



## RESEARCH ARTICLE

## IMPACT OF COVID-19 LOCKDOWN POLICY ON HEALTH AND EDUCATION SERVICE UPTAKE OF WORKERS IN GWAGWALADA, ABUJA, NIGERIA

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## ARTICLE DETAILS

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## ABSTRACT

The study examines the impact of the COVID-19 pandemic lockdown policy on the welfare of workers in the formal and informal sectors in Gwagwalada Area Council, Abuja, Nigeria, during the COVID-19 period using health and education services as case study. The study was motivated by the fact that the outbreak had a negative influence on both formal and informal workers' well-being; nonetheless, concluding that the lockdown had an equivalent impact on both formal and informal sector workers in Gwagwalada Area Council without an empirical investigation may not have been reasonable enough. Thus, the need for this study to make a comparative analysis between formal and informal sector workers. For empirical purpose, independent two-sample t-test were used to compare perceptions of the two sectors regarding the effects of daily COVID-19 cases and the attendant lockdown stringency measures on health and education services uptake of workers in the two sectors understudy. A survey of 363 respondents was undertaken between the formal and informal workers in Gwagwalada Area Council of Abuja, Nigeria, to examine the effects of the pandemic lockdown policy measures on the uptake of education and health services. The study found that the informal sector workers were more severely affected than the formal sector during the lockdown. To address these challenges, the study recommends, among others, massive loans and grants for business owners with little or no interest rate to cushion the effects of the COVID-19.

## KEYWORDS

Covid-19 Lockdown, Policy Measures, Health, Education, Formal, Informal

## 1. INTRODUCTION

The epidemic of coronavirus disease 2019 (COVID-19) began at the end of 2019. Because COVID-19 is extremely contagious, its rapid spread had an impact on people's lives, jobs, and opportunities for learning across the world. The extensive effects of the novel coronavirus (COVID-19) have put the entire world to the test. Its effects are felt in all parts of life, including healthcare (Uche, 2021) and educational services (Lau and Lee, 2021). It is well recognized that the health and educational systems, for instance in Sub-Saharan African countries face a number of difficulties that jeopardize the population's access to high-quality education (Rwigema (2021) and health services (Lucero-Prisno et al., 2020). This unpleasant situation was aggravated by the overwhelming effort to combat the COVID-19 epidemic that placed more burdens on these already frail systems (Ogunkola et al, 2021).

Because COVID-19 is so contagious, governments in a number of countries imposed lockdowns in an effort to stem the spread of the virus, and life became rather miserable as a result. Lockdown Measures include, but not restricted to numerous strict non-pharmaceutical interventions, such as hand sanitization, mask wear, the use of hand gels, and social distance measures, which were put into place to stop the spread of this highly contagious virus. The above measures notwithstanding, impacted negatively on a number of industries, including manufacturing (Sahoo and Ashwani, 2020), agriculture (Sahoo and Rath, 2020), and travel and tourism (Galvani et al., 2020). Healthcare and education were not exempted from the negative impact of the COVID-19 pandemic, and as a result, saw significant upheaval (Paudel, 2021; Holshue et al., 2020; Peng et al., 2020).

To combat the oncoming spread of the pandemic, the federal government of Nigeria undertook a number of policy steps to manage the virus, minimize disease transmission, and prevent economic and social disruptions. These measures were in line with the global effort to lessen COVID-19's impact. The government began by imposing a number of policy measures, such as social distancing in marketplaces, mosques, churches, schools, banks, shopping malls, airports, and beaches (Chima and Fatile, 2021). All of this was done to slow the spread of the Covid-19 virus. On the other hand, the policy actions have a detrimental impact on the lives of the masses in a range of areas, such as unemployment, education, consumerism, income generation, health, and so on.

From the foregoing, it is obvious that the extensive effects of the novel coronavirus (COVID-19) have put the entire world to the test. Its effects are felt in all parts of life, including healthcare (Uche, 2021) and educational services (Malachy, 2023). However, most empirical studies neglected to investigate how its effects vary between the formal and informal sectors using health and education services, both of which are regarded as vital commodities by any standards. In other words, research on the impact of COVID-19 on education and health continues to emerge, but reports of the impact on health and education services are limited. The informal sector is the dominant sector of economic activities in Nigeria, which is very extroverted and vulnerable to external shocks (Todaro and Stephen, 2003). According to the Centre for the Study of the Economics of Africa [CSEA] (2020), over 80% of working people in Nigeria are employed in the informal sector. While the formal sector of the economy is defined as those positions with regular hours and earnings that are documented, and acknowledged as sources of income on which income taxes must be paid (Odittah, 2016).

