



Understanding and Adherence to Covid-19 Management Protocol in Public Primary Schools in Adamawa State, Nigeria

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ABSTRACT

The study was done to examine COVID-19 management protocol in public primary schools in Adamawa State, Nigeria. One of the objectives of the study which this paper is based, focussed on evaluating how Covid-19 management being understood and adhered to by teachers and students and how that influenced classroom teaching and learning. The study adopted the survey research design where a sample of sixteen (16) schools was used. A sample of sixteen (16) head, one hundred and sixty (160) pupils, thirty-two (32) subject teachers were drawn from the target population using the stratified random sampling and purposive sampling to serve as respondents for the study. Questionnaire was used as the main instrument for collecting data for the study. The data collected were analysed using mean score method of data analysis. The paper established that the teachers and pupils in public primary schools in Adamawa State have knowledge on Covid-19 pandemic management protocols. Despite having the knowledge on Covid-19 pandemic management protocols, there are some challenges affecting the full utilization of the knowledge in the school like: scarcity of chemicals to clean the school, shortage of mask to cover the mouth and nose, shortage of materials like soap, alcohol sanitizer, shortage of water, deficiency of body temperature measuring device. Based on the above findings, this paper recommends that: Government should introduce seminars and workshops for the teachers to be updating their preventive knowledge and State government should build more ventilated classrooms for utilization of the learning materials and resources during the COVID-19 pandemic among other recommendations.

Keywords: Covid-19 Pandemic, Covid-19 management protocol and Public Primary Schools

Background and Introduction

In the year 2019, the whole world was shocked with the pandemic outbreak of Corona virus disease caused by SARS-CoV-2 (Severe acute respiratory syndrome – corona virus initially known as 2019-nCoV). The disease was reported in Wuhan, the capital city of China, in the year 2019. On March 11, 2020, the World Health Organization declared Covid-19 a global pandemic (World Health Organization, WHO, 2020). During the same month, China confirmed 83,878 cases of the infection and mortality rate at 4636. The World Health Organization described the infection as a H1N1 influenza pandemic. Since then, Covid-19 went on the rise globally bringing about social and economic implication to all economies, learning institutions and population of different countries (WHO, 2020).

The Covid-19 pandemic had infected over 3.04 million people around the world as of April 28th, 2020, with over 211,305 deaths and slightly more than 895,261 verified recovered cases (United Nation Educational Scientific and Cultural Organization, UNESCO, 2020a). With 988,469 infected cases, 56,253 deaths, and 111,583 recoveries, the United State of America (USA) was declared to be in the lead (Powell Crain, 2020). Italy had 199,414 infected cases, 26,977 deaths, and 66,624 recoveries, while the United Kingdom (UK) had 158,348 infections, 21,157 deaths, and 809 recoveries (Coll, 2020). Spain documented 229,422 infected cases, 23,521 fatalities, and 120,832 recoveries within the same time period (WHO Report, 2020).

Corona virus Disease (COVID-19) outbreak poses serious concerns to global education systems. Efforts to contain COVID-19 prompted unscheduled closure of schools in more than 100 countries worldwide. This school closure left over one billion learners out of school.

Teaching and learning in schools had many variables such as the learning task, learner behaviour and teacher behaviour. Before the outbreak of COVID-19 these variables enabled learners to interact and work in achieving their objectives in acquiring knowledge, skills and behaviours in order to gain their experience. The interaction promoted best teaching and learning practices in a consistent manner within the learning institutions.

The outbreak of Covid-19 pandemic has caused a lot of disruption in teaching and learning process with universal impact on teachers, learners and learning resources around the world at all levels of education. Schools were closed, classroom teaching was suspended and students remained indoors at home in fear of the spread of Covid-19 virus in schools. The Nigerian ministry of education came up with some management protocols to curtail the spread of Covid-19 pandemic and at the same time ensure the continuation of teaching and learning in schools. These protocols include: virtual exchange

