



Original Article

Knowledge and practices toward prevention of COVID-19 among students of Baptist High School Lafia, Nigeria

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ABSTRACT

Objectives: The objective of the study was to assess the knowledge regarding COVID-19 among Students of Baptist High School; to assess the practices towards prevention of COVID-19 among Students of Baptist High School; and to find out the statistical significance between their level of knowledge regarding COVID-19 with their selected socio-demographic variables.

Material and Methods: The research design used for the study was descriptive survey design; convenient sampling technique was used to select 50 Students of Baptist High School Lafia, Nigeria. Data were collected using self-structured questionnaire to assess the knowledge and practices toward prevention of COVID-19 among Students of Baptist High School Lafia, Nigeria. The data were analyzed using descriptive and inferential statistics with the aid of IBM SPSS Statistics for version 23.0.

Results: The results showed that the age range of the majority of the respondents is between 12–14 years and 15–17 years accounted for 18 (36%), out of 50 (100%) respondent majority 45 (90.0%) had adequate knowledge, 4 (8.0%) had moderate knowledge, but only 1 (2.0%) had inadequate knowledge, therefore, $H_{1,1}$ Hypothesis was accepted while $H_{0,1}$ Hypothesis was rejected; 23 (46.0%) of the respondent had high level of practices towards prevention of COVID-19, but majority 27 (54.0%) had low level of practices towards prevention of COVID-19. Hence, the $H_{0,2}$ Hypothesis was accepted while $H_{1,2}$ Hypothesis was rejected. There was statistically significant between their level of knowledge with their selected socio-demographic variables such as family history of COVID-19, yes ($P = 0.089$), no (0.000). Therefore, the $H_{1,3}$ Hypothesis was accepted while $H_{0,3}$ Hypothesis was rejected.

Conclusion: Recommendation was given to conduct a similar study in different setting using large sample so that to generalize the findings.

Keywords: Knowledge, Practices, Prevention, COVID-19, High school

INTRODUCTION

A novel coronavirus disease 2019 (COVID-19) outbreak was first identified in Wuhan City, Hubei Province China, in December 2019, which was declared as pandemic virus by the World Health Organization (WHO) on March 11, 2020. COVID-19 is infectious disease and almost lead to acute respiratory distress syndrome.^[1] The virus pandemic is a big problem for humanity health and can lead to death in special people with background diseases such as chronic obstructive pulmonary disease, and diabetes mellitus.^[2] COVID-19 is defined as an illness caused by a novel coronavirus 2 (SARS-CoV-2; formerly called 2019-nCoV). The infectious start from the common cold to more serious diseases, like Severe Acute Respiratory Syndrome.^[3]

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However, following the WHO declaration countries around the world, including Nigeria, have been learning on response plans to respond to the pandemic and contain the virus. Following the confirmation of its first case of COVID-19, it was around 1:00 am on Fri. 28 Jan. 2020, Nigeria announced Sub-Saharan Africa's first confirmed case of the coronavirus disease COVID-19, and the confirmation led to activation of National Coronavirus Emergency.^[4] The Government has been vigilantly monitoring the situation and developing specific measures that are in line with the WHO guidelines in dealing with the outbreak. These includes suspending all flights, closing all gathering places, except grocery store and pharmacies. The government imposed a curfew to restrict people movements.^[3]

Moreover, globally as of July 30, 2021, there have been 196,553,009 confirmed cases of COVID-19, including 4,200,412 deaths, reported to the WHO. As of July 29, 2021, a total of 3,839,816,037 vaccine doses have been administered. In Nigeria, from January 3, 2020 to July 30, 2021, there have been 172,821 confirmed cases of COVID-19 with 2141 deaths, reported to the WHO. As of July 26, 2021, a total of 3,938,945 vaccine doses have been administered.^[5] The COVID-19 transmission is through direct contact with infected person or airway droplets. Therefore, preventive measures play an important role to determine the public readiness to assent to behavioral change measures from health experts and have been recommended to control the spread of the disease.^[6] Those patients who are confirmed with COVID-19 have clinical sign and symptoms such as sore throat, cough, fever, and shortness of breath within 14 days of the incubation period.^[7]

In addition, COVID-19 vaccines are available for use, current evidence about the safety profile of COVID-19 vaccines relies mainly on data from one to three randomized control trials and vaccine safety surveillance system in several countries around the globe. Three reviews regarding safety of COVID-19 vaccine were found.^[8] Study shows that early detection is significant in human health and will help to define COVID-19 in its entirety, which is prerequisite to its effective management.^[9] Another study shows that assessing public health knowledge is also important in identifying gaps and strengthening ongoing prevention efforts.^[3] Hence, the investigator felt that the needs and desire to carry out a study to assess the knowledge and practices towards prevention of COVID-19 among Students of Baptist High School Lafia, Nasarawa State, Nigeria.

