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THE PLACE OF HEALTH EDUCATION IN ENVIRONMENTAL HEALTH

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Abstract

The focus of this paper is on the significance of health education in environmental health as it takes into account the uniqueness of how human beings might live concomitantly in harmony with the natural world and protect it from damage and perpetual destruction. The place of health education in environmental health is paramount as it brings about environmental sustainability. Environmental sustainability is not just about our environment but also concerns our health as a society that no individual or areas of life, suffer as a result of environmental legislature. This paper therefore, presents an overview and concept of the place of health education in environmental health. It was therefore, concluded that effective health education in collaboration with environmental health practice, need to be strengthened and proactively managed in a manner that would promote health education and environmental health for sustenance of positive health and welfare. In view of the various constraints and factors that hinders environmental health for enhanced health education development, it was therefore recommended among others that individuals, communities, agencies and organizations should optimally ensure holistic awareness, understanding, synergy and effective approach to protecting the natural environment through proper participation in environmental sanitation and health education activities.

Key words: Health education, Environmental health, Sustainability, Legislature, Development.

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Introduction

The place of health education in environmental health is significant as it takes into account the uniqueness of how human beings might concomitantly live in harmony with the natural world and protecting the environment from damage and perpetual destruction. Environmental health is basically the branch of public health that is concerned with all aspects of the natural and built environment that may affect human health. It encompasses those aspects of the human health and disease that are determined by factors in the environment. Health education therefore, is the pivot through which environmental health is hinged on creation of awareness concerning the dangers inherent in the natural and built environment. As a matter of fact, the place of health education in environmental health is paramount as it brings about environmental sustainability.

Environmental sustainability, according to Frank (1971) in Unuraye (2008), is a state in which the demands placed on the environment can be met without reducing its capacity to allow all people to live well, now and in the future. Herman, (1990) also defined environmental sustainability as the rate of renewable resource harvest, pollution creation and non renewable resource depletion that can be continued indefinitely. Nwajei, (2004), posited that it is equal truth that the earth capacity to support life is decreasing, while the amount of life it required to support, is increasing. Nwajei asserted further that in an ecosystem, interaction is based on cycles of exchange hence plants convert substances such as carbon dioxide and energy from the sun into food, animal consume the plant, decompose bacteria the waste product of plant and plant utilize this waste to perpetuate the cycle. He noted that in such a cycle, nothing is superfluous, every element is an essential part of the whole because no one part of nature can be altered without affecting another.

The key to environmental health practice is health education; hence the World Summit on Social Development, (2015), asserted that environmental health and sustainability involves the use of natural products and energy in a way that does not harm the environment. They noted that the only way to have effective environmental health practice is the optimal improvement in health education activities and in collaboration with sanitation programmes that would create conducive and accommodative environment which will enhance the promotion and sustenance of man's health or the entire



ecosystem. The United Nations General Assembly (2008), gracefully and gladly declared the year 2008 as the "International Year of Sanitation" (IYS), to help accelerate progress on sanitation in the world communities. World Health Organization, (1986), defined sanitation as the control of those factors in man's physical environment which exercise or may exercise a deleterious (harmful) effect on man's physical development, health and survival. Sanitation therefore, implies the effort that is geared towards taming our environment to such an extent as to make it optimally conducive and health promotive. This could only be achieved through the concept and overview of proper health education in the diverse communities.

Health education is one strategy for implementing health promotion and diseases prevention programs. Health education provides learning experiences on health topics and its strategies are tailored for their target population. Health education presents information to target populations on particular health topics, including health benefits/ threats they face and provides tools to build capacity and support behaviour change in an appropriate setting. The National Academy of Sciences (2016), highlighted some examples of health education activities such as Lecture, Courses, Seminars, Webinars, Workshops and Classes. In furtherance of how health education could be used to promote environmental health, Kegler (2004), asserted that interventions to address current, future and potential public health dilemmas, such as air pollution, urban sprawl, brown field reclamation and threats of intentional toxic exposures would benefit from a synergy between the disciplines of environmental health and health education. Kegler affirmed that a comparison between the protocol for assessing community excellence in environmental health and the precede-proceed model used in health education, illustrates some similarities and differences in terminology, assessment procedures, intervention design and types of evidence used by the two disciplines. He noted that appropriate targets of change can range from the equitable distribution of resources to individual behaviour change and concluded that significant interdisciplinary evaluation research is necessary to accelerate the identification of successful models for reducing the burden of environmental health problems in communities.