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In light of the foregoing, this study examines the impact of COVID-19 reported cases and the resulting stringency policy measures on health and education services uptake by formal and informal sector using Gwagwalada Area Council of Abuja, Nigeria as a unit of analysis. To achieve the aim of this study, the following hypotheses guided the study.

## 2. METHODOLOGY OF THE STUDY

The population of the study was obtained from the formal and informal sectors in Gwagwalada Area Council, Abuja, Nigeria. The formal sector consists of one-thousand, one-hundred and nine (1,109) staff from Gwagwalada Area Council and two thousand, two hundred and forty-six (2246) staff from the University of Abuja Teaching Hospital, while the informal sector comprised fifty-six (56) members of vulcanizers Association, two hundred and twenty (220) members of Motorcyclist Association (Okada Riders), one hundred and eighty-two (182) members from Main Timber Dealers Association, and one hundred and twenty-three (123) members from Park road Traders Association in Gwagwalada Area Council. This brings the total population to three thousand, nine hundred and thirty-six (3,936). The justification for choosing the University of Abuja Teaching Hospital and the workforce of Gwagwalada Area Council in the formal sector was to provide equal opportunity for both Federal Government and Local Government employees to participate in the study. While the choice of selecting Vulcanizers Association, Motorcyclist Association (Okada riders), Main Timber Dealers Association, and Park Road Traders Association under informal group because they are the most organized informal groups that have leaders and members, this gave the researcher the belief that valid information could be derived from the groups. These groups were also affected during the total lockdown in Gwagwalada Area Council.

## 3. SAMPLE SIZE

The sample size of the study is three hundred and sixty-three (363) respondents. Taro Yamane's statistical formula (1964) was adopted to

determine the sample size of the study. The sample size is gotten using Taro Yamane formula as shown below:

$$n = \frac{N}{1 + N(e)^2}$$

$$N = 3,936$$

$$e = 0.05 \text{ (error margin)}$$

$$n = \frac{3,936}{1 + 3,936(0.05)^2}$$

$$n = \frac{3,936}{1 + 3,936(0.0025)}$$

$$n = \frac{3,936}{1 + 9.84}$$

$$n = \frac{3,936}{10.84}$$

$$n = 363.09$$

Approximately = 363

The sample size is three hundred and sixty-three (363).

A stratified and simple random sampling technique was used to select participants for the study. In order to obtain sample size from each stratum, the formula as suggested by university of California at Davis was also utilized. The formula stated that:

$$\text{(Sample size of the strata)} = \frac{\text{Size of entire sample}}{\text{Population size}} * \text{layer size}$$

(<http://www.statisticshowto.com/stratified-random-sample/>).

The entire sample = 363

Population size = 3,936

Layer size = No. of people in strata

Therefore, the sample size of each stratum is given below:

Table 1: Sample Size of the Study				
S/N	Organization	Population	Working	Sample size
1	G/lada Area Council	1,109	$\frac{363}{3,936} * 1109 = 102.27$	102
2	UATH	2,246	$\frac{363}{3,936} * 2246 = 207.13$	207
3	Vulcanizer Association	56	$\frac{363}{3,936} * 56 = 5.16$	5
4	Okada Riders	220	$\frac{363}{3,936} * 220 = 20.28$	20
5	Main Timber Dealers Association	182	$\frac{363}{3,936} * 182 = 16.78$	17
6	Parkroad Traders Association	123	$\frac{363}{3,936} * 123 = 11.54$	12
7	Total	3,936		363

Source: fieldwork 2022.

The study used stratified and simple random technique method because it gives all the members of the population equal chances of being selected (Davis 1959). The study utilized both descriptive and inferential statistics for the study. The descriptive involves the use of simple percentages and means for analysing the research questions. The inferential statistics used for the test of the hypotheses was the two independent sample t-tests. The choice of the statistical method is because two different groups with distinct characteristics are involved. All the analysis was carried out with the aid of a statistical package for social science (SPSSv25). Decision rule: reject the null hypothesis if the calculated p-value is less than 0.05(p<0.05) and accept the null hypothesis if the calculated p-value is greater than 0.05(p>0.05) at a 95% level of significance.

## 4. HYPOTHESES

H<sub>1</sub>: There is no significant variation in the mean of household health service uptake between formal and informal sector workers in Gwagwalada Area Council.

H<sub>2</sub>: There is no significant difference in the mean of household educational service uptake between formal and informal sector workers in Gwagwalada Area Council.

