SCHOOL AND COMMUNITY HEALTH EDUCATION IN DISEASE PREVENTION AND CONTROL

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Abstract
In this school and community health education in disease prevention and control, an overview of disease was discussed, considering meaning, classification, factors and levels of prevention. The concept of community health education was analyzed, where discussion centred on the premise that the onus of creating a healthy community lies on the individual members who strive to attain high level of personal health status and then work together as a team to attain, promote and maintain optimum community health. School health education was discussed as a component of community health, where it is seen as that which provides students with planned and sequential learning experiences as applied to community based programmes to build a healthy community. School children influence the community through their parents with positive health habits gained from health instruction; On the other hand, schools utilise the health facilities of the communities for healthcare and learning purposes. These are complimenting roles of school and community through health education in the prevention and control of diseases. There are a number of militating factors against the effective implementation of school and community health education, of which advocates of these fields have proffered solutions to. It was therefore concluded that working together to address and improve health concerns as community members, will enhance the growth of community and school health education. Among other recommendations given was that there should be evaluation of schools' and communities' responsibilities in disease prevention and health promotion, with particular reference to the improvement of environmental conditions.

Keywords: *School health, community health, health education, disease prevention, disease control.*

Introduction
School and community health education is very pivotal to the prevention and control of diseases. The quality of one's environment is a function of the quality of care for it. George, Perrott and Holland (2005), maintained that as the community expands, so does health problems and this in turn has direct bearings on health

resources. Again, Kalesanwo, Jimoh and Awoleye (2019) maintained that most schools experience a wide range of health problems, some of which lie within the school, while others are problems of the surrounding community, which impact on the school environment and by extension, the health and wellness of learners and staff.

There are many factors influencing the health of a community, Mckenzie, Pinger and Kotecki (2012) grouped them into four, which are; physical factors, socio-cultural factors, community organization and individual behaviours. The rising cases of disease transmission, some of which would have been avoidable, leaves lots of worry, as to which influencing factor impacted negatively or whether the vulnerable are actually getting the attention they deserve to hold full control of their matters of health, especially the application of the primary level of disease prevention.

Education becomes a veritable tool used in combating adverse outcomes of the influencing factors of the health of the community. According to Ukpe (2016), people acquire knowledge on health related problems through adequate information from health educators to improve skills, choices, attitudes and practice to improve their health. This paper therefore, presents school health education and community health education as a branch of preventive medicine and its application to the prevention and control of diseases.

Concept of Disease

Disease can be likened to any abnormal or adverse situation of life. It is seen as any deviation from or interruption of the normal function of any part of the body, manifested by a characteristic set of signs and symptoms and in most cases, the axiology, pathology and prognosis is known (Livingstone, 1999). Tiran (2006) in her view, saw disease as an abnormal condition which causes a local or general disturbance in the structure or function of the body, Judging by the World Health Organisation's 1989 definition of health being the dynamic state of physical, social, mental well-being and not merely the absence of disease and infirmities. Disease here can be viewed as a deviation or reduction in health and well-being. In this context, health becomes a resource for daily life and not just an object of living. This deviation in health and well-being is classified according to Hamilton-Ekeke (2017) into six groups, namely:

i. Disease caused by other living organisms
ii. Disease that are human induced or self-induced
iii. Deficiency disease
iv. Genetic and congenital (present at birth) disease
v. Ageing and degenerative disease
vi. Mental illness

The author however emphasized that most diseases in group one are infectious while diseases in groups two to six are non-infectious. These six groups of diseases can further be divided into two broad categories, namely: the communicable diseases and the non-communicable diseases.Communicable diseases are contagious in nature, meaning that they can be transferred from person to person or animals to persons, via a transmission route, either directly or indirectly. (Hamilton-Ekeke, 2017). The author listed some examples to include: cholera, diahhoea, malaria, measles, typhoid fever, Ebola, sexually transmitted diseases (STDs), influenza (flu). Moronkola, (2020) listed among communicable diseases: leprosy, HIV/AIDS and even COVID-19; the most talked about in recent times, whose impact had left many nations in a state of near helplessness and would take a long time to rebuild the losses. Non communicable diseases according to Ojeniyi (2017) are those diseases which are not transmissible but can be hereditary in nature or as a result of individual lifestyle. They are also called chronic diseases, lingering over a long time with progression in slow pace. Some of which are diabetes, cancer, chronic lung diseases, cardiovascular diseases (coronary heart diseases, hypertension, stroke), neurological disorders, arthritis/musculoskeletal diseases.

