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## References

- Adio-Moses, R.O. (2013). Survey of Environmental Health Conditions in relation to safety in public Primary Schools in Egbeda Local Government Area of Oyo State Nigeria. *Nigeria School Health Journal* 25(1) 72-79.
- Anyanwu, F.C. (2013). Predictive Effects of selected Environmental factors on the Health Status of Pupils in Pre-Primary Schools in Abeokuta North Local Government Area of Ogun State. *Nigerian School Health Journal* 25(1) 81-86
- Federal ministry of Education 2006 *Implementation Guidelines on National School Health Programme* Abuja.
- Federal Ministry of Education (2005) *Home-Grown School feeding and Health Programme. A national framework for implementation* Abuja.
- Nathan, I.T., Perkins and Robert, D.B. (1999) *Environmental Aesthetics* Netherland Kluwer Academic Publisher Accessed from linkispringer com/./10.1007%2f-4020 on 5-4-2014.
- National Population Commission (NPC) 2009 *Nigeria Demographic and Health Survey* 2009 Abuja Nigeria
- Ogaji, D.S. and Okokon, E.O. (2012) Appraising the physical Environment of Secondary Schools in Calabar, *Nigeria. Journal of Environmental Science, Toxicology and food Technology* 1(1) 4248
- UNICEF/WHO (2002). *Children in the New Millennium Environment: Impact on Health* Geneva.
- WHO (1988). *Education for health: A manual on health Education in Primary Care* Geneva 134-138.
- Pruss-Ostun, E.S. & Convalan, H.C. 2006. Preventing chronic diseases: investing wisely in health. The role of schools retrived from [www.cdc.gov](http://www.cdc.gov) on 7-5-2014.

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## HEALTHFUL SCHOOL ENVIRONMENT AS DETERMINANT OF JUNIOR SECONDARY SCHOOL STUDENTS' HYGIENE BEHAVIOUR IN AFIJIO LOCAL GOVERNMENT AREA OF OYO STATE, NIGERIA

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### **Abstract**

*The study investigated healthful school environment as determinant of Junior Secondary School students' hygiene behaviour. The descriptive survey research design was employed in the study. A sample of 487 respondents were selected using simple random sampling technique. The instrument used was self developed questionnaire with reliability co-efficient of 0.61. The data was analysed with the use of percentage and inferential statistics of multiple regression at 0.05 level of significance. The result showed that, joint effect of variables of healthful school environment of (safe drinking water, hand and body washing equipment and facilities, toilet facilities, sanitary equipment and environmental aesthetic) on students' hygiene behaviour was significant;  $F_{(5,481)}=65.915$ ;  $R= 638$ ;  $R^2 = .407$ ,  $Adj. R^2 = .400$ ;  $P<.05$ . The paper concluded that, positive hygiene behaviour was a step towards achieving good health and could be fostered in students by the provision of healthful school environment. It was recommended that, government at all levels should make human and material resources available in schools to facilitate the implementation of healthful school environmental programme.*

**Keywords:** *Healthful school environment, hygiene behaviour, environmental disease burden, sanitation, health status.*

### **Introduction**

Environment is the aggregate of surrounding conditions that exert pressure on the life of a being. It is a social and cultural force that shapes the life of a person. The behaviour of an individual is a function of the environment in which he or she lives. This is in agreement with the concept of environmental determinism which regards physical environment as the primary determinant of human behaviour. There is a relationship between the health of an individual and the environment. This is because, the environment harbours disease and the extent to which an individual can be protected from the hazards determining one's state of health.

