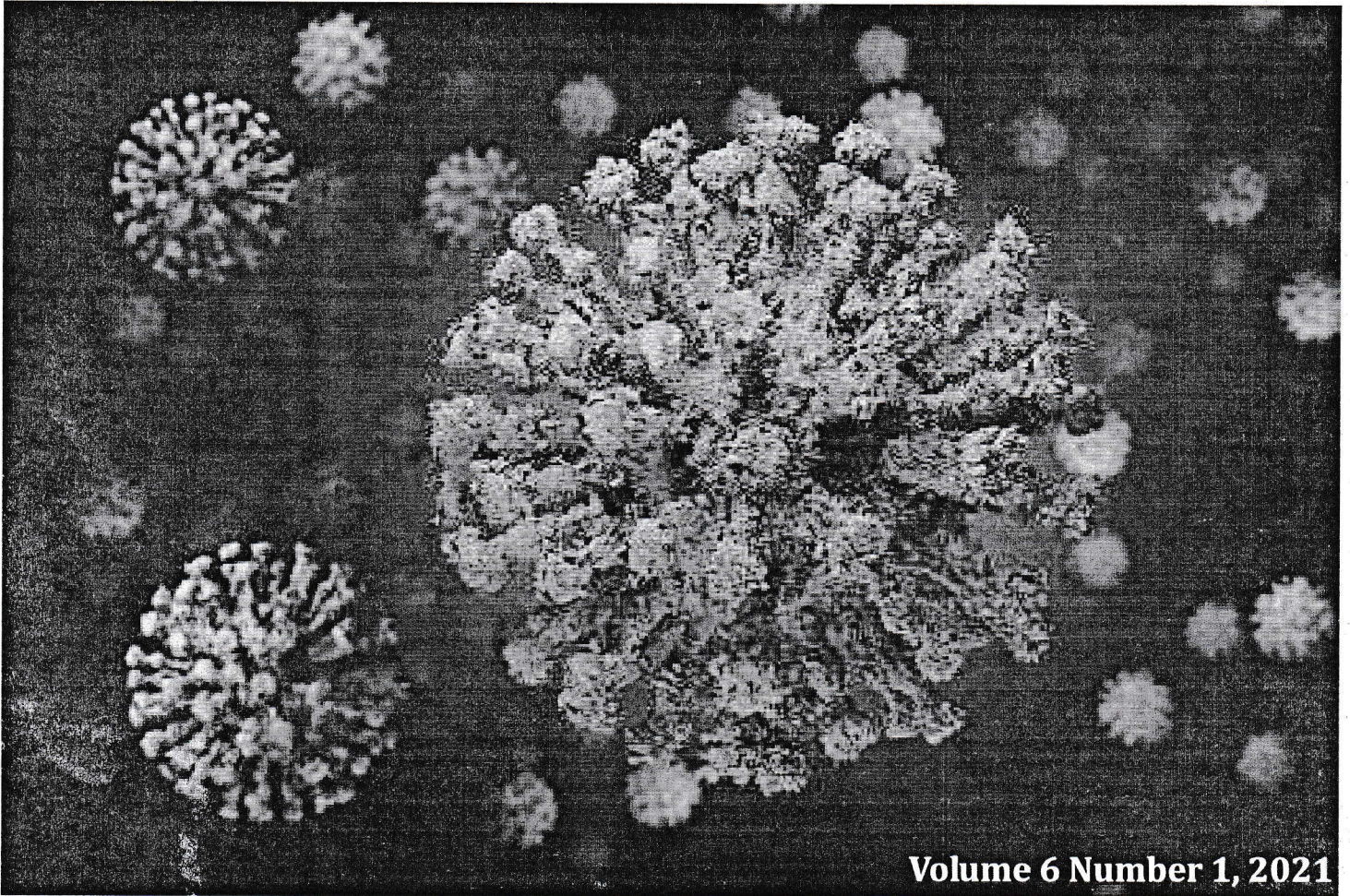




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Prof. Oby Omeje

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Prof. Barnabas Nwankwo

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## Knowledge, Attitudes and Practices toward COVID-19 Prevention among University Students in Enugu State University of Science and Technology

Nwangwu, C. N.,

Ngwu, L. U.

Nwosuji, E.P.

Ayuk, C.

Ezeh, I. L.

