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### Impact Of Health Education On Environmental Challenges and Issues Of Covid-19 Pandemic In Nigeria

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# Impact Of Health Education On Environmental Challenges and Issues Of Covid-19 Pandemic In Nigeria

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## **Abstract**

The outbreak of COVID-19 has caused concerns globally. On 30th January, 2020 WHO has declared it as a global health emergency as it affects virtually all spheres of life. The easy spread of this virus made people to wear a mask as precautionary route, use gloves and hand sanitizer on a daily basis that resulted in generation of a massive amount of medical wastes in the environment. Millions of people have been put on lockdown in order to reduce the transmission of the virus. This epidemic has also changed the people's life style; caused extensive job losses and threatened the sustenance of millions of people, as businesses have shut down to control the spread of virus. All over the world, flights have been cancelled and transport systems have been closed. Overall, the economic activities have been stopped and stock markets dropped along with the falling carbon emission. Conclusively, Health promotion can make an essential contribution to fighting a global pandemic such as COVID-19. In modern societies, new public health approaches are needed that are adapted to local situations and needs. Since the vaccine is adequate, the infection has been circulating rapidly within the population. Hence, the only measure that could be adapt at the moment is to prevent its further spread within the communities. Some of the preventive measures such as social distancing, frequent hand washing, wearing face masks and avoiding direct contact with sick people or suspected Covid-19 cases could reduce the risk of COVID-19 infection.

**Keywords:** Covid-19, impact, Frontline, health education, promotion, environmental challenges

## **1. INTRODUCTION**

Coronal Virus disease (COVID-19) is defined as illness caused by a novel coronavirus now called severe acute respiratory syndrome coronavirus 2 (SAR-Cov-2; formerly called 2019-nCov) which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China (COVID-2019). It was initially reported to the WHO on December, 31st 2019. On January 30, 2020, the WHO declared COVID 19 a global pandemic, its first such designation since declaring H1N1 influenza a pandemic 2009(Ihekweazu). Illness caused by SARS-CoV-2 was termed Covid-19 by the WHO, the acronym derived from coronavirus disease 2019." The name was chosen to avoid stigmatizing the virus's origin in terms of populations, geography, or animal associations (Gilbert et al., 2020). The new outbreak of COVID-19 has recently become a serious threat to the health of people around the world. COVID-19 is caused by the SARS-CoV-2, which is a single-stranded positive-sense RNA virus that causes infection and respiratory failure (Swerdlow and Finelli 2020) and has led to the thousands of people deaths (Thienemann et al. 2020).

Following the WHO announcement, the Global Emergency Committee identified the need for early detection, quarantine, and prompt treatment as a global concern (Sohrabi et al. 2020), because people with the virus do not have clinical symptoms such as fever, cough, etc., in the early stages. For this reason, there is not enough information on how to disinfect and disinfect surfaces and hands, human-to-human transmission through air, food, and water, and the presence of the virus in human wastewater and waste.

There are several factors involved in transmitting the virus. These conditions can be included in environment and human behavior. The distribution of human population, migration, social interactions, climate change (deforestation, habitat invasion), agricultural growth, and direct contact with domestic and wild animals fall into this category (Barratt et al. 2019). On the other hand, the effect of environmental factors such as ambient temperature, humidity, etc., relating to the COVID-19 pandemic has not been sufficiently investigated. How the virus enters the body (eyes, ears, mouth, and nose) is not well known by the release of aerosols and droplets containing SARS-CoV-2 in human societies.

## 2. CURRENT SITUATION AND RESPONSE TO COVID-19 OUTBREAK IN NIGERIA

As of 13 August, 2020, 48,116 cases have been reported in the country across 36 states and the Federal Capital Territory (FCT). Of these numbers, 30,000 (79 %) are male, the age-group 21 - 30 years were the most affected (39%), 1230 (21%) had international travel history; 34,309 (71%) cases have been discharged, and 966 deaths were recorded, bringing the case fatality rate (CFR) of confirmed cases to 27%, with a range from 0-15.2% by region (14). Prior to report of the COVID-19 outbreak in Africa, the WHO identified a strong link between the continent and China and has sent out guidelines on preparedness for the outbreak. Nigeria is one of the thirteen top countries identified as high risk for COVID-19 importation based on either direct link or high travel volume to and from China (Gilbert et al., 2020). The WHO also advised that countries develop capacity to promptly detect cases that will enable them to contain the outbreak early so that the health system is not overwhelmed (Gilbert et al., 2020).



