of his relationship with the rest of the ecosystem. Environmental education refers to the process that allows individuals to explore environmental issues, engage in problem solving, and take action to improve the environment according to United States environmental protection agency (USEPA).

Environmental education is defined by certain researchers as the educational process dealing with man's relationship with his natural and man-made surroundings and includes the relation of population, pollution, resource, allocation and depletion, conservation, transportation, technology and urban and rural planning to total human environment. Also Ghosh(2013) presented one of the commonly accepted definition worldwide that is developed by United Nations Scientific and Cultural Organization (UNESCO) in 1977 Tbilisi declaration. This body defined environmental education as a learning process that increases people's knowledge and consciousness about the environment and associated challenges, develops necessary skills and expertise to address the challenges and foster attitude, motivations, and commitment to make informed decision and take responsible action. Sarkar (2011) opined that one of the objectives of environmental education is to help individuals acquire favourable attitudes to protect and improve the environment, hence environmental attitudes are considered as part of environmental literacy. Orlu(2011) noted that environmental education should be a lifelong procedure that would inculcate the knowledge

and awareness of environmental challenges into the young and old. Orlu (2013) proposed that Environmental education improves critical thinking, encourages problem solving and participation in decision making. Therefore it is important that teachers adopt better approach in teaching environmental education.

Man's relentless trend of destruction of nature through his modification of the environment to satisfy his wants and services is not limited to Rivers State rather it is a global phenomenon. Most countries of the world are now concerned about environmental pollution. Environment is defined as everything that affects an organism during its lifetime the environment includes the air, water, land and the interrelationship that exist between them and human beings including other living organisms and property (Alozie, 2013). The external condition of the environment includes physical, sociological, chemical or structural. Alozie (2013) noted that the atmosphere begins from the surface of the earth and extends upwards without a specific boundary with major gases in the atmosphere as water vapour (H₂O), carbon (iv) oxide (CO₂) and ozone (O₃) which supplies solar energy giving life to all living organism. The knowledge of environmental education can impede certain disasters such as flooding which may affect academic call ender hence poor performance. Lead (2011) observed that the earth's fresh water is less than one percent; the remaining is sea water or polar ice which is not fit for drinking.

The social environment of Rivers State is heterogeneous in nature. There are over fifteen ethnic groups and languages with diverse cultures in Rivers State. The population of Rivers State is 5,198,716 (NPC, 2006) whose concentration is in the urban areas (mostly Port Harcourt). Port Harcourt is the capital city of Rivers State and hub of oil and gas in Nigeria. It lies between latitudes 4⁰47'21''N and longitude 6⁰59'55''E and total land area of 923,768Km². The economic environment for Rivers State is dominated by the public sector, though some industries are owned by the private sector, hence is a mixed economy. The bulk of the income generated in the state is through crude oil sales as the state is endowed with natural and human resources. The aim of this study is to identify and describe the attitudes of secondary school students towards environmental education in Port Harcourt and suggest ways to improve on it. In specific terms, the study is set out to achieve the following: To assess the level of environmental education awareness of the students and their harmonious living with the local environment, investigate the attitude of students towards environmental issues of public, determine the influence of environmental education on students' sanitation and hygiene practices, and determine how climate change influences the lives of senior secondary school students in Rivers State. To bring about the successful conducts of this study, these research questions were answered: What is the level of secondary school students' awareness of waste disposal methods?, To what extent are secondary school students' knowledgeable about environmental education in Port Harcourt?, To what extent are secondary school students aware of climatic changes in Port Harcourt?, What is the nature of students' attitudes towards environmental issues regarding their hygiene habits in Port Harcourt?, What are the impacts of climate change on senior secondary students in Port Harcourt?, What is the relationship between students' environmental education and their attitude towards the environment?

