

Full Length Research Paper

Knowledge, Attitude and Perception of Secondary School Students on Ebola Hemorrhagic Fever Disease in Onitsha Metropolis, Anambra State, Nigeria

Okonkwo VO^{12*}, Udeze HE¹ and Ugochukwu VE²

¹Nwafor Orizu College of Education Nsugbe, P.M.B 1734 Onitsha, Anambra State, Nigeria.

²Department of Statistic, University of Abuja, Abuja, Nigeria.

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Abstract

Ebola hemorrhagic fever disease is a health problem in most countries in West Africa Nigeria inclusive. Knowledge, Attitude and Perception (KAP) of secondary school students in Onitsha metropolis about Ebola hemorrhagic fever disease were critically evaluated between April and July 2016. Structured questionnaire were used to obtain information from the students on their socio-demographic characteristics, KAP about causes, transmission and prevention of Ebola hemorrhagic fever disease. Ages of the students range from 13 and 19 years. Students had good general knowledge of Ebola viral disease 388 (65.8%) only 118 (20%) were able to associate Ebola with a virus, on mode of transmission and spread of Ebola viral disease; contact between infected human and animals 202 (34.2%), contact with the fluid of infected human and bush meat 148 (25.1%), contact with anybody 240 (40.7%). Three hundred and twenty (54.2%) believe that Ebola has no treatment option, 425 (72.3%) prefer treatment at home rather than visit hospitals or health facilities when they have fever. Knowledge of hand washing after defecation and public interactions was significant among the students. Health promotion and advocacy on Ebola hemorrhagic fever disease is very important in all secondary schools in the country to avoid repeat outbreak.

Keywords: KAP, Secondary School, Student, Ebola, Hemorrhagic Fever, Onitsha, Anambra State.

INTRODUCTION

Ebola hemorrhagic fever (EHF) is one of the most deadly hemorrhagic fevers in the history of mankind. The disease is transmitted from wild animal to man caused by genus Ebola virus, order mononegaviral, family filioviridae (Kuhu *et al.*, 2010). Five Ebola viruses have been identified to cause severe diseases, four causes severe Ebola diseases in human are Bundibugyo virus (BDBV), Sudan virus (SUDV), Ebola virus (EBOV, formerly Zaire Ebola virus), Tai forest virus (TAFV), while

the fifth Ebola virus, Reston virus (RESTV) has not been known to cause Ebola hemorrhagic fever in man. There is no known effective treatment for Ebola except for the Supportive therapy (CDC, 2010). Ebola virus is spread through contact with infected fluids, usually the blood, vomitus and saliva, once infected, it rapidly attacks the internal organs, connective tissue, causing fever, severe bleeding, vomiting, aches, subsequently multiple organ failure and finally death (Lashley and Durhan, 2007). The international community first became aware of Ebola in 1976, when the disease erupted in Yambuku Zaire now the Democratic Republic of Congo DRC and Sudan (WHO, 2007).

The most recent Ebola outbreak in 2014 in West Africa in March was the highest and most complex since the Ebola virus was first discovered in 1976, and has recorded more cases and deaths in outbreak than all others combined (WHO, 2015). It commenced in Guinea Conakry and later spread to Liberia, Sierra Leone, Nigeria and Senegal. Apart from the toll on human lives and immeasurable suffering, the recent Ebola epidemic which affected West Africa had measurable economic impact in terms of foregone output (WBR, 2014). An estimated 5 million children and young ones were deprived access to education in Guinea, Liberia and Sierra Leone (UNICEF, 2015). Therefore, children, youths and their families are increasingly concerned about the impact that each outbreak will have on their future and the future of their countries (UNICEF, 2015). The impact of the disease was not just on those who contacted it, but on the whole country, as well as fear of becoming infected and the wider effects of the steps taken by the government to arrest the spread, which include strict set of measures such as suspension of market, movement restriction and curfew as well as suspension of academic activities and postponement of very important examinations such as NPSE and WASSCE examinations (Child info, 2014; BHDEV, 2014).

The impact of prolonged school closure in a region with some of the lowest education indicators in the world is dire and the outbreak has negative consequences on the availability of teachers, the safety of school premises, vulnerability of girls and women and, in the longer term, the ability of affected countries to accelerate economic and social development (Child info, 2014). The human-to-human transmission can occur via direct contact with blood or bodily fluid from infected person, contaminated medical equipment (CDC, 2014), Corpse or infected person or animal dead bodies as well as carcasses can transmit Ebola to a healthy individual or animal, semen may be infectious in survivors for up to three month (90) days though this likelihood is still under investigation (Athalia, 2014; WHO, 2015).