## 4.1 Empirical Review on the Study Variables

This section examines the empirical literature on the study's two main variables. These variables, as the study's title suggests, are education and health.

Education: COVID-19 uncovered the worldwide education environment's strengths and flaws in both developed and developing countries. Thus, this section empirically explores the impacts of the COVID-19 epidemic on Nigeria's educational system in order to help in a robust discussion of findings and incidentally provide a one-of-a-kind solution to the Nigerian educational sustainability challenges. A study by Spencer et al (2023) on challenges experienced by U.S. K-12 public schools in serving students with special education needs or underlying health conditions during the COVID-19 pandemic and strategies for improved accessibility reports that staff shortages (51.3%) and student compliance with prevention strategies (32.4%) were the two most frequently reported school-based challenges, and the two most frequently reported home-based challenges were a lack of learning partners at home (25.5%) and a lack of digital literacy among students' families (21.4%). Similarly, Sonnenschein et al. (2022) used a survey sent via social media to examine parents' perspectives on PK-12 education for children receiving special education help during COVID-19 (N = 153). Three main themes emerged from the results: (1) Special education and related service hours were reduced during virtual learning; (2) Parents reported that their children were unable to participate in virtual learning without a lot of adult

support; and (3) Parents frequently could not help their kids because of other obligations like childcare and work.

In another related research, Lau and Lee (2021) reported that three weeks after in-school sessions were discontinued, information was obtained from 6702 parents of kindergarten (equivalent to U.S. preschool and kindergarten) and primary school students in Hong Kong. In the report, parents claimed that their kids struggled to finish assignments without heavy parental supervision. Additionally, parents desired increased school support. A study conducted by Debbarma and Durai (2021) to identify the areas of educational disruption due to the COVID-19 situation in Northeast Indian States showed that the educational system in some parts of northeastern India was disturbed and that many different things can interfere with children's education. Primarily, it was found that poor network connectivity made it difficult for students to communicate with their lecturers. According to a study conducted by Rwigema (2021), COVID-19 had detrimental effects on education, including disruptions to learning and a decrease in access to resources for learning and research. In addition, it led to an increase in student debt and employment losses. Additionally, the findings indicated that many educators and learners relied on technology to maintain online education throughout the coronavirus outbreak. Online education was made challenging by a lack of infrastructure, which resulted in concerns with network connectivity, electricity, accessibility, and availability.

**Health:** No doubt, the World Health Organisation proclaimed the coronavirus disease of 2019 (COVID-19) pandemic on March 11, 2020, which had an impact on healthcare services with provider cancellations, delays, and patient avoidance or delay of emergency department or urgent care. Thus, the effects of the COVID-19 epidemic on Nigeria's health system are thus empirically explored in this section in order to aid in a thorough discussion of the findings and besides offers a novel solution to the problems with Nigeria's health system. Empirically, it has been found that over 56 million verified cases and more than 600,000 fatalities had been reported worldwide as of July 22, 2022 (Sharma, et al, 2023). Sharma et al. (2023) used secondary data analysis to examine how the COVID-19 pandemic affected the use of MCH provisions in India based on data that was routinely gathered from the HMIS for the quarter of April to June 2020 and 2021 relative to 2019. The results of the study demonstrate that the institutional and outreach maternal health services suffered during both COVID-19 periods that were taken into consideration. The finding is consistent with that of Sharma et al (2023) which confirms that the national lockdown, travel limitations, and increased accessibility to

healthcare services had more significant effects of COVID-19's first wave in 2020. Additionally, a study that covers the pre-pandemic, lockdown and post-lockdown phases of the COVID-19 pandemic offers novel and relevant insights into the provision and consumption of crucial health and nutrition services. During the lockdown, the study found considerable delays in the delivery of facility-based services, but outreach-based activities were carried on as usual (Nguyen et al., 2021). The study reported that facility-based services were significantly impacted during the lockdown, mostly as a result of the state government suspending services in areas with positive COVID-19 instances. After the SARS-CoV-2 outbreak, inpatient and outpatient health service utilisation in China significantly decreased, according to research by Xiao et al. (2021). This decrease was most likely brought on by changes in patient and provider behaviours, the suspension of health facilities' non-emergency services, severe mobility restrictions, and the SARS-CoV-2 epidemic itself.