The hypotheses postulated for this study are stated in their null form only and will be tested at 0.05 significant levels: There is no significant difference between Obio/Akpor and Port Harcourt students' knowledge of environmental education; There is no significant difference between Obio/Akpor and Port Harcourt students' attitude towards the environment; There is no significant relationship between students' awareness of waste disposal method and their attitude towards the environment; There is no significant relationship between student's

environmental knowledge and their environmental practices; There is no significant relationship between student's awareness of climatic changes and their environmental practices; There is no significant difference between the attitude of male and female students towards the environment.

Research methodology

Considering the purpose of this study, the cross-sectional survey method of research design was employed by the researcher. The population of this study consisted of all public senior secondary students in Port Harcourt, Nigeria. A total of 247 schools with a population size of one hundred and one thousand, five hundred and thirty-eight (101,538) senior secondary school students were considered for this study. The population elements for this study consisted of all students in class one through class three in Port Harcourt, Rivers State.

Table1: Population of Senior Secondary School Students in Port Harcourt

S/N	LGA	SS1			SS2			SS3			SS TOTAL		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	ELEME	543	688	1231	584	621	1205	445	483	928	1572	1792	3364
2	OBIO/AKPOR	1878	3087	4965	1512	3005	4517	704	1315	2019	4094	7407	11501
3	OKRIKA	251	273	524	304	296	600	315	261	576	870	830	1700
4	OYIGBO	338	329	667	405	390	795	291	265	556	1034	984	2018
5	PHALGA	1701	2374	4075	1461	2452	3913	960	1727	2687	4122	6553	10675
	GRAND TOTAL	4711	6751	6497	4266	6764	11030	2715	4051	4079	11692	17566	29258

Source: Rivers State School Census Report, 2011-201

The main instruments used for the collection of primary data were the questionnaire, achievement tests and personal interviews. The questionnaire was divided into four (4) parts. Part '1' focused attention on the background data of the respondents and the selected schools/local government areas under study. Part 2 focused on Environmental Education Awareness and was divided into two sections: Section B covered Awareness of Waste Disposal Methods and Section C covered Awareness of Climatic Change. Part 3 focused on the dependent variable, Attitudes of Students towards their environment, and finally Part 4 covered Implications of Climate Change where instruments were developed to throw light on the impact of climate change.

The questionnaire was designed in 4-point Likert-Scale. The Likert-Scale was assigned ordinal weights of 1-4 supplemented by personal interviews of the respondents. The Academic Performance Test (APT) was used to test senior secondary students' knowledge of environmental education. It contained 25 multi-choice questions, each with between 2 to 4 options of answers, out of which only one is the correct answer. Students were expected to provide the correct answers by ticking and to score between 0 and 25. Each correct answer is one point and is equivalent to 4%, therefore, 25 correct answers is equivalent to 100%. In line with examination regulations, scores below 40 was seen as fail, indicating that student's knowledge of environmental education was poor; and scores 40 and above was seen as pass indicating that student's knowledge of environmental education was satisfactory. Since the population size (29258) is too large, the researcher resorted to a sample study. In order to determine the sample size for the study, the Taro Yamene, Sample size determination function was used. To make the sample to be more representative of the population, researcher decided to add about 3% of the total population of 29258 of senior secondary

students. The questionnaire for the study was face and content validated by two experts in measurement and evaluation and the research supervisor of this study. The reliability of the instrument was conducted through the use of test-retest method. The data were analysed using the Cronbach-alpha co-efficient of concordance. The tools used in descriptive data analysis include percentages, means, variances, standard deviation, and charts. Considering the hypotheses of this study and the nature of data to be generated, the Spearman rank correlation coefficient and the z-Test analysis tools were used in testing the hypotheses. This test was computed with the aid of the software, Statistical Package for Social Sciences (SPSS) version 20.

RESULT PRESENTATION AND DISCUSSION

Table 2: Class of form and frequency

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid SS 1	340	38.6	38.6	38.6
SS 2	328	37.3	37.3	75.9
SS 3	212	24.1	24.1	100.0
Total	880	100.0	100.0	

Table2 above shows the distribution of the respondents according to their classes or form in the school. As indicated, senior secondary one (SS1) has the highest number of students with 340, representing 38.6% while SS3 has the lowest with 212 (24.1%).

