

## THE PLACE OF SCHOOL HEALTH EDUCATION IN PREVENTION AND CONTROL OF NEW DISEASES

**Ekpu, Felicia S., Usoro, Udeme S., Usen, Ofonime E. and  
Udoeyen, Ekaete O.**

*Department of Physical and Health Education  
Faculty of Education, University of Uyo, Uyo*

### **Abstract**

*This paper focuses on the place of School Health Education in the prevention of new diseases. Health and Health Education was x-rayed covering meaning and determinant factors of health, health literacy; a function of health education. School Health Education was analyzed in the light of being a component of the School Health Programme, according to the already revised National School Health Policy of 2006. The concept of new diseases was discussed with attention to meaning and types of diseases according to classifications. New diseases was viewed as infections that have recently appeared within a population or those whose geographical range is rapidly increasing or threatens to increase in the near future. Factors that necessitate the emergence of new diseases were identified, including the how. The knowledge offered through health education fosters the growth of the physical, social, mental and emotional well being as well as eradicate, ignorance of these diseases among school children – this was seen as a key function of the school Health Education in the prevention of new diseases. There are several challenges facing the proper implementation of the School Health Education where solutions were suggested. It was recommended among others that government should liaise with key players to develop, implement and enforce the implementation of School Health Education for the prevention of new diseases.*

**Key words:** *Health education, school health education, disease prevention, new diseases.*

### **Introduction**

The challenges facing health seems to be advancing within the world and government at all levels of the globe appear to be overwhelmed with these challenges. Considering Nigeria, aside the dreaded COVID-19 which entered the country early 2020. There has also been in recent times, the emergence and re-emergence of monkey pox, yellow fever, Lassa fever and others which have contributed to governments challenges in the health sector (Omotayo and Aliyu 2020). Own to this, there is the recommendation from authorities of health that

citizens be informed to practice proper hygiene devoid of age and status, World Health Organization – WHO (2013). For this to be possible, Omotayo and Aliyu (2020) posited that education and perhaps the school is a key sector that must be engaged to attain the sustainable Development Goal (SDG) 3 by 2030. Thus, the authors claim that the implementation of the School Health Programme (SHP) becomes imperative in order to make the educational system contribute significantly to the fight against new and emerging diseases.

The school has direct contact with vast majority of the nation's young people aged 5 to 17, for about 6 hours a day and for up to 13 critical years of their social, psychological, physical and intellectual development. The school system is established to facilitate societal growth and development in all spheres of endeavours, which can be achieved through the skilled Based Health Education, a component of SHP. As an assemblage of younger generation, the school provides a veritable avenue for fighting deadly and other life threatening diseases (Oluyinka and Ayodeji, 2019). This paper therefore addresses the role of School Health Education as a component of the SHP in the prevention of new diseases.

### **Health/Health Education**

All living things need health to be able to function optimally or with effective performance to enhance productivity. Moronkola (2020) perceived health as a state of being free from disease, also as a necessity of life and the ability and capacity to carry out daily activities efficiently and effectively, with reserve of energy to meet emergencies and enjoy leisure activities. This definition views health as a resource for everyday living and not just an object of living. In this context, health is not static, but a continuously dynamic homeostatic process of the whole human organism adapting to the interaction of his society and with his environment. WHO (1948) defined health by putting into consideration the physical, social and mental factors that affect health and longevity. One of the most widely quoted definitions of health from them is being a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity.

