

NIGERIAN JOURNAL OF HEALTH EDUCATION

Vol. 19, No.1, 2015

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ISSN: 119-7323

NIGERIAN Journal of Health Education

Vol. 19, No. 1, 2015

njhe is an Official Journal of the
Nigerian Association of Health Educators.

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ENVIRONMENTAL EDUCATION: A PANACEA FOR SAFE AND HEALTHY PRIMARY SCHOOL ENVIRONMENT IN NIGERIA

Ruth Ochanya Adio-Moses, Ph.D¹

Abstract

The primary school environment, just like other school environment should be the safest for both staff and pupils. But, this is not always the case in most Nigerian public primary schools as accidents and injuries are reported due to the poor conditions of the school environment especially the playground and classrooms. Indeed other components of the school environment are also associated with injuries which contradict the importance of safe school environment. This paper defines environment health and accentuated the need to reduce injuries related to the school environment through environmental education especially among primary school pupils. This will serve as a way of enhancing their awareness of the various dangers in and around the school environment including man-made and natural environmental degradation. The paper also considered environmental education as a multidisciplinary subject with the sole objective of creating a school environment that will evoking pupils sense of inclusion, physical and psychological safety and by creating positive, friendly and safe school environment through collaboration between the school and all sections of the society. The expectant result will lead to the development of healthy and safe environmental ethics and increase the value placed on conservation of life and environmental safety. The paper recommended that pupils should be adequately equipped with the necessary manipulative skills that will help them pay attention to both the physical and social environment that promotes safety, healthy interpersonal relationships, and freedom from discrimination and abuse.

Keywords: Environmental Education, Safe, Healthy, School, Environment

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Introduction

Children deserve to live and inherit a safer and healthier world. Maintaining a healthy environment is the first and critical step in ensuring the wellbeing and safety of children especially at school. A healthy school environment includes safeguarding the rights of the students and staff and maintaining a safe environment for work and learning. A healthful school environment is one that protects students and staff against immediate injury or disease and promotes prevention activities and attitudes against known risk factors that might lead to future disease or disability. The physical school environment encompasses the site on which a school is located the school building and all its contents including physical structures, infrastructure, furniture, and the use and presence of chemicals and biological agents and the surrounding environment including the air, water, and materials with which children may come in contact with, as well as nearby land uses, roadways and other hazards (World Health Organisation, WHO 2007). Provision of safe and sufficient water, sanitation, and shelter are basic necessities for a healthy physical learning environment. Equally important is the protection from biological, physical, and chemical risks that can threaten children's health (Centers for Disease Control and Prevention, 2014). Infectious diseases carried by water, and physical hazards associated with poor construction and maintenance practices are examples of risks children and school personnel are exposed to on a daily bases.

Effective school health programmes, including a safe and healthy school environment, are viable means to simultaneously address the inseparable goals of Health for All and Education for All in 2015. Environmental challenges and opportunities vary considerably among schools around the world, across countries and within communities. Similarly, the resources available to schools to manage health hazards vary as widely as the threats themselves, often creating formidable management challenges, particularly in the poorest parts of the world, especially for health promoting schools. Health-Promoting School (HPS) use information to create a healthy school environment, identify and modify aspects of the school environment that may jeopardize the safety and health of the school population. The extent to which each nation's schools provide safe and healthy physical environment plays a significant role in determining the level of environmental health that is passed on to the next generation.