Ebong (2009) presented two major factors that affect or influence the development of disease. The interactions of these two sets of factors, according to the author, determine whether or not disease would develop. These are:

i. Host factors
ii. Environmental factors

Concept of Disease Prevention

Prevention and control are the most practicable ways of intervening in disease issues. Prevention involves plans in steps as well as executions to forestall the spread of diseases. This helps in reducing or limiting the level of disease transmission thereby supporting the concept of preventive medicine. Control however, implies measures of containing the disease and this applies after disease occurrence.

There are three levels of disease prevention as highlighted by Hamilton-Ekeke (2017). They are primary, secondary and tertiary levels. Discussion on each of them is presented as follows:

i) **Primary Level of Disease Prevention**

This type of prevention refers to actions aimed at avoiding the manifestation of a disease. This may include actions to improve health through changing the impact of social and economic determinants on health; the provision of information on behavioural and medical health risk, alongside consultation and measures to decrease them at the personal and community level; nutritional and food

supplementation; oral and dental hygiene education, clinical preventive measures such as immunization and vaccination of children, adults and the elderly, as well as vaccination or post exposure prophylaxis for people exposed to a communicable disease (World Health Organization - WHO, 2020). Examples of this level of prevention are guidelines for the prevention of COVID-19 as listed by WHO (2020) and Nigeria Centre for Disease Control - NCDC (2020).

ii) **Secondary Level of Disease Prevention**

Secondary prevention of disease involves early diagnosis of disease and prompt treatment. With early detection and prompt treatment, it is possible sometimes to either cure disease at the earliest possible time or slow its progression, prevent complication, limit disability and reverse communicability of infectious diseases (Ebong, 2009). The process by which a disease is diagnosed at subclinical stage is called screening. Mckenzie, et.al, (2012) submitted that the goal of screening is to detect the presence of disease during its early pathogenesis, thus, permitting early intervention (treatment) and limiting disability. The authors further added that medical screening will economically and efficiently sort those who are probably healthy from those who could possibly be positive for a disease.

iii) **Tertiary Prevention Level of Disease**

Tertiary prevention of disease comes to play at the advanced stage of disease or disability. Ebong (2009) explained this as the alleviations of disability resulting from disease and attempts to restore effective functioning. Typical example of a type of this preventive measure according to Hamilton - Ekeke (2017) is rehabilitation, aimed at restoring a disabled person to fullest capacity. Its theme is maximal utilization of the individual's residual capacities with emphasis on his remaining abilities rather than on his losses (Ebong 2009).

Concept of Community Health Education

The concept of community health education stems from two key words: community and health education. A group of people can be identified as a community, provided that they reside within a particular area, with common characteristics. These common characteristics may be by location, race, age, ethnicity, occupation, interest in problems and outcomes and others. A community being termed as healthy becomes a function of the healthy nature of her members. Community health according to Mckenzie, et.al, (2012), refers to the health status of a defined group of people and the actions and conditions to promote, protect and preserve their health. The City University of New York (2020) sees it as the study and improvement of health characteristics among people of specific populations. Its focus is on promoting, protecting and improving the health of individuals, communities and organisations. This specific population can be viewed as a community of people. To this end, it can be agreed that this type of health

education aims at achieving the highest level of mental, physical, social and spiritual health of all citizens on community basis. Building a heavy community brings to the fore, health education and its importance.

Ayodele (2017) posited that the onus of creating a healthy community lies on the individual members who must strive to attain high level personal health status and then work together as a team to attain, promote and maintain optimum community health. The author further stated that development of community health can be achieved through individual readiness to learn about how health development can be achieved (knowledge acquisition); enthusiasm to modify behaviours favourably (change) and; preparedness to apply the knowledge (skills). These three activities of knowledge acquisition, behaviour change and skills confirm the concept of the Bloom's taxonomy of learning, according to Benjamin Bloom in University of Waterloo (2022), that learning which is a process of education is geared towards impacting on three domains of an individual. These domains can be placed side by side with the three areas of community health development, which are:

i)	Knowledge acquisition	(Cognitive domain of learning)
ii)	Behaviour change	(Affective domain of learning)
iii)	Skills	(Psychomotor domain of learning)

For community health to be effective therefore, some learning must have taken place, thus, community health education is that kind of teaching, training or learning, centred on the health of a community, with a view to instilling in the people, the conscious habit of protecting, promoting and improving the health of individuals and communities. Udo, George and Udokop (2019) in their view, saw it as a social science driven process that promotes health and prevents diseases within a diverse population, thus, enabling people to gain control over the social, political and personal conditions that affect their health. This supports the assertion of Goodman, Bunnell and Posner (2014) that community health education focuses on individuals and groups improving upon their health attention. Individual health here will pave way for a positive community health situation. Therefore community health education considers the health of a community as a whole, seeking to identify issues and trends within a population, as well as, working together with relevant stakeholders in order to find solutions to these concerns (Southern New Hamsphire University, 2018).

