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The Relationship Between Environmental Factors and Health Problems of Secondary School Students in Oyo State, Nigeria

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Abstract: This study investigated the relationship between Environmental factors and health problems of students in Oyo state Nigeria. The environment in which a child stays and learns has a direct effect on his/her health status. The classroom environment where too many students sit together to learn is likely to predispose them to infections and other health related problems. The number of students in a classroom can affect the condition of the environment where proper ventilation is not possible and the spread of diseases become more prominent. The condition will therefore put the health of those students in jeopardy. A sample of 2000 respondents was used for the study. Data collection involved the use of questionnaire while data analysis was done using frequency counts and percentages. The findings revealed that faulty refuse disposal, lack of toilet facilities, crowded classrooms and poor water supply as environmental factors predisposed the students to health problems. These findings have implications for curriculum planners and policy makers who are interested in the well being of the child.

Key words: Environmental factors, health problems, drinking water, disease, Nigeria

INTRODUCTION

It is undoubtedly true that man has almost complete dominion over all things on earth, yet he has remained subject to physicals, biological and social environmental problems which he created. Man has largely conquered or is on the way to conquering epidemics and communicable diseases but in the process of liquidating insects, pests, predators and vectors of diseases, he runs a risk of upsetting the cycle of nature (ecosystem) to the extent that he endangers food supply, pollutes the water he drinks and the air he breaths.

Dokun Oyesola (1995) stressed that a quality environment is important for the promotion of man's well being but in the process of man striving to control his environment he has made his environment a greater threat to his health and life as a result of his technological and industrial advancement. Thus, in the process of finding a better means of living (building canals, bridges and industries; constructing vehicles, etc.) man has succeeded in destroying the environment in which he lives. This is observed in air and water pollution through the generation of carbon (II) oxide from industries and cars, construction of drainages, fumigations and the use of insecticides/pesticides in home and farms.

World Health Organization (WHO, 2004) defined environmental health as the theory and practice of assessing, correcting, controlling and preventing those factors in the environment that can potentially affect adversely the health of present and future generations. World Resources (1998) stated that environmental health problems are associated with poverty and lack of essential resources, the chief among these is inadequate clean water, food, shelter, fuel and clean air. It added that in many developing countries, populations are in doubles jeopardy, facing both the long standing traditional environmental health problems, such as poor sanitation, as well as the emerging problems of industrial pollution. This is true of Nigeria with an ever increasing population, oil exploration and industrial development. World resources (1998) also maintained that a clean environment supports good health while a degraded environment increases the likelihood of disease and death while, Aina (1990) and Olaniran *et al.* (1995) agreed that the quality of the environment in which man lives is inextricably linked with the quality of life he enjoys, especially his socio-economic and health status.

The school system in Nigeria is not exempted from the environmental health problems. In many schools, the environment is not child-friendly. Most of the classroom

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blocks in these schools are dilapidated (cracked walls/floors, leaking roofs, broken doors, windows, etc). In addition, water supply, recreational, refuse disposal and toilets facilities are inadequate or non-existent. This situation does not augur well for a healthy school environment which is essential for effective teaching and learning. The Universal Basic Education Programme (UBEP, 2001) revealed that only 200 (16.9%) out of the 1184 primary schools used for the study had good sources of water supply (pipe borne and bore hole), 468 (39.5%) had no refuse disposal facilities, 164 (13.9%) had no games/sports facilities, 696 (58.8%) had recreational facilities that were not useable and 510 (41.6%) of the schools had no toilet facilities. Some schools do not haves first-aid boxes or materials to attend to students when they sustain injury or when the need arises.

It is pertinent to note that most schools do not have sanitary conveniences and refuse is not properly disposed. This, to an extent leads, to an outbreak of communicable diseases in the schools. Another important basic facility with far-reaching effects for health is water, particularly potable water. Philips (1990) emphasized that availability of cleans drinking water can be a major influence in enhancing health, particularly among children, in reducing death and illness from diarrhoeal diseases.

The supply and distributions of drinking water to students can be a major cause of health problems in schools. The inability of school authorities to provide good drinking water and proper storage system in the school should be an issue of concern to both parents and government. Where water is provided, students share cups and water cans in such a manner that those having any respiratory tract infection can easily transfer such to others.

Environmental health problems can be described as man-made hazards to human health, notable among which are accidents, water pollution, food pollution, air pollution, pesticides and radiation. This means that despite considerable advances in providing better living conditions for humans, the environment continues to suffer the outcome of the numerous technological advancements. The school environment can become stimulating, interesting, pleasant and conducive to teaching-learning situation if the serenity of the environment is captivating and sanitarily maintained. For the purpose of the control of nuisance and communicable diseases in schools, the authorities are charged with the responsibility of undertaking routine inspection. This inspection is done to detect nuisance as well as control communicable diseases in schools and in food preparing establishments around the schools.