Indeed a healthful school environment serves as a major determinant of health and greatly influences individual level of intellectual growth and development and also provides a school environment that guarantees efficient performance for both staff and students (Federal Republic of Nigeria, 2004),

Concept of environment

The environment encompasses virtually everything that surrounds an organism in a holistic ecological approach. Out of all the nine planets, meteorites, and satellites in our solar system, the earth is the only planet known to support life. Life on earth experiences different types of surroundings. These surroundings may be living or non-living. Each living organism constantly interacts with its surroundings and adapts to it. These surroundings are our environment. The physical environment, which consists of soil, air, water, sunlight among others, provides favourable conditions for the existence and growth of different life forms. Living beings constitute the biological environment (Centre for Science and Environment, 2005). Gordon (2005) explained that both the physical and the biological environments closely interact with each other to form a stable self-perpetuating system. Everything that influences an organism and its living processes from outside is collectively known as 'environment.' The living component of the environment is known as the biotic component and the non-living component (things) as the abiotic component. Hence, the term 'environment' can be defined as the sum total of living and non-living components, their influences and events surrounding an organism. No organism can live without interacting with the environment. Animals depend on green plants for food and oxygen, whereas plants depend on animals for pollination of flowers and dispersal of seed or fruit. Therefore, for the survival of human civilization, the protection of its environment is very important. This is also true for the school environment which incorporates a broad spectrum of issues from the physical environment of the school building to the emotional wellbeing of students and staff. The components of the school environment can seem overwhelming but reminds us that even the smallest detail can have an impact on students' ability to be safe.

Concept of environmental education

Environment, as an interactive entity, could be cited as the other side of life in the sense that the very basic support system for life is provided only by the environment, in one way or the other. Thus, considering the fast deteriorating environmental condition, it becomes necessary to make Environmental Education (EE) as a tool for life and learning right from one's childhood. In this light EE can be defined as a process of developing a world population that is aware of, and concerned about, the total environment and its associated problems and which has the knowledge, attitudes, commitments and skills to work individually and collectively towards the situation of current problems and prevention of new ones (Environment Education Centre, 2009; Kola-Olusanya, 2006). The primary objective of EE is to create a safe and friendly environmental attitude and behaviour among all sections of the society (Schrender, 2002). This will lead to the development of environmental ethics and increase the value people place on conservation of life and biodiversity in the environment. Environmental education provides sufficient knowledge about the philosophy, genesis and consequences of local and global environmental problems.

Environmental concerns began to emerge due to the enormous technological growth and its application resulting in a drastic transformation of environmental situations. The organized global efforts started with the First United Nations Conference on Human Environment opened at Stockholm in June 1972. Consequently, United Nations Environmental Programme (UNEP) was formed and International Programme in Environmental Education (IIEP) was launched by UNESCO and UNEP in January 1975. Environmental Education became the centre focus of environmental and educational movement after the Inter-Governmental Conference on Environmental Education held at Tbilis in 1977. The Agenda 21, the report of the United Nations Conference on Environment and Development (UNCED) held in Rio-de-Janeiro, Brazil (1992) called upon the member states to raise public awareness and intensify education and training related to environment and development (Guha, 2000). It is by now everyone's general perception, rightly that, increasing population, unplanned growth of urban areas, ill planned industrialization and misconceived development paradigm have given rise to the contemporary environmental crisis world over. As most of the environmental problems are

development induced as well as unavoidable consequences of livelihood extraction. There are certain situations to which one just cannot say "no" in spite of the fact that one knows the potential harmful effect of human activities on the environment. Thus, a new paradigm of development and environment has to be the order of the day.

Environmental Education (EE) is a field of education incorporated into the educational system in order to enhance the awareness of people on environmental issues at all levels of education. It is an approach to education which is hoped to bring some solutions to the deteriorating relationship between man and the environment (Adedayo&Olawepo, 2007). Through environmental education, it is believed that man would be able to find a mechanism where clean environment will be adequately enhanced through consistent day-to-day increase in the knowledge of emerging environmental problems. The children are not left out and the aim is to adequately equip them intelligently, emotionally and with the necessary manipulative skills that will help them to meet the challenges posed on them by both the present and the future environment (Jekayinfa&Olawepo, 2008). The emphasis here is to meet the need to educate children so they will have knowledge about how to explore and conserve the environment naturally and remain safe by reaching this understanding in their own way.

