

Measures of Knowledge, Attitudes and Behaviour towards COVID-19 among Students Using the Library of Nasarawa State University, Keffi – Nigeria

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Abstract

In recent human history, very few incidences of pandemics have disrupted social and economic life like what is currently being experienced with COVID-19. No part of the world is spared the effects of this pandemic, just as various efforts are implemented to mitigate and contain it. The foundation of a good preventive measure is an excellent public health information programme. The library plays, and in this case, must play, a major role in information dissemination to show relevance in efforts to beat the pandemic. This study was undertaken to gauge the knowledge levels of library users to the virus and how they are applying that knowledge to prevent infection. A survey of 350 students of Nasarawa State University who used the library of the Nasarawa State University was undertaken to elicit data for the research. A response rate of 68% was attained. Results showed that there was adequate knowledge about the pandemic and positive attitudes towards its prevention. However, the study found out that there is vaccine hesitancy in the population and that information about the pandemic did not come from the use of the library. Even though the study did not investigate their sources of information, it is assumed that it might come from other media outlets like the radio, television, and social media. Some of these channels are susceptible to carrying unverified information. The study recommended that libraries and librarians be more robust about providing information on the pandemic in libraries.

Keywords: COVID-19, Behaviour, Knowledge, Pandemic.

Introduction

Towards the end of 2019, an unexpected health incidence was noticed in the Chinese city of Wuhan. This rather unusual (and then-unknown) disease was recording fatalities among residents of the city. By the middle of December 2019, the pneumonia-like disease had become prevalent, not only in Wuhan but around the world, with fatalities rapidly increasing by the day. Due to the rapidity of geographical spread and fatalities, the World Health Organisation country office in China notified the

International Health Regulators (IHR) about a Wuhan Municipal Health Commission media statement indicating the presence of the then-unknown disease in the municipality (WHO, 2020). Not long after that, and due to a multiplicity of expressed concerns from countries around the world, the World Health Organisation designated the new virus as a pandemic on 11th February 2020 and, according to Deng, 2020, renamed it as "COVID-19" expressed as *Corona Virus Disease – 2019*. Ever since the designation of the disease as a pandemic, various countries, organisations, and institutions worldwide have focused attention on how to end or at least mitigate it.

The devastating effects of the pandemic are now clearly visible in the number of infections and fatalities, as well as the wide-ranging disruptions it has brought about in almost all spheres of the social, economic, and financial sectors. As this research was ongoing, the New York Times reported on April 19, 2021, that the death rate around the world had surpassed three million persons. Likewise, Pak et al. (2020) posited that since the start of the year 2020, leading U.S. and European stock market indices (the S&P 500, FTSE 100, CAC 40, and DAX) had lost a quarter of their value, with oil prices declining by more than 65%.

Nigeria, with an already weak economic base, faced a lot of challenges from the effects of the pandemic. According to the World Economic Forum, Nigeria's economy contracted by 6.1% year on year in the second quarter of 2020, with the decline being Nigeria's steepest in the last 10 years. By the third quarter of 2020, the Financial Times reported that Nigeria had formally entered recession. The National Bureau of Statistics also posited that in April 2021, the Consumer Price Index, which measures inflation within the country, increased by 18.12%, while urban inflation stood at 18.68%. The unemployment rate in the country worsened to 33.3%, which is the second-highest on the global list (Olorunbi, 2021).

To contain the effects of the pandemic on development efforts within the country and in order for the economy to be reflat, the government began to take many measures to contain the continued spread of the virus. The President, Muhammadu Buhari, on the 30th of March 2020, issued an Executive Order in line with Sections 2, 3, and 4 of the Quarantine Act, 2004. Some of the measures spelled out on the executive order included lockdowns in some parts of the country, social distancing, compulsory wearing of face masks, use of alcohol-based hand sanitizers, the introduction of virtual meetings, etc. The compliance to, and effectiveness of these measures, however, largely depends on a robust public education regime. It is in this consonance that this research was undertaken to principally gauge the knowledge level of the study population and the effect of that knowledge on attitudes and practices.

Objectives of the Study

The objectives of the study are:

- i. To investigate the knowledge levels of library users toward the COVID-19 pandemic
- ii. To relate the knowledge levels of library users to their attitudes and behaviour
- iii. To investigate the sources of information on COVID-19 among library users
- iv. To recommend ways in which the library can provide support towards mitigating the pandemic

The Setting

Nasarawa State is located in the North Central Zone of Nigeria. It shares sixty percent of its borders with the Federal Capital Territory (FCT) of Nigeria. The Capital Territory has been described as one of the major epicenters of the COVID-19 incidence in Nigeria (Amzat et al., 2020). Thus, there was and continues to be a spillover of the virus from the FCT into Nasarawa State. In order for control measures to be effective within the FCT and Nasarawa State, it is important that mitigating measures as announced by the Federal Government are adopted and ingrained in the Nasarawa State population. Nasarawa State University was established under the Nasarawa State Law No. 2 of 2001. Located in Keffi, it is about 65 kilometers away from the capital city of Abuja. According to information available on the University website, <https://nsuk.edu.ng/history/>, the aim of establishing the University was, fundamentally, to provide an avenue for the young men and women of Nasarawa State to pursue and acquire University education, which in the long run, will prepare the graduates and equip them with adequate skills needed for the development of the state and the country at large.