Nuisance is an act, deed or omission which is likely to be injurious to health and which permit an abatement either by the individual whose act or omission gave rise to the nuisance or by an agent or author of the nuisance. This can be categorized into common nuisance and structural nuisance. Common nuisance would be seen in refuse heap, over growth of weeds, faulty drains, dirty environment and classrooms filled with cobwebs, while structural nuisance includes dilapidated walls, scraped floors and faulty laboratories. Both categories of nuisance are source of environmental degradation that's could be injurious to the health of the children in schools if not properly managed. It is, therefore, important to note that the quality of environment is important in the promotion of man's well being especially the school children. Therefore, the researcher contends that there is a serious relationship between the health of the school child and the environment in which he stays and learns.

The following research question guided this study:

Would faulty refuse disposal system, toilet facilities, crowded classrooms and poor water supply be responsible for the health problems of secondary school students in Oyo State, Nigeria?

MATERIALS AND METHODS

Two thousand students drawn from 20 secondary schools in Oyo State formed the sample for the study.

A self developed structured questionnaire was used for data collection. This instrument was validated by experts in health education and educational evaluation. A test-retest method was used to determine the reliability of the instrument using 20 students outside the study sample. The result showed a reliability estimate of 0.74 using Pearson product-moment correlation co-efficient which indicates no ambiguities in the instrument.

The instrument was administered directly on the students. This ensured on the spot administration and collection of the instrument. Data analysis involved the use of frequency counts and percentages.

RESULTS

Table 1 revels the extent to which faulty refuse disposal system, toilet facilities, crowded classrooms and poor water supply were responsible for the health problems of secondary school students in Oyo state, Nigeria.

Table 1 indicates that 1,280 (64%) of the respondents agreed that faulty refuse disposal system would lead to health problems to students while 720 (36%) disagreed. On lack of toilet facilities, 1,680 (84%) of the respondents agreed that health problems would ensure when there is total lack of toilet facility in the school while 320 (16%) said no.

Table 1: Data on faulty disposal system, lack of toilets facilities, crowded classrooms and poor water supply as responsible for health problems amongst secondary school students

	Yes		No	
Variable	N	(%)	N	(%)
Faulty refuse disposals system	1280	64	720	36
Lack of toilet facilities	1680	84	320	16
Crowded classrooms	1420	71	580	29
Poor water supply	1160	58	840	42

As indicated in the table on crowded class room, 1,420 (71%) respondents affirmed that this condition would lead to health problems in school while 580 (29%) disagreed. As for poor water supply 1,160 (58%) were positive in their response that poor water supply would be responsible for some health problems experienced in the school while 840 (42%) were negative in their responses.

DISCUSSION

The results of the study revealed that the four variables could effectively be responsible for the incidence of health related problems experienced in secondary schools. These findings corroborated the view of Lucas and Gills (1990) that some schools do not have sanitary equipment for the disposal of human waste products and this usually results in communicable diseases such as dysentery, cholera and typhoid fever. It is important to note that the presence of heeps of refuse and the lettering of the school compound can be a source of roddents infestation which will invariably lead to other health problems among the students. However, schools that provide effective refuse disposal system and appropriate toilet facilities generate positive and healthy living in their students. The students would practice keeping their school toilet clean which can be transferred to their homes.

Crowded class rooms was found to be responsible for the spread of communicable diseases in the schools. This is due to lack of ventilation and proper sitting arrangements. Body contacts in large classes are more visibly seen than smaller class size and this condition would put students at greater risk of contacting diseases as well as reducing learning and teacher feedbacks. Crowded class room environment contributes to unhealthy physical environment and unconducive atmosphere for learning. It is pertinent to emphasis that crowded class room would pre-dispose the students to communicable diseases through the polluted air they breath in and the heat that is generated from their bodies.

On poor water supply the result showed that most schools in Oyo state do not have water facilities that would supply good treated water to the students. This was also found to be responsible for the incidence of water borne diseases in most schools. The inadequate supply of water to the schools has led to more serious problems amongst students. They find it difficult to wash their hands after break time, wash the fruits they pluck around the school premises and flush the toilet when it is provided in schools. This has led to a serious epidemic in schools.

CONCLUSION

The results presented in this study provided an empirical basis for suggesting that school authorities should make frantic efforts in protecting the health of the students by making some of the sanitary facilities available to the students. The benefits to student of a quality education taught in a wholesome and conducive environment can positively enhance their health status and academic achievement. Healthy, physicals environment is more likely to motivate the learners and make them more successful in their academic endevours.

A child friendly-environment may enhance the development of a healthy-self image in students as well as the ability to pursue intellectual, social and emotional challenges. Quality environment is critical to the development of concepts that leads to lifelong healthy lifestyles. It is therefore recommended that environmental health education be made part of the school curriculum at all levels of education to inculcate in the minds of the students the ability to be contious of filthy environment and its consequences.

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