between teachers and learners, social distancing, few number of not more than twenty students in a class, appropriate use of face mask, proper hand washing with soap and water and using out door and ventilated area for learning purposes among other protocols that were to help minimize the spread of Covid-19. However, considering the economic status and technological challenges the Nigerian education sector faces, some Covid-19 pandemic management protocols faced challenges in their implementation. Most schools in Nigeria seemed to lack technological capacity and resources to adapt to Covid-19 containment measures such as the use of Radio and television for teaching and learning and other online learning models that necessitated the use of digital gadgets and internet by both teachers and students. Despite the fact that schools had limited facilities and resources, the challenges they faced in observing the Covid-19 protocols in teaching and learning and the strategies they used to navigate such challenges had not been fully researched. This knowledge gap necessitated a study of this nature. The fact that the social setting of Nigerian society promote close social interaction between students and their teachers and among students themselves in the course of teaching and learning also led to the need to seek understanding of how Covid-19 management protocols that partly restricted free social and physical interaction were observed in schools.

Covid-19 pandemic was real and is still in existence. There was need for management protocols to be observed to ensure continuity of teaching and learning in Adamawa State. Before the designing and implementation of this study, the impact of long-term school closures that resulted from the need to control the spread of Covid-19, had also not been fully assessed. Yet education is one of the biggest determinants of a population's health and prosperity. School attendance is important for children's social, physical, and psychological well-being. The data on the implementation of COVID-19 pandemic management protocols and its influence on classroom teaching and learning in public primary schools, especially in Adamawa State, Nigeria, were minimal yet necessary. This study was conducted in Adamawa State which is among the States that experienced high rates of Covid-19 pandemic with cases of 1, 157 in 2021 when compared to other states like: Borno which recorded 81, Yobe 19, Taraba 25, Gombe 30 and Bauchi 70 cases of infection within the same year 2021.

One of the objectives of this study, on which the paper is based, focused on evaluating how Covid-19 pandemic management protocol was being understood and adhered to by teachers and students and how that influenced classroom teaching and learning in public primary schools in Adamawa State, Nigeria. The study was done with an aim of suggesting appropriate teaching and learning practices for healthy learning environment during and after the Covid-19 pandemic outbreak and other similar pandemics.

In the context of the objective highlighted above, this paper seeks to address the following research questions:

- i. What do teachers and students understand about the Covid-19 management protocol in public primary schools in Adamawa State, Nigeria?
- ii. How are teachers and students adhering to the Covid-19 management protocol in public primary schools in Adamawa State, Nigeria?
- iii. What challenges face teachers and students in the implementation of the Covid-19 management protocol in public primary schools in Adamawa State, Nigeria?

The COVID-19 Management protocols

The COVID-19 pandemic management protocol constitutes measures done both inside and outside the classroom to stop the virus from spreading. Physical distancing at school, practicing health and hygiene, cleaning and sanitizing advice for classrooms, and intervening if a pupil appears sick are all part of the program (UNICEF, 2021). Teachers' knowledge of the facts will not only protect the teachers but also help the students in understanding COVID 19, how it spread and how the students can protect themselves and others. This is an important step in establishing classroom procedures and protocols, because students need to understand in order for them to follow the rules.

According to Ministry of Education, (2013a) and Werabe administrative town education office (2013) schools were to fulfil the set standards before re-opening. For instance, it was mandatory for all students and teachers to wear face masks, schools needed to allocate one desk per a student, the school was to accommodate a maximum of 1000 students in one shift, staff and students needed to keep 2-meter distance in the school environment, schools had to provide sufficient sanitizer, cleaning water and soap as per their students' population.

Other useful measures included avoiding unnecessary or non-essential movements within and outside the schools, adhering to physical distancing guidelines (keeping 1-2m distance away from others), covering mouth and nose with flexed elbow or tissue when coughing or sneezing and used tissue was to be disposed off properly (in the pit latrine or toilet). Washing hands often with soap and water for at least 20 seconds or use of an alcohol-based hand sanitizer (at least 70% alcohol content), that has not been diluted had to be observed. Face masks were to be worn in public, including when using public transport. Also necessary was cleaning and disinfecting frequently touched surfaces and objects, including desks, tables, floors, and doorknobs, Schools were to adhere to any other new measures recommended by the Ministry of Health on the prevention of COVID-19 (NCDC, 2020). UNESO (2021) depicted that guaranteeing schools are cleaned and disinfected and guaranteeing that staff, students and other visitors to the school have access to washbasins with water was to be given priority to safely return students and staff to schools.

