ASSESSMENT OF COVID -19 CONTROL MEASURES AWARENESS AND COMPLIANCE AMONG TEACHERS AND STUDENTS IN PUBLIC SECONDARY SCHOOLS IN MINNA, NIGER STATE

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ABSTRACT
The few studies on the impact of COVID-19 pandemic on education reported that most governments around the world temporarily closed educational institutions in an attempt to contain its spread. Now that schools have resumed based on the reasonable adherence to the laid down measures of the government on the control measures of COVID-19 pandemic, it is imperative to carry out a study to assess the awareness of schools of these measures. This study therefore assessed the awareness and compliance of COVID-19 pandemic control measures in public secondary schools in Minna, Niger State between teachers and students. Data were collected with the aid of questionnaire from 375 teachers and 1500 students of 15 public secondary schools in Minna, Niger State using purposive sampling technique. The research instrument was subjected to a reliability test with a high reliability coefficient (Cronbach's Alpha) of 0.77. Both descriptive (percentile) and inferential (independent sample t − test at 5% level of significance) analytical tools were employed for data analysis. Results of the study showed high rate of awareness of COVID-19 control measures among teachers and students. It was also found that there exists a non-statistically significant difference between the percentage of teachers and students that are aware of the control measures of COVID-19 in the 15 public secondary schools studied ($p = 0.600$ or > 0.05). In addition, the percentage of the teachers that are aware of these control measures is slightly lesser than that of the students. Findings also show that both teachers and students have high level of compliance with the control measures of COVID-19 pandemic. It was therefore concluded that both teachers and students have high level of awareness of and compliance with the control measures of COVID-19 pandemic except for the measures of 'contact tracing' which is not the sole responsibility of the schools' management. Major recommendation from the study was that school management should always put up mechanism for implementing the 'contract tracing' measures in order to act immediately when a case of COVID-19 is found among staff or students in a school.

Keywords: Awareness, Compliance, Control Measures, COVID-19, Public Secondary Schools.

INTRODUCTION
Background of the Study
The Corona Virus Infectious Disease (COVID-19) occurred first in Wuhan Province of China in 2019 and since then has spread to almost all continents of the world. According to World Health Organisation (WHO, 2020), COVID-19 is a viral infection that causes respiratory illness. The disease is basically transmitted from person to person through contact with droplet of an infected

person and that most people can easily recover from the illness without specialized treatment, but people who are older and those with existing medical conditions such as cancer, chronic respiratory infections, diabetes and cardiovascular diseases are more likely to experience severe illness and death due to COVID-19 (WHO, 2020). Some of the symptoms of the disease include: sore throat, runny nose, constant coughing/sneezing, breathing difficulty and fatigue.

The statistics of global report of the virus as complied by George Hopkins University on CNN International of Friday 16 October 2020 are confirmed cases 38,480, 128, discharged cases are 29, 944,128 and deaths cases are 1,107,019. Nigeria statistics as released by Presidential Task Force on COVID-19 on Friday 16 October 2020 are confirmed cases are 60,982, discharged cases are 52, 184 while deaths cases stood at 1,114. In Nigeria, the first outbreak of COVID-19 according to Nigeria Centre for Disease Control (NCDC) (2020) occurred on 27th February 2020 through an Italian businessman who visited the country. The declaration of this index case spurred the Nigerian Government, with the support of relevant health agencies to embark on measures targeted at curtailing the spread of the disease. (Omaka-Amari *et al.*, 2020). However, despite all preventive and control efforts of the Nigeria government following the outbreak, the disease as of 30th April 2020 had spread to 36 states of the Federation. Controlling this rise in COVID 19 in the country was particularly challenging and thus gave reason for worry especially in the face of limited health care facilities to contend with the virus (Omaka-Amari *et al.,* 2020). As at 16th October, 2020 there were no reliable treatments for Coronavirus, but a series of researches were ongoing across the world towards finding a clinical vaccine or treatment for the virus pandemic. However, according to Edeh *et al*. (2020), recent events show that behavioural change can help contain the spread of coronavirus. Some of the suggested measures to halt the coronavirus pandemic include; improved individual habits such as personal hygiene, including constant washing of hands with alcohol-based sanitizers, good respiratory attitude (close coughing and sneezing), and other personal protection practices like wearing of face mask, social distancing, avoiding touching of the face, and reducing contacts with people through self-isolation at home or avoiding nonessential travels or gatherings.

Coronavirus is therefore a global problem that requires effective and comprehensive planning and conducting a risk assessment, which is crucial to minimise the spread of COVID-19 (Mohammed, 2020). It was as a result of the risk associated with COVID-19 that the United Nations appealed for 2 billion dollars to support global response efforts towards tackling the coronavirus pandemic. The consequences of COVID-19 could be more severe; if people do not comply with or adhere strictly to public health regulations and advice. The United Nations Educational, Scientific and Cultural Organisation (UNESCO, 2020a) that is monitoring closure of schools revealed that over 100 countries implement nationwide closures, impacting over half of the world's student. According to UNESCO (2020b), school closures carry high social, educational and economic costs, and the disruptions affect everybody, but their impact is particularly severe for disadvantaged persons and their families. Edeh *et al.* (2020) reported that unplanned schools closures can cause severe problems for students, educators, parents and the society at large. It could negatively affect the academic interest and performance of students. If the students are not engaged productively, it could also lead to idleness which might result in youth involvement in crimes, loss of interest in learning, and poor academic performance. School closure as controversial as explained by Quentin (2014); it can have spillover effects on a large number of students in closed down schools. It can also affect the quality of teaching and learning, and academic achievement particularly for students with special needs or those with

learning difficulties that often requires more physical attention and guidance from the teachers. Edeh, *et al.* (2020) suggested that technology can be used to remedy some of the fallouts from school closures, but it cannot replace the important effect of face-to-face interactions by students and teachers.