**Fig. 1: COVID 19 Outbreak Scenario in Nigeria**

**Source:** <https://www.theafricareport.com/28694/coronavirus-effects-of-covid-19-on-nigerias-informal-economy/>

### **2.1 Harmful Effects of Covid-19 Outbreak to the Environment**

Covid-19 outbreak pandemic, which restricts the daily mobility of people with its increasing effect worldwide, caused the closure of the factories, the stopping of education and training (Bandyopadhyay et al., 2020), the halt of social mobility and the reduction in greenhouse gas emissions in industrial countries. Besides serious limitations in international travel, entertainment, sports, hospitality, tourism, transportation, manufacturing and many other sectors were also affected by the outbreak. The global aviation industry expects that they could damage \$ 100 billion due to such restrictions (Bandyopadhyay et al., 2020; Doherty 2020). A study has been put forward by Yu and Aviso (2020) to assess the vulnerability caused by the outbreak at the international level in the supply chain. Such a wide outbreak pandemic, of course, has environmentally destructive effects. One of these is medical wastes resulting from the increased medical activity. It was stated that for the period when the outbreak peaked in Wuhan, an average of 240 tons of medical waste was produced daily in hospitals and this value was 6 times higher than normal value (Zuo 2020).

### **2.2 The Beneficial Effects of Covid-19 Outbreak On The Environment**

Environmentally, the Covid-19 outbreak also has constructive effects. Studies started in the home environment during the outbreak increased Home Office applications. This will have an effect that will reduce carbon dioxide emissions by reducing the mobility of people in their external environment. Many countries in the world have switched to distance education due to corona virus (Zhou et al. 2020). Social mobility, which causes many carbon emissions, such as student services, has also decreased with distance education. In addition, since the scientific events, meetings and political events started to be held in the form of a remote conference, environmental emissions have decreased globally. In this context, those who are accustomed to the efficiency of teleconferencing and distance education are expected to increase the number of these activities after the outbreak (Rohwer-Kahlmann 2020). In most countries, there has been a lockdown with people not allowed to move around leading to a reduction in greenhouse gas emissions.

## **3. HEALTH EDUCATION**

Health education is a social science that draws from the biological, environmental, psychological, physical and medical sciences to promote health and prevent disease, disability and premature death through education-driven voluntary behavior change activities. Health education is the development of individual, group, institutional, community and systemic strategies to improve health knowledge, attitudes, skills and behavior. The purpose of health education is to positively influence the health behavior of individuals and communities as well as the living and working conditions that influence their health (Donnelly) (Gilbert et al., 2020)

### **3.1 Roles of Health Education in Nigeria Health Sector**

1. To contribute to the knowledge and understanding of health behavior through scholarly research;
2. To maintain the highest standards of academic excellence in teaching and the professional preparation of future health promotion specialists at both the undergraduate and graduate levels;
3. To develop leaders who will contribute to the growth of the profession and the accomplishment of societal health goals;
4. To serve as a health promotion resource to the community, both regionally and nationally.