Table3: Local Government Areas (Location of School)

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Eleme	150	17.0	17.0	17.0
Okrika	140	15.9	15.9	32.9
Oyigbo	170	19.3	19.3	52.2
Obio/Akpor	203	23.1	23.1	75.3
Port Harcourt LGA	217	24.7	24.7	100
Total	880	100.0	100.0	

Table 3 above shows the distribution of respondents according to local government areas. Oyigbo has 170, representing 19.3%, whereas Obio/Akpor and Port Harcourt local government areas when combined make up more than 30% of respondents in this study as each frequency is about 450. There are 45% of males to 55% females as illustrated in Figure 1.

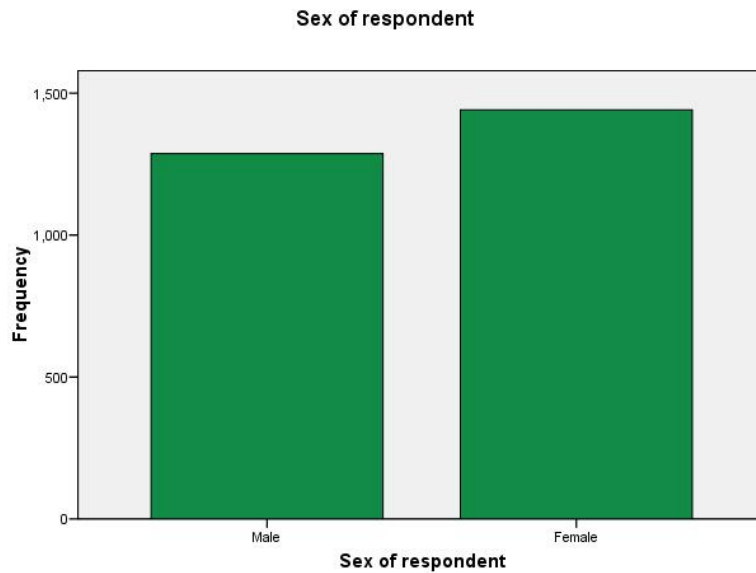


Fig. 1: Graph showing distribution of respondents according to sex

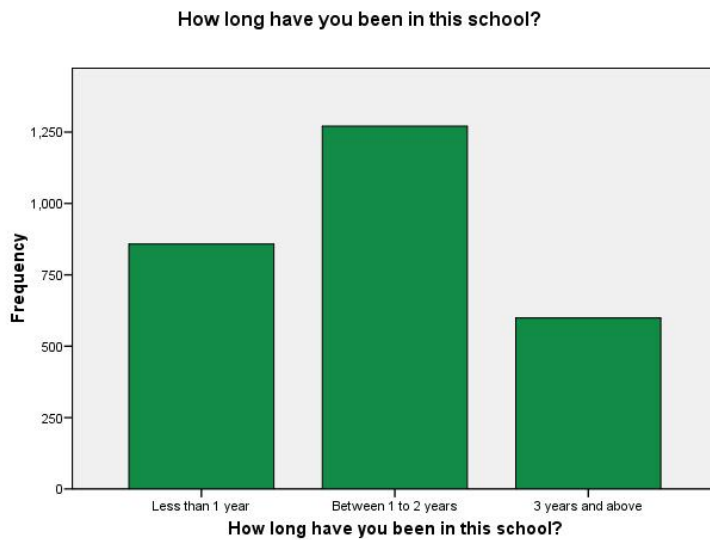


Fig.2Chart showing how long students have been in the school

Table 4: Is "Environmental Education" taught as a subject in yourschool?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	9	1.0	1.0	1.0
	No	871	99.0	99.0	100.0
Total		880	100.0	100.0	

This is a clear indication that the subject is not taught in any of the schools in Port Harcourt recording 100%, but portions of it are included in subjects like social science, agriculture, health science, and biology.