The environment is largely man's making and protection it from man's injurious economic activities should therefore be man's responsibility (Summers, Kruger & Childs, 2000). Teaching children therefore through EE would therefore be an intervening mechanism. Children must be taught to be active and creative and learn in ways natural to them in order to grasp an understanding of the natural phenomenon around them and apply this knowledge within the school and home environment to remain safe. The EE Curriculum for primary schools, drafted by the Nigerian Education Research and Development Council (NERDC), shows that the scope of EE is structured into four main themes: ecological foundation, human environment/development, environmental change/impact and sustainable development (Okebukola, Arove, Akpan&Ogunsola-Bande, 2007). The curriculum allows for objectives within a theme to be incorporated into existing school subject at the primary and secondary schools levels or to be taught exclusively as a module of knowledge in the tertiary institutions or

out-of-school setting. Incorporation of EE into the existing primary school subjects means that relevant topics and issues within each theme are structured into performance objectives, content, learner's activities, teaching materials and evaluation guidelines (Okebukola, Aabove, Akpan&Ogunsola-Bandeled, 2007).

Environmental education a panacea for Safe and Healthy Primary School Environment

The role of environmental education in the promotion of a safe and healthful school environment cannot be overemphasized. A healthful school environment protects the school community from infections which can spread from person to person and physical injury. The physical environment of a school can affect pupils in a variety of ways for example; lighting and aesthetic characteristics such as architecture, landscaping, color, artwork, flexible spaces, and movable furniture, with designated areas of quiet can make the school environment a comfortable setting for productive activity. Air and water quality; the presence or absence of physical, biological, and chemical agents; and general maintenance and upkeep all contribute to the experience of the school as a place for living and learning. In addition, researchers have found that crowding, noise, temperature, humidity, and other environmental factors can affect the health and academic performance of students and staff (Frumkin, Geller, Rubin &Nodvin, 2006; Shield &Dockrell, 2008; Jaakkola, 1995).

The physical school environment has a strong influence on children's health for several reasons. The environment is one of the primary determinants of children's health: contaminated water supplies can result in diarrhea disease; air pollution can worsen acute respiratory infections and trigger asthma attacks; and exposure to lead, arsenic, solvents, and pesticides which can cause a variety of health effects and even death (Centre for Science and Environment, 2005). Similarly, primary school age children may be more susceptible to the adverse health effects of chemical, physical, and biological hazards in the environment than adults. Reduced immunity, immaturity of organs and functions, and rapid growth and development can make children more vulnerable to the toxic effects of environmental hazards. Relative to their body weight, they breathe in more air, consume more food and drink more water than adults, therefore, exposure to any contaminant in

the air, water or food will therefore be higher than that experienced by adults. Children spend much of their day within the school environments during critical developmental stages.

Furthermore, children's behavioural patterns are distinctively different from adults and this place them at risk of exposure to environmental threats that adults may not face. These behaviours include placing fingers and objects in their mouth and not washing hands before eating. Children lack the experience to judge risks associated with their behaviours. Children, in particular, are more likely to take risks, such as climbing and jumping from unstable structures which may lead to injuries and further result to disability. The National Safe Kids Campaign (NSKC) (2015) stated that more than 53 million children spend almost one-fourth of their total hours in school or on school property. An estimated 10% to 25% of more than 14 million unintentional injuries sustained by school age children occur in and around schools. Annually, 1 out of 14 school age children suffer a medically attended or temporarily disabling injury at school. The poor condition of playground and classroom are associated with the majority of injuries among elementary school students, but an understanding or knowledge of the environment simplified to make impact on children and will go a long way in reducing school related injuries. Accidents and injuries are the leading cause of morbidity and mortality in primary school aged pupils and it has been estimated that 20-30% of all injuries in primary school pupils occur at school. It has also been documented that school hours have been estimated to be a non-safer than the school hours. Each year, several pupils suffer from substantial injuries at school which results in significant health loss and medical spending. Apart from the direct medical consequences, excessive absence from the school which is associated with failure may result from injuries. The proportion of death of children that are attributed to environmental variables was as high as 36%, likewise, 35-36% of death of children resulted from poor environment. (Bundy, 2008;WHO, 2007).