Environment means one's surrounding or external conditions affecting the growth, existence and welfare of an organism. These conditions, may be physical, biological or socio-cultural. The physical environment includes land,

water and air. The biological environment consists of animals (including man), plants and micro-organisms while the socio-cultural environment also consists of man as member of society, cultural beliefs, traditions etc. These three components affect the health of man in one way or another. The environment is a major determinant of health as it account for almost 20% of all deaths in Europe. Ogbalu (2012), emphasized that in 1989, concerned about the growing evidence of the impact of hazardous environments on human health and indicated the need for intersectoral approach. He affirmed that collaboration among the three different sectors is crucial to protecting human health from the risks of a hazardous or contaminated environment. In light of the above, the United Nations brought many players together to tackle central environment and health problems which gave rise to the World Environmental Day that has been celebrated every 5th of June each year. According to Ogbalu, (2012), the United Nations use this World Environmental Day to stimulate worldwide awareness of environmental issues. This is a pointer to the fact that health education is the pinnacle of environmental health practice in all ramifications of life.

Afoke, (2012), opined that the Federal Republic of Nigeria in 2007, stated that Nigeria has been rated low in respect of global development indicators such as water resources, water supply and sanitation coverage, poverty and child health, life expectancy and quality of life. She averred that this could be attributable to the unsustainable guidelines beyond our normal legislative requirements. According to the United Nations International Children Emergency Fund (1999a), Environmental sanitation is the principle of hygienic conditions in the environment to promote public health and ensure sustainable development. They affirmed that it involves a range of interventions designed to improve the management of excreta, sludge, drainage and solid waste. It also entails awareness of and capacity for managing all wastes in the rural, sub-urban and urban areas. She noted that a clean and healthy environment is important for the reduction of sanitation related diseases, preventable deaths, increased economic productivity, poverty reduction and sustainable environment. The United Nations Economic and Social Council, (2006), posited that societal growth is evidenced by an increase in its economic and developmental activities which are marked by production and consumption patterns. These activities according to her,

are heightened by improved standards of living and commercialization levels resulting in increased waste generation. She opined that the ability to properly manage waste generation in the society is tied to a sustainable economic development.

Lorek, (2011), posited that sustainability is the study of how natural systems function, remain diverse and produce everything it needs for the ecology to remain imbalance. He also acknowledges that human civilization takes resources to sustain our modern way of life and affirmed that there are countless of examples throughout human history where a civilization has damaged its own survival chances. Herman, (1990), defined sustainability as the ability to continue a defined behaviour indefinitely. Herman (1990), looked at the problem from maintenance of natural capital viewpoint and proposed that:

1. **For Renewable Resources:** The rate of harvest should not exceed the rate of regeneration (sustainable yield).
2. **For Pollution:** The rate of waste generation from projects should not exceed the assimilative capacity of the environment (sustainable waste disposal) and
3. **For Non-Renewable Resources:** The depletion of the non renewable resource should require comparable development of renewable substitutes for that resource and should be noted that the above is an elegant abstraction which has been widely accepted.

Herman concluded that no form of economic growth can be continued indefinitely and maintained that all economic growth today is terribly environmentally degrading. He affirmed that most people now live in a modern, consumerist and largely urban existence throughout the developed world and they consume a lot of natural resources every day as those in urban settings, consumes more power than those in the rural settings.

The world Summit on Social Development (2005), identified three core areas that contributes to the philosophy and social science of sustainable development basically as the three pillars of sustainability. Accordingly, these "pillars" in many national standards and certification schemes, form the backbone of tackling the core areas that the world now faces. The three pillars of sustainability are as follows:

1. Economic Development.

This is the issue that proves the most problematic as most people disagree on political ideology, what is and is not economically sound and how it will affect businesses and extension, jobs and employability. It is also about providing incentives for businesses and other organizations to adhere to sustainability, their normal legislative requirements. Also, the World Summit on Social Development (2005), averred that economic development is to encourage and foster incentives for the average person to do their bit where and when they can. The supply and demand market is consumerist in nature and modern life requires a lot of resources every single day. They affirmed that for the sake of the environment, getting what we consume under control is the paramount issue.