Numerous countries began responding to Covid-19 pandemic by trying to minimise the rate of infection using different methodologies such as contact tracing and quarantine as per the requirement with the health systems (Caena & Redecker, 2019). For these strategies to be embraced individuals were to be knowledgeable regarding the Covid-19 pandemic and that called for change of attitude among individual practices (Campos et al., 2021). These preventive measures were crucial since there was no treatment for the disease and thus useful in reducing the rate of transmission from one person to

another. Regarding body temperature measuring devices, documents like (MoE, 2013a; MoSHE, 2013) encourage schools to have a thermometer at the gate so that the body temperature of all staff and students could be checked whenever they went in and out of the school compound.

Similarly, Giuseppina et al (2020) observed that cleaning and disinfecting floors, surfaces, and all premises with alcohol or sanitizer was necessary at least once per day with additional cleaning on frequently touched surfaces like door handles. He also stated that toilets had to be cleaned frequently at least two or three times a day.

There was evidence to demonstrate that the scarcity of mask in schools of the study area was already highly affecting the implementation of COVID-19 management protocols. In the same way, National Academy of Science and Technology (2020) showed that dearth of Personal Protective Equipment (PPE), such as masks and face shields for students and teachers; was becoming a barrier in school reopening. National Academy of Science and Technology (2020) stated that poor-quality school buildings that had bad indoor air quality and inadequate bathroom facilities could also complicate school reopening in America and may make it difficult for school districts to implement the recommended health and safety measures which in turn poses a challenge for equitable implementation of the strategies as children and youth from low-income families were disproportionately attending their schools with poor quality facilities. In the same way United Nation (2020) elaborated that schools had to be cleaned and disinfected to inform hygienic practices for students and staff, especially in case they were used as health centres during the closure period.

Research Design and Methodology

This research made use of survey research design. Surveys are used as a tool to gain a greater understanding about an individual or group perspectives relative to a particular concept or topic of interest. To collect the required data for this study, the researchers consulted both primary and secondary sources of data. As secondary sources, various documents particularly MoE guidelines, journal articles, WHO reports, attendance sheets, lesson plans, and various reports were considered.

The target population, is a part of the population drawn from the entire universe (Mugenda & Mugenda, 2013). The target population for this study comprised all the public primary school pupils (309,434), and head teachers and teachers (37800) in Adamawa State, numbering 347, 234. Public primary school pupils were chosen due to their high vulnerability in society and high level of exposure to COVID-19. The researchers used the target population of public primary school head teachers numbering 1,890 and subject teachers numbering 35,910 and primary school pupils numbering 309,434 distributed across the 21 local education authorities according to Adamawa State Universal Basic Education Board (ADSUBEB, 2021).

This study employed multistage sampling techniques which include stratified random sampling, simple random sampling, and also purposive sampling. The study used stratified random sampling to select four (4) schools from each of the five educational zones in Adamawa State, to form a total of 16 schools. To begin with, schools were grouped into three strata in each of the four zones that included mixed-sex schools, boys-only schools, and girls-only schools. In each of the three strata, the names of every single school was written on a piece of paper, folded and placed in a bowl. The bowl was shaken and a school randomly picked to be included in the sample.

The study also made use of a purposive sampling method to select head teachers, pupils and teachers. Purposive sampling was used because it meets with the research purpose of studying Covid-19 pandemic management protocol in the area of teaching and learning primary school. In this case, therefore, the sample was obtained purposively in regard to COVID-19 pandemic management protocols and classroom teaching and learning in public primary schools in Adamawa State, Nigeria.

Twenty-one (21) Local Education Authorities (LEAs) were grouped into educational zones. Each educational zone was regarded as a stratum, and all the schools were grouped into five (5) strata. In selecting the study sample, the researchers used the stratified random sampling method to select four (4) schools from each stratum, hence a total of sixteen (16) schools studied. The researchers used sixteen (16) schools for the study, (16) head teachers for questionnaire, one hundred and sixty (160) pupils and thirty-two (32) subject teachers.

