

EFFECTS OF EPIDEMIC PREPAREDNESS AND SOCIAL ECONOMIC STATUS ON CORONAVIRUS OUTBREAK IN SOME SELECTED STATES IN NIGERIA

Author's Name: ¹Dr Oluwagbemi EBUN, ²Dr Oluwaseun Emmanuel Odipe

Affiliation: ^{1,2}School of Public Health, University of Medical Sciences, Ondo

E-Mail: wwwgbemi@yahoo.com

DOI No. – 08.2020-25662434

Abstract

This study examined the effects of Epidemic preparedness and socio-economic status on coronavirus outbreak in some selected states in Nigeria. The descriptive research design of the survey type was employed. The population consisted of all Male and Female house hold of six major towns from the six states (geopolitical zone) in Nigeria. A representative sample of 600 people was purposively selected from the six cities using questionnaire instrument. Test retest method was used to ascertain the reliability of the instrument. Data collection was carried out by the researcher. The two postulated Null hypotheses were tested using the descriptive statistics of chi-square at 0.05 alpha level of significance. Information was obtained on the level of epidemic preparedness and the socio-economic status of the people. The findings of the study revealed that there was significant relationship between inadequate epidemic preparedness and the spread of coronavirus disease and the negative response of people towards government intervention control, and breach in the compliance level of people to government directives to curtail the outbreak of the virus is responsible for the spread of the COVID-19. Based on the findings of this study, it was recommended that people should comply and adhere to government intervention policies to curtail the spread of the virus before it gets out of hands. A high level of political commitment is considered vital and government should be more proactive in putting polices in place that can address any situation of outbreak of disease of this magnitude.

Keywords: Coronavirus, Epidemics, Preparedness, Socioeconomic, Intervention, Personal Protective Equipment

INTRODUCTION

Epidemics of emerging and re-emerging infectious diseases are on the increase, with devastating health, social and economic consequences, especially in the developing countries. The Novel coronavirus outbreak has been declared by the World Health Organization as the sixth public health emergency of international concern (WHO, 2020). COVID-19 is an acute respiratory pneumonia, it is a severe acute respiratory syndrome caused by coronavirus. This COVID-19 pandemic began in December 2019 at Wuhan China. More than (4,170,424) cases have been reported in more than (212) countries or regions, resulting in more than (289,399) death worldwide, confirmed cases in Nigeria stands at (4,971) with (164) death as at 13th May, 2020 (NCDC, 2020). Now, there is a fear of the unknown, science is yet to provide a definite answer to the cause(s) of the disease or exactly how it spreads, public health measures have been imposed: victims are quarantined, Movie theaters, Markets, Churches and other Public meeting places are closed down for the time being (WHO, 2019).

There is a lock down of activities everywhere. People are overwhelmed with fear, thinking that the end of world has come, because the virus struck indiscriminately for reasons still not clear. The COVID-19 pandemic did not primarily affect the elderly; it strikes both young and old of

different ages alike. Today, we know that this disease is caused by a virus and that it can be spread from person to person in respiratory secretions expelled by coughing, sneezing, handshaking, kissing, hugging and talking (Huang C.Y. 2020). This COVID-19 (SARS-COV1D) is the most dangerous type of virus, is small in size compared with many viruses. It is usually spherical, with projections from its surface, when the virus infects a human cell, it reproduces so rapidly that often within about ten hours, a swarm of between 100,000 million new copies explodes from the cell, and the scaly characteristic of this single organism has the ability to change quickly. Because the virus produces so rapidly (faster than the HIV virus) its many copies are not exact, some are different enough to escape the immune system (Awake, 2005). That is why we face different viruses now which present a new set of antigens- substances that test our immunity. When the antigen changes sufficiently our immune system has little defense against it and that is a risk of pandemic (NCDC 2020). This is just the global issue that needs urgent attention. On a serious note, Doctors still do not know of any cure for this powerful virus.

The clinical presentation includes, fever, cough, tiredness and difficulty in breathing, although COVID-19 may not show any symptoms (A-symptomatic) until its active or disease state (Huang, 2020). By the beginning of this century, medical science had seemingly made great strides in conquering diseases, even during the outbreak of Lassa fever, Ebola and HIV/AIDS; Doctors took great pride on their successes at reducing the effects of infectious diseases. But then came the outbreak of coronavirus, and medical science proved almost totally helpless. All the physicians were participants in the greatest twentieth century or, if absolute members of dead ones are the measure of all times, lest the blame be placed entirely on the medical professional. Back then, scientists fully comprehend the threat's magnitude, know how to cure many secondary bacterial phenomena and gave public health advice that would have saved tens of thousands of people yet, COVID-19 has overwhelmed even the best health system of the world (NCDC, 2020). The failure of the numerous efforts to address the problem (s) of COVID-19 may be attributed to social and political reasons.