2. Social Development.

Environmental Science, (2015), posited that there are many facts to this pillar. Most importantly is awareness of and legislation protection of the health of people from pollution and other harmful activities of business including organizations. According to them, there are strong checks and programmes of legislation in North America, Europe and the rest of the developed world, to ensure that people's health and wellness is strongly protected. It is also about maintaining access to basic resources without compromising the quality of life as the biggest hot topic. For many people presently, is sustainable housing and how they could better build the homes they live in, from sustainable material. They posited further that the final element is education which has to do with encouraging people to participate in environmental sustainability and teaching them about the effects of environmental protection as well as warning of the dangers of not achieving our goals.

3. Environmental Protection.

Environmental protection is the third pillar and to many, the primary concern of the future of humanity. It defines how human beings should study and protect ecosystems, air quality, integrity and sustainability of our resources and focusing on the elements that place stress on the environment. It also concerns how technology will drive our greener future as the Environmental Protection Agency (EPA), recognized and noted that developing technology is key to this sustainability and protecting the

environment of the future from potential damage that technological advances could potentially bring.

Olise, (2012), stressed that sustainable development is hinged on social, economic and environmental factors which are also reflected in the millennium development goals. He opined that sustainable development requires multisectoral and interdisciplinary collaboration for success in solving certain environmental problems. Accordingly, he further highlighted some of the constraints to sustainable development as follows:

1. Corruption, weak government, weak rule of law, weak enforceability of contracts.
2. Political instability and insecurity.
3. Low priority attached to social sectors.
4. Weak structures for public accountability
5. Lack of a free press
6. Climatic and geographic predisposition to disease.
7. Physical environment unfavourable to service delivery.

The United Nations, (1992), averred that "human beings are at the centre of concerns for sustainable development and that there can be no real growth without healthy population, no sustainable development without tackling diseases and malnutrition, no international security without assisting crisis ridden countries and no hope for the spread of freedom, democracy and human dignity unless we treat health as a basic human right". Also, the Alma Ata Declaration, (2008), provided a great opportunity for many countries and the international communities to galvanize political commitment as well as increased momentum to revitalizing environmental sanitation in order to achieve environmental sustainability for growth and developmental goals.

The United Nations, (2002), opined that sustainability and sustainable development focuses on balancing that fine line between competing needs-our need to move forward technologically and economically, and the needs to protect the environments in which we and others live. Ostensibly, sustainability is not just about our environment, it is also about our health as a society in ensuring that no people or areas of life suffer as a result of environmental legislation and it is also about examining the longer term effect of the actions humanity takes and asking questions about how it may be improved.

The Global Citizen (2012), posited that climate change is persistently the most urgent issue affecting the whole planet. It has been described as the defining human development issue of our generation. Climate change-related hazards are on going and increasing. They noted that climate change poses serious threat to the achievement of the millennium development goals as they have the potential to reverse years of development gains. Tackling the climate is a need for justice. The Global Citizen (2012), stated that developing countries have 98% of the seriously affected and 99% of all deaths from weather-related disasters, along with over 90% of the total economic losses, while the 50 least developed countries contribute less than 1% of global carbon emissions. In light of the above assertion, the place of health education in environmental health is basically awareness creation concerning health in entirety, since it has been found that environment is a major determinant of health. Accordingly, Global Citizen (2012), posited that climate change and global poverty must be combated simultaneously. They emphasized that 75% of the world's poor, live in rural areas and largely depend on natural resources for their livelihoods and income. Such people suffer the most from natural disasters due to poor infrastructure and systems that are not equipped to deal with the drastic impact of major catastrophes such as the 2004 Tsunami or Haiti earthquake. They projected the impacts from climate change to include the following:

1. **Decline in Agricultural Productivity:** The areas suitable for agriculture, the length of growing seasons and the yield potential of food staples are all projected to decline. Some African countries could see agricultural yields decrease by 50% by 2050 and crop net revenues could fall by as much as 90% by 2100.
2. **Increased Water Stress:** Changing climate patterns will have important implications for water availability in Africa. By 2020, an additional 75-250 million people in Africa are projected to be exposed to increased water stress due to climate change.
3. **Rising Sea Level:** Across the globe, sea levels could rise rapidly with accelerated ice sheet disintegration. In Africa, highly productive ecosystems, which form the basis for important economic activities such as tourism and fisheries, are located in coastal zones. A total of 70