School Health Education

One very important component of community health which contributes immensely to disease prevention and control, through its synergistic approach is School Health Education. Ani and Erumi (2017) stated that the practice of health promotion in the community was adopted by the WHO (2012) in line with the principles of Ottawa Charter of 1986 with the pronouncement of the 'Health Promotion School'

Concept. School health education according to Oyerinde (2017) forms part of the five components of the school health programme which followed provisions of the already revised National School Health Policy according to Federal Ministry of Education (2006). The components are:

i. School Health Education/Health Instruction
ii. Healthful School Environment/Healthful School Living
iii. School Health Services
iv. School Feeding Services
v. School-Home-Community-Relationship

A school is an accredited and established agent for dissemination of health information, transmitting desirable values including health education. School health education provides experiences which positively influence health behaviour of the students for disease prevention and control. It is provided by qualified professional health educators and can be translated to community behaviour pattern (Onwuama, 2017). The author added that healthy school community supports the wellness of its members, such as students, teachers, parents, administrators including community partners and strengthen capacity to provide a healthy setting, conducive for living, learning and working. In the view of Mckenzie, et.al, (2012), school health education is that which provides students with a planned, sequential curriculum that addresses the physical, mental and social dimensions of health. Such curriculum according to the authors should focus on promoting the following contents of health priority: Alcohol and other drugs; healthy eating; mental and emotional health; personal health and wellness; physical activity; safety/unintentional injury prevention; sexual health (abstinence and risk avoidance); tobacco and violence prevention.

The aim of school health education as presented by Oyerinde (2017) is that of providing a sequence of planned and incidental learning experiences, capable of equipping learners with adequate skills to take appropriate decisions and actions that will promote their health, family members and the community. It is that part of the curriculum for all classes and is applied to community health based activities and programmes to build a healthy community (Onwuama, 2017). In order for the school health education curriculum to be effective, it must be able to outline the areas to be covered (scope), duration or timing for the lessons (sequence), instructional materials, teaching methods, which determine the pattern to be implored for content delivery to be properly assimilated and assessment methods which would determine the level of learning outcome achievement. This curriculum encourages competencies in health literacy and leisure planning, training qualified professionals to teach physical and health education physical activities, sports and leisure. Creating a positive learner-centred environment for best practices and encourages students to be active participants (Onwuama, 2017). Observing keenly the COVID – 19 situations, Nelson (2020) submitted that one

agreeable fact about the disease is that at this point in the pandemic, preventing and ultimately controlling **local outbreaks** relies largely on human behaviours.

The above statement with particular reference to the phrase '**Local outbreaks'**, confirms the fact that the COVID-19 situation of the country had entered the phase of community transmission. This had brought the delay in schools resumption for fear of the spread of the virus. Arising from this, NCDC (2020) submitted guidelines for the safe re-opening of schools, of which a careful look brings to bear, the place of schools and community health education and their components in the prevention and control of diseases. To this end, Ayodele (2017), identified school health education and community health education working together, as one of the ways through which infectious diseases can be controlled in the community.

Complementary Roles of School and Community in Ensuring Disease Prevention and Control

As reported by Johnson (2010), in Kalesanwo, et.al, (2019), health education in the school and community is a communication activity which involves teaching and learning experiences pertaining to knowledge, beliefs, attitudes, values, skills and competences, whose focus is on any combination of learning experiences, designed to help individuals and communities improve their health by increasing their knowledge or influencing their attitudes. It is true that parents have the responsibility for health of school aged children, this doesn't erase the fact that schools have immeasurable potentials for affecting the health of children, their families and the health of the community (Mckenzie, et.al, 2012). This confirms the assertion of Ojedokun (2017) that the development and wellbeing of children and young people are directly influenced by the school, community and the family in which they live. It is according to Peckover, Vasquez, Housen, Saunder and Allen (2012) noteworthy that good health condition supports successful learning, meaning that where there is optimal health, there is possibility of better learning. Also, an individual who has not been provided assistance in the shaping of healthy attitudes, beliefs and habits early in life is likely to suffer the consequences of reduced productivity in the later years. To this end, collaboration between school and community becomes very necessary for disease prevention and control in the community.