Nigeria is a developing nation; the concern is that majority of people are driven below the poverty line. The major challenge of the government is to protect people from the burden of this disease outbreak, the government therefore put in place Presidential Task Force (PTF) for the country to develop strategies in getting ready for the outbreak, treatment and control of the virus in terms of; surveillance and triage activities, clinical evaluation, patient isolation and cohorting, engineering and environmental process, in terms of supplies and equipment, access control, staffing needs and personnel policies (NCDC,2020). Although, it is not out of place to mention that the state of government preparedness for the outbreak is not proactive enough and the level of response by the people to the intervention is very poor. An epidemic management may not be completed without an evaluation to identify what went right and wrong, before and during the outbreak. From the foregoing, the state of preparedness for an outbreak is a subset of epidemic management which constitutes all the activities that have to be undertaken from the national to the grassroots level to be ready to respond effectively to disease outbreak getting ready the needed infrastructure, better equipped quarantine isolation places, better equipped hospitals with ventilator machines, easily accessible and affordable masks, sanitizers, standard laboratories of international recognition with screening machines (NCDC, 2020).

During the outbreak of COVID-19 in Nigeria, Government introduced public health advices that would have controlled the spread as the virus continues to spread, the first intervention was the introduction of the Presidential Task Force that prohibits all travels by both public and private individuals to and fro high burden countries with COVID-19 yet, politicians and citizens ignored the advice. The result of ignoring this timely intervention brought about the first sets of index cases that were tested positive to COVID -19 among the politicians and other eminent personalities and foreigners who came into Nigeria from foreign countries with high burden of COVID-19 (NCDC, 2020)

As the virus spread to more states in Nigeria, public health measures were imposed; ports, markets, movie theaters, churches, schools and other public meeting places were short down and interstate boundaries were closed. The approach used herein emphasizes the consistent use of adequate personal protection equipment when dealing with patients or clients prompt decontamination and sterilization of exposed materials and surfaces, proper waste disposal system amongst other personal protection measures including; wearing a masks, avoid crowding, stay indoors, washing of hands with sanitizers were displayed in our social media for public consumption, yet, all these measures were not religiously adhered to (NCDC, 2020).

Stigma may constitute other major problem in community transmission of COVID-19. It may equally be a factor responsible for people to hide or divulge their status even to the nearest person to them if they are living with the virus. Stigmatization is identifying a person with label that ostracizes the person and associates them with undesirable elements resulting in unfair treatment, discrimination and social exclusion (Goffman, 2005). Some patients prefer patronizing private hospitals or other alternatives, thereby neglecting government approved centers for COVID-19 treatment just to avoid being exposed, this may have been responsible for some health care givers and family members to fall victim and to be infected with the virus.

STATEMENT OF THE PROBLEM

WHO has declared novel COVID-19 outbreak as a world global public health emergency of international concern, despite all interventions, active surveillance and lockdown measures to curtail the spread of the virus, yet the outbreak of COVID-19 is increasing at alarming rate globally? This has become one of the turbulent issues which recently attracted the attention of every person as the COVID-19 pandemic did not primarily affect the elderly; it strikes both young and old of different ages alike. People are in fear of the unseen that claim lives more than any recent atomic bomb (NCDC, 2020).

A breach in the compliance level to prohibition of all travel by both and private individuals and ignoring of personal protective measures imposed by the government to break the chain of transmission of this deadly virus may have resulted to the high new index cases of coronavirus victims in Nigeria.

Poor state of preparedness as a response management strategy of victims of coronavirus in the part of the government may have contributed to the spread of the virus on daily basis of COVID-19 patients. It is also observed that only few hospitals are equipped with better facilities to fight the disease. The researcher has the fear that, should this coronavirus disease spread to local areas in Nigeria with 77 local government, how will they be managed, where none of the local

government has any standard hospital, better equipped quarantine places for new confirmed cases and to quarantine those who will be exposed or have contacted with positive cases: if positive cases are difficult to be managed in cities, what will be the situation in our local domain in Nigeria, it is against this background the researcher want to assess the effect of government intervention and the attitude of people toward novel coronavirus epidemic among the contemporary Nigerians.