#### 4. CONCLUSION AND RECOMMENDATIONS

Health education and promotion are important components of disease prevention activities in general, but during disease outbreaks and health emergencies, they play a key role in an active response by offering well-established tools (especially important in the absence of specific drug therapies and vaccines) to communicate and engage quickly and effectively with the public and prevent infections. Messaging specifically targeting people who may well be acting as “silent transmitters of COVID-19 is presently lacking. Therefore, The following recommendation are proffered;

- a) Health education should increase people’s knowledge and behavior about the importance of healthy living habits during the COVID-19 pandemic.
- b) There should be awareness programme on bone health using health education

#### REFERENCES

1. Ayiso (2020) Nigeria responds to COVID-19; First Case Detected in sub-Saharan Africa. *Nat Med*. 2020 Mar 11;26(4):444–8.
2. Ajisegiri WS, Chughtai AA, MacIntyre CR. A Risk Analysis Approach to Prioritizing Epidemics: Ebola Virus Disease in West Africa as a Case Study. *Risk Anal Off Publ Soc Risk Anal*. 2018;38(3):429–41.
3. Bandyopadhyay, Ebrahim SH, Ahmed QA, Gozzer E, Schlagenhaut P, Memish ZA. Covid-19 and community mitigation strategies in a pandemic. *BMJ [Internet]*. 2020 Mar 17 [cited 2020 Apr 24];368. Available from: <https://www.bmj.com/content/368/bmj.m1066>.
4. Barrat (2019). National Strategic Health Development Plan II 2018 - 2022 [Internet]. 2019 [cited 2020 Apr 25]. Available from: <https://nipc.gov.ng/nshdp-ii-final-version-health-plan-pdf/>.
5. Gilbert M, Pullano G, Pinotti F, Valdano E, Poletto C, Boëlle P-Y, D’Ortenzio E, Yazdanpanah Y, Eholie SP, Altmann M, Gutierrez B, Kraemer MUG, Colizza V (2020). Preparedness and vulnerability of African countries against importations of COVID-19: a modelling study.
6. Swerdlow and Finelli (2020) New York, USA., S F, B H, Women4Health Programme, Kano, Nigeria. Cost-Effectiveness of Alternative Models of Community Health Workers for Promotion of Maternal, Newborn and Child Health in Northern Nigeria. *Int J Transl Community Med*. 2017 Sep 12;85–97.
7. Nigeria Centre for Disease Control. First Case of Corona virus Disease Confirmed in Nigeria [Internet]. 2020 [cited 2020 Apr 1]. Available from: <https://ncdc.gov.ng/news/227/first-case-of-corona-virus-disease-confirmed-in-nigeria>.
8. Nigeria Centre for Disease Control. COVID-19 Outbreak In Nigeria Situation Report S/N 54. Abuja; 2020. [Internet]. 2020 Available from: <https://ncdc.gov.ng/diseases/sitreps/?cat=14&name=An%20update%20of%20COVID-19%20outbreak%20in%20Nigeria>.
9. Ihekweazu C. (2020); Steps Nigeria is taking to prepare for cases of coronavirus [Internet]. *The Conversation*. 2020 [cited 2020 May 8]. Available from: <http://theconversation.com/steps-nigeria-is-taking-to-prepare-for-cases-of-coronavirus-130704>.
10. Zhou , Perry HB, Dhillion RS, Liu A, Chitnis K, Panjabi R, Palazuelos D, Koffi AK, Kandeh JN, Camara M, Camara R, Nyenswah T. Community health worker programmes after the 2013–2016 Ebola outbreak. *Bull World Health Organ*. 2016 Jul 1;94(7):551–3.
11. World Health Organization. Nigeria’s polio infrastructure bolster COVID-19 response [Internet]. WHO | Regional Office for Africa. 2020 [cited 2020 May 8]. Available from: <https://www.afro.who.int/news/nigerias-polio-infrastructure-bolster-covid-19-response>.

12. World Health Organization. Coronavirus disease (COVID-2019) R&D (2020). WHO. World Health Organization;. Available from: <http://www.who.int/blueprint/priority-diseases/key-action/novel-coronavirus/en/>.
13. World Health Organization. WHO ramps up preparedness for novel coronavirus in the African region [Internet]. WHO | Regional Office for Africa. [cited 2020 Apr 24]. Available from: <https://www.afro.who.int/news/who-ramps-preparedness-novel-coronavirus-african-region>.
14. Worldometer. Coronavirus (COVID-19) Pandemic Update (Live) [Internet]. 2020 [cited 2020 Apr 24]. Available from: <https://www.worldometers.info/coronavirus/>.