Despite some research suggesting increases in health service utilization during the Covid-19 lockdown, a study conducted by Moynihan et al (2021) on an evaluation of 81 studies covering more than 17.9 million services delivered across 20 countries revealed consistent evidence of significant decreases in the consumption of healthcare services during the pandemic period up to May 2020, compared to previous years. From the viewpoints of medical experts and community members, Assefa et al (2021) also assessed the effects of the COVID-19 pandemic on health service disruptions in three sub-Saharan African countries (Nigeria, Burkina Faso and Ethiopia) and found that the pandemic caused significant interruptions to vital health services. However, the study found that interruptions in health care in Nigeria were unusually high when compared to Burkina Faso and Ethiopia. The huge number of active COVID-19 cases in Nigeria may explain this disparity in impact. For example, in August, Nigeria reported 48,665 COVID-19 instances, Ethiopia had 27,242, and Burkina Faso had 1237. These findings imply that a country's pandemic curve influences health services that have been disrupted. When the weight of the COVID-19 caseload grows, so will the impact on access to other healthcare services. Utilizing information gathered from in-depth interviews with thirty (30) heads of household in the state capitals of Lagos, Enugu, and Anambra in Nigeria, Odii et al. (2021) found that shortage of funds and an increase in the price of food and transportation were prevalent during the COVID 19 lockdown. Fundamentally, it was shown that many households self-medicated, employed home remedies, and ignored disease symptoms due to access issues to medical facilities.

## 5. DATA PRESENTATION AND ANALYSIS

**Table 2:** Difference in the Mean of Household Health Service Uptake Between the Formal and Informal Sector Workers

S/N	Statement	Sector	Response Categories					Total	Mean score	Decision
			SA (5)	A (4)	U (3)	D (2)	SD (1)			
1.	My household could not access health services during the Covid-19.	<b>Formal</b>	38	156	35	27	26	282	3.54	Agree
		<b>Informal</b>	2	4	3	29	12	50	2.1	Disagree
2.	Health facilities around my area were looked down due to Covid-19 pandemic	<b>Formal</b>	102	91	27	36	26	282	3.73	Agree
		<b>Informal</b>	1	0	3	30	16	50	1.80	Disagree
3.	The fear of contacting the Covid-19 virus discouraged my household from attending health facilities	<b>Formal</b>	0	0	0	162	120	282	1.5	Disagree
		<b>Informal</b>	11	30	2	7	0	50	4.05	Agree
4.	My household was depending on traditional medicine during the Covid-19 looked down	<b>Formal</b>	34	89	25	79	55	282	2.88	Disagree
		<b>Informal</b>	31	18	1	0	0	50	4.80	Agree
5.	Scarce financial resources affected my household affordability of health services during the covid-19 pandemic.	<b>Formal</b>	0	0	0	173	109	282	1.61	Disagree
		<b>Informal</b>	33	16	1	0	0	50	4.78	Agree
Sectional Mean = $\frac{\text{Formal}}{\text{Informal}} = \frac{2.67}{3.41} = \frac{\text{Disagree}}{\text{Agree}}$										

Source: Field Survey, 2022

### 5.1 Result Interpretation

Table 2 shows the item-by-item descriptive analysis of health and how it differs between the formal and informal workers. According to the results produced for the formal sector workers, the mean scores for items 1 and 2 (mean scores of 3.92 and 4.25) were higher than the average 5 - Likert scale measurement score of 3.0, while the mean scores for items 3, 4 and 5 (mean scores of 1.63, 2.69, and 1.69) were lower than the average. In

contrast, the analysis of the workers in the informal sector revealed that the mean scores for items 1 and 2 (mean scores = 1.78 and 1.70) were lower than the average measurement on the 5-likert scale, which was 3.0, while the mean scores for items 3, 4 and 5 (mean scores = 4.05, 4.80 and 4.78) were higher than the average. The results also revealed that the informal sector workers' sectional mean rating was higher than the formal sector workers' grand mean rating with a mean score of 3.42 compared to 2.84. Since the informal sector workers' grand means are higher than the

average 5 Likert scale measurement score of 3.0, it can be inferred that they concurred that the covid-19 pandemic had an impact on health, in contrast to the formal sector workers, whose mean score of 2.84 was lower than the average 5 Likert scale measurement score of 3.0. Additionally, it was noted that there was a difference in opinion regarding health between the formal and informal workers in the Gwagwalada Area Council during the COVID-19 pandemic because the sectional mean of the informal

sector workers (mean score = 3.42) was higher than the formal sector workers (mean score = 2.82).

### 5.1.1 Test of Hypotheses

$H_0$ : There is no significant difference in the mean of household health service uptake between the formal and informal sector workers in Gwagwalada Area Council.