THE OBJECTIVE OF THE STUDY

The objective of the study was to:

1. Evaluate the relationship between the intervention response and the spread of coronavirus disease in Nigeria
2. Find out the relationship between the poor state of preparedness and the spread of the coronavirus epidemic in Nigeria

RESEARCH HYPOTHESIS

1. There is no significant relationship between the poor state of preparedness and the spread of the coronavirus epidemic in Nigeria
2. There is no significant relationship between the intervention response and the spread of coronavirus disease in Nigeria

METHODOLOGY

The descriptive survey design was adopted for the study. The population of the study comprises all the 36 states of Nigeria with 1.9 million people (NDPI, 2018)

Sample Size and Sample Technique

A total of 600 men and women have been selected from the six geopolitical regions in Nigeria using purposive sampling procedure for the study

The instrument used for this study was a self-designed questionnaire to evaluate the state of government preparedness to COVID-19 outbreak and the attitude of people towards government interventions to curtail the spread of the virus in some selected states in Nigeria. These states include; Lagos, Ondo, Osun, Kano, Edo, FCT, Abuja. To ascertain the validity of this instrument, the researcher gave a draft copy to the experts in the relevant fields, the comments and suggestions made were used to improve the quality of the instrument. To determine the reliability of the instrument, the researcher adopted a test re-test method. It was administered on sixty (60) respondents outside the study area at two weeks interval. Both results were compared using Pearson product moment correlation (PPMC) statistical analysis. A reliability coefficient 0.85 was obtained which was considered high enough for the study

DATA ANALYSIS

The data collected from the field survey were analyzed. Relevant statistical tools were used in the presentation and analysis of data derived from the questionnaire (frequency distribution table and chi square (χ^2) were used to analyze the data

Table1; X_1 analysis showing relationship between response to interventions and the spread of coronavirus disease in Nigeria

S/N	ITEMS N=600	SA	A	D	SD	N	DF	X	0.05	DECISION
1	Majority of the people still doubt the existence of COVID-19	120 (120)	140 (680)	140 (680)	160 (480)	600	2	2.3	2.5	Sig

2	Personal Protective Materials are not commonly used due to socioeconomic status of people	110 (110)	120 (240)	190 (240)	180 (720)	600	2	2.2	2.5	significant
3	Compliance to government lock down and other measures to contain the spread of COVID-19 is low	102 (102)	108 (216)	198 (594)	192 (768)	600	2	2.2	2.5	significant
4	Stigma may be a factor responsible for the spread of community transmission of COVID-19	102 (102)	108 (216)	198 (594)	192 (768)	600	2	2.2	2.5	Significant

$X^2_{cal} 8.9 < X^2_{table} (10)$

The result presented in table 1 shows that the t calculated (8.9) is lesser than the t-table (10). Thus, the null hypothesis is rejected, meaning that there is a significant relationship between negative attitude of people towards government intervention control, and the spread of coronavirus disease.

Table2; Chi-square analysis showing relationship between the poor state of preparedness and the spread of the coronavirus epidemic in Nigeria

	ITEMS	SA	A	D	SD	N	DF	x	0.05	DECISION
1	State of government preparedness is poor	120 (120)	140 (280)	160 (480)	180 (720)	600	2	2.3	2.5	Signific-ant
2	Inadequate provision of relief materials and PPE materials to people resulted to low level of compliance	110 (110)	120 (240)	190 (570)	180 (720)	600	2	2.2	2.5	sig
3	Nigeria as a developing nation may be a factor affecting the ineffectiveness of her interventions	102 (102)	108 (216)	198 (594)	192 (768)	600	2	2.3	2.5	sig
4	Lack of government capacity to lock down people at home due to the enormity of their poverty may be responsible for the increase in community transmission of COVID -19	120 (102)	108 (216)	198 (594)	192 (768)	600	2	2.3	2.5	sig

$X^2_{cal} 8.9 < X^2_{table} cal 10$ The result presented in table 11 shows that the t calculated (8.9) is lesser than the t-table (10). The null hypothesis is rejected, meaning that there is a relationship between the government state of preparedness and the spread of coronavirus

DISCUSSION

Hypothesis one above indicated that there is a relationship between peoples’ response and compliance to the government protective measures on the spread of corona virus disease. The null hypothesis was rejected, meaning that a breach in the compliance level to government imposed protective measures may further compound the threat of coronavirus pandemic