However, according to Erika and Nicholas (2020), the mathematical model and empirical analysis of reactive closures of schools in past pandemics indicates that it reduces the total number of cases in the community by 25 percent and postpones the peak of the pandemic by a week or two, while proactive closures of school during pandemics remains one of the most beneficial interventions that can be employed to mitigate the impact of epidemic disease. In another development, Erika and Nicholas (2020) ascertained that school closures can either be reactive or proactive. Furthermore, Erika and Nicholas (2020) stated that reactive closure of schools occur upon the discovery of coronavirus case among the students, staff or parents. While proactive school closure occurs before the disease even reaches the doors of the school. School closures due to coronavirus has posed new problems like how to make the transition to online learning, at-home learning and how to cater for those who rely on school for food and housing security (Madeline, 2020) According to Madeline (2020), school closures for coronavirus tends to increase pressures on students, teachers and parents especially those with limited digital skills, education and resources for continued education. It also increases the burden on parents to not only struggle to provide for the home, but also to perform the supervision task of ensuring that their children learn from home. Coronavirus school closures increases the pressure on hospitals as they have to cater for many health matters that as ordinarily could have been attended to by school health centers. Education jobs can also be affected as many workers risks pay cuts or even disengagement from work during unscheduled school closures most especially those workers in private schools. UNESCO (2020b) outlined some of the harmful effects of school closure as a result of coronavirus pandemic. These effects are highlighted as follows:

1. Interrupted learning: School provides essential learning and when they are closed, students are deprived of opportunities for growth and development.
2. Nutrition: Many youngsters rely on free or discounted meals provided at schools for food and healthy nutrition. This is compromised as a result of school closures for coronavirus.
3. Unequal Access to digital learning portals: Lack of access to technology or good internet connectivity for continued learning during school closures affects the children of the poor more.
4. Increased pressure on schools and school system that remain open: Localized school closures place burdens on schools as parents tend to redirect their children to open schools.
5. Social Isolation: Considering the fact that educational institutions are hubs for social activity and human interactions, school closures can deprive youth and children of some social communications and socializations that are essential to learning, development and creativity.

Statement of Research Problem
In view of the above, the problem identified by the study is interrupted learning of schools, unequal access to digital learning portal and deprivation of students from social activities as a result of schools closures due to the spread of COVID-19 pandemic. All these have negative impact on the students' academic performance. Erika and Nicholas (2020) therefore suggested that closure of schools is not the only option to mitigate coronavirus. They advocated for authorities to give parents some flexibility to choose what is best for their families, while

implementing stronger mitigation/control measures. In order to prevent this problem from reoccurring, it is better to ensure continuous compliance of teachers and students with the control measures of COVID-19 in school premises as schools resume nationwide.

Research Questions
In order to address this problem, the study answered the following questions:

i. What is the percentage of teachers and students that are aware of the control measures of COVID-19 in public secondary schools in Minna, Niger State?
ii. What is rate of teachers' and students' compliance with COVID-19 control measures in public secondary schools in Minna, Niger State?

Purpose for the Study
There are few studies on the impact of COVID-19 pandemic on education (Jegede, 2020). Some of the few ones reported that most governments around the world have temporarily closed educational institutions in an attempt to contain the spread of the COVID-19 pandemic. Now that schools have resumed based on the reasonable adherence to the laid down measures of the Government on the control measures of COVID-19 pandemic, it is imperative to carry out a study to ensure continuous compliance of schools to these measures. Therefore, in view of the background of this study and review of related literature therein, the study assessed the awareness and compliance of COVID-19 pandemic control measures in public secondary schools in Minna, Niger State with a view to improving level of compliance among teachers and students. In order to achieve the aim of the study and to provide answers to the research questions, the following objectives were pursued:

i. To determine the level of awareness of teachers and students on the control measures of COVID-19 in public secondary schools in Minna, Niger State.
ii. To examine the percentage of teachers and students in compliance with COVID-19 control measures in public secondary schools in Minna, Niger State.

Statement of Hypotheses
In view of the first research question and first objective of this study and the review of literature relating to the first research question and first objective, the following pair of hypotheses are formulated for the study:

H_0: There is no significant difference between the percentage of teachers and students that are aware of the control measures of COVID 19 pandemic in 15 public secondary schools in Minna, Niger State.

H_1: There is significant difference between the percentage of teachers and students that are aware of the control measures of COVID 19 pandemic in 15 public secondary schools in Minna, Niger State.

LITERATURE REVIEW
Control Measures for COVID-19 Pandemic
According to the NCDC (2020), the most important advice is for all schools to encourage their students to maintain good hand and respiratory hygiene to remain safe. School proprietors, headmasters, and head mistresses must ensure that students have access to clean water and soap

at all times while on the school premises. NCDC (2020) further highlighted that the best way for schools to avoid COVID-19 infection is to: ensure students and teachers wash their hands frequently; show students how to cough or sneeze into a tissue, or to cough into their elbow if they cannot get tissue; clean and disinfect their premises often; and encourage sick students and teachers to stay home.

Maintaining the health and safety of people and environments will be more important than ever before in the aftermath of the COVID-19 school closures (Carvalho *et al*., 2020). To make school environments safe, additional health and hygiene measures should be implemented, and school-based psychosocial and nutritional support should be extended to students to strengthen their overall health and well-being in the wake of the pandemic. In addition, Carvalho *et al*. (2020), added that to provide safe school environments following a pandemic, policymakers should: Pair school-based hygiene promotion with the distribution of waterless hand sanitizer and/or soap (where hand-washing stations are already available); Consider school-based screening for fever and cough, which may reduce risk and improve confidence, but which does not by itself offer a reliable solution.; Train and support teachers and other school staff to offer school-based psychosocial support to returning students; and Prepare for a spike in the number of students with malnutrition and other unmet basic needs.

Guner *et al*. (2020) reported that although there are cures for illnesses and developments made by leaps and bounds in our day, the strongest and most effective weapon that society has against this virus that is affecting not just health but also economics, politics, and social order, is the prevention of its spread. In view of this, Guner *et al*. (2020) further contributed that the main points in preventing the spread in society are hand hygiene, social distancing, use of personal protective equipment and quarantine. With increased testing capacity, detecting more COVID-19 positive patients in the community will also enable the reduction of secondary cases with stricter quarantine rules.

Level of Awareness of Control Measures of COVID-19 Pandemic
According to Oyeyemi *et al*. (2019), COVID-19 is being transmitted actively in Nigeria. To effectively break the chain of transmission of the current outbreak, there is an urgent need for a robust public enlightenment about the disease. Also, physical and social distancing should be emphasized across all age groups with additional focus on the older population. This shows that awareness of the control measures of COVID-19 should be a continuous focus of research in order to be able to improve level of compliance to the control measures of COVID-19 in Nigeria. This is why the Nigeria Education Working Group (EiEWG) which is based in Maiduguri was set up. This Group was set up mainly to facilitate the coordination of partners, information sharing, and mobilize partners to ensure a coherent and effective response.

Okoro *et al.* (2020) reported that COVID-19 disease remains a public health emergency of international concern. Efforts at the global and national levels are being made to control its spread. The Nigerian Correctional Service is also proactive in the fight against the disease by organising COVID-19 awareness training for correctional officers. The study conducted a pre- and post-test assessment of COVID-19 knowledge among correctional officers in Enugu State Command to determine the impact of awareness training on their knowledge level. The study revealed a high level of knowledge, practices and attitude among correctional officers towards COVID-19. Such observations reflect the efforts made by the Nigerian Correctional Service, and

the government to sensitize the general population about COVID-19. This shows that the Government has made a lot of effort to educate the public on the key issues on how to detect and prevent COVID-19. This effort can only continue to yield fruitful results if this high level of awareness is backed by strict compliance.