**Table 3: Covid-19 Pandemic Lockdown and Household Health Services Uptake (T- Test Result).**

Sectors	Total	Mean	Std. dev.	T- test Result	$t_{critical}$	D.F.	P - Value
Formal	282	2.33	0.3577	-18.45	-1.96	330	0.00
Informal	50	3.89	0.3628				

Source: Author computation from SPSS (Version 25)

### 5.1.2 Interpretation of Result

An independent two-sample t-test was used to examine if there were any differences in opinion between formal and informal sector workers in Gwagwalada Area Council about how the COVID-19 pandemic lockdown affects household health service uptake. The test was found to be statistically significant because the mean response from the informal sector (mean = 3.89, S.D. = 0.3628) was statistically significantly higher than the mean response from the formal sector (mean = 2.33, SD = 0.3577),

with a mean difference of 1.56. This difference was significant since  $t_{calculated} = -18.45$  was bigger than  $t_{critical} = -1.96$ , and  $P = 0.00$  was less than 0.05 at 330 degrees of freedom.

The alternative hypothesis was accepted, while the null hypothesis was rejected. This shows that there is a considerable difference in the means opinion of formal and informal sector workers in Gwagwalada Area Council over how the COVID-19 pandemic lockdown affects household health service uptake.

**Table 4: Difference in the Mean of Household Education Service Uptake Between the Formal and Informal Sector Workers**

S/N	Statement	Sector	Response Categories					Total	Mean score	Decision
			SA (5)	A (4)	U (3)	D (2)	SD (1)			
1.	I engaged my children in online lectures/lessons during the period of covid-19 pandemic	Formal	50	42	24	100	66	282	2.68	Disagree
		Informal	20	27	0	1	2	50	4.24	Agree
2.	I organized a lesson teacher for my children during the period of the covid-19 outbreak	Formal	0	0	0	141	141	282	1.50	Disagree
		Informal	10	9	7	11	13	50	2.84	Disagree
3.	My children could not engage in academic activities during the period of the covid-19 lockdown	Formal	57	120	24	41	40	282	3.40	Agree
		Informal	19	22	2	4	3	50	4.00	Agree
4.	My children were affected by the closure of schools and universities due to preventive measures taken by government against the spread of COVID-19.	Formal	42	43	4	147	46	282	2.60	Disagree
		Informal	16	22	0	8	4	50	3.76	Agree
5.	The loss of family incomes keeps my children out of school indefinitely during the period of the lockdown.	Formal	0	0	1	134	147	282	1.48	Disagree
		Informal	31	18	0	1	0	50	4.58	Agree

$$\text{Sectional Mean} = \frac{\text{Formal}}{\text{Informal}} = \frac{2.33}{3.89} = \frac{\text{Disagree}}{\text{Agree}}$$

Source: Field Survey, 2022

### 5.2 Result Interpretation

The item-by-item descriptive study of the education service uptake of formal and informal workers in Gwagwalada Area Council during the COVID-19 pandemic lockdown is shown in Table 4 above. The mean scores for items 1, 2, 4, and 5 among the formal sector workers were 2.68, 1.50, 2.60, and 1.48 respectively, which were below the average score of 3.0 on the 5-point Likert scale while item 3 had a higher mean score of 3.40. The examination of the informal sector workers revealed that, with the exception of item 2, all mean scores were above the average measurement of the 5-Likert scale. The result also showed that the sectional mean rating of the informal sector workers was higher with (mean score = 3.89) than the grand mean rating of the formal sector workers with (mean score = 2.33). Because the informal sector workers' grand means (mean score =

3.89) are higher than the average of the five Likert scale measurements, or 3.0, it can be inferred that they agreed that the covid-19 pandemic had an impact on education levels, as opposed to the formal sector workers, whose mean scores of 2.33 were lower than the average of the five Likert scale measurements, or 3.0, implying that they did not. Similarly, during the COVID-19 pandemic, there was a difference in opinion regarding education level between formal and informal workers in Gwagwalada Area council because the sectional mean of the informal sector workers (mean score = 3.89) is higher than the formal sector workers (mean score = 2.33).

### 5.2.1 Test of Hypothesis

$H_0$ : There is no significant difference in the mean of household education between the formal and informal sector workers in Gwagwalada Area Council.