This definition however, hadn't fared well for regarding health as a "state", imply being static rather than a dynamic or variable concept that changes from time to time. Again, the term "complete" implies that one is either healthy or not; bearing in mind that there is no such thing or complete or perfect health. The major determinants of health apart from the genetic or biological inheritance are lifestyle (behaviour) nutrition, physical as well as the cultural environment, thus health is largely determined by where we live and how we live, our biological makeup and availability of healthcare services (Achal and Achalu, 1999). Consequent upon this, there is need to be well informed in order to make choices or decisions that favour good health in our day to day life privileges. This body of knowledge passed over time has played significant roles in man's ability to protect and

maintain one's health (Moronkola, 2020). However, the ability of an individual to understand and apply health information appropriately is referred to as health literacy, which is an important factor in health promotion, disease prevention and global control. Health literacy according to WHO (2013) is viewed as the cognitive and social skills which determine the motivation and ability of individuals to gain access to understand and use information in ways which promote and maintain good health.

Health Education is a profession of educating people about health. Downie, Fyfe and Tannalull (1990) posited that it is a communication activity designed to enhance positive health as well as preventing or diminishing ill health in individuals and groups, by influencing the beliefs, attitudes and behaviours of individuals as well as the community in general. The concept of health education entails the development of individuals, groups, attitudes, skills and behaviours. Its purpose therefore is to positively influence the health and behaviour of individuals and communities, as well as the living and working conditions that influence their health (Lynne, Laurice and Donna, 2017). Health education takes place at different settings: homes, school, industries, hospitals and others, hence, we have school health education, community health education, industrial/occupational health education, patient (health) education (Moronkola, 2017).

### **School Health Education as a Component of School Health Programme**

School Health Education (SHE) which is a primary focus of this paper can take place in different ways. Moronkola (2020) noted that it can take place as a formal (direct approach) subject offering in form of health education or informal direct approach (correlated instruction, incidental instruction, integrated instruction and miscellaneous instruction) at all levels of education. According to Ogundele (1999) SHE is the plan of instruction of a School Health Programme and the organization of learning experiences. It is that section of educational process that is primarily concerned with the developing and understanding of health and providing necessary services, which play a key role in the maintenance and improvement of the health of pupils and the school personnel (Willigoose, 2002). In relation to community, Da'am (2015) views SHE as an integral part of community health, though mainly deals with all the health activities and measures carried out within the community to protect and promote the health of children of school age.

SHE provides students with a planned, sequential curriculum which addresses the physical, mental and social dimensions of health (Mckenzie, Pinger and Kotecki, 2012). Such curriculum, the authors said should focus on promoting the following areas of health priority.

- i. Personal health and wellness
- ii. Sexual health (abstinence and risk avoidance)
- iii. Alcohol and other drugs

- iv. Mental and emotional health
- v. Physical activity
- vi. Violence prevention
- vii. Tobacco

A close look at the listed content, the first two holds direct bearing on the prevention of new emerging diseases, hence, in the curriculum content and delivery, attention must be paid greatly to this. This is because, there is believe that establishing health behaviours during childhood is easier and more effective than trying to change unhealthy behaviour during adulthood, as such, the provision of health and wellness of learners in schools is a critical step towards the achievement of quality education.

SHE according to Oyerinde, (2017) is among the composites of the School Health Programme (SHP), owing to the provisions of the already revised National School Health Policy (2006). Others include: school health service, healthful school environment, school feeding service and school home – community relationship. The author further stressed that the SHP is an integrated, planned, school based programme that is designed to promote the physical, emotional and educational development of students. There are different models of the SHP, a very important of it is “The component model”. This, Idowo, (2017) presented as a traditional model of this programme, consisting of three inter-related and inter-dependent components, which are:

- i. Health service which focuses on health appraisal, prevention of new emerging and re-emerging diseases and remediation. In a broader sense, the need for school health service according to Boroffice, Idowu and Adeogun, (2003) include:
  - a. The school must put in place a system to handle first aid, medical emergencies and detection of contagious conditions that could spread
  - b. Schools are considered as logical site for preventive services that are population based.
  - c. Schools provide access to primary healthcare, especially for the poor who are often at greater risk of academic failure.
  - d. Many parents will appreciate the convenience which having health care in school will bring
- ii. Health instruction which is carried out through a comprehensive health education curriculum that focuses on increasing students understanding of health principles. It also helps in modifying health related behaviours.
- iii. A healthy school environment through which the physical and emotional aspects of children’s health, including schedules, fire protection, safety, inspection and good housekeeping are taken care of.