The above indicates that no matter how high the level of awareness is, it should be evaluated from time to time in order to enhance the level of compliance with the control measures of COVID-19. It is therefore imperative to evaluate the rate of awareness of teachers and students of secondary schools on the control measures of COVID-19 pandemic before examining their level of compliance with these measures.

Compliance with COVID-19 Control Measures in Educational Institutions
According to Moti and Vambe (2020), the novel coronavirus pandemic, though mainly a major global public health concern, has significant socioeconomic implications of great consequences to economies and the well-being of the population, just as it is an assessor of the institutional structures and governance framework of nations. Whereas some countries were proactive with comprehensive mitigation, containment and management policies in response to the pandemic, some were in denial and procrastinated. Notwithstanding the initial reaction of countries, the policy actions appear generic in compliance with standard World Health Organisation (WHO) protocols: lockdowns, testing and contact tracing, isolation and social distancing.

Studies on the compliance with COVID 19 pandemic control measures in educational institutions are scarce. A related study by Oyeyemi *et al*. (2020) revealed that a high proportion of respondents had correct knowledge about COVID-19. However, only about half had correct knowledge that obesity was a risk factor for COVID-19 and that antibiotics cannot be used to treat COVID-19. Most did not have a self-perceived risk of contracting COVID-19. Most have been avoiding crowded places and some washed their hands very often. Consequently, this study shows that Nigerians' knowledge, perception and adherence to preventive measures of COVID 19 is averagely good. It is therefore imperative to find out if the trend is the same in educational institutions and particularly secondary schools.

If the COVID-19 control measures are not adhered to in the school environment, then there are negative consequences that follow. These negative consequences as stated by World Bank Group Education (2020) are: school closures; learning will decline and dropouts will increase, especially among the most disadvantaged; health and safety will suffer, without the support and structure that schools provide; and on the supply side, the economic shock will hit schools and teachers. It was however emphasized by the World Bank Group Education (2020) that if the COVID-19 pandemic control measures are adhered to, then it is possible to turn the crisis countered due to those shocks into opportunities. The study of Oyeyemi *et al*. (2020) recommends more rigorous public health education aimed at improving COVID-19 outbreak response in Nigeria. Also, physical and social distancing should be emphasized across all age groups with additional focus on the older population in order to increase the level of compliance with and awareness of the measures for controlling the spread of COVID-19 pandemic.

RESEARCH METHODOLOGY

Research Design

The study adopted the use of quantitative research approach with the use of questionnaire survey. Data collected for the study were analysed with the use of descriptive and inferential methods of analysis. Findings from the study were discussed in line with findings from the review of literature undertaken. In addition, the aim of the quantitative research method is to test pre-determined hypotheses and produce generalizable results (ACAPS, 2012). Using statistical methods, the results of quantitative analysis can confirm or refute hypotheses about the impact of a disaster and ensuing needs of the affected population. Conclusions made from the analysis of quantitative data indicate how many are affected, where the greatest area of impact is, and what are the key sector needs. For this reasons, this study adopted the quantitative research approach. Therefore, quantitative research can be used to inform business decisions policy formation, communication and research focus groups etc. about the extent and situation of things (compliance with COVID-19 control measures at workplace/schools).

Population and Sampling Procedure

The use of purpose sampling was employed for the selection of respondents in the study. For the staff the use relevant post and responsibilities required for the study was employed. In view of this, staff who hold key posts were selected. Based on this 25 staff/teachers were selected from each school. This is shown in Table 1.

Table 1: Designation of Teachers/Staff Sampled per School

Respondents' Designation	Frequency
Principal	1
Vice Principal	1
Bursar	1
Head Teacher	1
Health Master	1
Games Master	1
Labour Master	1
JSS 1 Class Teacher	1
JSS 2 Class Teacher	1
JSS 3 Class Teacher	1
SS 1 Class Teacher	1
SS 2 Class Teacher	1
SS 3 Class Teacher	1
English Teacher	4
Health Science Teacher	4
Biology Teacher	4
Total	**25**

Source: Researchers' Fieldwork (2020)

In the case of the students on the other hand, posts of responsibility and academic performance were the criteria used for selection. Based on this, students who hold key posts were and 15 academically sound students from each class (JSS 1 – SS 3) were selected. Table 2 gives a summary of the number of students selected per school.

Table 2: Designation of Students Sampled per School

Respondents' Designation	Frequency
Head Boy	2
Assistant Head Boy	2
Head Girl	2
Assistant Head Girl	2
Health Prefect	2
JSS 1 Students	15
JSS 2 Students	15
JSS 3 Students	15
SS 1 Students	15
SS 2 Students	15
SS 3 Students	15
Total	**100**

Source: Researchers' Fieldwork (2020)

Table 3 gives a summary of the total number of respondents sampled per school.

Table 3: Total Population of Respondents

Respondent's Identity	No per School	No of Schools	Total Population
Teachers	25	15	375
Students	100	15	1500

Source: Researchers' Fieldwork (2020)

From Table 3, it was revealed that 25 teachers/staff were selected from each school. This gives a total population of 375 teachers/staff considered for the study. The study sampled 100 students from each school. This implies that 1500 students were considered for the study across the 15 public secondary schools selected in Minna, Niger State for the study.

Methods of Data Collection
The use of close ended questionnaire was adopted for the collection of data for the study. In order to examine and assess the level of compliance of COVID 19 control measures, a quantitative research approach was adopted. According to ACAPS (2012), quantitative research methods are characterised by the collection of information which can be analysed numerically, the results of which are typically presented using statistics, tables and graphs. For phase I of assessments, the majority of quantitative data collected is secondary data (e.g. affected population figures provided by the government). During phase II, field level questionnaires complement the continued collection of secondary data through the collection of quantitative information using close ended questionnaire with two-response format (Yes/No). The questionnaire is made up of three sections. The first section addresses the profile of the respondents. The second section of the questionnaire seeks opinion of the respondents on the issue of awareness of COVID-19 control measures. Here the respondents were asked to respond whether they are aware (Yes) or unaware (No) of the COVID-19 control measures. The opinion of the respondents on the issue of compliance with seven (7) major COVID-19 control measures was sought. Here the respondents were asked to respond whether they implement/comply (Yes) or do not implement/comply (No) with the COVID-19 control measures. The categorical data obtained from questionnaire were transformed into percentage (continuous data) before being subjected to inferential analysis in order to determine percentage of teachers and students that are aware of the COVID-19 control measures to test the study's hypotheses.