There are currently 8 (eight) faculties in the University – Administration, Agriculture, Arts, Education, Environmental Sciences, Law, Natural Sciences, and Social Sciences. Together, these have a total student population of approximately 6000. Courses are offered at the undergraduate and graduate levels in these faculties. A good percentage of the students travel to and from the FCT (one of the epicenters of the virus) periodically, and so have the possibility of being exposed to the virus in the course of their travels.

The library of the University serves as its main information, knowledge, and intellectual hub. The library's main purpose is to deliver in a timely, up-to-date, and accurate format information that helps in the learning and decision-making process. In the face of the serious effects of COVID-19, it is expected that the library will provide information and become a point of reference in efforts to help prevent and tackle the menace of disinformation which has become a worldwide issue of concern (Richardson et al. 2020). Thus, the study sought to elicit data from students of the University who use the library in the course of their studies.

Methodology

To draw data for the research, a cross-sectional (hybrid) survey questionnaire was administered to 350 students of the University who were physically in the library between February and April 2021. The survey was hybrid because some students chose to receive the questionnaire in the electronic format while others received hard copies. The respondents were randomly selected as they read in the University Library. However, care was taken to ensure that there was a near equitable distribution of questionnaires among the faculties of the University and also among undergraduate and postgraduate students. A total of 238 responses were returned, which represents a 68% response rate.

The questionnaire was adapted but slightly modified from the one used in a similar study in Ethiopia (Mohamed & Abdikadir Jama, 2020). It consisted of 25 items that drew data on demographic characteristics of the respondents as well as knowledge, attitudes, and behaviour of the respondents towards COVID-19. A section was added that required the students to suggest ways in which the University could improve its response to the pandemic. The data from the questionnaire was aggregated into percentages to conclude the study.

Results and Discussion

Demographic Variables: The demographic variables of the 238 students who responded to the questionnaire are shown in Table 1.

Table 1 – Demographic Characteristics of Respondents

Demographic Characteristics	Frequency (n=238)	Percentage (%)
Age of Respondents (No. of Years)		
18 – 24	162	68.1
25 – 31	54	22.7
32 – 38	22	9.2
39 + above	0	0.0
Gender		
Female	76	31.9

Male	162	68.1
Marital Status		
Single	169	71.0
Married	54	22.7
Divorced	15	6.3
Educational Level		
Undergraduate	206	86.6
Postgraduate	32	13.4
Faculty		
Education	56	23.5
Environmental Studies	27	11.4
	23	9.7
Natural Sciences	39	16.4
Social Sciences	31	13.0
Law	36	15.1
Agriculture	26	10.9
Arts		
Frequency of Library Use		
Every Day	39	16.4
Three Times a Week	51	21.4
Twice a Week	72	30.3
Weekly	48	20.2
Twice a Month	12	5.0
Monthly	16	6.7

A cursory look at the ages of the respondents shows that 162 or 68.1% were in the 18 – 24 years bracket. Another 54 or 22.7% were in the 25 – 31 age groups. Put together; this means that a majority of the population – 90.8% was made up of mainly young persons who ordinarily should be very information savvy and knowledgeable of the issues pertaining to COVID-19. Also, 169 respondents, or 70.0%, reported their

marital status as single. With respect to the respondents' educational level, there were 206 students, or 86.6%, who were undergraduates, while 32 or 13.4% were postgraduate students. As for the field of study or faculties to which the respondents belonged, the faculty of education contributed the highest number of students while the faculty of natural sciences provided the least number of respondents.

Knowledge of COVID-19: The study investigated the knowledge levels of the COVID-19 pandemic and its associated symptoms among the study population. Results of this investigation are presented in Table 2.