Following the fact that the school cannot operate independent of itself and likewise the community. This means that the school can impact the community and vice versa. For instance, in many cases, children can share information to their parents about most of the lessons built from the school health education/instruction curriculum and learnt at school which can be of immense help to the family, by transferring the knowledge to them, thereby improving the health of the entire community. Mckenzie, et.al, (2012), submitted that knowledge, attitude, behaviour and skills developed as a result of effective school health programme; where

school health instruction is a subset, enables individuals (both students and parents) to make informed choices about behaviours that will affect their own health throughout their lives, as well as the health of the families for which they are responsible and the health of the communities in which they live in.

Through community health education, information can be disseminated via formal health education in schools, sales of health books, distribution of pamphlets on different health issues, house to house visitation and teaching and trainings, seminar, workshops, media sources and others (Ayodele, 2017). The author further added that schools do mount health promoting programmes like sports competitions, mid-day meals, first aid treatment, environmental sanitation, body inspections that ensure community fitness, prevent nutritional diseases and spread of other diseases, offer prompt attention in times of emergencies, ensure community safety and improve personal hygiene. The community on the other hand according to the author also, provides funds, health facilities and equipment and community personnel which assist schools in implementing worthwhile programmes to eradicate communicable diseases. It is obvious that if the school health programme, of which health education is a composite, is well implemented, it will reduce common health problems, thereby increasing educational, social and economic development of individuals and the community.

The National School Health Policy of 2006, which community health was a part, has as one of its objects, the promotion of the health of people in both schools and communities. This in turn achieves the goals of mass literacy as submitted by Federal Ministry of Education (2006). Against this back drop, Ani and Erumi (2019) submitted that where the two systems; the school and the community enjoy a healthy relationship, the school can utilize the health facilities in the communities for healthcare and learning purposes, as well as, play an important role in improving the health and development of the community as a whole, through making available the school's resources, both human and material to the service of the community.

Idowu (2017) posited that the school provides an easy avenue for the spread of communicable diseases. Early diagnosis according to the author is important in containing disease transmission, where the social contact route can be blocked by isolation. Again, the author maintained that airborne infections can be controlled by the provision of proper ventilation in classrooms as well as ensuring that students practice respiratory hygiene; a function of school health education. Furthermore, controlling water routes advocates for water available in schools and communities to be clean. The communities should be sensitized on water borne diseases, how to maintain good water sources as well as provision for emergency services. These are aspects of the school health services, a component of the school health policy. Interestingly, these and others form guidelines for the safe re-opening of schools in Nigeria, after the COVID-19 pandemic closure. This now

brings the concern as to the readiness of our educational institutions to apply these 'new normal', especially the public schools.

Concerns Facing the School and Community Health Education

Despite the recognition of the importance of school and community health education, there still exists a lot of hindrances to its successful implementation. Researches by various authors like Telijohann (2009) and Mckenzie et al (2012) have informed health education specialist of hindrances to establishing and maintaining effective health instruction for schools and community and they are:

i) Inefficient local administrative content
ii) Inadequately prepared health teachers
iii) Lack of credibility for health education as an academic subject
iv) Inadequate community/parental support
v) Concern for the teaching of controversial topics
vi) Insufficient health personnel in the community health sectors
vii) Limiting community health education activities to classrooms and health facilities
viii) Human behaviours and socio-cultural factors affecting health
ix) Inadequate funding

School health policy is of immense benefit to community health, just as the community plays a key role in the sustenance of school health. Hence, the need for communities and her relevant stakeholders to address these concerns by working together to proffer solutions based on peculiarities.

Conclusion and recommendations

Prevention and control of diseases and maintenance of optimum health is not simply dependent on medical and health care systems, but, on numerous community systems and associated factors. Improvement of our school health policies and programmes as an aspect of community system will affect positively the health of many in the community. Appreciating good quality of life as well as working together to address and improve health concerns as community members, will enhance the growth of community and school health education.

Recommendations made based on the outcome of this study are:

1. Health education on the prevention and control of diseases in schools and communities should be encouraged and supported by relevant stakeholders.
2. There should be evaluation of communities and schools responsibilities in disease prevention and health promotion, with particular reference to the improvement of environmental conditions by government in collaboration with professionals of this field.

3. Government at all levels should assist communities and health educators in their effort to promote community and school health. This, they can do through funding and provision of man power to address shortages.
4. Government should be employ qualified health professionals who can use school health education as a tool for initiating positive behaviour changes among students, staff and the community members.
5. Government has to as a matter of urgency; address the infrastructure deficit in our schools, as this will enhance effective implementation of the school health policy.
6. Government should liaise with relevant stakeholders to develop, implement and enforce policies that support individual and community health efforts.
7. Key partners like NGOs should mobilize community partnerships to identify and solve health problems.

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