Questionnaire was used as the instrument for collecting data for the study. The questionnaire was organized into categories of four sections, whereby section A contained the general information about respondents, such as age, gender, teaching experience, and level of education. In sections B C and D the researchers used closed entered items formulated using the modified Likert Scales. It enables researchers to collect data that is needed to achieve the objectives of the study.

Tool for data collection were pretested on a selected sample that is similar in terms of characteristics to the actual sample that was used in the research. The instrument were piloted on primary school teachers, pupils and head teachers from public primary schools in the same state of Nigeria. The participants in the pilot sample were excluded from the actual study. Pretesting of research instruments was done to reveal the validity and adequacy of instruments, not excluding language, length, focus, and ambiguity. The data obtained from questionnaire was quantitatively analyzed using mean score method of data analysis and this was guided by the research objectives.

Results and Discussion

Knowledge of students and teachers on the COVID-19 management protocols in public primary schools in Adamawa State, Nigeria.

Findings concerning the knowledge of the Covid-19 management protocol by teachers and students in public primary schools in Adamawa State, Nigeria are illustrated in table 1 below:

Table 1: Knowledge of students and teachers on the COVID-19 management protocols in public primary schools in Adamawa State, Nigeria.

S/N	ITEM OF COVID-19 MANAGEMENT PROTOCOL	Mean	Awareness
1	Awareness of the need to create awareness on Covid-19	3.41	Agreed
2	Ensuring Physical distancing principles	3.36	Agreed
3	Appropriate use of masks where physical distancing cannot be maintained	3.12	Agreed
4	Clean and disinfect frequently touched surfaces such as door handles, desks, toys, supplies, light switches, doorframes, play equipment, teaching aids used by children and covers of shared books.	3.24	Agreed
5	Provide sufficient soap and clean water or alcohol-based rub at school entrances and throughout the school	3.29	Agreed
6	Allocate only 20–25 students per classroom	3.34	Agreed
7	Thermometer to measure the body temperature	2.98	Agreed
	Cumulative Mean	3.25	Agreed

From the analysis of table 1 above; it is clear that teachers and students' agreed to the items 1-7 on the Knowledge of students and teachers on the COVID-19 management protocols in public primary schools in Adamawa State, Nigeria. This assertion is supported with cumulative mean score of 3.25. This finding agreed with the provisions by UNICEF (2021), NCDC (2020) and the findings by Campos et al., (2021) and Giuseppina et al (2020) which suggest that: ensuring physical distancing principles, use of face mask, cleaning and disinfecting surfaces and providing soap and clean water for hand washing are some of the Covid-19 management protocol.

Utilization of the knowledge on COVID-19 management protocol by teachers and students in public primary schools in Adamawa State, Nigeria

Findings concerning the utilization of knowledge of the Covid-19 management protocol by teachers and students in public primary schools in Adamawa State, Nigeria are illustrated in table 2 below:

Table 2: Utilization of the knowledge on COVID-19 management protocol by teachers and students in public primary schools in Adamawa State, Nigeria

S/N	ITEM	Mean	Decision
1	Lectures on awareness on Covid-19	3.21	Agreed
2	Ensuring Physical distancing principles	3.37	Agreed
3	Providing appropriate use of masks where physical distancing cannot be maintained	3.34	Agreed
4	Cleaning and disinfecting frequently touched surfaces	3.15	Agreed
5	Provide sufficient soap and clean water or alcohol-based rub at school entrances and throughout the school	3.17	Agreed
6	Allocate only 20–25 students per classroom	3.30	Agreed
7	Providing and using thermometer to measure the body temperature of staff at the gate or entrances	3.54	Agreed
	Cumulative Mean	3.30	Agreed

From analysis of table 2 above; it is clear teachers and students' agreed to the items 1-7 on the utilization of the Knowledge on the COVID-19 management protocols by students and teachers in public primary schools in Adamawa State, Nigeria. This is supported with a cumulative mean score of 3.30. The finding agreed with the findings of Caena and Redecker (2019) which suggest that: providing lectures on the Covid-19 management protocol, providing and using thermometer to measure the body temperature of staff at the gate or entrances, ensuring physical distancing principles, use of face mask, cleaning and disinfecting surfaces, providing soap and clean water for hand washing and allocating only 20–25 students per classroom are the sure ways of utilizing the knowledge on Covid-19 management protocol.