Table 2 – Knowledge of COVID-19 among Respondents

Knowledge Characteristic	Frequency (n=238)	Percentage (%)
Have you ever heard of COVID-19?		
Yes	227	95.4
No	11	4.6
Which of the following is a cause of COVID-19?		
Virus	206	86.6
Bacteria	32	13.4
Fungus	0	0.0
Immunodeficiency	0	0.0
I don't know	0	0.0
Which of the following are reasons for transmitting COVID-19		
Coughing	107	45.0
Touching surfaces	32	13.4
Consuming milk	0	0.0
All of the above	87	36.6
None of the above	12	5.0
Which of the following are symptoms of COVID-19		
High Temperature	22	9.2
Coughing	25	10.6

Difficulty in breathing	32	13.4
	159	66.8
All of the above		

Is COVID-19 treatable

Yes	223	93.7
No	15	6.3

Do you think early diagnosis helps treatment

Yes	238	100.0
No	0	0.0

Do you think isolation of suspected patients is important

Yes	227	95.4
No	11	4.6

Is vaccination a preventive measure

Yes	234	98.3
No	4	1.7

Is it possible to treat asymptomatic patients at home

Yes	130	54.6
No	108	45.4

Do you think information provided by libraries can help mitigate the disease

Yes	216	90.8
No	22	9.2

The results in table 2 showed that 95% of the respondents have heard of the pandemic, and 86.6% of these correctly stated that the pandemic was caused by a virus, with 13.4% wrongly stating that it was caused by a bacterium. The mode of transmission was also investigated as well as the symptoms of the disease. Two correct modes of transmission (coughing and touching infected surfaces) were given, with one incorrect mode (drinking milk) also provided. There were other wrong options for "none of the above" and "all of the above." A combined 58.4% (Coughing 45.0% and touching surfaces 13.4%) correctly chose one of the options while a significant number, 36.6%, chose all of the above, a response that included consuming milk. Looking at the data

from a knowledge of the symptoms, 66.8% of the respondents agreed that all the options given (high temperature, coughing, and difficulty in breathing) were symptoms of COVID-19.

As to the management and treatment of the COVID-19 pandemic, 93.7% of the respondents agreed that the pandemic was treatable, while there was a general agreement that early detection of the virus helped in treatment. In the same vein, 98.3% accepted that vaccination was a preventive measure.

Attitudes towards COVID-19: Our study also investigated the attitudes of respondents towards COVID-19. The postulation was that a good knowledge and attitude base would somehow lead to preventive practices among the population. The responses for the respondents are presented on table 3

Table 3 – Attitudes towards COVID-19 among Respondents

Attitude	Frequency (n=238)	Percentage (%)
Characteristic		
Do you think COVID-19 is dangerous		
Yes	238	100.0
No	0	0.0
What will be your reaction if diagnosed with COVID-19		
Fear	104	43.7
Sadness	75	31.5
Surprise	32	13.5
Shame	27	11.3
Who will you speak to about a positive diagnosis		
Healthcare worker	162	68.1
Spouse	29	12.2
Parents	32	13.4
No one	15	6.3
Are you afraid to go to common places		
Yes	184	77.3

No	54	22.7
If you take precautions, can COVID-19 be avoided		
Yes	238	100.0
No	0	0.0
If the vaccine is in Nigeria, will you take it		
Yes	97	40.8
No	119	50.0
Undecided	22	9.2
Do you wear preventive gear (e.g., Mask)		
Yes	204	85.7
No	34	14.3

Table 3 indicates that all the respondents of our study revealed that they considered COVID-19 dangerous and would be in a state of fear if and when they were diagnosed with the disease. As a reaction to being positively diagnosed, most respondents, 68.1%, stated that they would approach a health worker to seek advice/treatment.

Most of our respondents 77.3% stated that as a preventive measure, they avoided going to common places where they are likely to come in contact with persons or surfaces that carry the virus. When it becomes necessary to go to areas where infection might be possible, 87.5% of our respondents claimed that they would wear a mask—finally, the study knowing if respondents will take a vaccine if available. Surprisingly, less than half of the study population (40.8%) accepted to take the vaccine, with 50.0% and 9.2% indicating that they would not take the vaccine or are undecided, respectively.

Behaviour During the Pandemic: The World Health Organisation has severally published advisory protocols aimed at either preventing or mitigating transmission among individuals. Some of the advised behaviours include avoidance of large gatherings, the wearing of masks, and general cleanliness. Respondents in this study were requested to indicate the behaviour they would take (washing hands, avoid touching face, using a face mask, disposing of face mask properly, using hand sanitizer, and do not care) to prevent infection by the virus. Their responses are presented in table 4 below.

Table 4 – Behaviour towards COVID-19 among Respondents

Behaviour Characteristic	Frequency (n=238)	Percentage (%)
Which one of the following preventive measures do you take?		
Wash hands	32	13.4
Avoid touching face	15	6.3
Use face mask	151	63.5
Dispose face mask properly	19	8.0
Use Hand sanitizer	20	8.4
I don't care	1	0.4
Have you ever attended a health education programme on COVID-19?		
Yes	22	9.2
No	216	90.8
Have you ever purposely read about COVID-19 in the library?		
Yes	87	36.6
No	151	63.4

Table 4 shows the most popular action taken is wearing a face mask 63.5%, followed by using hand sanitizers 13.4% and washing of hands 8.4%. As information is critical to behaviour, respondents were requested to indicate if they had ever attended a health education programme or gone to a library to read about the pandemic. Responses to these questions were rather appalling as 90.8% indicated that they had never attended a health education programme aimed at providing information about the virus, and 63.4% had never deliberately gone to the library to read about COVID-19.