Enugu State University of Science and Technology

Correspondence: [chukscnn@gmail.com](mailto:chukscnn@gmail.com)

### Abstract

*Coronavirus is a global pandemic that has adversely disrupted social, political, and economic as well as educational activities in the world. Reports have shown reductions in the rate of school enrollment, changes in the mode of learning, poor funding, and death of students as a result of the COVID 19 pandemic. Global efforts to prevent the virus and reduce mortality from the disease including manufacturing of the vaccine seemed to have not solved all the COVID 19 related challenges. The population of Nigerian undergraduate students is more than 2 million and it is still unclear the knowledge, attitudes, and practices on COVID-19 prevention among students in Enugu State, Nigeria. This study was undertaken to assess KAP among undergraduates in Enugu State University of Science and Technology (ESUT). A cross-sectional study was conducted among 364 randomly selected undergraduate students. An online structured questionnaire was used to collect the data and analyzed using descriptive statistics. The results revealed that students have fairly good knowledge about the disease, however, there is a negative attitude and poor practice towards the disease prevention especially on COVID 19 vaccination. There is a need to embark on a youth-friendly COVID 19 comprehensive prevention measure in universities so that students can make an informed decision toward COVID 19 prevention.*

**Keywords:** Attitudes, knowledge, Practices, COVID 19, Prevention and University Students

### Introduction

It is no longer news that COVID 19 pandemic has affected almost all the nations of the world. What is of concern to many especially researchers are understanding the extent of damage, how to cushion its negative effects and people's behaviour towards its prevention. According to recent reports from Statista (2021) the number of people infected with COVID 19 is over 176.2 million and the number of deaths had reached above 3.8 million persons worldwide. International community has not relented in their efforts to contain further escalation of the virus. WHO (2021) among other things had launched COVID-19 Solidarity Response Fund seeking appeal for US\$ 1.96 billion to fulfil the requirements of the 2021 Strategic Preparedness and Response plan. Global efforts to prevent the virus and reduce mortality from

the disease including manufacturing of the vaccine seemed to have not solved all the COVID 19 related challenges. Recent report has raised concern over possible third wave of COVID 19 pandemic in Africa (WHO, 2021).

One of the institutions that is greatly affected by COVID 19 is educational institution. The impact on education ranges from reductions in the rate of school enrollment, changes in the mode of learning, poor funding, and death of students as a result of COVID 19 pandemic (Bravata, Cantor, Sood, & Whaley, 2021). Most countries implemented different lockdown measures in order to contain the spread of the virus which significantly affected educational institutions. According to UNESCO, (2020) more than 1.598 billion students from 194 countries were required to stay at home because of the closure of educational institutions. Apart from the devastating health consequences for the students directly affected by the virus, the COVID-19 pandemic holds major implications for the way university students have managed the unprecedented challenges and expectations that accompanied the pandemic (Aristovnik, 2020).

The government has reopened commercial activities including schools in Nigeria with strict warning that all schools must observed international best practices on COVID 19 preventive protocols. The Nigeria NCDC, in partnership with the Federal Ministry of Education, developed guidelines for schools to ensure safety of students and staff while carrying out academic activities (Federal Ministry of Education, 2020). The guidelines stipulate a number of essential activities, based on the key strategies of physical distancing, hand hygiene, environmental cleaning, use of face masks, screening, isolation, and notification for further action. Though there are prevention guidelines from authorities, the resumption of schools may likely expose students to risky behaviours that may predispose them to COVID 19 infections. Moreover, it is still unclear how much students know about these prevention protocols and their attitude toward it as well as the practices in Nigeria. The population of Nigerian undergraduate students is more than 2 million and yet not much studies have been done to assess knowledge, attitudes, and practices on COVID-19 prevention among this population. Study has shown that understanding knowledge, attitude, and practices (KAP) towards disease are important for its prevention and can help to establish effective interventions to mitigate its effects, which may have long-term consequences on people's health and well-being (Jones, Manze, Ngo, Lamberson & Freudenberg, 2021).

It has been observed that Enugu State University of Science and Technology (ESUT) management has put in place mechanisms to ensure that government stipulated COVID 19 prevention protocols within its campuses are duly observed. However, it appears that the inability on the school authorities to strictly enforce COVID 19 prevention protocol among students; may further make the students vulnerable to the contracting the virus. Hence, it becomes imperative to ascertain the KAP toward COVID 19 prevention among undergraduate students in ESUT because intervention to reduce COVID 19 incidence rate among students may not achieve an evidence-based results if objective assessment of their KAP towards the disease prevention is not assessed. Thus, this study was undertaken to assess KAP among undergraduates' students in Enugu State University of Science and Technology (ESUT).