Method of Data Analysis
The study employed the use of descriptive and inferential methods of analysis for the study. This included the use of frequency counts average, and percentage in order to determine the level of compliance to the measures preventing the spread of COVID-19 by the staff/teachers and students. The use of student's t test was employed to determine the difference between the percentage of staff/teachers and students who are aware of the preventive measures of COVID-19 pandemic. The data collected were transformed from categorical data into continuous data by changing them into percentage of teachers and students that are aware of the control measures of COVID-19 pandemic in each of the public secondary schools considered for the study.

The analysis of the questionnaires survey data was undertaken using the MS Excel and Statistical Package for Social Sciences (SPSS) Version 20.0. The inferential statistics was carried out at 5% level of significance. Descriptive statistics consists of methods for organising, displaying, and describing data by using tables, graphs and summary measures. While inferential statistics consist of methods that use sample results to help make decision or predictions about a population.

Reliability Test
In order to validate the research instrument used, a reliability test was carried out on the data collected. The result of the reliability test is summarised in Table 4.

Table 4: Reliability Test

Item No	Variable	Inter Item Correlation Coefficient
1	Teachers' Compliance	1.000
2	Teachers' Awareness	0.330
3	Teachers' Average Awareness	0.996
4	Teachers' Percentage Awareness	0.549
5	Students' Compliance	0.376
6	Students' Awareness	0.370
7	Students' Average Awareness	0.375
8	Students' Percentage Awareness	0.237
N	**15**	
Cronbach's Alpha	**0.778**	
Cronbach's Alpha Based on Standardized Items	**0.812**	

Researchers' Field Survey (2020)

Table 4 shows that all the items loaded have fairly good correlation coefficient which range between 0.237 and 1.000. The Cronbach's Alpha of 0.778 observed for the reliability test is high and close to 1.000. The Cronbach's Alpha based on standardized items is 0.812 and is of a higher value and closer to 1.000. This shows that the research data are reliable and hence the research instrument is valid.

RESULTS AND DISCUSSION
Results and Discussion on Level of Awareness of Teachers and Students on Control Measures of COVID-19 in Public Secondary Schools in Minna, Niger State
In order to carry out the inferential analysis for this study, the data collected on the number of teachers and students that are aware and not aware of the control measures of COVID-19

pandemic were transformed from categorical data (Yes/No) into continuous data (percentage). In order to do this, the data was transformed into the percentage of teachers and students that are aware of the control measures of COVID-19 in the 15 public secondary schools studied in Minna, Niger State. This is illustrated in Figures 1 and 4.

Fig. 1: Comparison between Number of Teachers Aware and Unaware of COVID 19 Measures in Selected Public Secondary Schools in Minna, Nger State
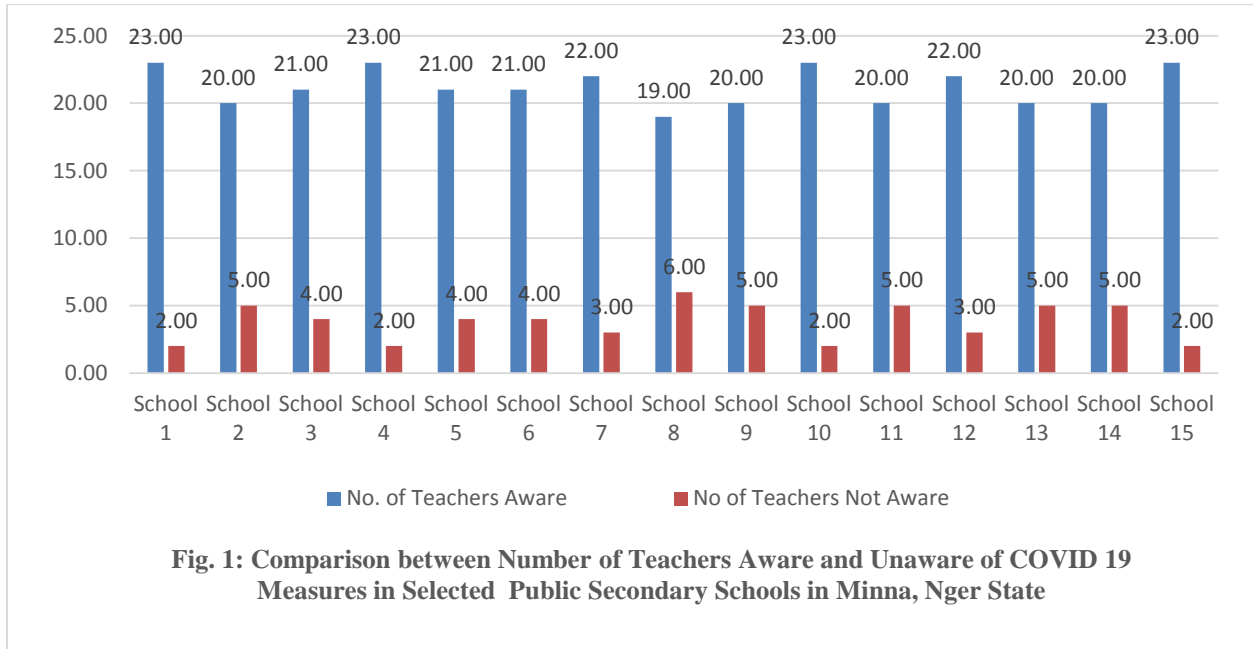
Figure 1 presents the result of data collected on the number of teachers that are aware of the control measures of COVID 19 and the number of teachers that are not aware of the control measures of COVID 19 pandemic across the 15 secondary schools considered for the study. It was shown that in all the 15 public secondary schools, the number of teachers that are aware of the control measures of COVID 19 pandemic are more than the number of those that are not aware.