Suggested Actions by the University: As a way of understanding what actions the respondents wanted the University to take towards assisting them to mitigate the pandemic, they were asked to provide suggestions for containing the virus within the institution while there was a diversity of opinions and suggestions.

Table 5 – Suggestions of respondents towards mitigating COVID-19 in the University

S/N **RESPONDENTS SUGGESTIONS FOR CONTAINING COVID IN THE UNIVERSITY**

1. University should distribute face masks free
2. Online schooling/lectures should be introduced
3. Regular washing of hands before any activity
4. Strict adherence to social distancing
5. Ensuring that students and staff of the University avoid crowded spaces.
6. Make hand sanitizers available in all areas of the University
7. University should construct more hostels and lecture halls

It is not surprising that these items featured in the list given by respondents. They are basically the ideas put out to the public by health agencies in a bid to slow infection rates in most communities.

Discussion

It is always postulated that a good knowledge of any issue is likely to affect our reactions to such (Razaket al., 2019; Hausbeck, 1992, Saddique 2020, Enendu, 2020). The connection is very well articulated by Ruben et al., 2020 when they wrote that *“With the infection prevention and control (IPC) strategies adopted by the NCDC and Nigerian government to curtail COVID-19, the adherence of the citizenry depends largely on their level of awareness and knowledge regarding the pandemic. Unconcerned attitudes and adherence to false and superstitious beliefs by the public often arise due to inadequate awareness, which further affects the level of preparedness and the proper implementation of IPC measures at the national or sub-national levels”*.

This study showed an appreciable level of knowledge among the population. This is attributable to the very robust public enlightenment strategies adopted by all public health institutions within and outside the country. The Nigeria Center for Disease Control (NCDC) and all media houses were mobilized to enlighten the public about prevention protocols. Additionally, COVID-19 has, in the past year, become a worldwide health issue, and it is discussed daily on all formal and non-formal media outlets. The results of this study are, therefore, in tandem with other studies of this nature (Mustapha, 2020; Ruben, 2020, Zhong, 2020). This is commendable because if the population was ignorant of the causes of the pandemic, then they were likely to engage in behaviour that can lead to infection.

Attitudes that will mitigate the spread of the virus in the population were also reported as positive. All the respondents agreed that the virus was dangerous, and if they took precautions, they would avoid infection. Generally, the precautionary measure taken by our respondents consisted mainly of wearing protective gear, like face masks. However,

the study revealed an uncomfortable degree of vaccine hesitancy (50%, with a further 9% undecided) among the population.

The issue of vaccine hesitancy in various populations has been the subject of intense concern and discussion, especially as it has the potential of torpedoing efforts at mitigating the pandemic (Kayode, 2021; Jacobson, 2020). According to the WHO, in 2019, vaccine hesitancy was considered a threat to global health efforts and is the result of three intertwined variables - complacency, convenience, and confidence. To tackle this situation, Kayode (2021) suggested the use of "evidence-based efforts from social, behavioral, communication, and implementation science that can inform clinical efforts at the interpersonal, individual, and organization levels to address COVID-19 vaccine hesitancy". As has been stated elsewhere, good information and communication strategies need to be ramped up to tackle hesitancy if the efforts to roll back the pandemic are not to fall like a pack of cards.

The study also investigated behavioral and preventive tendencies among the study population. It was found out that using face masks 63.5%; washing hands 13.4%; using hand sanitizers 8.4% were the major preventive measures taken by the respondents. These results are in agreement with the study undertaken by Mohamed (2020). Unfortunately, these preventive measures did not come as a result of attending health education programmes or reading about the pandemic in libraries. They came from the fact that COVID-19 had become an issue of worldwide discussion with crippling effects on all aspects of life. This finding stands against the findings of a study by Wang (2018) which concluded that health education was a positive factor that affected infectious disease, knowledge, and prevention behaviour, further affirming the value of health education.

Conclusions and Recommendations

The findings of this study showed a good knowledge of the COVID-19 pandemic among the student population. This knowledge base, however, is not the result of direct participation in public education programmes carried out in libraries or reading about the pandemic in the library. It resulted from the preponderance of social and traditional media information available in the public domain and the disruptions caused by the pandemic. It is therefore important that libraries and librarians step up their game of providing timely and accurate information through media visibility to sustain the good knowledge base of the population. It is also important to point out that attitude and practices were generally good due to the good knowledge base. Therefore, to control the continued spread of the COVID-19 pandemic and its new variants, libraries should engage in special promotional activities because this will continue to be an important element of preventing the pandemic and saving lives.

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