### **Research Questions**

1. How much knowledge do undergraduate students in ESUT have about COVID 19 and prevention?
2. What is the attitude of undergraduate students in ESUT towards COVID 19 prevention?
3. How undergraduate students in ESUT have practiced COVID 19 prevention?
4. In what ways can the KAP of undergraduate students in ESUT be improved?

### **Literature Review**

#### Knowledge about COVID 19 prevention

Alrasheedy, Abdulsalim, Farooqui, Alshali, & Godman (2021) conducted a cross-sectional study to determine the extent of knowledge, attitude, and practice about the coronavirus disease (COVID-19) pandemic and its psychological impact on students and their studies among pharmacy students in Saudi Arabia. The study found that the mean total knowledge score was  $9.87 \pm 2.04$  out of the maximum attainable score of 12. Consequently, the overall rate of correct answers for the knowledge statements was 82%. It may be expected that medical students should have good knowledge of medical conditions like COVID 19.

Also, a web-based cross-sectional study on knowledge, attitudes, and practices related to the COVID-19 outbreak among Bangladeshi young adults showed that overall, 61.2% had adequate knowledge. However, noticeable confusion was found among participants regarding the mode of transmission of COVID-19, and only 38.0% of participants correctly reposed that the COVID-19 virus, is not airborne, and very few ( $n = 306$ , 43.3%) were able to respond

correctly when asked if eating and touching wild animals could result in infection (Banik, Rahman, Sikder, Rahman, & Pranta, 2020). The implication from these findings clearly showed that the knowledge of COVID 19 among studied participants look artificial because they seemed to lack knowledge on issues around the transmission of the virus.

Furthermore, a cross-sectional study on knowledge, attitude, and practice toward COVID-19 pandemic among 384 persons visiting Dessie health center for covid-19 screening in Northeast Ethiopia revealed that the magnitude of good and poor knowledge among the study participants was found to be 197 (51.3%) and 187 (48.7%), respectively. A high number of study participants had poor knowledge about the major symptoms; fever, cough, sore throat, muscle pain, and difficulty of breathing, of COVID-19 (Gebretsadik, Gebremichael and Belete, 2019). The implication of the finding may be that the scope allowed for all clients both young and old, unlike some similar studies that are limited to medical students or the adult population.

A cross-sectional study on knowledge, attitude, and practices towards COVID-19 among nursing and midwifery students in Jalingo, Nigeria revealed that a majority of the students (53.80%) possessed a good level of knowledge regarding COVID-19. The mean knowledge of COVID-19 in this study was  $9.40 \pm 1.353$  (range 0-12). This score suggests an overall 78% ( $9.40/12 * 100$ ) correct answer rate (Inegbenosun, Azodo, Anionye, Inegbenosun, & Njoku, 2021).

#### *Attitude toward COVID 19 prevention*

Alrasheedy, Abdulsalim, Farooqui, Alsaahali, & Godman (2021) a cross-sectional study knowledge, attitude and practice about coronavirus disease (COVID-19) pandemic and its psychological impact on students and their studies among Pharmacy Students in Saudi Arabia showed that the majority of the participants ( $n=165$ ; 71.1%) agreed that COVID-19 will finally be successfully controlled. At the early stages of the pandemic, the majority ( $n=163$ ; 70.3%) believed that COVID-19 is a health threat to the community.

A web-based cross-sectional study on knowledge, attitudes and practices related to the COVID-19 outbreak among Bangladeshi young adults found that majority of the participants had a positive attitude towards COVID-19 ( $n = 558$ , 78.9%) with a mean attitude score of 2.7 (SD: 0.3). About 87% (614) of the participants agreed that COVID-19 would successfully be controlled with the rate of reporting “disagree” and “not sure” was 4.2% and 8.9% respectively (Banik, Rahman, Sikder, Rahman, & Pranta, 2020).

Furthermore, in a cross-sectional study on knowledge, attitude, and practice toward COVID-19 pandemic among 384 persons visiting Dessie health center for covid-19 screening, Northeast Ethiopia a majority of the study participants (71.9%) perceived that traditional medicines like eating garlic are not helpful to prevent infection with the new coronavirus. About 49.2% of the study participants perceived that COVID-19 cannot affect young people and a high number of study participants will not go to a quarantine center if they develop the disease. The majority of study participants perceived that the measurements taken by the Ethiopian Ministry of Health are helpful and the country can win the battle against COVID-19.