Environmental related diseases are a global problem, but unacceptably high in developing countries of the world, including Nigeria. WHO (1995) reported that, five million deaths each year in children, less than 15 years of age, are linked to the environment in which; they live, learn and play, their homes, schools and their communities. Ogoji and Okokon (2012) identified groups of environmental hazards that exacerbate the effects of economic and development and cause bulk of environmental-related death and diseases among children as water insecurity, lack of hygiene and poor sanitation, air pollution, vector-borne diseases, chemical hazards and unintentional injuries or accident. Pruss-Ostun and Convalan (2006) found that, 94% of

diarrhoeal diseases attributable to environment are associated with unsafe drinking water and poor sanitation as well as hygiene in the developed, developing and underdeveloped countries. Child survival in Nigeria is threatened by environmental diseases; particularly, malaria, diarrhoeal diseases, cholera and upper respiratory tract infection which account for the morbidity and mortality in childhood. In a national cross-sectional survey, the National Development Health Survey (NDHS), 10.3% of children experienced symptoms of acute respiratory infections and 31% had a fever (NPC, 2009). The need to stem the tide of environmental disease burden on Nigerian youths is imperative because, healthy youths translate into future manpower who are prime movers of the country's political, economic and social development.

Intervention strategies in environmental disease burden that have been found effective include: provision and maintenance of health facilities and services in the form of access to improved drinking water resources, access to improved sanitation and good hygiene behaviour that helped to break the overall cycle of faecal-oral pathogen contamination of water bodies, polluted indoor and outdoor air, inadequate and improper use of health facilities in order to enhance well-being and human development (Pruss – Ostun and Corvalan, 2006). Healthful School Environment is a component of total School Health Programme which ensures good state of health of the entire school population.

School environment consists of the site of the school, including buildings with their equipment and facilities. Healthful School Environment is the one that puts into consideration; physical, emotional, social as well as intellectual development of a child in order to enhance his/her learning capacity. It is characterized by portable water supply, waste disposal system and provision of safety measures. Social and emotional dimension of a school environment include; harmonious pupil-pupil and pupil-teacher relationships, organization of healthful school day and participation in recreational activities. Provision of healthful school environment ensures favourable setting which also encourages hygienic behaviour.

Environmental conditions of schools in Nigeria are deplorable as they do not stimulate pupils to learn nor improve their health. Most schools lack good source of drinking water, toilet facilities, wash-hand basins as well as dustbins to dispose refuse generated in classrooms. The pupils continue to indulge in multiple health risk-behaviours associated with disease such as improper hand-washing before eating and after-toileting, indiscriminate refuse dumping, not sweeping classrooms, keeping overgrown hair and nails. They also wear dirty uniforms to school. The consequence of which is disease, resulting in ill-health. This study was designed to find out Healthful School Environment as a major determinant of Junior Secondary School Students' hygiene behaviour in Afijio Local Government area of Oyo state, Nigeria.

### **Healthful School Environment**

Healthful school environment is an effort directed at facilitating safety and wellbeing of members of the school community. It ensures that, the time children spend in school is spent in the atmosphere conducive to physical, social and emotional health. Federal Ministry of Education (2006) listed as one of the objectives of Healthful School Environment; 'to bring about positive changes in hygiene behaviour of learners and the community'. In order to achieve the all important objective, the following healthful school environmental equipment and facilities must be provided;

### **Safe Drinking Water Source**

Safe drinking water source must be available in the school. This is to encourage drinking adequate water for the maintenance of body health. Availability of safe drinking water source will discourage students from buying water sachets which are from the doubtful sources. The water supply must be well maintained by the school authority to avoid contamination. FME (2006) recommended that, in the case of new bore-holes/hand-dug wells, sampling of water analysis should be done quarterly for the first year, thereafter yearly sampling should be done if no harmful substances are discovered. Also, location of the water source should be at least 30 meters away from any soak-away/toilet. There must be adequate water points to serve the entire school population.

### **Hand and Body-washing Equipment:**

In the school premises, provision must be made for wash-hand basins: including water soap and clean towel placed at strategic locations. Water basins must be cleaned and water replaced every day. Also, towel must always be washed. Shower must be provided for students to wash their body after taking part in practical lessons and when they come in contact with dirty materials. Adequate and separate bathrooms for male and females, especially in boarding schools, should be made available.