School Health Programme (SHP) is of immense importance to both the school and community, some of which, according to Idowu (2017) are listed below:

- i. It facilitates better learning. Healthy children attend school more regularly and therefore are able to maximize benefits from school.
- ii. There is global basic and natural initiative to achieve universal access to basic education. This means that more children now have the opportunity to go to school than before. These children need health interventions such as can be provided by the school to ensure they are healthy and able to take full advantage of formal education.
- iii. Children who begin with bad health benefit a lot through the intervention of the SHP. Children from poor homes are particularly disadvantaged because they cannot afford the cost of basic healthcare. Schools with effective SHP give attention to these categories of children, so they can be successful.
- iv. SHP through its instructional phase; school health education, promote the attainment of skills that empower students in order to resist peer pressure to engage in risky health behaviours.

### **The Concept of New Diseases**

Disease is seen as a disorder of structure or functions in a human, animal or plant, especially one that produces symptoms or that affects a specific location and is not simply a direct result of physical injury (Salecma, Parrey, Syed and Anna, 2018). Considering the word “disorder” in this definition, it is agreeable that this is an abnormal medical condition in which Moronkola, (2020) noted as occurring when the body is physically, psychologically or physiologically unable to carry out its functions as expected. The author further noted that the disease state of a person can either be acute (a short period of time) or chronic (long lasting).

Two broad groups of disease according to Ebong (2009) are communicable and non-communicable disease. Communicable diseases are those diseases that can be transmitted from one person to another by direct or indirect contact, which can also be contagious or infectious (Moronkola 2020). Some of them as listed by the author include Rubella or German measles, Diptheria, whooping Cough (Pertussic) Meningo-cocal Meningitis, Sore throats, mumps, tuberculosis, measles, common cold, Penumoia, malaria, yellow fever, Rabies, Dysentery (Bascillary), cholera, guinea worm infection, giardiasis, Hepatitis B, Diarrhea. These diseases are most common among school children and part of the reasons for poor productivity and absenteeism from schools. Non communicable diseases according to Ebong (2009) are those diseases that cannot be transmitted from person to person. Ojeniyi (2017) noted that they are of long duration (chronic) and of generally slow progression. The author also posited that this chronic conditions are characterized by the following:

- i. They do not result from acute infectious process.

- ii. They are not communicable.
- iii. They cause premature morbidity, dysfunction and reduced quality of life.
- iv. They usually develop and progress over long period.
- v. They are often initially insidious.
- vi. Once manifested, they have a protracted period of impaired health.

Ebong (2009) listed some of them to include: diabetes mellitus, hypertension, stroke, arthritis, cancer, scurvy, kwashiorkor and marasmus. Non communicable diseases are caused by a number of factors including physical inactivity, poor nutrition, poverty, age, gender, race genetics, alcohol use, tobacco, ignorance. These, Ojeniyi (2017) grouped into modifiable and non modifiable risk factors.

The “health for all” slogan of WHO has suffered so much set back which appears to be far from reach. This is own to the fact that while they are trying to achieve the eradication of infectious diseases, the world is witnessing developing epidemic and pandemic new emerging diseases. WHO (2007) reported that over the past few decades, infectious diseases are emerging at a rate that has not been seen before. Precisely, the author claimed that since the 1970s, about forty infectious diseases have been discovered including Severe Acute Respiratory syndrome (SARS), Middle East Respiratory Syndrome (MERS), Ebola, Chikungunya, Avian flu, swine flu, Zika and mostly COVID-19, caused by a new coronavirus, SARS-COV – 2. Baylor College of Medicine (2021) defined new emerging diseases as infections that have recently appeared within a population or those whose incidence or geographical range is rapidly increasing or threatens to increase in the near future. The author added the causes for this to include:

- i. Previously undetected or unknown infectious diseases
- ii. Previously known agents whose role in specific diseases has previously gone unrecognized.
- iii. Re-emergence of agents whose incidence of disease had significantly declined in the past, but whose incidence of diseases has disappeared.