Inegbenosun, Azodo, Anionye, Inegbenosun, & Njoku (2021) conducted a cross-sectional study on knowledge, attitude, and practices towards COVID-19 among nursing and midwifery students in Jalingo, Nigeria which showed that a vast majority of the respondent showed a high degree of optimism regarding the pandemic with almost all respondents (98.1%) in agreement that the pandemic will be finally controlled. A vast majority of the respondents (82.7%) had strong confidence that Nigeria can win the battle against the COVID-19 virus with just 27 participants (17.3%) with a contrary opinion.

#### *Practice toward COVID 19 prevention*

Alrasheedy, Abdulsalim, Farooqui, Alsaahli, & Godman (2021) a cross-sectional study knowledge, attitude and practice about coronavirus disease (COVID-19) pandemic and its psychological impact on students and their studies: among Pharmacy Students in Saudi Arabia showed that 201 participants (86.6%) did not go to any crowded places during these days and 155 participants (66%) reported wearing a mask when leaving home. Moreover, the vast majority of participants (n = 211; 91%) reported that they were following the strategies recommended by the authorities, e.g. the Ministry of Health, to prevent infection and spread of COVID-19.

A web-based cross-sectional study on knowledge, attitudes, and practices related to the COVID-19 outbreak among Bangladeshi young adults revealed that only 51.6% had good practices. Also, a majority 75.2% of participants always washed hands with soap or hand sanitizer and 70.6% wore a mask when going outside the home in recent days (Banik, Rahman, Sikder, Rahman, & Pranta, 2020).

Furthermore, in a cross-sectional study on knowledge, attitude, and practice toward COVID-19 pandemic among 384 persons visiting Dessie health center for covid-19 screening, Northeast Ethiopia the magnitude or level of poor practice in the current study was found to be

41.7%. Two hundred and forty (62.5%) study participants reported that they went to crowded places. The majority (69.3%) of the respondents used a face mask when they leave their home but the number of study participants who did not use a face mask is also higher. The other less frequently practiced preventive measures (10.4%) were avoiding recontamination after handwashing from a pipe or any other water container materials and practicing physical distancing (45.1%). About 55% of study participants did not keep the recommended distance when they speak in front of others (Gebretsadik, Gebremichael, and Belete, 2019).

Knowledge, attitude, and practices towards COVID-19: a cross-sectional study among nursing and midwifery students in Jalingo, Nigeria revealed that only a few students avoided large gatherings of people (30.8%) with the vast majority reporting to have worn a mask when going out (84.6%) and washing their hands with running water and soap frequently as recommended (73.1%) (Inegbenosun, Azodo, Anionye, Inegbenosun, & Njoku, 2021).

## **Methods**

### *Research Design*

The study employed a cross-sectional survey research design. The design is found suitable for the study because it provides the techniques to collect data from selected undergraduate students in ESUT at a particular point in time and the findings were generalized to the target population. This institutional-based quantitative cross-sectional study design was conducted from May 10<sup>th</sup> to 28<sup>th</sup>, 2021.

### *Area of Study and Population*

The study was conducted at Enugu State University of Science and Technology (ESUT). ESUT is the only government-owned university in Enugu State. The headquarters is located in Agbani Nkanu West Local Government Areas of Enugu State. The total population of undergraduate students in ESUT was 18,702 (ESUT Academic Planning Records, 2020)

### *Sample Size and Sampling Technique*

The study used the Taro Yamane formula for sample size determination. This formula provides simplistic steps of determining appropriate sample size for a finite (known) population, using

a 95% confidence level and a 5% margin of error. The sample size for the study was 392 students.

Cluster sampling technique was used to divide the departments in ESUT along with art/humanities-related discipline and Science related discipline. Simple random sampling was used to select one department from each of the two cohorts (art/humanities and science-related disciplines). Furthermore, students list and phone contact were obtained from their respective departments and a simple random method was used to select the study participants by lottery method.

#### *Data Collection*

The study employed a structured online questionnaire as the only instrument for data collection. The questionnaire was divided into two sections. Section A dealt with the sociodemographic characteristics of the respondents while Section B dealt with substantive issues in the research questions. One day pre-test data collection exercise was conducted to validate the reliability of the instrument in providing accurate results. The data collection process was online based. The questionnaire was distributed to the selected respondents through different online platforms. A total of 392 questionnaires were distributed but only 364 (92%) of them were properly filled and returned for analysis.