Aim

The aim of the study was to assess the knowledge and practices toward prevention of COVID-19 among Students of Baptist High School; and to find out the statistically significance between their level of knowledge and practices towards prevention of COVID-19 with their selected socio-demographic variables.

Research hypothesis

- H_{1.1} There was statistically significance of knowledge regarding COVID-19.
- H_{0.2} There was no statistically significance regarding practices toward prevention of COVID-19.
- H_{1.3} There was statistically significance association between their level of knowledge regarding COVID-19 with their selected socio-demographic variable's.

MATERIAL AND METHODS

Study design and population for the study

The research design used for the study was descriptive survey design to assess the knowledge and practices toward prevention of COVID-19 among Students of Baptist High School Lafia, Nigeria.

Sample size and sampling technique

Purposive sampling technique was used to select 50 Students of Baptist High School Lafia, Nigeria. The sample size of this study was 50 respondents who are selected from the target population which are Students of Baptist High School Lafia, Nigeria.

Inclusion criteria

Only Students of Baptist High School Lafia, Nigeria, that were willing to participate and were available during data collection were included in the study.

Exclusion criteria

Students that were not willing to participate or were not available during data collection were excluded from the study.

Development and description of tool

A structured knowledge questionnaire was developed by the researcher to obtain answer from High School Students. The tool used for the research study was self-structured knowledge questionnaire which was prepared to assess the knowledge, and practices toward prevention of COVID-19. The tool was formulated on the basis of the clinical experience of the researcher, review of literature, extensive library research, and consultation of experts. Questionnaire consisted of three sections, sections A, B, and C.

Section A

It consisted of demographic variables of students included nine items such as age, gender, class of study, religion, occupational status of the father and mother, type of family,

sources of information regarding COVID-19, and family history of COVID-19.

Section B

It consisted of self-structured knowledge questionnaire on knowledge regarding COVID-19. There were eight knowledge questions, each question had multiple choice with four responses (a, b, c, and d). Each correct answer was given a score of one (1) mark while wrong answer and unanswered score zero (0). The maximum score was eight. To interpret the level of knowledge scores was interpreted as adequate, moderate, and inadequate [Table 1].

Section C

It consisted of self-structured questionnaire on practices toward prevention of COVID-19. There were seven questions; each question had multiple choices with two responses (yes/no). Each correct answer was given a score of one (1) mark while wrong answer and unanswered score zero (0). The level of knowledge scores was interpreted as high and low [Table 2].

Ethical consideration

The proposed study was conducted after the approval of ethical committee of the ministry of health Lafia, Nasarawa State of Nigeria; and consent were also obtained from the School principal and study participants. The subjects were assured for confidentiality of their responses.

Method of data analysis

Data were analyzed using descriptive and inferential statistics with the aid of IBM SPSS Statistics for version 23.0. Sample criteria were analyzed by frequency and percentage distribution tables. Chi-square test was used to find out the association between their level of knowledge and practice toward prevention of COVID-19 among students with their selected socio-demographic variables.

Level of knowledge	Score	Percentage
Adequate	6–8	75–100
Moderate	4–5	50–63
Inadequate	0–3	0–38

Level of practices	Score	Percentage
High	4–7	57–100
Low	1–43	14–43

RESULTS

The age range of the respondents was between 12 and 14 years, 15 and 17 years, and ≥ 18 years which accounted for 18 (36%), 18 (36%), and 14 (28%), respectively. In terms of gender males were the minority representing 15 (30%) while females were the majority of the participants representing 35 (70%). According to class of study 18 (36%) were in JSS 1–3, and 32 (64%) were in SSS 1–3. Other demographical data are resented in [Table 3].

Of the 50 respondents, majority 45 (90.0%) had adequate knowledge, 4 (8.0%) of the respondents had moderate knowledge, while only minority 1 (2.0%) had inadequate knowledge of COVID-19 [Table 4].

Of the 50 respondents, 23 (46.0%) had high level of practices and 27 (54.0%) had low level of practices toward prevention of COVID-19. There was statistically significant relationship

Table 3: Respondents socio-demographic variables ($n=50$).

Variable	Frequency	Percentage
Age		
12–14 years	18	36.0
15–17 years	18	36.0
≥ 18 years	14	28.0
Gender		
Male	15	30.0
Female	35	70.0
Class of study		
JSS 1–3	18	36.0
SSS 1–3	32	64.0
Religion		
Christianity	40	80
Islam	10	20
Occupational status of the Father		
Employee	26	52.0
Business	15	30.0
Farmer	9	18.0
Occupational status of the Mother		
Employee	21	42.0
Business	21	42.0
Housewife	8	16.0
Type of family		
Nuclear	46	92.0
Extended	4	8.0
Source of information regarding COVID-19		
Family and friends	6	12.0
School authority	6	12.0
Mass media	34	68.0
Health personnel	4	8.0
Family history of COVID-19		
Yes	4	8.0
No	46	92.0

JSS: Junior Secondary School, SSS: Senior Secondary School

Table 4: Respondents knowledge of COVID-19 ($n=50$).