Fig. 2: Comparison between Number of Students Aware and Unaware of COVID 19 Measures in Selected Public Secondary Schools in Minna, Nger State
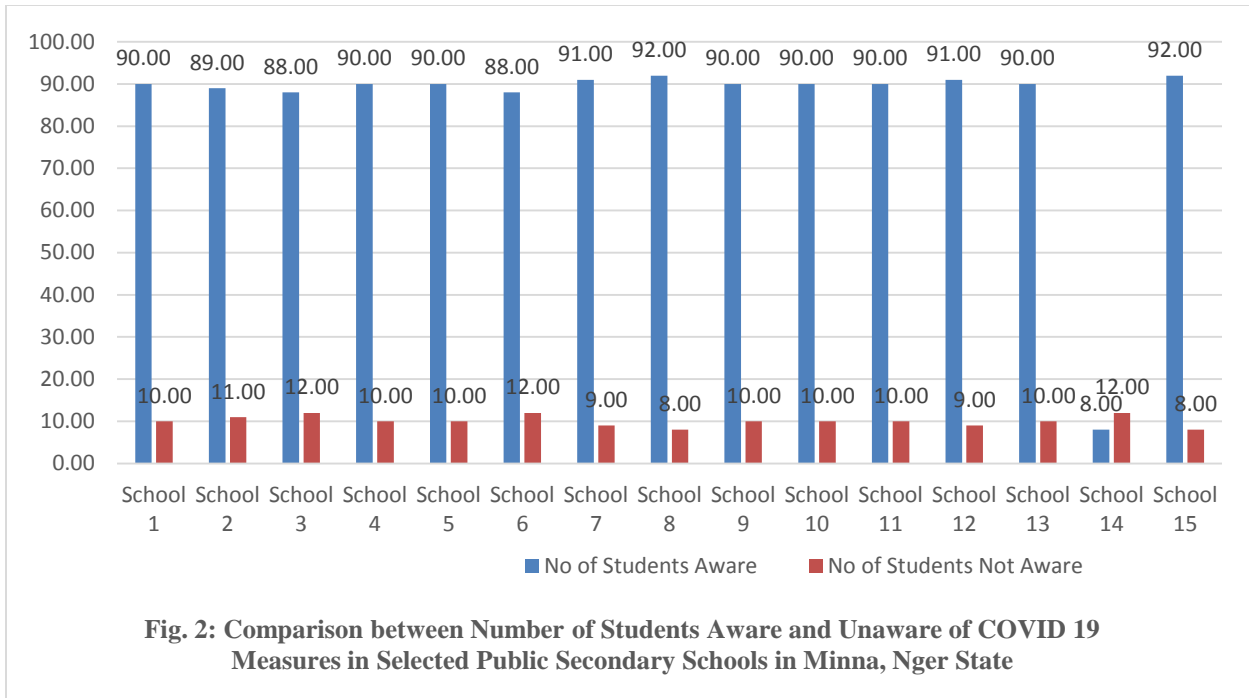
Figure 2 presents the result of data collected on the number of students that are aware of the control measures of COVID 19 and the number of students that are not aware of the control measures of COVID 19 pandemic across the 15 secondary schools considered for the study. It was also indicated here that in all the 15 public secondary schools, the number of students that are aware of the control measures of COVID 19 pandemic are more than the number of those that are not aware.

Fig. 3: Comparison between Percentage of Teachers and Students Aware of COVID 19 Measures in Selected Public Secondary Schools in Minna, Nger State
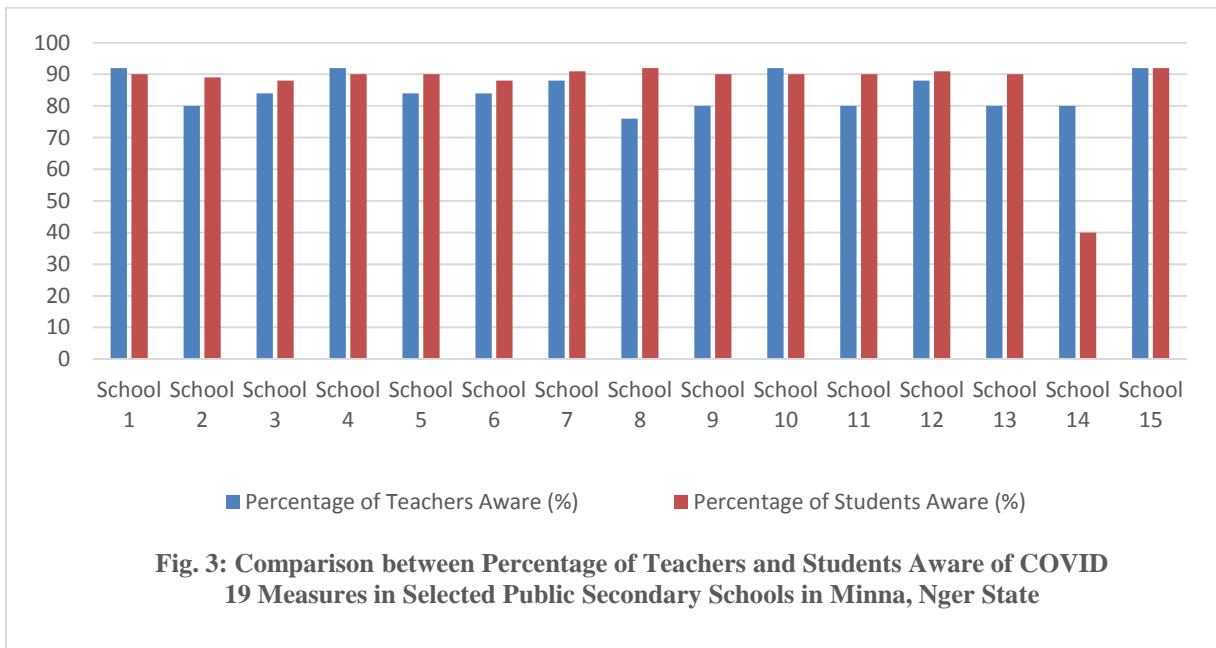
Figure 3 shows the result of the transformed data into the percentage of teachers and students that are aware of the control measures of COVID 19 pandemic in the 15 public secondary schools considered for the study. Figure 3 compares the data on the percentage of teachers that are aware of the control measures of COVID 19 pandemic and the percentage of students that are aware of the control measures of COVID 19 pandemic in the 15 public secondary schools considered for the study. It was revealed that in most of the schools (Schools 2, 3, 5, 6, 7, 9, 11, 12, 13 and 14) the percentage of teachers that are aware of the control measures of COVID 19 pandemic is less than the percentage of the students that are aware of the control measures of COVID 19 pandemic. In the fifteenth school, equal proportion of teachers and students are aware of the control measures of COVID 19. In Schools 1, 4, 8 and 10, the percentage of teachers that are aware of the control measures of COVID 19 pandemic is greater than the percentage of the students that are aware of the control measures of COVID 19 pandemic. This gives a fluctuating or irregular trend which calls for a further analysis. In view of this, before the inferential analysis was undertaken, an average value was computed for the fifteen schools on the percentage of teachers and students that are aware of the control measures of COVID 19 pandemic. This is shown in Figure 4.