**Table 5: Covid-19 Pandemic Lockdown and Household Education (T- Test Result).**

Sectors	Total	Mean	Std. dev.	T- test Result	$t_{critical}$	D.F.	P - Value
Formal	282	2.67	0.4972	-30.92	-1.96	330	0.00
Informal	50	3.41	0.5108				

Source: Author computation from SPSS (Version 25)

### 5.2.2 Interpretation of result

An independent two-sample t-test was used to determine if there were any differences in the means opinion of the Covid-19 pandemic lockdown on household education in Gwagwalada Area Council between formal and informal sector workers. The test was found to be statistically significant because the mean response from the informal sector (mean = 3.41, S.D. = 0.5108) was statistically significantly higher than the mean response from the formal sector (mean = 2.67, SD = 0.4972), with a mean difference of 0.74 found between the two sectors workers. This difference was significant since  $t_{\text{calculated}} = -30.92$  was bigger than  $t_{\text{critical}} = -1.96$  and  $P = 0.00$  was less than 0.05 at the 330 degrees of freedom.

The alternative hypothesis was accepted, while the null hypothesis was rejected. This means that there is a considerable variation in the mean perceptions of official and informal sector workers in Gwagwalada Area Council regarding how the Covid-19 pandemic lockdown affects household education.

## 6. DISCUSSION OF RESULTS

### 6.1 Covid-19 Pandemic Lockdown and Household Health Service Uptake.

The examination of health service intake revealed a substantial variation in the perceptions of formal and informal workers about their level of home health service consumption throughout the pandemic. The informal sector workers had a higher sectional mean rating than the formal sector workers. The null hypothesis was rejected as a result of this development. It follows that the informal sector workers at Gwagwalada Area Council agreed that their access to health care was hampered during the COVID-19 outbreak. This is in line with the finding of Moynihan et al. (2021) which found consistent evidence of large decreases in healthcare usage over the pandemic period up to May 2020, based on an analysis of 81 research spanning more than 17.9 million services given across 20 countries. This could be due to apprehension about contracting the illness or an inability to pay the medical bill due to a disturbance in their daily revenue creation. Furthermore, it is possible that the informal workers' healthcare budget was impacted by the lockdown, and they chose to rely on traditional medicine instead of seeking healthcare facilities. This finding aligns with the contribution of the World Health Organization regarding the effect of the Covid-19 pandemic (WHO, 2020). The impact of the COVID-19 pandemic has been felt worldwide in many different spheres of society. However, this affects mostly the people within the informal group, especially in access to health services for unrelated conditions.

### 6.2 Covid-19 Pandemic Lockdown and Household Education.

The analysis reveals that formal and informal worker opinions on household education vary. It is obvious that the informal sector workers' grand mean rating of the COVID-19's impact on household education was higher than that of the formal sector workers. This merely indicates that they have different opinions about Covid-19 and household education. The null hypothesis was rejected as a result of this development. Additionally, it can be said that during the Covid-19 lockdown, the informal sector workers in Gwagwalada Area Council had higher effects on their household education level than the workers in the formal sector.

According to the result analysis, the informal sector was more negatively impacted by the consumption of educational services than the formal sector. This is so because the majority of them (those in the formal sector) involved their families in online lectures, home lessons, etc. However, because it would have disrupted their livelihood, the workers in the informal sector could not afford to do it during the lockdown. Due to lost family income during the lockdown, the majority of children from the informal sector were not in school. The interruption of educational activities, job losses in the education industry, restricted access to laboratory facilities, loss of learning interests, restrictions on research, and decreased funding for education are only a few of the obvious repercussions of the lockdown.

The results support the earlier claim made by Onyema et al. (2020) that the Covid-19 shutdown has made a number of issues in the education sector worse and limited the prospects of impoverished students to receive an education. The results are in line with those of a study by Susana Castro (2021) on the impact of the Covid-19 pandemic on household education, which unequivocally concluded that the Covid-19 pandemic had a significant negative impact on children and young people with special educational needs and disabilities as well as their families.

## 7. CONCLUSION

The economic and social shock caused by the COVID-19 pandemic lockdown has been revealed to be a universal phenomenon that has continued to disrupt the lives of people from all walks of life. The effects, however, differed between the formal and informal sector workers in Niger Gwagwalada Area Council, resulting in poor education and health service uptake, as well as disparity in education and health service uptake. COVID-19 was shown to have had a negative impact on education and health in Nigeria. Based on the foregoing, the study recommends the following:

### 7.1 Household Health Service Uptake

It is necessary to give more public funds to health and social protection programs. To guarantee the effective and efficient use of the resources at hand, a follow-up is necessary. By streamlining the administrative process, leveraging digital innovation, and equitably allocating costs between businesses, employees, and governments, we can create a more adaptable and inventive health system. The provision of basic medical care and initiatives to reach elusive informal laborers, especially undocumented migrants, are necessary. In hospitals, there should be access to medical supplies and medications. After COVID-19, all hands must be on the desk to guarantee that all medical supplies adhere to the necessary standards.