Level of knowledge	Score range	Frequency	Percentage
Adequate	6–8	45	90.0
Moderate	4–5	4	8.0
Inadequate	0–3	1	2.0

Table 5: Association between the level of knowledge of the respondents with their selected socio-demographic variables ($n=50$).

Variables	Frequency	Percentage	Df	P value
Age				
12–14 years	17	34.0	2	1.814
15–17 years	18	36.7	2	2.080
≥18 years	15	29.3	1	1.336
Family history of COVID-19				
Yes	4	8.2	1	0.089
No	46	91.8	1	0.000

between level of knowledge regarding COVID-19 and selected socio-demographic variables such as family history of COVID-19 [Table 5].

DISCUSSION

Reuben *et al.* conducted a study on knowledge, attitude, and practice towards COVID-19 in North Central Nigeria. Snowball sampling technique was used to select 589 samples, data were collected using semi-structured questionnaire. The results showed that the majority of the respondents (99.5%) had good knowledge while 79.5% had negative attitudes toward prevention of COVID-19.^[10]

In another study conducted by Ekpenyong *et al.* (2020) on assessment of knowledge, practice and guidelines toward the novel COVID-19 among eye care practitioners (ECPs) in Nigeria, data were obtained from 823 ECPs through emails and social media networks using self-administered questionnaire during lockdown. The results showed that optometrist showed higher COVID-19 related knowledge than other ECPs ($P < 0.001$), particularly those working in private sector.^[11]

The key findings of this study showed that the socio-demographic variables showed that the age range of the respondents are between 12 and 14 years, 15 and 17 years, and ≥18 years which accounted for 18 (36%), 18 (36%), and 14 (28%), respectively. In terms of gender males are the minority representing 15 (30%) while females are the majority of the participants representing 35 (70%). According to class of study 18 (36%) are in JSS 1-3, and 32 (64%) are in SSS 1-3. In religion practice, 40 (80%) practice Christianity, while 10 (20%) practice Islam. The occupational status of their father 26 (52%) are employee, 15 (30%) are business men, 9 (18%)

are farmers, in comparison to their occupational status of their mother, 21 (42%) employee, 21 (42%) business women, and 8 (16%) full time house wives. Majority of the participants 46 (92%) belong to nuclear family while minority 4 (8%) of them belong to extended family. The respondent's sources of information are family and friends, school authority, mass media, and health personnel accounted for 6 (12%), 6 (12%), 34 (68%), and 4 (8%), respectively. Finally, majority of the 46 (92%) respondents has no family history of COVID-19, while minority 4 (8%) has family history of COVID-19.

The study results showed that, out of 50 (100%) respondent majority 45 (90.0%) have adequate knowledge, 4 (8.0%) had moderate knowledge, while only minority 1 (2.0%) had inadequate knowledge of COVID-19. Therefore, the $H_{0:1}$ hypothesis is rejected while $H_{1:1}$ hypothesis is accepted. This is in conformity with a study conducted by Reuben *et al.*, where snowball sampling technique was used to select 589 samples, data were collected using semi-structured questionnaire. The results showed that the majority of the respondents (99.5%) had good knowledge while 79.5% had positive attitudes toward prevention of COVID-19.^[10]

Minority 23 (46.0%) had high level of practice but majority 27 (54.0%) had low level towards prevention of COVID-19. Therefore, the $H_{0:1}$ hypothesis is accepted while $H_{1:1}$ hypothesis is rejected. This is in conformity with a study conducted on knowledge and perception toward universal safety precaution during early phase of the COVID-19 outbreak in Nepal. Data were collected from 871 participant using structured questionnaire through web-based, from March 29 to April 7, 2020. Data analysis revealed that the median knowledge of the participants was 10.0 (± 3.0 IQR). The overall score knowledge was high.^[12]

The result shows that there was statistical significance between knowledge regarding COVID-19 and selected socio-demographic variables such as family history of COVID-19. Hence the $H_{1:2}$ hypothesis is accepted while $H_{0:2}$ hypothesis is rejected. This is in conformity with a study conducted by Ekpenyong *et al.* Data were obtained from 823 ECPs through emails and social media networks using self-administered questionnaire during lockdown. The results showed that Optometrist showed higher COVID-19 related knowledge than other ECPs ($P < 0.001$), particularly those working in private sector.^[11]

CONCLUSION

The results revealed that majority of the respondents had adequate knowledge, and positive practice toward prevention of COVID-19. There was statistically significance between their knowledge and practice with their selected socio-demographic variables (age and family history of COVID-19).

Recommendations

In view of the study findings, the researcher recommends that a similar study can be conducted on knowledge and practice toward prevention of COVID-19 among high school students using different setting and large sample for generalization of the findings. A quasi-experimental study can also be conducted on knowledge and practice toward prevention of COVID-19 among high school students using different setting.

Declaration of patient consent

Patient's consent not required as there are no patients in this study.

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Conflicts of interest

There are no conflicts of interest.

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