### **Toilet Facilities**

Toilet facilities of ventilated improved pit (V.I.P.), latrines of water closet (W.C.) types should be provided. It is recommended that, there should be at least a toilet compartment for thirty students (FGN 2000). There should also be fitted urinal pots for boys and girls.

### **Sanitary Equipment:**

Brooms must be made available to sweep and remove cobwebs from toilets, the kitchen, food store and classrooms. Dust bins must be provided in adequate number and placed at strategic locations around classrooms and hostels. Large containers should be provided for collection of refuse generated daily. Refuse collection van should also be provided to carry refuse generated to the point of final disposal.

### **Environmental Aesthetic:**

Environmental aesthetic is defined broadly as the interaction between an individual and environment in relation to beauty (Nalhan, Perkins and Brown, 1999). In order to ensure that school environment is beautiful, flowers can be planted. Lawns as well as paths are created. Painted stones can be arranged along the paths. Personnel as well as machines should be provided to ensure maintenance.

In most Nigerian Schools, learning environments have few resources; classrooms are small and overcrowded due to the upsurge in the school enrolment. Water supply as well as toilet facilities are not available. A survey of environmental health conditions in public primary schools in Egbeda Local Government area of Oyo State Nigeria by Adio-Moses (2013) showed inadequacy of water supply, toilet facilities and disposal of facilities.

### Hygiene Behaviour

Hygiene is of Greek Origin known as Hygenia. It is a set of activities performed to safeguard health. In a broader sense, hygiene encompasses circumstances, lifestyle, surrounding and communities that promote a safe and healthy environment. In everyday life-setting, hygienic practices are employed as preventive measures to reduce the incidence of illness and spread of diseases. Hygienic behaviour is the cultivation of good health habit. WHO (2008) found that, hygienic behaviours are capable of cutting the number of deaths from diarrhoea by almost half and from pneumonia by one quarter. Specific hygienic behaviours that should be inculcated in the school-age children include the following:

- i. Safe drinking: This is the ability of an individual to select water for drinking from good source. Water from poor sources can also be purified to make it safe for drinking. Drinking water that is safe for human consumption is a good health habit that helps to prevent diseases.
- ii. Hand washing: It is the act of rubbing the hands with the use of water or another liquid together with soap for the purpose of removing dirt. The proper way of washing hand is to rub hands together with digit interlocking. A brush could be used to remove dirt under nails and since disease germs may be in water or on the hands, it is necessary to rinse well and wipe the hands dry with a clean towel. The critical times a child washes his/her hand include after sweeping classroom, after cleaning toilets and after handling dustbins. It is also important to wash hands after defecation, and before and after eating.
- iii. Use of latrine for defecation and proper anal cleansing The use of latrine for passing excreta is a good health habit. This habit should be encouraged in order to block faecal-oral route infection. After defecation, it is important that, the student does anal cleansing with water in a proper manner.
- iv. Use of urinal pot for passing urine: Students must cultivate the habit of using urinal pots located at specific places within the school premises whenever they went to urinate. This is because, urinating indiscriminately can contaminate the environment and also constitute indecency.
- v. Regular cleaning of facilities: Students must be involved in sweeping classrooms as well as removing cobwebs using brooms. They should clean chairs and tables as well as chalkboards. Toilets and urinal pots must be cleaned and disinfected. Students should be responsible for cutting of grasses low and maintenance of the flowers and lawns

### Statement of the Problem

Environmentally-related diseases are a major cause of morbidity and mortality among school-age children. UNICEF/WHO (2000) stated that, every year more than five million children, mainly in developing world die from the burden of environmental diseases. In Nigeria, poor environment and sanitation conditions lead to a build-up of worm infestations over time, making parasitic infection endemic in school-age children (FGN 2005). Preventable diseases continue to decimate the lives of the country's school age children. Hygiene is a better health protecting option, especially in a country where health care system is greatly constrained by inadequate health care or to render effective medical treatment. Hygiene is a practice that



prevents the spread of pathogens. However, it is impossible to practice hygiene in an unhealthy environment. The cycle of ill-health may continue among the school age-children in Nigeria, if the practice of hygiene is constrained by poor school environment.