### 7.2 Household Education

To encourage educators and students to be committed when schools resume, the government should postpone the payment of school fees after Covid-19 and boost teacher welfare. Many parents lost their jobs and revenue generation decreased during the epidemic, making it difficult for them to pay for their children's school tuition following the pandemic. As a result, the government should step in and suspend students' school payments. Although it may not be relevant in private schools, the government can provide financial help to private schools in order to ensure the well-being of teachers and students.

The government must construct broadband infrastructure that is affordable for all. To provide internet connectivity in all schools, the government should greatly support the cost of data packages. To bring it about, the government should create plans with mobile phone providers. Institutions can embrace distant learning platforms, technologies, and systems fast once they have access to affordable, dependable high-speed internet. As a matter of suggestion, the government should lift or reduce taxes and dues on technology and media equipment and devices, including TV channels, mobile services, private radios, etc.

A strong technological foundation should be supported by the private sector, and governments should work to provide a "enabling environment" for the educational system through fiscal policies and other incentives.

The training of teachers in the use of technology and in delivering classes online should be a government priority. "I would urge the government to provide financial aid to institutions so they may build the foundation for an online queue in every institution. I would also suggest that the government require all teachers to complete a course on using ICT in both teaching and learning.

## REFERENCES

- Assefa, N., Sié, A., Wang, D., Korte, M. L., Hemler, E. C., Abdullahi, Y. Y., Lankoande, B., Millogo, O., Chukwu, A., Workneh, F., Kanki, P., Baernighausen, T., Berhane, Y., Fawzi, W. W., & Oduola, A. 2021. Reported Barriers to Healthcare Access and Service Disruptions Caused by COVID-19 in Burkina Faso, Ethiopia, and Nigeria: A Telephone Survey. *The American Journal of Tropical Medicine and Hygiene*, 105(2), 323-330. <https://doi.org/10.4269/ajtmh.20-1619>.
- Chima, P. and Fatile. J.O. 2021. Corona Virus (COVID-19) Lockdown Policy Measures and Socio-economic Development of the Nigerian State: Critiquing the Present and Envisaging the Future. *BVMISR's Journal of Management Research*. 13 (1).
- Debbarma, I., & Durai, T. 2021. Educational disruption: Impact of COVID-19 on students from the Northeast states of India. *Children and Youth Services Review*, 120, 105769. <https://doi.org/10.1016/j.chilyouth.2020.105769>.
- Galvani A, Lew AA, Perez MS. 2020. COVID-19 is expanding global consciousness and the sustainability of travel and tourism. *Tourism Geographies* 22(3), 567-576.