- million people and 30% of the Africa coastal infrastructure could face the risk of coastal flooding by 2080 because of rising sea levels.
4. **Risk to Human Health:** Climate change will affect human health through variables such as change in temperature, exposure to natural disasters, access to food and air quality. Previously, malaria free highland areas in Ethiopia, Kenya, Rwanda and Burundi could experience modest incursions of malaria by the 2050s, with conditions for transmission becoming highly suitable by the 2080s. An additional 260-320 million people world-wide could be living in malaria -infected areas by 2080.
 5. **Threats to Ecosystems and Biodiversity:** Changes induced by climate change are likely to result in species range shifts and changes in the productivity, adding further stress to forest ecosystems. Studies predict that 25-40% of mammals (species such as Zebra, could become endangered or extinct by 2080).

Health education therefore, concerns all those experiences of an individual, group or community that influence beliefs, attitude and behaviour with respect to health, as well as the process and efforts of producing change when this is optimal for health. (WHO 2008). Olise, (2012), stated that health education is the first of the eight minimum components of primary health care. He further opined that the importance of health education is further demonstrated by the submission of the Alma Áta Declaration of 1978 which stipulated that "the people have the right to know about prevailing health problems concerning them and the methods of preventing and controlling them". In the same vein, Kalesanwo and Oke, (2012), averred that health education is an intellectual, psychological and social processes that are used to increase the abilities of people (that is acquisition of health knowledge) in making informed decisions that affect their personal, family and community well-being. They opined that it is a process that is based on scientific principles, facilitates planning and behaviour change in both health personnel and consumers, including children and youths. They affirmed that one of the goals of health education is behaviour change and modification as a result of exposure to learning experiences in the field of health.

Importance of Health Education in the promotion of Environmental Health.

Health education builds individual human knowledge, skills and positive attitudes about health. Health education teaches about physical, mental, emotional and social health. It motivates people to improve and maintain their health, prevent disease and reduce risky behaviors (New Hampshire Department of Education, 2012). They further affirmed that health education is a profession of educating people about health. Areas within this profession encompass environmental health, physical health, social health, emotional health, intellectual health and spiritual health, as well as sexual and reproductive health education. As a matter of fact, health education can be seen as the principle by which individuals and groups of people, learn to behave in a manner conducive to the promotion, maintenance or restoration of health. The Joint Committee on Health Education and Promotion Terminology of 2001, defined Health Education as "any combination of planned learning experiences based on sound theories, that provide individuals, groups and communities the opportunity to acquire information and the skills needed to make quality health decisions.

Health education can also be seen as consciously constructed opportunities for learning, involving some form of communication designed to improve health literacy, including improving knowledge and developing life skills which are conducive to individuals and community health (Center for Disease Control and Prevention 2007).

The United Nations, (2005), posited that it is no secret that people are living longer and that the global population is on the rise. As a matter of fact, they projected that there will be more than 10 billion people living on the earth by the year 2100. This explosion in population is perhaps one of the greatest reasons why environmental sustainability is so important. However, the importance of environmental sustainability as stipulated by the United Nations (2005), are as follows:

1. To protect the natural and built environment
2. To protect technological resources and
3. Provision of basic human needs.

All these put together, accelerates and enhances the smooth achievement of environmental sustainability for healthy living through sound and fruitful health education to the entire citizenry (Diamond, 2005). Ogbalu,

(2012), asserted that to be optimally healthy, a person must not only be physically fit but must also be emotionally and socially stable. He noted that the physical health of an individual will definitely determine his emotional health, his social stability and also his economic output and concluded that the protection and promotion of health is ultimately an individual's responsibility.

The National Association of Health Educators (NAHE), has come of age. This is the 23rd annual conference of this body which is almost synonymous with health education scholarship in Nigeria. According to Ezedum, (2012), at the early part of the 21st century, the world is still battling with the problems of population explosion, global food crisis, urbanization, global warming, among others. He affirmed that all these impact on our environment and health in ways that had never been experienced before. However, health education has come to fashion ways in proffering solutions to the existing environmental health issues in Nigeria. It becomes imperative to agitate our minds basically on some of these environmental health issues: Environmental degradation and urbanization.

What is Environmental Degradation?