#### *Method of Data Analysis*

The Statistical Package for Social Sciences (SPSS) 20.0 was used to process the data collected with the questionnaire. Questionnaire data obtained was presented, analyzed, and interpreted using descriptive statistical tools such as simple percentages in table pie chart and bar chart.

### **Results**

#### *Socio-demographic characteristic of respondents*

The study showed that a majority 63.2% of the respondents were female students while 36.8% were males. In all, the mean age of respondents was 20.6. Virtually all the respondents 97.4% were single, only 2.6% were married. A majority 40.8% of the respondents were Catholics. This was closely followed by 39.5% of them who were Pentecostal while 18.4% were Protestants. Only 1.3% adhered to traditional religion. On the academic level of the students, a majority 42.1% of the respondents were in their fourth year while 9.2% of them were either in



the first and second year respectively. A majority 73% of the respondents were in Art/Humanities related discipline while 26.3% were of them were science students.

**Analysis of Research Questions**

*Students' Knowledge of COVID 19 and Prevention*

To assess students' level of knowledge of COVID 19 and its prevention, questions on types of infection, main transmission method, incubation period, clinical manifestation, and non-pharmaceutical method of prevention.

**Table 1: Distribution of respondents on knowledge of the type of infectious disease does COVID 19 belong to**

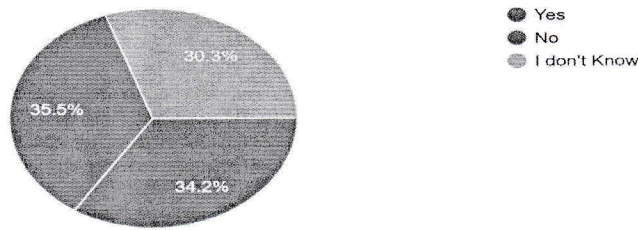
knowledge of the type of infectious disease does COVID 19 belong to			
	Bacterial	Viral	I don't know
What type of infectious is Covid-19?	22.4%	69.7%	7.9%

Field survey 2021

Table 1 showed that the majority of the students had accurate knowledge of the type of infectious disease COVID 19 belongs to. However, more than 20% of them gave the wrong answers while 7.9% of them do not know at all.

Also, the finding revealed that an overwhelming majority 97.4% of the respondents knew that respiratory droplets and close contacts are the main transmission method while only a few 2.6 indicated that they do not know. In addition, the majority 75% of the respondents answered correctly that COVID 19 incubation period span from 1-14 days while 11.8% do not know COVID 19 incubation period. Moreover, a significant majority 94.7% of the respondents correctly identified fever and dry cough as the main clinical manifestation. Overall, the students demonstrated good knowledge of the virus. This implication may be that awareness campaigns by all stakeholders at different levels to increase public knowledge about the disease may have contributed to the high knowledge of COVID 19 among the students. Also, these are students who are constantly informed by virtue of their academic environment. Furthermore, students' knowledge was questioned on the non-pharmaceutical method of prevention, the responses are shown in figure 1

**Figure 1 non-pharmaceutical method of prevention is important for COVID 19**

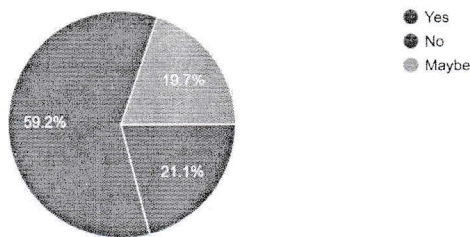


Fieldwork, 2021

Figure 1 clearly showed that a majority 35.5% of respondents disagreed that non-pharmaceutical method of prevention for COVID 19 is important. This is closely followed by 34.2% of them who were in affirmation while a significant number 30.3% who did not know. This finding spring surprises and may suggest that the knowledge of many of the respondents about this virus looks artificial.