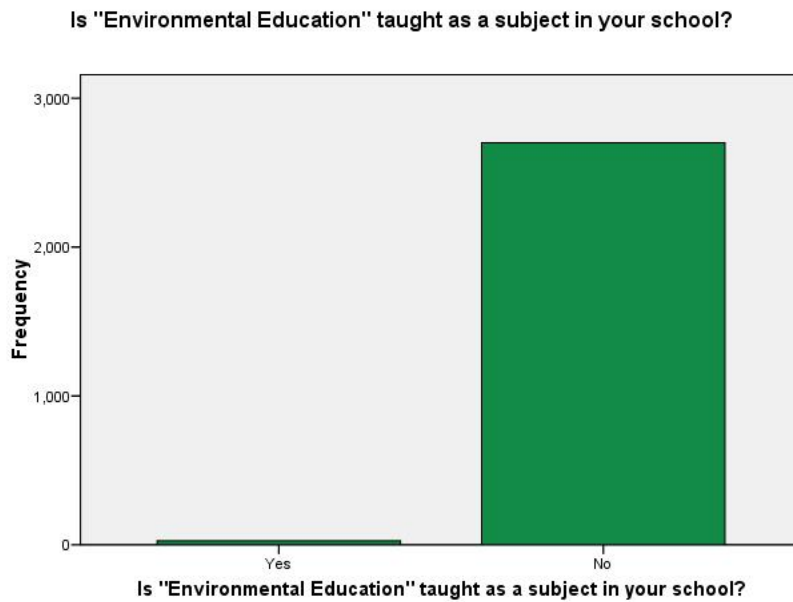


Fig.3: Chart showing students’ responses to whether “Environmental Education” is taught.

What is the level of secondary school students’ awareness of waste disposal methods in Rivers State? Therefore, a score is expected to oscillate between 1 and 4. A score of 4 or close to 4 will respectively indicate maximum or large extent of awareness of waste disposal methods and a score of 1 or close to 1 will indicate none or small extent of awareness of waste disposal methods Table 5 summarizes all the nine instruments used in measuring awareness of waste disposal methods in the study. The table shows the highest mean rating score of 1.953 with senior secondary students agreeing that there is no indiscriminate dumpsite(s) or dumping of refuse within their school premises.

Table 5: Students’ Response on Awareness of Waste Disposal Method

	N	Minimum	Maximum	Mean	Std. Deviation
Waste bins are strategically positioned within and around my school environment	880	1.00	2.00	1.5902	.49189
In my school, we conduct sanitation exercise on a regular basis	880	1.00	4.00	1.5623	.72298
There is no indiscriminate dumpsite(s) or dumping of refuse within my school premises	880	1.00	4.00	1.9527	.78324
All students are aware that litters are not for gutters	880	1.00	4.00	1.5385	.90672
Both old and new students are adequately made aware of the school's policies on sanitation and hygiene	880	1.00	4.00	1.5583	.90201

	N	Minimum	Maximum	Mean	Std. Deviation
I can say my school maintains a high standard of hygiene	880	1.00	4.00	1.6279	1.05815
I perceive that my school has the cleanest environment in this local government area	880	1.00	3.00	1.5139	.75135
Students have been punished for indiscriminately littering the school premises	880	1.00	4.00	1.6994	.85586
One of the ways of disciplining an unruly student is to ask him/her to pick litters within the school premises and dispose properly	880	1.00	4.00	1.5330	.79719
Valid N (listwise)	880				

To what extent are secondary school students' knowledgeable about environmental education? As indicated in Table 6 below, the average score achieved by all 880 respondents combined was 7.75 over 25 which is equivalent to 31.36%. This is interpreted to mean that on the average, students' knowledge of environmental education is poor since the average percentage score is less than 40.