Developmental disability is a term used to describe life-long disabilities attributable to mental and or physical impairments, manifested prior to age 18. It is synonymous with "developmental delay which is often a consequence of a temporary illness or trauma during childhood. The

worldwide proportion of children with developmental disabilities is believed to be approximately 1.4% (Emerson, 2005). Developmental disabilities affect between 1 and 2% of school age population in most western countries and above 10% in the developing nations. It is twice as common in males as in females, and some researchers have found that the prevalence of mild developmental disabilities is likely to be higher in areas of poverty and deprivation, and among people of certain ethnicities. There are many social, environmental and physical causes of developmental disabilities these include head injuries, visual impairment, hearing impairment, and brain injury as a result of falls and infection (Secretary of State (UK) 2001).

A review of childhood injuries at the Wesley Guild Hospital, a component of ObafemiAwolowo University Teaching Hospital Complex, Ile-Ife, Nigeria, showed that 1,471 patients seen in the children's emergency room during a period of 4 years (1992-1995) were there as a result of trauma, representing 9% of all patients seen. The case notes and accident and emergency cards of 1,224 were available for review. Ages ranged from 2 months to 15 years, with a mean of 6.9 years, and 40% of the patients were between 5 and 10 years of age. More males were affected than females, with a ratio of 1.5:1. 19.5% of injuries occurred at school. The most common anatomic region affected was the head and neck, followed by the limbs. One hundred ninety-seven patients (16%) had bony fractures, femurs being the most affected bone. Head injury was seen in 104 patients, representing 8.5%, although only 17 of these injuries were severe. There were 10 cases of abdominal injury and 9 cases of chest injury, representing 0.8 and 0.7%, respectively. Wound infection occurred in 6.4% of the patients. Death occurred in 19 patients, accounting for 1.6%; 10 of these patients had severe head injuries. (Adesunkanmi, Oginni, Oyelami&Badru, 1998).The National Safe Kids Campaign (NSKC, 2015) stated that more than 53 million children spend almost one-fourth of their total hours in school or on a school property and an estimated 10% to 25% of more than 14 million unintentional injuries sustained by school age children occur in and around schools. Annually, 1 out of 14 children suffer a medically attended or temporarily disabling injury at school. Furthermore, they stated that school-age children are nine times more likely to sustain unintentional injury than to be the victim of an intentional injury while at school. The poor condition of

playground and classroom are associated with the majority of injuries among elementary school students and environmental education will go a long way in reducing these injuries.

Conclusion and Recommendation

It is important to incorporate EE into the primary school curriculum in Nigeria as a way of creating and enhancing safe and healthful environmental awareness. Also by incorporating environmental education all through the curriculum at every class, a more comprehensive teaching of environmental issues and concerns may be accomplished. Children will be adequately equipped intelligently and emotionally with the necessary manipulative skills that will help them meet the challenges posed on them by both the present and the future generation. The emphasis here is to meet the needs of children so that they are able to explore and acquire knowledge in conserving the environment naturally by reaching an understanding in their own way. It is important for Health educators to join in the promotion of Environmental education in primary schools as this would be an intervening mechanism of teaching children about the world natural and man-made events and the laws that govern man's existence. Children should be taught how to be creative and learn in ways natural to them in order to grasp the understanding of environmental safety and the natural phenomenon around them.

The school environment should be safe at all times for both staff and pupils. Cases of accidents in schools will be reduced to a large extent if pupils are exposed to the various school environments that could predispose them to accidents. Environmental education is therefore an answer for healthy and safe school environment as pupils and staff's comfort and welfare is indicated as the most important aspect of any school environment.

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