### Research Hypothesis

1. There is no joint effect and relative contributions of independent variables of healthful school environment (safe drinking water, hand and body washing equipment and facilities, toilet facilities, sanitary equipment and environmental aesthetic) on students' hygiene behaviour.

### Methodology

The survey research design was used to describe the variables of this study. The population comprised all the students in Junior Secondary Schools in Afijo Local Government Area of Oyo state. Simple random sampling technique was adopted to select ten (10) schools from the total number of schools in the local government area. This method was also used to pick fifty students from the schools giving a total of five hundred respondents out of which only four hundred and eight seven (487) questionnaire forms were successfully retrieved. The instrument for data collection was self-constructed questionnaire with reliability co-efficient of 0.61. The data collected were analysed using inferential statistics of multiple regression analysis.

### Results and Discussion

#### Demographic Characteristics of Respondents.

Table 1: Frequency and percentage distribution according to age, religion and class.

Age		
	Frequently	Percentage
Less than 10 years	38	7.8
10-15 years	327	67.1
16-21 years	118	24.2
22 years and above	4	0.8
<b>Total</b>	<b>487</b>	<b>100</b>
Religion		
Traditional	17	3.5
Islam	166	34.1
Christianity	304	62.4
<b>Total</b>	<b>487</b>	<b>100</b>
Class		
JSS 1	85	17.5
JSS 2	118	24.2
JSS 3	284	58.3
<b>Total</b>	<b>487</b>	<b>100</b>

Table one shows that, three hundred and twenty seven (67.1%) respondents were within age bracket 10-15 years. One hundred and eighteen (24.2%) were between 16-21 years, thirty-eight (7.8%) were less than 10 years and four (0.8%) were 22 years and above. Also, in the table three hundred and four (62.4%) were Christians, one hundred and sixty (24.2%) were Muslims while seventeen (3.5%) were of traditional religion. Eighty-five (17.5%) respondents were in junior secondary school one (JSS 1), one hundred and eighteen respondents (24.2%) were in JSS2 and two hundred and eighty-four (58.3%) respondents were in JSS 3 class.

**Table 2. Correlation matrix showing the relationship between dependent variable of hygiene behaviour and independent variables of healthful school environment (safe drinking water, hands and body washing equipment and facilities, toilet facilities, sanitary equipment and environmental aesthetic)**

	Student hygiene behaviours	Safe drinking water	Hands and body washing equipment and facilities	Toilet facilities	Sanitary equipment	Environmental aesthetic
Student hygiene behaviours	1					
Safe drinking water	.497**	1				
Hands and body washing equipment and facilities	.346**	.543**	1			
Toilet facilities	.333**	.617**	.602**	1		
Sanitary equipment	.540**	.597**	.544**	.610**	1	
Environmental aesthetic	.538**	.470**	.349**	.428**	.583**	1

The table above showed that, there was significant relationship between students' hygiene behaviour and provision of safe drinking water, hand and body washing equipment and facilities, toilet facilities, sanitary equipment and environmental aesthetic.

**Table 3: Analysis of Variances (ANOVA) showing joint effects of independent variables (safe drinking water, hands and body washing equipment and facilities, toilet facilities sanitary equipment and environmental aesthetic) on dependent variable.**

Model	Sum of Square	Df	Mean Square		Sig
Regression	10168.469	5	2033.694	65.915	.000
Residual	14840.471	481	30.853		
Total	25008.940	486			

R =.638

R. square =.407

Adjusted R square .400

Standard Error of the estimate 5.55458

The table above shows that, the joint effect of independent variables (safe drinking water, hands and body washing equipment and facilities, toilet facilities, sanitary equipment and environmental aesthetics) on students' hygiene behaviour was significant ( $F_{(5,481)}=65.915$ ;  $R=.638$ ;  $R^2=.407$  Adj.  $R^2=.400$ ;  $P < .05$ ). The result of study further revealed that, about 34% of the variation was accounted for by the independent variables. Therefore, the hypothesis which states that, there is no joint effect of independent variables of (safe drinking water, hands and body washing equipment and facilities, toilet facilities sanitary equipment and environmental aesthetics) on student' hygiene behaviour is rejected.