Fig. 4: Comparison between Average Proportion of Teachers and Students Aware of COVID 19 Measures in Selected Public Secondary Schools in Minna, Nger State
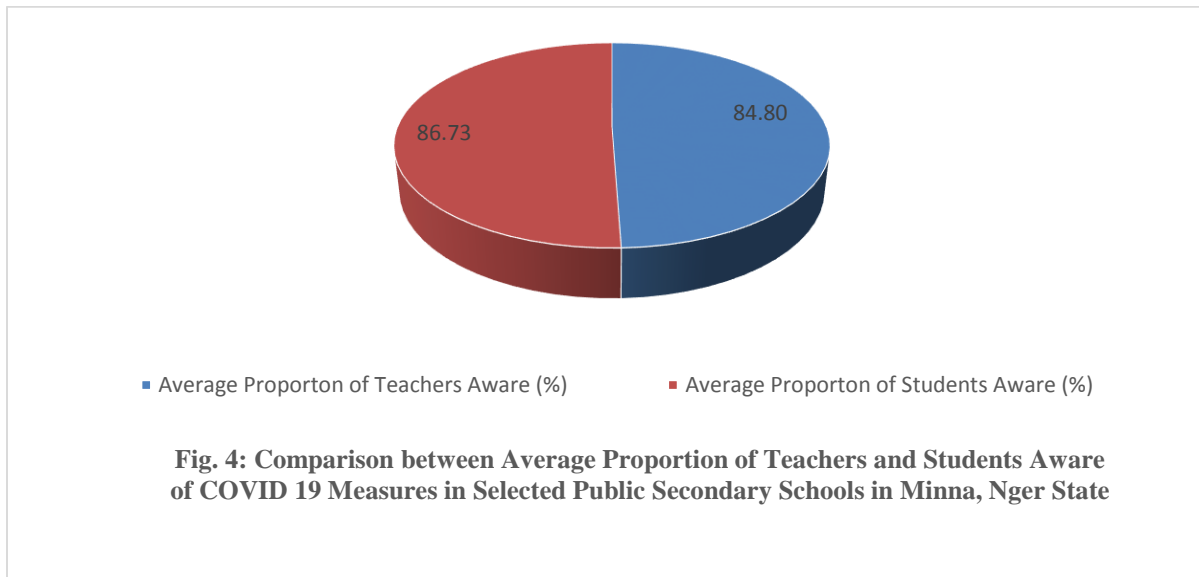
Figure 4 also shows a slightly lesser average proportion of teachers (84.80%) that are aware of the control measures of COVID 19 pandemic than the average proportion of students (86.73) that are aware of the control measures of COVID 19 pandemic. This shows a similar trend from the result shown in Figure 3. On the basis of this, the use of the inferential analysis was further undertaken to compare the trend between teachers and students of the 15 public secondary schools selected in Minna, Niger State on the awareness of the control measures of COVID 19 pandemic. This was done in order to test the research hypothesis inferentially.

The inferential analysis is the independent sample t-test undertaken in order to determine the statistical difference between the percentage of teachers and students that are aware of the control measures of COVID 19 pandemic in the 15 public secondary schools in Minna, Niger State which were considered for the study. Table 5 presents the results of this independent sample t-test.

Table 5: T-Test Result on Percentage of Teachers and Students that are Aware of the COVID–19 Control Measures in 15 Public Secondary Schools in Minna, Niger State

Analysis No.	Variables Tested		Observations				Inferences	
	X_1	X_2	Mean Values	T_{cal}	T_{tab}	P_{value}	Remark	Action on H_O
1	Teachers' Awareness Level	Students' Awareness Level	$X_1 = 84.80$ $X_2 = 86.73$	0.531	2.040	0.600	NSD	Accepted

Source: Researcher's Analysis of Data (2020)

Key:

NSD = No Significant Difference

In the t - test presented in Table 5, it was observed that there exists a non-statistically significant difference between the percentage of teachers that are aware of the control measures of COVID-19 pandemic and the percentage of students that are aware of the control measures of COVID-19 in the 15 public secondary schools sampled for the study. The mean value observed for the percentage of teachers that are aware of the COVID 19 control measures is 84.800% while that of the students is 86.733%. This implies that a slightly lesser percentage of teachers are aware of the control measures of COVID19 than the percentage of the students that are aware of the control measures of COVID 19 pandemic. This supports the results of the descriptive analysis in Figure 3. The t calculated value of 0.531 observed was less than the t tabulated value of 2.040 and the observed P (sig.) value of 0.600 was greater than 0.05. This implies that there is no significant difference between the percentage of teachers that aware of the control measures of COVID-19 and the percentage of students that are aware of the control measures of COVID-19 pandemic. This led to the acceptance of the null hypothesis which states that there is no significant difference between the percentage of teachers and students that are aware of the control measures of COVID-19 pandemic in public secondary schools in Minna, Niger State. The study of Okoro *et al*. (2020) agrees with the finding if this study because it revealed a high level of knowledge, practices and attitude among correctional officers towards COVID-19. Also in line with this study, is the finding of a related study by Oyeyemi *et al*. (2020) that a high proportion of respondents had correct knowledge about COVID-19. For this reason, Oyeyemi *et al*. (2019) reported that to effectively continue to break the chain of transmission of the current outbreak of COVID-19, there is an urgent need for a robust and continuous public enlightenment about the disease.

Results and Discussion on Percentage of Teachers and Students in Compliance with COVID-19 Control Measures in Public Secondary Schools in Minna, Niger State

In the descriptive analysis, the data so collected were organised and presented in a clear and systematic way, so that the analysis can result in valid and accurate conclusion. For this purpose, the percentage of teachers and students in compliance with control measures of COVID-19 was determined under seven (7) major control/preventive measures. These are:

  i. Ensuring people with symptoms of COVID-19 do not come to work/school.
  ii. Screening staff and students.
  iii. Physical (Social) distancing.
  iv. Good/Personal hygiene.
  v. Cleaning and disinfection.
  vi. Contact Tracing.

vii.   Use of Personal Protective Equipment (PPE).

The result of the descriptive analysis on the seven (7) measures identified are presented in Table 6.

Table 6: Results of Teachers' and Students' Compliance with COVID-19 Control Measures in 15 Public Secondary Schools in Minna, Niger State

S/N	MEASURES	TEACHERS		STUDENTS		
		Yes (%)	No (%)	Yes (%)	No (%)	
1	**Ensuring people with symptoms of COVID 19 do not come to work**					
a.	Awareness of COVID 19	92	8	90	10	
b.	COVID 19 patient are not allowed to come to work or school	83	17	46	54	
c.	Symptoms of COVID 19	95	19	38	62	
2	**Screening workers and students**					
a.	Contact with persons with COVID 19	1	99	1	99	
b.	Travel outside Minna Niger state recently	32	68	45	55	
c.	Temperature check with touch free thermometer	60	40	40	60	
3	**Physical distancing (Social distancing)**					
a.	Understanding physical distancing	92	2	33	67	
b.	Probability of implementing social distancing	9	91	5	95	
c.	Implementing physical distancing at workplace/school will reduce person in workplace/school spreading COVID 19	93	7	85	15	
d.	Implementing physical distancing at workplace/school will reduce person in workplace/school contacting COVID 19	93	7	80	20	
e.	Implementing physical distancing at workplace/school will reduce that person enter the workplace/school with COVID 19	95	5	92	8	
4	**Hygiene**					
a.	Practice good hygiene	99	1	98	2	
b.	Adequate facilities to achieve good hygiene	55	45	45	55	
c.	Adequate suppliers of water, soap, toilet paper and dry facilities	53	43	32	68	
5	**Cleaning and disinfection**					
a.	Appropriate implementation of cleaning and disinfection measures at workplace/school	60	40	47	53	
b.	More frequently used place is more frequently clean	55	45	35	65	
c.	More frequently used equipment are cleaner	55	45	35	65	
6	**Contact tracing (Any contact tracing)**	0	100	0	100	
7	**Personnel Protective Equipment (PPE)**					
a.	Face mask are worn at the school	65	35	70	30	
b.	Types of face mask worn	**N95 & P2 Mask**	**Surgical Mask**	**Cloth Mask**	**N95 & P2 Mask**	**Surgical Mask**	**Cloth Mask**
	Frequency (%)	10	30	60	0	30	70