Two major categories of emerging infectious: new-emerging and re-emerging infections diseases can be defined respectively as diseases that are recognized in the human host for the first time and diseases that historically infected humans but continue to appear in new locations or in drug resistant forms or that appear after apparent control or elimination (Papazisi et al, 2010). The complicated nature of many new diseases often open the difference between new emerging and re-emerging infections. As example, Papazisi et al (2010) explained that re-emerging disease are the ones associated with acquisition of new genes by an existing microbe e.g. antibiotic resistant gene even when mutations cause entirely new diseases with unique clinical epidemiological features e.g. Brazilian purpunic fever. On the other hand, the authors classified SARS as an emerging disease after

it appeared and apply the same term to the related MERS, coronavirus which appeared in Saudi Arabia in late 2012.

Many factors play significant role in the emergence of new infectious diseases or the re-emergence of old infectious diseases. With people traveling more frequently and far greater distances than in the past, living in more densely populated areas and coming into closer contact with wild animals, the potential for emerging infectious diseases to spread rapidly and cause global epidemics is a major concern (Baylor College of Medicine, 2021a). In the view of Glang, Pinner and Viswanath (2008), population growth, migration from rural areas to cities, international air travel, poverty, war and destructive ecological changes due to economic development and land use, account for the emergence of new emerging diseases. Additionally, there is the potential for diseases to emerge as a result of deliberate introduction into human, animal or plant populations for terrorist purposes such as bioterrorism agents. (Baylor College of Medicine, 2021a). This, the author maintained are pathogenic organisms or biological toxias used to produce death and disease in humans, animals or plants for terrorist purposes. These agents are typically microorganisms found in nature, but it is possible that they could be modified to increase their virulence, make them resistant to current antibiotics or vaccines or to enhance the ability of these agents to be disseminated into the environment. From all these factors, it could be agreed that for an emerging disease to become established, two events must take place and these are:

- i. The infectious agent has to be introduced into a vulnerable population
- ii. The agents must have the ability to spread readily from person to person and cause disease. The infection also has to be able to sustain itself within the population, that is, more and more people continue to be infected.

Considering the “how” as to the emergence of some of these diseases, the case of coronavirus, SARS-COV, MERS-COV and SARS – COV-2 (which cause the diseases Severe Acute Respiratory Syndrome – SARS, Middle East Respiratory Syndrome – MERS and COVID – 19 respectively), represents instances of how viruses can move from animals to humans, acquire the ability to spread from person to person using great speed and reach the globe resulting from air travel (Baylor College of Medicine, 2021b).

According to David, Morens, Anthony and Fauci (2013), SARS had its emergence from China in 2002, MERS emerged in Saudi Arabia in late 2012, Avian Influenza became epizootic in Eastern China as of 2013 and COVID-19 in Wuhan, China at the end of 2019. For SARS, an unprecedented global response halted the spread of the causative virus though not before about 8,000 people had been infected with 800 deaths. MERS had been largely contained but not before spreading to 27 countries and causing over 2,500 infections with close to 900 deaths. The outcome of SARS COV-2 however has been vastly more devastating. Aided by delayed and uncoordinated global response, insufficient containment

measures and the fact that infected people can transmit the virus even in the absence of symptoms, the virus raged beyond the ability to control its spread and resulted in a worldwide pandemic that lasted over a year and caused around 3 million deaths globally (Baylor College of Medicine, 2021b). On Ebola virus epidemic that emerged in 2014 in West Africa, Shukla, Sharma and Tiwara (2018) posited that it was a virus that previously affected a small group of persons and later exploded to affect thousands, becoming difficult to contain. Combined factors of increased travel, high population densities, contact with wild animals, slow response and others jointly resulted in the worst outbreak the world ever witnessed.