This is in line with findings of Dr Irwin J. Mansford (2020), who asserted that as the world faces the threat of coronavirus, many commentators and national leaders around the world are beginning to recognize it as a genuine national security threat, in human behavior terms however, the threat is not from an external enemy but from citizens who refused to comply with the guide lines and restrictions and fail to change their behavior to adapt to the developing situations with coronavirus. He further stated that, the individuals refusing to comply is an active and ongoing threat to others as well as or sometimes more than to themselves. A breach in the compliance

level to prohibition and measures imposed by the authority will compromise the confidence of the epidemic management. (NCDC, 2020)

The findings from hypothesis two showed that there was a significance relationship between poor state of government intervention and spread of coronavirus disease. The null hypothesis was rejected. From the report, it can be concluded that poor state of preparedness, surveillance activities and inadequate personnel preventive equipment have led to the spread of coronavirus disease. This is in line with the study conducted by (Akinola,2017) who stated that an epidemic preparedness may not be completed without an evaluation to identify what went right and wrong before and during the outbreak of disease. From the foregoing, preparedness during an outbreak of a disease is a subset of epidemic management which constitute all the activities that have to be undertaken from the national to the grass root level to be ready to respond efficiently to disease outbreak (WHO, 2016)

CONCLUSION

In the light of the findings by this study, the researcher concluded that there is a relationship between the response of people on personal protective measures and the spread of coronavirus disease. It is further concluded that there is a relationship between peoples' response and compliance level to the government protective measures on the spread of coronavirus disease. There is a significance relationship between poor state of government intervention and spread the coronavirus disease. From the report, it can be concluded that poor state of preparedness, surveillance activities and inadequate personnel preventive equipment have led to the spread of coronavirus disease.

RECOMMENDATION

1. The Nigerian Health System must be restructured to improve the health status of Nigerians as a significant co-factor aimed at strengthening the national health care system.
2. There is the need for health care workers to be familiar with the emerging epidemic management framework that has worked in other settings for effective preparedness and response to epidemic in general.
3. Government should be proactive in the state of preparedness, for surveillance and management of outbreak of diseases in the country, by incorporating an Automated based medical intelligence and surveillance system
4. Government should develop a unified permanent DATA base that will capture every Nigerian citizen that will enhance proper planning and management of resources. without the government knowing her citizen, it will be very difficult to plan for them and to reach them for any development
5. A high level of political commitment should be considered vital to satisfy the country's needs. And to invest on equitable access to health care services for all Nigerians, this can be achieved by judiciously using the county's resources by checkmating corruption, and mismanagement of public funds

REFERENCES

1. Akinola A.F and Elvis E.I (2017). Epidemic preparedness and Management; A guide on Lassa fever outbreak preparedness plan. *Niger Med journal*. 58 (1); 1-6

2. Abubakar A. A. (2013). Assessment of integrated disease surveillance strategy implementation in selected local government areas of Ondo State, Annual Niger Med, 7; 14-9
3. Awake (2005). The next global epidemics when? Published by Jehovah's Witnesses, P.M1090 Benin City300001, Edo State Nigeria pp 3-
4. Goffman, E. (2005). *Stigma: Note on the management of identity*. Englewood cliffs: Prentice Hill Inc.
5. Huang C. Wang Y. Lix (2020). Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. The Lancet, published online January 24, 2020; [https://doi.org/10.1016/80140-6736\(20\)30183-5](https://doi.org/10.1016/80140-6736(20)30183-5)
6. Irwin J. Mansdof (2020). Enforcing compliance with COVID-19 pandemic restrictions: psychological aspect of national security threat. <https://reliefweb.intvol.20.no3> originally published, 18 Mar, 2020
7. NCDC (2020). An update of COVID-19 outbreak in Nigeria, <https://ncdc.gov.ng.www.africanews.com>
8. NCDC (2005). Emerging infectious disease control and prevention: emerging infectious journal cdc volume, November 4, 2005: <https://www.ncdcgoveidarticle.ISSN.1080-6059>
9. NCDC (2020). An update of COVID-19 report; <https://www.covid-19.ncdc.gov.ng> Wednesday, 13th may 2020
10. Nkechi . O. U. (2020). Confirmed cases of coronavirus in Nigeria, <https://m.guardian.ng.www.africanews.com>
11. The Lancet (2020). Emerging understanding of 2019-nCoV. Published online, January 24, 2020; <https://www.sciencedirect.com.science>
12. World Health Organization (2019). Coronavirus disease situation report, February 25,2020. <https://www.who.int/mediacentre/factsheet/fs179/en>
13. W. H. O (2013). Global health and foreign policy, 2013. UN General Assembly Resolution, A/67/L36