Table 6: Descriptive Statistics for Students' Scores and Percentages on Environmental Education

		Environmental Knowledge	Academic Performance Test (APT) Percentage Scores on Environmental Knowledge
N	Valid	880	880
	Missing	0	0
Mean		7.7522	31
Std. Error of Mean		.04504	2
Median		8.0000	32
Mode		9.00	36
Std. Deviation		2.35239	9
Variance		5.534	22
Range		13.00	52
Minimum		1.00	4
Maximum		14.00	56

The third question was to what extent are secondary school students aware of climatic changes in Port Harcourt? Table 7 below was used to answer this research question. As a matter of fact, the grand mean rating score for students' response on awareness of climate change is 2.934 indicating that climate change awareness as perceived by students in senior secondary schools in Rivers State is high.

Table 7: Students' Response on Awareness of Climate Change

	N	Minimum	Maximum	Mean	Std. Deviation
School policy does not allow the burning of waste anywhere in the premises	880	1.00	4.00	2.2570	1.20974
Climate change refers to the alterations in the atmosphere that are over and above natural climate variations, and that are result of human activity	880	1.00	4.00	3.1026	1.17161
Climate change can be favourable if human beings transform their ways of living to be more sustainable and friendly to the environment.	880	1.00	4.00	3.0598	1.14469
We can change the climate by reducing the emissions of green house gases like water vapor, carbon dioxide, and methane.	880	1.00	4.00	3.7031	.78618
Environmental education will ensure that students know how to take necessary precautions to prevent the impacts of climate change.	880	1.00	4.00	2.8618	1.12329
Climate change is linked to changes in global patterns of land use	880	1.00	4.00	2.742	1.19094
Because of changing climate, farmers are less able to predict the rainy season prior to planting	880	1.00	4.00	2.812	1.16763
Valid N	880				

The fourth question was what is the nature of students' attitudes towards environmental issues regarding hygiene in Port Harcourt? Table 8 below was used to answer this research question.

Table 8: Students' Response on Nature of Students' Attitude to the Environment

	N	Minimum	Maximum	Mean	Std. Deviation
All the students of my school willingly and happily participate during clean-up exercises	880	1.00	4.00	1.9391	.94976
Sanitation/hygiene behaviours of students in my school is commendable	880	1.00	4.00	2.0209	.91914
It is common practice in my school for a student to pick random litter and dispose properly without prompting	880	1.00	4.00	1.9076	.89834
We have a sanitation prefect who is effective in ensuring that students exhibit good environmental attitudes	880	1.00	4.00	1.7892	.87708

	N	Minimum	Maximum	Mean	Std. Deviation
Students are able to maintain a high standard of hygiene because of fear of reprimand	880	1.00	4.00	1.8908	.87113
Valid N (listwise)	880				

Table 8 above summarizes all the five instruments used in measuring students' environmental attitude in the study. The table shows the highest mean rating score of 2.021 with senior secondary students agreeing that Sanitation/hygiene behaviour of students in their school is commendable. The fifth question was what are the impacts of climate change on senior secondary students in Port Harcourt?

Table 8: Students' Response on Impact of Climate Change

	N	Minimum	Maximum	Mean	Std. Deviation
Lack of rainfall can lead to food scarcity	880	1.00	4.00	3.5374	.84218
Climate change can affect people's lives and survival of livestock.	880	1.00	4.00	3.4384	.92309
Floods have caused severe damage to lives and infrastructure	880	1.00	4.00	3.3501	1.01667
Floods have resulted in displacement of families and towns	880	1.00	4.00	3.6562	.76968
Severe drought can lead to scarcity of drinking water	880	1.00	4.00	3.1455	1.14116
climate change impacts on boys' and girls' accesses to quality education	880	1.00	4.00	3.2610	1.06037
Damage to housing caused by natural disasters leaves many children homeless, or living in accommodation that is overcrowded and inadequate	880	1.00	4.00	3.1686	1.09712
Climate change can affect health and wellbeing due to loss of income	880	1.00	4.00	3.0367	1.11829
Valid N (listwise)	880				