We appear to be at a stage where many emerging, re-emerging diseases are being better controlled (e.g hepatitis B, rabbies and even to some extent HIV/AIDS). However, our success in stopping the many new emerging disease that will inevitably appear is not assured (Kilpatrick and Randolph, 2012). Despite our having and deploying our arsenals, including preparedness plans and stock piles of drugs and vaccines to contain disease, it should be noted that each new disease brings unique challenges causing us to continually adapt to evershifting threats. Solhi, Abolfathi, Darabi, Mizael and Dadgar (2017), maintained the fact that some reemerging diseases such as tuberculosis, foodborne and emerging diseases and some other infectious diseases such as AIDS and some antibiotic resistant infections are greatly influenced by individual behaviour. Disease prevention becomes the best and most successful way to fight diseases and restore the health of the community. These days, health promotion through health education is known to be the best principle of disease prevention in all communities. WHO (2013) mentioned that some of the most important strategies of prevention programme are educational institutions and informing the public and beliefs that enabling people to function effectively in a crises is the WHO capability. This is where the School Health Education, a composite of the School Health Programme becomes unavoidable.

### **The Role of School Health Education (SHE) in the Prevention of New Diseases**

The SHPs are said to be one of the most efficient strategies that a nation might use to prevent major health and social problems. Next to the family, schools are the major institution for providing the instruction and experiences that prepare young people for their roles as healthy and productive adults (Worldford-symons et al 1997).

Allensworth and Olsen (2022) maintained that for many young people in their formative years, school may, in fact be the only nurturing and supportive place where they learn health information and have positive behaviour consistently reinforced. In Nigeria, health education which is a compulsory part of the School curriculum from the nursery to secondary level of education plays a vital role in the prevention of new emerging diseases among school children. The knowledge

offered through health education fosters the growth of the physical, social, mental and emotional well being as well as eradicate ignorance of these diseases among school children (Ugwu, 2020). Centre for Disease Control and Prevention – CDCP (2021) posited that school based health education helps adolescents acquire functional health knowledge and strengthens attitudes, beliefs and practice skills needed to adopt and maintain healthy behaviours through their lives. This means that the school plays a critical role in reducing adolescent health risk through the delivery of effective health education contents drawn from a curriculum, which the author said should include:

- i. A set of intended learning outcomes or objects that directly relates to students acquisition of health related knowledge, attitudes and skills.
- ii. A planned progression of developmentally appropriate lessons or learning experiences that lead to achieving health objectives.
- iii. Conformity between lessons or learning experiences that clearly reinforces the adoption and maintenance of specific health enhancing behaviours.
- iv. Contents or materials that correspond with the sequence of learning events and help teachers and students meet learning objectives
- v. Assessment strategies to determine if learning outcomes have been met and to what extent.

School Health Education (SHE) enables students to meet the Natural Health Education Standards, which specify that students should know and should be able to do. These standards aim to help students make responsible decisions, use communication and decision making skills, develop positive self-esteem, express feelings and practice conflict resolution skills (National Centre for Health Education, 2022). Students who receive SHE have health knowledge and life skills that help them establish the difference between wellness behaviours and health related health risk behaviours.

### **Problems Facing the Proper Implementation of School Health Education for the Prevention of New Diseases.**

Inspite of the fact that school Health Education is recognized as being able to reduce the spread of new diseases, there are many challenges plaguing its success. Some of these according to Telijohann (2009) are:

- i. Lack of efficient administrative process.
- ii. Insufficient health education teachers
- iii. Inadequate funding
- iv. Inadequate school – community relationship
- v. Lack of credibility for health education as an academic subject.