Source: Researchers' Analysis of Data (2020)

The result of the analysis on ensuring people with symptoms of COVID-19 do not come to work is presented in items 1a – 1c of Table 6. Increased awareness of the existing COVID-19 is important to prevention or minimising the spread of COVID-19 at workplace and schools. From Table 6, it can be observed that both the teachers and students have significant awareness of the COVID-19 pandemic that is 92% and 90% awareness of the COVID-19 respectively (Item 1a). Despite the fact that it is all over the media that anybody with COVID-19 symptoms should stay at home not to come to work or school, the results in Item 1b is not impressive as knowing that if anybody have COVID-19 should not come to work reduces the risks of spreading the virus. The results in Table 6 shows that 83% of the teachers know that, while only 46% of the students know that with COVID-19 don't go to school. Understanding the symptoms of COVID-19 reduces the risks of person with COVID-19 spreading the virus at workplace or schools. It is important for everyone to know at least five (5) symptoms of the virus. The results in Item 1c of Table 6 shows that significant percentages (95%) of the teachers can list at least five (5) symptoms of the virus, while on the sides of the students a reasonable number of the students (62%) cannot list at least five (5) symptoms of the virus.

The result of the analysis on Screening workers and students is presented in items 2a – 2c of Table 6. It is advisable to always ask workers if they have any contact within the last 48hours with person with COVID-19 or show any symptoms within the last 48hours as a result of their contact with person with COVID-19. Such information will assist the management in controlling the risk of spreading the virus at workplace and schools. It can be clearly stated from observation of Item 2a of Table 6 that both the teachers (99%) and the students (99%) do not have any contact with the person with COVID-19 within the last 48 hours. Just as the virus disease have spread in some countries like USA, Spain, Italy, France, UK, and Germany being the most affected, so also there are states in Nigeria that have higher rates of the virus. Such States include Lagos, Abuja, Kano, Ogun, Osun and Rivers. Such information about the rates of COVID-19 were obtained from National Centre for Disease Control (NCDC) during the Presidential Task Force (PTF) on COVID-19 presented on national media every day. From Item 2b of Table 6, it can be observed that more students (45%) travel outside Minna more than their teachers (32%). Such information is useful as it keep on monitoring of those that have travel to those state with high rates of the virus in other to reduce the risk of spreading the virus. Temperature checks can be used in combination with other measures but they should not be solely relied on. Temperature checks do not indicate whether a person has COVID-19. A person could have a temperature for another reason unrelated to COVID-19, and people with COVID-19 may also be asymptomatic or on medication that reduces their temperature. The results in Item 2c of Table 6 have some hidden facts, while the teachers (60%) are trying to protect the system the students (40%) are in support of their teachers stand as regard the use of the temperature touch free thermometer at the entrance to the schools premises.

The result of the analysis on Physical distancing (Social distancing) is presented in Items 3a – 3e of Table 6. Is the requirement that people distance themselves from one others, every person to maintain a physical distance of 1.5 meters? Implementing physical distancing controls reduce the risk of a person in the workplace spreading and contracting COVID-19, including the risk that persons with COVID-19 enter the workplace. In understanding and its meaning the teachers (92%) have more knowledge of it more than the students (33%) (Item 3a of Table 6). More than 90% of the teachers (91%) and students (95%) believed that is not possible to implement social

distancing at their offices and classrooms due inadequate office accommodation in most school and over population in classrooms (Item 3b of Table 6). Although it may be difficult to maintain physical distancing is schools classroom, school management must still implement measures to maximise the distance between people to the extent it is safe and possible to do so. Where the interaction is unavoidable, school management must also minimise the time that workers and students are in close contact, and if appropriate, provide workers with PPE.

Implementing physical distancing controls reduce the risk of a person in the workplace/school spreading COVID-19. It is important to ensure the layout of the workplace/classrooms enables people to keep 1.5 metres apart. From table 9a both the teachers (93%) and the students (85%) agreed in principles that implementing physical distancing will prevent/reduce the spread on COVID-19 (Item 3c of Table 6). Implementing social distancing at workplace/schools can prevent/reduce the rate of contacting COVID-19. It is important to redesigning the layout of the workplace/classroom including creating one-way systems in corridors, stairways and other common areas if possible in other to reduce contacting. From Item 3d of Table 6, the teachers (93%) and students (80%) agreed that by implementing social distancing at workplace/schools can reduce the rate of contacting COVID-19. It is important to limiting access to the workplace/school or parts of the workplace to only workers that need to be there. Also, providing separate entry and exit points to that person with COVID-19. It can be observed from table 9c that teachers (95%) and students (92%) agreed that implementing social distancing at workplace/school can reduce or even prevent that person with COVID-19 spreading the virus (Item 3e of Table 6).

The result of the analysis on Hygiene is presented in Items 4a – 4c of Table 6.   Everyone must continue to practice good hygiene at all times to prevent the virus spreading. Good hygiene requires everyone to wash their hands regularly with soap and water for at least 20 seconds and dry them completely, preferably with clean, single-use paper towel. Virtually all the teachers (99%) and students (98%) agreed that they practise good hygiene at all times to prevent the spread of COVID-19 (Item 4a of Table 6). It is better to consider the number of workers/students and other people entering the workplace or schools in providing adequate facilities for good hygiene. It is advisable that the alcohol-based hand sanitizer (with at least 60% ethanol or 70% isopropanol as the active ingredient) in appropriate locations, such as entry and exits, if there are limited hand washing facilities available. From Item 4b of Table 6, teachers (55%) agree that such facilities are adequate. While on the other hand students (45%) believed that such facilities are inadequate. One wander the type of response here, is as the teachers are trying to make good their system while the students want to give the exact situation of things. This finding disagrees with that of PTF (2020) that reported that training workers on the importance of washing their hands with soap and water for at least 20 seconds and drying them correctly, or using an alcohol-based hand sanitizer is compulsory and such facilities should be provided. The teachers and students will be at risk of spreading and contacting COVID-19 if such facilities are not provided adequately. From Item 4c of Table 6, the teachers (53%) agree that the items are adequately provided, while the students (68%) disagree with their teachers stand. It is in the opinion of the researcher that the students express the actual situation of things.