Table 9 summarizes all the eight instruments used in measuring impact of climate change in the study. As a matter of fact, the grand mean rating score for students' response on impact of climate change is 3.324 indicating that the impact of climate change as perceived by students in senior secondary schools in Port Harcourt is high and far above moderate. The sixth question was what is the relationship between students' environmental education and their attitude towards the environment which showed poor relationship. From results, the highest mean test

score recorded for urban area is 8.07, representing 32.29% for Obio/Akpor local government area and the lowest is 7.74, representing 30.97% for Port Harcourt local government area. There is significant difference in the knowledge of environmental education between male and female students.

Table 10 Result of z-test analysis on location of school and knowledge of environmental education

	<i>ATP of Urban Students on Environmental Education</i>	<i>ATP of Rural Students on Environmental Education</i>
Mean	7.906420022	7.673852957
Known Variance	5.329	5.623
Observations	919	1809
Hypothesized Mean Difference		
Z	2.464231335	
P(Z<=z) one-tail	0.006865373	
z Critical one-tail	1.644853627	
P(Z<=z) two-tail	0.013730746	
z Critical two-tail	1.959963985	

Table 11: Result of z-test analysis on location and environmental attitude

	<i>Environmental Attitude for Urban</i>	<i>Environmental Attitude for Rural</i>
Mean	1.934494015	1.896849088
Known Variance	0.197	0.173
Observations	919	1809
Hypothesized Mean Difference	0	
Z	2.138100665	
P(Z<=z) one-tail	0.016254287	
z Critical one-tail	1.644853627	
P(Z<=z) two-tail	0.032508574	
z Critical two-tail	1.959963985	

Source: SPSS ver. 20.0 Output window.

The conclusion is that there is significant correlation between the two variables. Awareness of waste disposal method and Students' environmental attitude in senior secondary schools in Port Harcourt, Nigeria. Direction is same (i.e. as one increases, so also does the other), also, since the p-value = 0.000) is less than the level of significance, α (= 0.05), we therefore reject the null hypothesis and conclude that there is significant correlation between the two variables: Students' Environmental knowledge and Students' environmental attitude in senior secondary schools in Rivers State, Nigeria.

Students' awareness of climate change is correlated with Students' environmental attitude giving a coefficient of 0.447, and a p-value of 0.000, which shows that there is a weak positive linear relationship between the two variables. Direction is same (i.e. as one increases, so also does the other), also, since the p-value (= 0.000) is less than the level of significance, α (= 0.05), we therefore reject the null hypothesis and conclude that there is significant correlation between the two variables: Students' awareness of climate change and Students' environmental attitude in senior secondary schools in Rivers State, Nigeria.

Table 12: Result of z-test analysis on effect of gender on students' environmental attitude

	<i>Environmental Attitude Score for Male Students</i>	<i>Environmental Attitude Score for Female Students</i>
Mean	1.903185703	1.915197779
Known Variance	0.0188	0.174
Observations	1287	1441
Hypothesized Mean Difference	0	
Z	2.032470294	
P(Z<=z) one-tail	0.015092598	
z Critical one-tail	1.644853627	
P(Z<=z) two-tail	0.030185157	
z Critical two-tail	1.959963985	