### Conclusion and Recommendations

Skill based health education also considered as School Health Education, being a part of the School Health Programme, provides students with a planned, sequential learning process which addresses the physical, mental and social dimensions of health. This, in a way proves that the provision of health and wellness of learners in School using the SHE is a critical step towards the achievement of quality education. For effective promotion and control of new diseases, School health Education and other aspects of the School Health Programme is key. This will enable school students make informed decisions concerning health both in Schools and communities. Based on the study, the following recommendations have been suggested:

- i. Relevant stakeholders must work together to ensure the promotion of Health Education for the prevention of new diseases.
- ii. Government should address deficits in infrastructure as well as manpower as these enhances the proper implementation of school health education.
- iii. Government should liaise with key players to develop, implement and enforce the implementation of school health education for the prevention of new diseases.
- iv. Priority attention should be given to Health Education and regarded as compulsory subject since optimum health enhances educational advancement.

### References

- Achulu, E. I., and Achalu, O. E. (1999). *Introduction to health and health careers*. Lagos: Samarchi Nig. Limited.
- Allensworth, D., and Olsen, L. (2022). School health education: Characteristics of effective programmes. Conclusion. Retrieved from: [https://www. Education stateuniversity.com/pages/2035/Health-Education-School.html](https://www.Educationstateuniversity.com/pages/2035/Health-Education-School.html).
- Baylor College of Medicine (2021a). Emerging infectious diseases. Accessed 23/6/2022 from [https://.www.bc.ed/departments/molecular-virology-and-microbiology/emerging-infections- and biodefence/emerging-infectious-disease](https://www.bc.ed/departments/molecular-virology-and-microbiology/emerging-infections- and biodefence/emerging-infectious-disease)
- Baylor College of Medicine (2021b). Potential bioterrorism agents. Retrieved 23/6/2022 from: <https://www.bcm.edu/departments/molecular-virology-and-microbiology/emerging-infections-and-biodefense/potential - bioterrorism - agents> 23/6/2022.
- Boroffice, O. B., Idowu, B. B. and Adeogua, J. O. (2003). *Fundamentals of school health programme*, Lagos: The Rehoboth Links.
- Centre for Disease Control and Prevention-CDCP (2021). Adolescent and school health Education. Retrieved from: [https://www.cdc.gov/healthy\\_youth/health-education/index.htm](https://www.cdc.gov/healthy_youth/health-education/index.htm).
- Da'am, E.H. (2015). *Public health education and promotion* (Vol.1) Jos: Zimek Communications. 294.
- David, M., Morens, A. S. and Fauci (2013). Emerging infectious diseases: Threats to human health and global stability. *Plos Pathogens* 9(7):1-3.