**Table 4: Regression Analysis showing relative effect of independent variable (safe drinking water, hands and body washing equipment and facilities, toilet facilities, sanitary equipment and environmental aesthetic) on student's hygiene behaviour**

Model	Unstandardized Coefficients		Standardized Coefficients		Sig
	B	Std. Error	Beta		
Constant	10.633	1.148		9.260	.000
Safe drinking water	.448	.085	.260	5.283	.000
Hands and body washing equipment and facilities.	.074	.091	.038	.820	.413
Toilet facilities	.260	0.88	.151	2.952	.003
Sanitary equipment	.565	.107	.278	5.293	.000
Environmental aesthetic	.666	.096	.305	6.918	.000

The table above shows that, the relative contribution of the following independent variables on the dependent variable were significant: Environmental aesthetics ( $\beta=.305$ ;  $P < .05$ ); sanitary equipment ( $\beta=.278$ ;  $P < .05$ ); safe drinking water ( $\beta=.260$ ;  $P < .05$ ); toilet facilities ( $\beta=.151$ ;  $P < .05$ ), while the contribution of hands and body washing equipment and facilities was not significant. ( $\beta=.038$ ;  $P > .05$ )

### Discussion of Finding

The findings of this study showed that, there was significant joint effect of safe drinking water, hands and body washing equipment and facilities, toilet facilities, sanitary equipment and

environmentally aesthetic on students' hygiene behaviour. Also, the relative contribution of each of the variables, except hands and body washing was significant. The import of this result is that hygiene behaviour of students was largely determined by the provision of environmental aesthetic, sanitary equipment, safe drinking water, toilet facilities and hands and body washing equipment and facilities in that order.

The result of the study lent credence to the assertion of WHO (1998) that, it is difficult to teach a child the value of health if the school environment is not conducive to health behaviour and if there are no resources with which to practice health skills. Also, the finding is in line with Anyanwu (2003) whose study showed significant predictive effect of environmental factors (water supply, sanitation availability of toilet facility and refuse disposal) on health status of the respondents. The result of the study confirmed the earlier submission that, the environment in which a person lives determines his/her health behaviour.

### **Conclusion**

Hygiene behaviour is the basic activities of cleaning, grooming and caring for the body as well as the immediate environment. Therefore, good personal hygiene practices should form important part of children routine activities at home and in the school. The children spend their prime time daily in school and therefore; it is in this strategic position where to instil hygiene behaviour in them. The school should be empowered through provision of healthful school environment to perform these all important roles.

### **Recommendations**

Provision of healthful school environment is important. This is to bring about positive changes in hygiene behaviour for improved health status of school children in Nigeria. It is along this line that, the following recommendations were made:

1. Compulsory implementation of healthful school environmental programme in secondary schools
2. Government must make available adequate funds for the implementation of Healthful School Environmental Programme.
3. Dilapidated buildings in schools should be demolished and new ones constructed. Also relevant standards must be maintained in the construction of school building.
4. Regular payment of school running grants for the maintenance of the schools
5. Daily inspection of personal health of school children
6. Relevant ministries, agencies, parastatals and department at all the three levels of Education including private sectors and the civil society should collaborate with Ministry of Education in the implementation of healthful school environmental programme
7. Inspectorate Division of Ministry of Education must ensure supervision, monitoring and evaluation of health school environment.

Health education and teachers as well as members of school management must be given regular orientations on the implementation of activities that promote healthful school environment.