Okudaye and Uloko, (2015), defined environmental degradation as the process in which the environment is gradually being damaged or simply put, made worse that would eventually affect human health. Iwugo, (1992) and Alabi, (2010), postulated that the towns face severe environmental degradation and human health risks due to uncollected domestic refuse on the streets and in public places as well as clogged urban drainage system caused by indiscriminately dumped waste as a result of the "throw away" culture prevalent in Nigeria. They also posited that in nearly every settlement, rural or urban, heaps of refuse dumps are seen along the streets, highways, motor parks, schools and in several parts of people's immediate environment. This holistically implies that the insensitiveness and unhealthy habits or attitude of individuals and other agencies towards effective handling and management of waste/refuse in all the states in Nigeria, positively degrade the natural and built environment.

Impact of Environmental Degradation

The United Nations International Strategy for Disaster Reduction, (2015), posited that the impact or consequences of Environmental degradation on human health include increased poverty, overcrowding, famine, weather extremes, species loss, acute and chronic medical illnesses, war, human right abuses and an increasingly unstable global situation that portends Malthusian chaos and disaster. They affirmed that these has led to environmental changes that have become harmful to all living beings. The crave for urbanization and industrialization can lead to environmental pollution, air pollution, noise pollution, reduction of soil moisture, intensification of carbon dioxide emissions, strains in the cities' infrastructure, unplanned and congested residential designated areas and shortage of safe and clean drinking water. (Okudaye & Uloko, 2015). It implies therefore that the activities of man, degrade the natural environment in different perspective and ways.

Shridhar, (2001), in Okudaye & Uloko, (2015), observed that children were susceptible to diseases when they are born and developed in environment characterized by overcrowding, poor hygiene and lack of space for recreation and study, adding that as a result of this situation, the World Bank, (2000), estimates that by 2035, cities will become the predominant sites of poverty.

Urbanization

Otiono, (2012), in Okudaye & Uloko, (2015), asserted that solid waste is mainly due to rapid population growth, high population density and urbanization taking place at enormous scale. He opined that rapid population growth and uncontrolled industrial development severely degrade the urban environment and put a serious strain on natural resources. Otiono observed that inadequate management and disposal of solid waste (Polythene menace) was an apparent cause of the degradation of the environment in most cities and villages. According to Youthink, (2012), urbanization refers to the growing of cities as people move from the countryside in search of better jobs and living conditions. In the same vein, Wikipedia, the free Encyclopedia (2009), defined urbanization as the physical growth of urban areas as a result of rural migration and even suburban concentration into cities. Ezedum,

(2012), bemoaned that urbanization is the concentration of people in places viewed by rural migrants as holding better prospects of enhanced livelihood and job opportunities.

Conclusion

It was therefore concluded that effective health education in collaboration with environmental health practice need to be strengthened and proactively managed in a manner that will promote health education and environmental health for sustenance of positive health and welfare, including environmental sustainability and development. In a nut shell, spontaneous community organization is necessary to ensure judicious use of natural resources in order to address some of the constraints in environmental sustainability. Environmental degradation, urbanization and climate change, usually affect the health and welfare of mankind.

Environmental sustainability involves the use of natural products and energy in a way that does not harm the environment. The only way to achieve environmental sustainability for enhanced development is the optimal improvement in sanitation activities and health education programmes that would create conducive and accommodative healthy environment for the present and future generation.

Recommendation

In view of the various constraints and factors that hinders environmental health for enhanced health education development; the following recommendations are hereby made:

- The individual, communities, agencies and organizations should optimally ensure holistic awareness, understanding, synergy and effective approach to protecting the natural environment through proper participation in environmental sanitation and health education activities.
- Federal Government should ensure a holistic approach to the protection of the environment by empowering all the agencies involved in waste and environmental management.
- Government at all levels should also ensure proper implementation and compliance on poverty eradication based on the Alma Ata Declaration of 2008.

- Government should enforce the existing law on pollution control in all of its ramifications to achieve environmental sustainability and sustainable healthy living and development for both mankind and the entire ecosystem.
- Collaboration among health educators and environmental health practitioners is crucial for the protection of human health from the risks inherent in a hazardous or contaminated environment. Therefore, all hands should be on deck for the achievement of environmental sustainability in the rural and urban communities.
- Environmental sanitation should be prioritized in accordance with the Alma Ata Declaration of 2008 and Health educators should be well equipped by the three tiers of governments to enable them carry out public health education on environmental degradation, urbanization, climate change and the need for healthy environment.

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