*Attitude towards COVID 19 prevention*

**Figure 2: Whether students were worried they might get COVID 19**



Fieldwork, 2021

Figure 2 showed that a majority 72.4% of the respondents indicated that they are not worried they might get COVID 19. Only 19.7% of them said they are worried while 7.9% of them were indifferent. The respondents were further asked a follow-up question on whether they think Covid-19 prevention measures should only be applied by older adults and age groups most risk. The majority 72.4% of the respondents indicated no as their responses while 19.7% said yes. Only 7.9% were not sure of their position. Also, the opinion of the respondents was sought on whether they will seek to visit a health facility if they develop symptoms of COVID 19, the result revealed that 56.6% agreed that they will seek medical help while only 7.9% disagreed. Furthermore, the respondents were asked to what extent do they think practicing personal

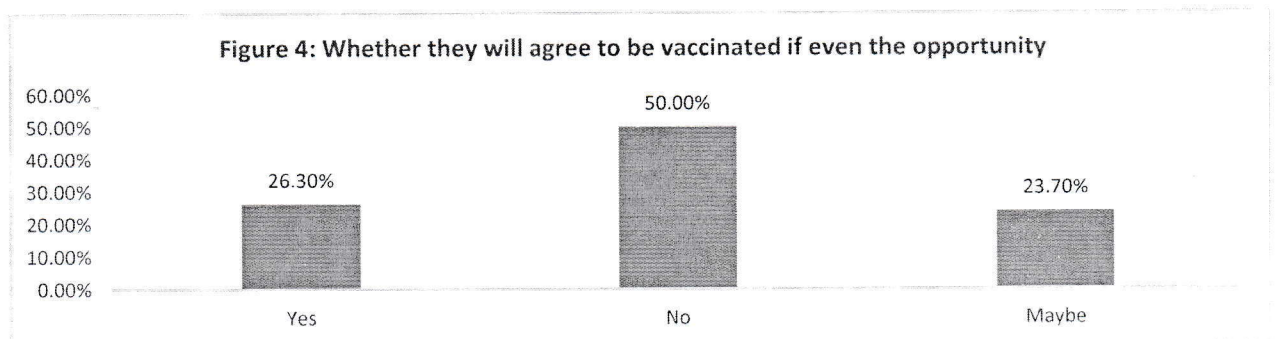
hygiene such as wearing facial masks and hand hygiene is an effective way to reduce the risk of COVID-19 infection. The responses are shown in figure 3

*Figure 3: Extent of practicing personal hygiene such as wearing facial masks and hand hygiene*



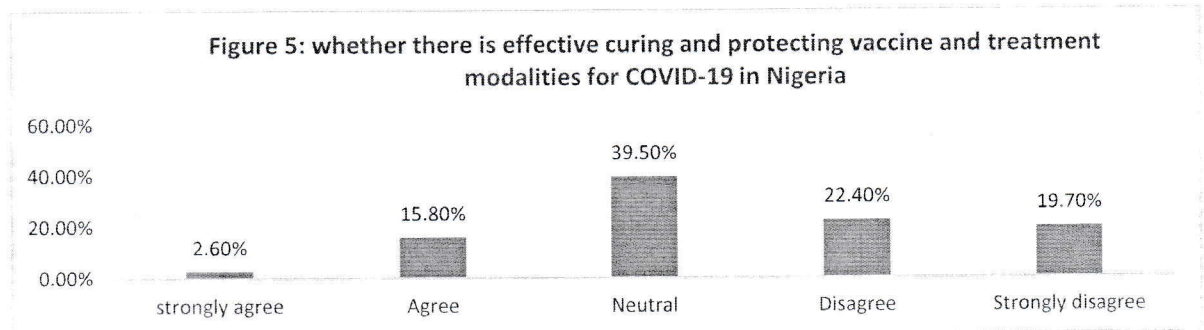
Fieldwork, 2021

Figure 3 showed that the majority 32.9% of the respondents indicated to a great extent while 9.2% of them said either to a little extent or very little extent respectively. Furthermore, on social distancing such as avoiding crowded places, a majority 31.6% of the respondents said to a great extent while 7.9% said to a little extent. Moreover, an overwhelming majority 88.2% of the respondents believed that students are vulnerable to COVID 19 while only 9.2% said that they are not vulnerable. This is further validated by a majority 71.1% of the respondents who were in the affirmation that COVID 19 has impacted negatively on their studies while 22.4% did not affirmed that it has impacted negative on their studies. The respondents were asked if they will agree to be vaccinated if, given the opportunity, the responses are shown in figure 4