From the result in Table 12 above, there is significant difference in the environmental attitude between female and male secondary school students. Result revealed that their knowledge of environmental education was poor as was confirmed by the mean of 7.75 over 25 which is equivalent to 31.36%. This highlights the point that students' knowledge of environmental knowledge is low locally as well as globally; Study found that students' awareness of climatic changes resulted in an overall mean rating score of 2.934 (which is interpreted to mean that students were highly aware of changes in the climate since it is above the 2 threshold). Students agreed that Humans can change the climate by reducing the emissions of green house gases like water vapour, carbon dioxide, and methane. The high rating score for this instrument could well imply that most schools do indeed have such policies which were in agreement with Alozie (2013) who observed that the actions of individuals have affected beyond the immediate environment to impacting on the climate. However, Francis (2014) in his study of the impact of climate change on accounting students, where he stated that the overall level of public awareness on issues related to climate change in Nigeria is considered to be low. It was revealed that "Environmental Education" does not have a systematic curriculum and was not taught in any of the public schools in Rivers State. Awareness of climate change correlated with students' environmental attitude resulting in a coefficient of 0.428 was interpreted to mean a weak positive linear relationship; however it was significant. According to articles surveyed, most of these studies show predominantly low levels of knowledge among populations studied (Gigliotti, 1990; Hausbeck et al., 1992; Kuhlemeier et al., 1999; Wright and Floyd, 1992, etc). Ibrahim and Babayemi (2010) study of University of Ibadan students also indicated that the mean knowledge score, 15, is not just low but very low, with 68.7% response. Finding is supported by Agbanusi's (2009) assertion that man's modification of his environment to satisfy his desire has led to the alteration of the ecosystem and this has resulted to several environment problems such as climate change, flooding, deforestation, erosion, drought, desertification, and famine. Also, Ozor (2009) in listing the impact of climate change on national development of the country stated that variations in climate change have led to devastating consequences and effects in various parts of the country which include flooding, desertification, erosion, drought, sea level rise, heat stress, pests and diseases, erratic rainfall patterns and land degradation, specifically he stated that the South-south geopolitical zone is mainly affected by sea level rise and deforestation-induced changes; the Southwest zone also is affected by sea level rise and deforestation-induced changes;

Southeast by erosion, flooding and land degradation. Many researchers believe that responsible environmental behaviour is connected to personal experiences. The Findings of this study is in line with Kofoworola (2007) offering strong evidence which suggests that individual or group awareness and attitudes towards waste generation and management is critical in the effort to respond to the waste management challenges in public schools.

CONCLUSION AND RECOMMENDATIONS

There is no indiscriminate dumpsite(s) or dumping of refuse within their school premises and the least contributory was they perceive that their school has the cleanest environment in the local government area. It was revealed that students' attitude to the environment was not commendable. They have a sanitation prefect who is effective in ensuring that students exhibit good environmental attitude. The negative attitude of the (*Nigerian*) society towards the environment has affected the educational institution whose problem has been aggravated by constant changes, not just in curriculum content but also school subjects. This is further corroborated by their findings were respondents were found to have poor practices towards waste management. The impact of climate change yielded the highest mean rating score of 3.324 indicating that the overall impact from climate change was severe. From these findings, it is evident that most of the respondents must have been direct or indirect witnesses to the effect of climate change in 2012 when flooding displaced families in many. There was a weak but positive linear relationship between students' awareness of waste disposal methods and their attitude towards the environment. This research has shown, using the major findings as a basis that senior secondary school students' awareness of waste disposal methods is low, their knowledge of environmental education is poor, but their level of awareness for climatic changes was high. Research also showed that students' attitude towards their environment was not commendable. However, students displayed a keen perception in relating with the impact of climatic changes. Empirical studies used two perspectives to present the nature of the relationship between environmental education and students environmental attitude: the first perspective enabled us to understand that though both were low, environmental knowledge and environmental attitude were significantly different for students in urban and rural areas - urban being higher in both cases. We should emphasize at this point that impacts of climate change has more effects on women and girls' lives than men as studies have shown. The situation can be changed if human beings transform their ways of living to be more sustainable and friendly to the environment. In conclusion therefore, research joins its voice with the advocacy group that calls for the standardization of environmental education as a subject, and reiterates the need for school administrators both in governmental agencies and secondary education system, to put in place a full and systematic curriculum for a subject known as "Environmental Education" scope of which should cover both classroom and outdoor activities.

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