Challenges affecting implementation of knowledge on COVID-19 management protocol in Adamawa State, Nigeria

Findings concerning the challenges affecting the implementation of knowledge of the Covid-19 management protocol by teachers and students in public primary schools in Adamawa State, Nigeria are illustrated in table 3 below:

Table 3: Challenges affecting implementation of COVID-19 management protocol in Adamawa State, Nigeria

S/N	ITEM	Mean	Decision
1	Scarcity of chemicals to clean the school	3.40	Agreed
2	Shortage of mask to cover the mouth and nose	3.71	Agreed
3	Shortage of materials like soap, alcohol sanitizer	3.24	Agreed
4	Shortage of water	3.15	Agreed
5	Deficiency of body temperature measuring device (Thermometer at gates)	3.23	Agreed
6	Shortage of textbooks to apply the principle of one book for one student	3.36	Agreed
7	Shortage of classrooms	3.54	Agreed
8	Shortage of books to practice one book one student principle	3.46	Agreed
9	Uncomfortable classroom structure to ventilate air	3.38	Agreed
	Cumulative Mean	3.39	Agreed

The analysis in table 3 suggests that it is clear that there are various challenges affecting the implementation of the Covid-19 management protocol in public primary schools. These challenges are: scarcity of chemicals to clean the school, shortage of mask to cover the mouth and nose, shortage of materials like soap, alcohol sanitizer, shortage of water, deficiency of body temperature measuring device (Thermometer at gates), shortage of textbooks to apply the principle of one book for one student, shortage of classrooms, shortage of books to practice one book one student principle and uncomfortable classroom structure to ventilate air. Similarly, this finding agreed with the findings of National Academy of Science and Technology (2020) which demonstrated that: shortage of materials like soap, alcohol sanitizer, shortage of water, deficiency of body temperature measuring device (Thermometer at gates), shortage of textbooks to apply the principle of one book for one student, scarcity of chemicals to clean the school, shortage of mask to cover the mouth and nose, shortage of classrooms, shortage of books to practice one book one student principle and uncomfortable classroom structure to ventilate air are the major challenges affecting the implementation of knowledge of the Covid-19 management protocol by teachers and students in public primary schools in Adamawa State, Nigeria

Conclusion and Recommendations

This paper established that the teachers and pupils in public primary schools in Adamawa State have knowledge on Covid-19 pandemic management protocols, they identified the use of face mask, hands washing with soap and water, sanitizing, social distancing, avoiding overcrowded places, using ventilated area, object and class disinfecting among others as the preventive protocols against Covid-19 virus. The student and teachers can easily identify the symptoms of a covid-19 virus and several ways of managing it in such a way that it does not spread to others. They demonstrated knowledge of the fact that the Covid-19 vaccine can help in protecting one from infection with the virus and that Covid-19 virus can spread through hand shaking with an infected person.

Despite having the knowledge on Covid-19 pandemic management protocols, this study observed that there are some challenges affecting the full utilization of the knowledge in the school including: scarcity of chemicals to clean the school, shortage of mask to cover the mouth and nose, shortage of materials like soap, alcohol sanitizer, shortage of water, deficiency of body temperature measuring device. Based on the findings of the study the paper make the following recommendations:

- 1 Adamawa State government should incur more ICT equipment and ensure stability of power supply and good network for proper integration in teaching and learning during the COVID-19 pandemic and beyond as this will help in reducing social contact in the teaching and learning process.
- 2 All stakeholders of primary education including: State Universal Basic Education, Ministry of Education, Head teachers and teachers should join hands to make sure the suggested measures and interventions of addressing Covid-19 pandemic during teaching and learning are fully implemented.
- 3 Government should introduce seminars and workshops for the teachers to be updating their preventive knowledge.
- 4 State government should build more ventilated classrooms for utilization of the learning materials and resources during the COVID-19 pandemic.
- 5 Take teachers for seminars on how to overcome challenges in the interaction between pupils and teachers during teaching and learning in the context of covid-19 Pandemic.

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