The result of the analysis on Cleaning and disinfection is presented in Items 5a – 5c of Table 6. School management can protect workers/students and others from the risk of exposure to COVID-19 is by implementing appropriate cleaning and disinfecting measures. Cleaning means

physically remove germs and disinfecting means using chemicals to kill germs. From Item 5a of Table 6, teachers (60%) agree that such operation were carried out but students (53%) do not believe that such operations are carried out as required. Cleaning and disinfection may be required at workplaces with a high volume of workers and students or visitors that are likely to touch surfaces. Cleaning and disinfection should be used where there is a high volume of workers, students or visitors that are likely to touch surfaces. From Item 5b of Table 6, teachers (45%) agree that such cleaning and disinfection are frequently carried out. Teachers (45%) disagree that such action are carried out frequently. On the side of students, 35% agree with their teachers while 65% of students totally disagree with the teachers on the issue of cleaning and disinfection. The results in Item 5c of Table 6 are similar to that of Item 5b of Table 6. The results are of the cleaning and disinfection of equipment in schools workshops, laboratory and library. More frequent cleaning may be required if equipment is shared between workers and students or among themselves. It should be cleaned between uses, where practicable. Where cleaning on or around electrical equipment/fittings, isolate electrical equipment and turn off power source if possible before cleaning with liquids. The results in Table 6 shows that teachers (55%) agree that the equipment in the workshop, laboratory and library are frequently clean. Teachers (45%) disagree with the issues. On the other sides, only 35% of students agree that equipment is frequently clean while 65% of students disagree with their teachers' stand on cleaning and disinfection of equipment.

The result of the analysis on Contact tracing is presented in Item 6 of Table 6. Contact tracing is the process of identifying, assessing and managing people who have been exposed to COVID-19, to prevent transmission. In conjunction with the other control measures, contact tracing can help slow the spread of COVID-19. Contact tracing usually relies on the infected person's recollection of individuals they have been in contact with. Both the teachers (100%) and students (100%) have no contact with the person with COVID-19.

The result of the analysis on Personnel Protective Equipment (PPE) is presented in Items 7a and 7b of Table 6. The results in Item 7a of Table 6 is based on observation of the required same for the study of teachers and students within the schools premises. The main benefit of wearing a mask is to protect others. If the person wearing the mask is unknowingly infected, wearing a mask will reduce the chances of them passing the virus on to others. Some workplace and schools have issued directions about wearing face masks in public and other specific settings. Therefore, results in Table 6 shows that 65% of teachers wear mask while 35% of teachers do not wear mask within the school premises. Seventy percent (70%) of students wear mask while 30% of students do not wear mask within school premises. Students respect wearing of mask more than their teachers. The breakdown of types of mask worn within school premises were shown in Item 7b of Table 6. Sixty percent (60%) of teachers wear cloth mask, 30% of teachers wear surgical mask and 10% of teachers wear N95 & P2 mask. However, 70% of students wear cloth mask, 30% of students wear surgical mask. Wearing a face appropriate where directed or recommended by a state or territory (e.g. under public health orders or in areas where there is community transmission). The N95 & P2 mask are tight fitting with adjustable nose piece, air filtration mechanism, can be disposable, protect the wearer from bacteria and virus, etc. and is recommended for medical procedures that generate aerosols from a patient. It is not recommended for non – healthcare settings. The face surgical mask is loose fitting, disposable, physical barrier, designed for medical settings to provide droplet protection, do not protect the wearer from bacteria and virus, etc. and recommended for suspected or confirmed COVID-19

patients and those providing their care, healthcare workers who have frequent, close contact with sick or vulnerable people, the general public and other specific groups and settings when recommended or required by government, etc. The face cloth mask is are a washable covering of the wearer's nose and mouth, cloth masks may be a suitable alternative to a surgical mask when masks are recommended or required to be worn by the general public in specific circumstances and cloth masks should be properly designed, constructed and washed to maximise the protection provided.

In summary, the results of this study indicates that both the staff and students have high level of awareness of and compliance with the control measures of COVID-19 in the selected secondary schools in Minna, Niger State on the average. However, the teachers have been shown to have slightly lower level of awareness and higher level of compliance than the students on the average. This may be as a result of the fact that the students are supposed to learn from the teachers while the teachers are expected to be a good example to the students. The lower percentage of teachers that are aware of COVID-19 control measures may be as a result of the slight disparity between the response of the teachers and the students. Although, on the overall both the teachers and students have high level of awareness of and compliance with the control measures of COVID-19. The overall finding of this study is in line with the finding of the study of Carvalho *et al*. (2020) where it was reported that training and supporting teachers and other school staff to offer school-based psychosocial support to returning students; and prepare for a spike in the number of students with malnutrition and other unmet basic needs will help in increasing the level of compliance to COVID 19 control measures. In addition, Oyeyemi *et al*. (2020) found that Nigerians' knowledge, perception and adherence to preventive measures of COVID-19 is averagely high.

CONCLUSION AND RECOMMENDATIONS
The study assessed the awareness and compliance with COVID-19 pandemic control measures in public secondary schools in Minna, Niger State with a view to improving level of compliance among teachers and students. Data were collected with the aid of questionnaire from both teachers and students of fifteen secondary schools in Minna, Niger State. Both descriptive (frequency count and percentile) and inferential (independent sample t - test) analytical tools were employed for data analysis. Findings from the analysis of data led to the conclusion that both teachers and students of the selected secondary schools have high level of awareness of and compliance with the control measures of COVID-19 pandemic except for the measures of contact tracing which is not the sole responsibility of the schools' management anyway and can only be implemented when there is a reported case of COVID-19 in such a school. In addition, the teachers have slightly lower level of awareness and higher level of compliance than the students.

In view of the conclusions made, it is recommended that the school management should constantly organise orientation and re-orientation for both staff and students, especially the staff in schools on the control measures of COVID-19 so as to maintain high level adherence and awareness rate at all times. School management should always put up mechanism for implementing the contract tracing measures in order to act immediately when a case of COVID-19 is found among staff or students in a school. Finally, the government should ensure that the education budget of the country takes care of additional fund to support schools in the implementation of the control measures of COVID-19 pandemic and such budget should be fully

implemented because education is one of the most important sector that must be given priority at this period of time.

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