Bats are considered the likely natural resource of Ebola virus, 3 types of fruits bats have been recognized they include; *Hypsignathus monstrosus*, *Epomops franqueti* and *Myonycteris torquata* (Olival *et al.*, 2013; Strakey, 2014). The development of any country depends largely on the educational status of her citizen, not much research has been conducted in Nigeria to ascertain the impact of Ebola virus on the overall educational system of Nigeria, hence the importance of this study.

METHODOLOGY

Onitsha metropolis consists of Onitsha North Local Government Area (6.10 N; 6.47E) with its headquarters at the G.R.A. Onitsha is a major metropolitan city known

for its river port and as an economic hub for commerce, industry and education, with an established urban population of 742, 500 people. Onitsha indigenes are predominantly Igbo and speak Igbo language. Onitsha lies at a major east-west crossing point of the Niger River, and occupies the north most point of the river regularly navigated by large vessels. These factors historically made Onitsha a major center for trade between the coastal region and the north as well as between eastern and western Nigeria. Onitsha passes on the road bridge crossing of the mile wide Niger-river and plans are in place to add the 2nd Niger Bridge near it.

Onitsha is an example of urbanization without planning or public service, Onitsha is bounded by Obosi and Nkpor in the east, Ogidi in the south, Nkwelle- Ezunaka & Nsugbe in the north and Asaba and Ogbaru in the West; the vegetation of the areas is tropical rainforest. After successful solicitation/persuasion visit to the schools informed consent was obtained from school authority as well as the students. Structured questionnaire were distributed. In the questionnaire responses on socio-demographic characteristics, knowledge of some aspects of Ebola hemorrhage fever disease, transmission prevention and control were presented to the respondent in a way that elicited bias. Five hundred and ninety (590) students from twelve secondary schools were randomly selected and enrolled in the stench that lasted from May to July 2016. The collected data were edited and entered into a computer. Data were analyzed using Excel 2006 Microsoft Corp. and SPSS for Windows, version 12.0.1 programs.

Ethical consideration

Ethical approval for the study was sought and obtained from Health research ethics committee of Anambra State ministry of health and education Awka, Anambra State. Only consented student participated and all information obtained was kept confidential.

RESULTS

The mean age of respondents was 14.9 Years \pm 3.6 standard deviations, (50.3%), Age range from 11- 19 years. Two Hundred and Ninety Seven respondents were 15 years and above. Three Hundred and Six (51.9%) were female. Only 285 (48.3%) of the respondents were from junior secondary school level. Other socio-demographic characteristics are shown in Table 2. Three hundred and eighty- eight 65.8% of the respondents have heard about Ebola. Of this figure, 218(56.2%) of the senior class had good knowledge of Ebola hemorrhagic fever, (Table 2). Only 118 (20.6) were able to associate Ebola hemorrhagic fever to a viral disease, 34.2% said that Ebola could be transmitted through contact between

Table 1: Socio-demographic characteristic of secondary school students in Onitsha metropolis (N= 590)

SOCIO-DEMOGRAPHIC CHARACTER	NUMBER	PERCENTAGE
Age group in years		
11-19 years	293	49.7
15-19 years	297	50.3
Class		
JSS 1-3	285	48.3
SS 1-3	305	51.7
Gender		
Female	306	51.9
Male	284	58.1
Ethnicity		
Igbo	528	89.5
Others	62	10.5
Religion		
Christianity	456	77.3
Islam	24	4.1
African Traditional Religion	94	15.9
Others	16	2.7

Table 2: Respondent's Knowledge on cause, Transmission and Prevention of Ebola Hemorrhagic Fever

VARIABLE	FREQUENCY	PERCENTAGE
What is Ebola		
Viral haemorrhagic fever	388	65.8
Malaria Fever	135	22.8
Bacteria Fever	67	11.4
Causes of Ebola		
Virus	118	20.0
Bacteria	288	48.8
Protozoa disease	96	16.3
Helminthes (worm) disease	88	14.9
Transmission of Ebola		
By contact b/w infected human and animal	202	34.2
Contact with infected person fluid	148	25.1
Contact with any body	240	40.7
Prevention/control measure.		
Avoid any close contact such a hand shakes, hugs, kisses during out break	286	48.5
Isolation of people affected with Ebola in their neighbor hoods	104	17.6
Constant Enlightenment and Advocacy about Ebola virus	200	33.9
Treatment Behavior		
Ebola pattern cannot be treated	390	66.1
Ebola can be treated in the hospital	86	14.6

Only palliative treatment can be given Ebola treatment	114	19.3
Preferred place of treatment		
Visit the hospital or health family	105	17.8
Treatment at home (Trado-medical & medicine store)	297	50.3
Treatment in the church	188	31.9
Prevention By Adequate Hygiene		
Use of sanitizer after public interaction	200	33.9
Wash hand with soap & water after public interaction	320	54.2
Wash hand with only water after public interaction	70	11.9

infected human and animal, 25% said infected animal or person body fluid. On the knowledge about prevention, 48.5% reported that avoidance of any close contact during outbreak such as hand shake, kisses, hug etc while 33.9% reported that advocacy and proper enlightenment may improve knowledge of transmission approach during outbreak.