- Dictionary.com (2002). Disease. Accessed 18/7/22 from <https://www.dictionary.com/browse/disease>
- Downie, R., Fyfe, C., and Tannahill, A. (1990). Health promotion: models and values. Oxford: Oxford University press.
- Ebong, R.D., (2009). *Community health and issues*. Abak: Riduma Printers and Publishers
- Federal Ministry of Education (2006). *The national school health policy*, Abuja: Federal Ministry of Education.
- Glanz, K., Pinner, B. K., and Viswanath, K. (2008). *Health behaviour and health education: Theory, research and practice*. San Francisco: Jossey Boo.
- Hamilton – Ekeke, J. T. (2017). Communicable diseases in O. A. Moronkola (ed.). *Health Education for Tertiary Institution Students* (pp 336-365). Ibadan: His Lineage Publishing House.
- Idowu, B. B. (2017). An overview of the school health programme in O. A. Moronkola (ed), *Health education for tertiary institution students* (pp 99-119) Ibadan: His Lineage Publishing House.
- Kilpatrick, A. M., and Randolph, S. E. (2012). Drivers and control of emerging vectorborne zoonotic diseases. *Lancet* 380: 1946-1955.
- Lynne, R., Launice, W., and Donna, B. (2017). Health education and promotion. Kent: University Press.
- Mckenzie, J. F., Pinger, R. R., and Kotecki, J. E. (2012). An introduction to community health (7<sup>th</sup>ed.) Boston: Jones and Barllett publishers.
- Moronkola, O. A. (2017). School health education programme: A jewel in search of true love. An inaugural lecture presented at Trenchard Hall, University of Ibadan on 11<sup>th</sup> May, 2017.
- Moronkola, O. A. (2020). *Personal health and Wellness*. Ibadan: His Lineage Publishing House.
- National Centre for Health Education – NCHE (2022). Comprehensive school health education. Available at: <https://www.riche.org/growinghealthy-comprehensiveschoolhealthed.htm>.
- Ogundele, B. O. (1999). School health programme in O. A. Moronkola (ed) *Essentials of human kinetics and health education* Ibadan: Codat Publishers.
- Ojeniye, R. O. (2017). Basic facts on non communicable diseases in O. A. Moronkola (ed) *Health education for tertiary institution students* (pp 366 – 383). Ibadan: His Lineage Publishing House.
- Oluyinka, D., and Ayodeji, M. A. (2019). School health programme in Nigeria: A review of its implementation for policy improvement. *American Journal of Educational Research* 7(7):499-508.
- Omotoayo, G.O., and Aliyu, I. N. (2020). Implementation of school health policy: Echoing its prospects in combating emerging health challenges in Nigeria. *World Journal of Innovative Design* 8(4):125-130.
- Oyerinde, O. O. (2017). Quality control aspects of measures for improving health education in schools, in O. A. Moronkola (Ed) *Health education for tertiary institution students* (pp 271-285). Ibadan: His Lineage Publishing House.
- Papazisi, L. et al (2010). Tracing philogenomic events leading to haemophilus influenza in the emergence of Brozillian purpuric Fever (BPF) associated clones. *Genomics* 96:290-302.

- Saleema, A. G., Parvez, N. I., Syed, S. H., and Amna, K. (2018). Development of school health programme. *Pakistan Journal of Medical Association*. 62(10):1209-1215
- Shukla, S., Sharma, V., and Tiwara, A. (2018). General concept for emerging new diseases and remerging of old disease. *International Journal of Avian and Wildlife Biology* 3(1):1-3.
- Solhi, M., Abolfath; M., Darabi, F., Mizael, N. and Dadgas, N. (2017). The role of health education on emerging diseases: A systematic reviews. *Journal of Health Education Research and development* 5(3):229
- Telijohann, S. K., Symons, C. W., and Pateman, B. (2009) *Health education: Elementary and middle school applications* (6<sup>th</sup> ed.). New York: McGraw-Hill.
- Turner, C., (2000). *The introduction of school health and health education in schools* (3<sup>rd</sup> ed) St. Louis: Mosby Publishers.
- Ugwu, A. (2020). The role of health education in the care and prevention of noncommunicable diseases among school children in Nigeria. Engage Africa foundation. Available at: <https://www.engageafricafoundation.org/blog/view-the-role-of-health-education-in-the-care-and-prevention-of-noncommunicable-diseases-amongst-school-children-in-nigeria>.
- WHO (1948). *Definition of Health* Geneva: WHO
- WHO (2013). Global Alert and Response (GAR) Disease outbreak News. Available at: <https://www.who.int/csr/don/en/index.html.5/6/2013>
- Willgoose, C. E., (2002). *Health education in elementary schools* (12<sup>th</sup> ed), NewYork: W.B. Saunders.
- Wolford-Symons et al (1997). Bridging Students' health risk and academic achievement through comprehensive school health programme. *Journal of School Health* 67(6):220-227.
- World Health Organization – WHO (2013). Health literacy: The solid facts. Publication of WHO Regional office for Europe. UN City. Marmorvej 51.DK-2100 Capenhagen, Denmark.