Fieldwork, 2021

The findings from figure 4 showed that a majority 50% of the respondents said they will not agree to be vaccinated when given the opportunity. 26.3% of them said they will agree to be vaccinated if given the opportunity while only 23.7% were indifferent. To deepen understanding of respondent's attitude about prevention of the disease, the question on whether there is an effective curing and protecting vaccine and treatment modalities for Covid-19 in Nigeria was asked, the responses are shown in figure 5



Fieldwork, 2021

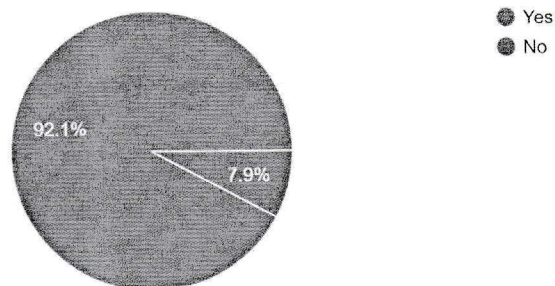
The findings from figure 5 showed that a majority of 39.50% of the respondents were indifferent on whether there is effective curing and protecting vaccine and treatment modalities for COVID-19 in Nigeria. Also, 22.4% of them disagreed that there is effective curing and protecting vaccine and treatment modalities for COVID-19 in Nigeria while only 15.8% of the respondents indicated agreed. This further validates the true reflection of public perception including students toward COVID 19 prevention in Nigeria, however, the implication could also be that there is a communication gap and mutual distrust between authorities and the students on government comprehensive prevention plan and its implications toward COVID 19 prevention in Nigeria.

#### *Practice of COVID 19 prevention*

On handwashing, a majority 78.9% indicated that they are committed to washing hands while 19.7% said they are not committed. Also, on practicing the proper methods of coughing and sneezing etiquette, a majority 63.2% of the respondents were in affirmation while 26.7% indicated no. Furthermore, respondents were asked about the practice of wearing face mask regularly, the result showed that 53.9% of the respondents affirmed that they wear face mask regularly. This is closely followed by 40.8% who said that they do not while 5.3% remained

undecided. Moreover, the respondents were asked whether they have been vaccinated, the responses are shown in figure 6

*Figure 6: Practiced COVID 19 Vaccination*



Fieldwork, 2021

Figure 6 revealed that the overwhelming majority 92.1% of the respondents have not received COVID 19 vaccination while only 7.9% said that they have received the vaccine. This finding is expected owing to the vaccine hesitant which is widespread in Nigeria.

#### **Ways to improve student's KAP towards COVID 19 Prevention**

Questions were posed to respondents on ways to improve students' KAP towards COVID 19 prevention. The result revealed that the majority 59.4% of the respondents suggested a constant youth friendly campaign on COVID 19 prevention in the campuses. Also, the findings showed that 30% of the respondents said suggested strict enforcement to observe COVID 19 preventive protocol within campuses while 10.6% of them said providing adequate prevention facilities/commodities for the students.

#### **Discussion of Findings**

The study assessed how much knowledge undergraduate students in ESUT have about COVID 19 prevention. The findings found that students have adequate knowledge on multiple topic about the virus such as type of the infection, main transmission method, incubation period and main clinical manifestation. This finding supports earlier studies done on knowledge, attitude and practice among students (Alrasheedy, Abdulsalim, Farooqui, Alsahali, & Godman, 2021;

Inegbenosun, Azodo, Anionye, Inegbenosun, & Njoku, 2021). Since the advent of COVID 19 pandemic, there has been sustained awareness creation across all media platforms for a while now. This may have contributed to the good knowledge of the virus among the students studied. However, the study also found that a good number of respondents did not have good knowledge that non-pharmaceutical methods are important in preventing COVID 19. This may imply that students having good knowledge of the disease may not necessarily translate to good knowledge of the importance of prevention measures. This calls for further interrogation as to identify factors informing such position among students.