On preferred place of treatment during outbreak, 66.1% reported that Ebola cannot be treated. Only 17.8% respondents prefer treatment in the hospital while 50.3% rather preferred to take treatment at home when they have fever. About 31.9% preferred to be treated in church and the rest 17.8% choose to be treated in any health facilities. On primordial fever 33.9% preferred the use of only sanitizer (whenever they return from public interactions) while in school 54.2% reported that washing hand with running water and soap reduce the risks of contacting the Ebola infection during outbreak. The result showed that most of the respondents had good knowledge of Ebola hemorrhagic fever but good numbers of the respondents lack the knowledge of the causative agent as well as the mode of transmission. The knowledge of prevention and treatment seems significant but ignorant about mode of transmission and perception in handling a patient was prevalent among respondents.

DISCUSSION

Ebola hemorrhagic fever poses a great public health importance due to lack of effective means of treatment, highly virulent nature and its contagiousness during outbreak and its potential to cause acute sickness with high mortality and morbidity among survivor during and after the outbreak. During the last outbreak in 2014,

Ebola hemorrhagic fever triggered a lot of fear among Nigerians which affect both economic social and educational life of the nation. The behavioral modifications due to fear of Ebola occasioned by the outbreak regarding positive health of individual and society assisted in stamping out the diseases very fast. Unfortunately, these positive health life pattern behaviors were completed as soon as Nigeria was delivered Ebola free that same year (Ilesanmi and Alele, 2016).

This study revealed that over 65.8% of the respondents reported that they had heard of Ebola hemorrhagic fever diseases in mass media radio and television as well as in the church. This result agrees with KAP study conducted in some states in Nigeria (Iliyasu, *et al.*, 2015; Tinuola, 2016), but disagree with the study conducted in Sierra Leone where majority of the respondents were ignorant of Ebola hemorrhagic fever diseases (Ngegba and Mausaray, 2016). The discrepancy might be due to cultural and signification of the respondents. Although most respondents reported high level of awareness, majority of them were unable to associate the Ebola hemorrhagic fever with virus as well as its mode of transmission.

The result was consistent with some study conducted in Nigeria (Fasina *et al.*, 2014; Iliyasu *et al.*, 2015; Ilesami and Alele, 2016). Lack of knowledge of Ebola transmission and causative agent increases the ignorant behaviors which aid the spread of Ebola during Ebola outbreak. Respondents with general good knowledge of EHF diseases route of transmission as well as the causative agent are more likely to adopt appropriate measures to prevent community spread (Janjua *et al.*, 2007).

Majority of the respondents reported that an Ebola disease is contacted during an outbreak by contact with

anybody. This modified behavior may worsen the spread pattern. The report is different from result obtained by most respondent in some studies carried out in Nigeria (Fasina *et al.*, 2014; Iliyasu *et al.*, 2015; Ilesami and Alele, 2016).

This result was an indication that the effect of health education and proper enlightenment that focused on detailed education of secondary school students may go extra miles in curbing the spread and transmission during outbreak considering the contagious nature of the disease. The study found out that level of knowledge experience between the two strata; junior secondary and senior secondary was insignificant. This result was inconsistent with the finding of Ilesami and Alele, (2016) which reported a close associate where respondents in senior secondary student were more knowledgeable than their junior counterparts. In this study, half of the respondents would rather treat fever at home, a health seeking behavior that is not encouraging the finding again was inconsistent with the study of Ilesami and Alele, (2016), while only a little above 17% of the respondents agreed to visit the hospital to seek care when they have fever. The reason might be connected with the economic hardship and ignorant level of the respondents.

Interestingly over half of the respondents reported that they wash their hands with running water and soap after public interaction. This is a very important preventive practice even against other diseases. The promotion and sustainable of health promotion focusing, on demystifying Ebola and emphasis on the mode of transmission and preventive measures and hand washing with a running water, personal hygiene, need to seek health care whenever we noticed fever from well trained professionals, ignorance and misconception, safe burial practice among members of the society.

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CONFLICT OF INTEREST

We state that there is no conflict of interest among the authors.

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