- Holshue ML, DeBolt C, Lindquist S, et al. 2020. First case of 2019 novel coronavirus in the United States. *New England Journal of Medicine* 382: 929–936.
- Kassie, A., Wale, A., & Yismaw, W. 2021. Impact of coronavirus Diseases-2019 (COVID-19) on utilization and outcome of reproductive, maternal, and newborn health services at governmental health facilities in South West Ethiopia, 2020: comparative cross-sectional study. *International journal of women's health*, 479-488.
- Lucero-Prisno, D. E., Adebisi, Y. A., & Lin, X. 2020. Current efforts and challenges facing responses to 2019-nCoV in Africa. *Global Health Research and Policy*, 5(1), 21. <https://doi.org/10.1186/s41256-020-00148-1>.
- Moynihan, R., Sanders, S., Michaleff, Z. A., Scott, A. M., Clark, J., To, E. J., Jones, M., Kitchener, E., Fox, M., Johansson, M., Lang, E., Duggan, A., Scott, I., & Albarqouni, L. 2021. Impact of COVID-19 pandemic on utilisation of healthcare services: A systematic review. *BMJ Open*, 11(3), e045343. <https://doi.org/10.1136/bmjopen-2020-045343>.
- Nguyen, P. H., Kachwaha, S., Pant, A., Tran, L. M., Walia, M., Ghosh, S., Sharma, P. K., Escobar-Alegria, J., Frongillo, E. A., Menon, P., & Avula, R. 2021. COVID-19 Disrupted Provision and Utilization of Health and Nutrition Services in Uttar Pradesh, India: Insights from Service Providers, Household Phone Surveys, and Administrative Data. *The Journal of Nutrition*, 151(8), 2305–2316. <https://doi.org/10.1093/jn/nxab135>.
- Odi, A., Ngwu, M. O., Aniakor, M. C., Owelle, I. C., Aniagboso, M. C., & Uzuanwu, O. W. 2021. Effect of COVID-19 lockdown on poor urban households in Nigeria: Where do we go from here?. *Ianna Journal of Interdisciplinary Studies*, 2(1), 75-85. Retrieved from <https://iannajournalofinterdisciplinarystudies.com/index.php/1/article/view/42>.
- Odittah, C. 2016. Formal sector contributed 58.82% to economy, says NBS. *The Guardian*. Available @ <https://guardian.ng/news/formal-sector-contributed-58-82-to-economy-says-nbs/>
- Ogunkola, I. O., Adebisi, Y. A., Imo, U. F., Odey, G. O., Esu, E., & Lucero-Prisno, D. E. 2021. Impact of COVID-19 pandemic on antenatal healthcare services in Sub-Saharan Africa. *Public Health in Practice*, 2, 100076. <https://doi.org/10.1016/j.puhip.2021.100076>.
- Rwigema, P. C. 2021. Impact of COVID-19 lockdowns on the education sector. The case of Rwanda. *The Strategic Journal of Business & Change Management*, 8 (1), 150 – 169.
- Sahoo P, Ashwani. 2020. COVID-19 and Indian economy: Impact on growth, manufacturing, trade and MSME sector. *Global Business Review* 21(5), 1159–1183.
- Sahoo PP, Rath S. 2020. Potential impact of coronavirus on agriculture sector. *Biotica Research Today* 2(4): 64–65.
- Sharma, S., Aggarwal, S., Kulkarni, R., Kumar, D., Mishra, B. K., Dwivedi, G. R., Devi, K. R., Mamidi, R. S., Singh, K. J., Singh, L., Sahu, D., Adhikari, T., Nair, S., Kumar, A., Juneja, A., Sharma, A., Begum, S., Surve, S., Prusty, R. K., ... Rao, M. V. V. 2023. Challenges in Accessing and Delivering Maternal and Child Health Services during the COVID-19 Pandemic: A Cross-Sectional Rapid Survey from Six States of India. *International Journal of Environmental Research and Public Health*, 20(2), 1538. <https://doi.org/10.3390/ijerph20021538>.
- Sharma, S., Singh, L., Yadav, J., Gupta, U., Singh, K. J., & Rao, M. V. V. 2023. Impact of COVID-19 on utilization of maternal and child health services in India: Health management information system data analysis. *Clinical Epidemiology and Global Health*, 21, 101285. <https://doi.org/10.1016/j.cegh.2023.101285>.
- Sonnenschein, S., Stites, M. L., Grossman, J. A., & Galczyk, S. H. 2022. "This will likely affect his entire life": Parents' views of special education services during COVID-19. *International Journal of Educational Research*, 112, 101941. <https://doi.org/10.1016/j.ijer.2022.101941>.
- Spencer, P., Timpe, Z., Verlenden, J., Rasberry, C. N., Moore, S., Yeargin-Allsopp, M., Claussen, A. H., Lee, S., Murray, C., Tripathi, T., Conklin, S., Iachan, R., McConnell, L., Deng, X., & Pampati, S. 2023. Challenges experienced by U.S. K-12 public schools in serving students with special education needs or underlying health conditions during the COVID-19 pandemic and strategies for improved accessibility. *Disability and Health Journal*, 16(2), 101428. <https://doi.org/10.1016/j.dhjo.2022.101428>.
- Uche, E., Marcus, S. N., Effiom, L., & Okoronkwo, C. 2021. Food and healthcare accessibility during COVID-19 pandemic. *Heliyon*, 7(12), e08656. <https://doi.org/10.1016/j.heliyon.2021.e08656>.
- Upoalkpajor JLN, Upoalkpajor CB. 2020. The impact of COVID-19 on education in Ghana. *Asian Journal of Education and Social Studies* 9(1), 23–33. 24-39.
- Xiao, H., Dai, X., Wagenaar, B. H., Liu, F., Augusto, O., Guo, Y., & Unger, J. M. 2021. The impact of the COVID-19 pandemic on health services utilization in China: Time-series analyses for 2016–2020. *The Lancet Regional Health - Western Pacific*, 9, 100122. <https://doi.org/10.1016/j.lanwpc.2021.100122>.