On the student's attitude towards COVID 19 prevention, the study found that majority of the respondents are not worried that they might contract COVID 19. This could be attributed to self-denial where most people tend to disassociate from negative results. On the contrary, the study revealed that many of the students believed that prevention measures should not only be applied to older adults and age groups most risk rather by everybody. This finding contradicts previous study done in Ethiopia which showed that about 49.2% of the study participants perceived that COVID-19 cannot affect young people and a high number of them were unwilling to go to a quarantine center if they develop the disease (Gebretsadik, Gebremichael, and Belete, 2019). Also, it was found that the students have positive attitude towards COVID 19 prevention because many of them opted to seek professional medical help in the event they contract the virus and are willing to practice personal hygiene such as wearing facial masks and hand hygiene as an effective way to reduce the risk of COVID-19 infection. This is in agreement with studies done in Bangladesh and Nigeria which showed that the respondents had a positive attitude towards COVID-19 prevention (Banik, Rahman, Sikder, Rahman, & Pranta, 2020; Habib, Dayyab, Iliyasu, & Habib, 2021). However, on the issues of vaccination, majority of the respondents were not willing to take the COVID 19 vaccine if given the opportunity. This situation presents contradictory attitude of student towards the disease prevention. This negative attitude toward COVID 19 vaccination may not be unconnected to the conspiracy theories and fear of unknown which are usually associated with vaccine acceptance in Nigeria. This is in agreement with a study in Bangladesh among university students which revealed that most of the students doubt the effectiveness of the vaccine which interrupts them from taking the vaccine willingly (Biswas, Ullah, Roy & Roy, 2021). Contrary this finding, a study among university students in Italy showed that, of the total of 3226 participants studied, 91.9% were keen to receive a COVID-19 vaccination (Gallè, Sabella, Roma, De Giglio, Caggiano, Tafuri & Napoli, 2021). In addition, the study found that majority

respondents of the were indifferent on whether there is effective curing and protecting vaccine and treatment modalities for COVID-19 in Nigeria. This finding is contrary to earlier study done in the Northern Nigeria among medical students which showed that they had confidence that Nigeria COVID 19 prevention framework can win the battle against the COVID-19 virus (Inegbenosun, Azodo, Anionye, Inegbenosun, & Njoku, 2021). There is a disconnect between the public and the government in Nigeria due to persistent issues bordering on bad governance, corruption and poverty which have affected the consciousness of the people towards buy-in to any government program including COVID 19 prevention strategies.

Furthermore, the level of practice of COVID 19 prevention was assessed among students. The findings clearly showed that majority of the student studied showed a good practice of COVID 19 prevention. Majority of them indicated that they were committed to washing hands and had positive attitude towards the use of proper methods of coughing and sneezing etiquette as well as wearing face mask regularly. However, the finding equally revealed that a large proportion of them do not have positive attitude towards wearing face mask regularly. The finding supports a similar study in Nigeria among students which showed that majority of them had observed wearing face mask and washing their hands regularly but only a few students avoided large gatherings of people (Inegbenosun, Azodo, Anionye, Inegbenosun, & Njoku, 2021). On practice of vaccination, overwhelming majority have not been vaccinated. This is expected but portrays a great danger to students in the event of the third wave of the virus and spring up of different dreadful variant of the virus in Nigeria. Also, this poor practice toward COVID 19 vaccination will hinder the 40% target to set by Nigeria government to vaccinate its population by the end of 2021 (Federal Ministry of Health, 2020).

Finally, the study sought for ways to improve the knowledge, attitude and practice of students towards COVID 19 prevention. The findings showed that the respondents suggested constant youth friendly campaign, enforcement of prevention guideline and provision of adequate facilities and commodities as ways to improve KAP of students in ESUT. In Italy, the success of COVID 19 prevention among students has been attributed to a good level of awareness about COVID-19 vaccination through effective and strategic communication measures in the universities (Gallè, Sabella, Roma, De Giglio, Caggiano, Tafuri & Napoli, 2021).

## Conclusion

Every day, new challenges and expectations on how to contain the global pandemic continue to evolve with unprecedented consequences. It becomes very worrisome that many persons including students have not embraced the comprehensive prevention measures such as vaccination. It seems that their knowledge, attitude and practices towards COVID 19 prevention remains artificial. Hence, there is need for the authorities to re-strategize on its approaches and adopt more youth friendly interventions that can engage the students effectively to make an informed decision toward COVID 19 prevention.

## Recommendations

1. The massive public enlightenment campaigns in the campuses should be employed by behaviour change communication department of ministry of health using youth friendly communication channels and contents to disseminate correct information about COVID 19 prevention.
2. There is also the need to leverage on the opportunities of social media platforms to create youth friendly contents that will be used to conduct consistent sensitization on COVID 19 prevention especially for students
3. The school authorities should strengthen their enforcement strategies to ensure strict adherence to COVID 19 prevention guidelines
4. The government should provide adequate testing and vaccination centers in campuses to enhance access to prevention measures.

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