

Assessing the impacts of COVID-19 on critical social institutions in South-South Nigeria: During and post-pandemic perspectives

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Abstract

This study examined the impact of the COVID-19 pandemic on critical social institutions, with particular emphasis on the educational and family institutions in South-South, Nigeria. Guided by the Laboratory Leak Theory and the Accidental Laboratory Escape Theory, the study conceptualized COVID-19 as a globally generated crisis with far-reaching local consequences that expose institutional vulnerabilities in developing societies. A survey research design was adopted, employing both quantitative and qualitative methods. Data were collected through structured questionnaires and interviews, and analyzed using SPSS and thematic analysis. Findings revealed that the COVID-19 pandemic had a significant negative impact on educational institutions at all levels. Prolonged school closures, inadequate digital infrastructure, and limited access to online learning led to learning loss, increased dropout rates, teacher attrition, and declining academic performance. The study also found that Nigeria's education system was largely unprepared for a transition to virtual learning, thereby widening existing educational inequalities. Furthermore, the pandemic significantly affected family institutions by disrupting household income, livelihoods, and family relationships. Lockdown measures intensified unemployment, food insecurity, and economic hardship, while extended confinement heightened domestic stress and emotional strain within households. The study concludes that COVID-19 was not merely a health crisis but a systemic social shock that magnified existing inequalities and exposed institutional weaknesses. It recommends strengthening digital education infrastructure, expanding social protection systems, and improving crisis preparedness to enhance institutional resilience against future emergencies.

Keywords: COVID-19 pandemic, education, family institution, social impact, institutional resilience, Nigeria.

Introduction

The outbreak of COVID-19, which originated in Wuhan, China, rapidly spread through the mechanisms of globalization to become a global pandemic and a major public health challenge affecting virtually all sectors of national economies. Nigeria has emerged as one of these countries most severely affected in Africa. The consequences of the pandemic have been profound, with far-reaching effects on individuals, families, and the broader socio-economic fabric of society. Owing to the intensity of its impact on human life and social institutions, the United Nations Development Programme (UNDP, 2020) described COVID-19 as the most significant global health crisis and a defining challenge confronting the world since the Second World War. The pandemic has unfolded like a powerful wave, disproportionately affecting populations least equipped to protect themselves or cope with its consequences. Beyond its health implications, COVID-19 has placed immense strain on nations, with the potential to trigger devastating economic, social, and political crises, thereby constituting one of the most critical global calamities of the twenty-first century.

The cultural implications of the COVID-19 pandemic have been equally profound and continue to evolve globally. The pandemic has led to the closure of cultural institutions, the cancellation of cultural events, the dormancy of UNESCO World Heritage sites, the suspension of community cultural practices, increased looting of cultural artefacts, and significant disruptions to cultural tourism (UNESCO, 2020a). Globally, approximately 95 per cent of the estimated 60,000 museums were forced to close, severely disrupting museum operations and threatening the financial sustainability of institutions as well as the livelihoods of thousands of cultural workers (International Council of Museums [ICOM], 2020). The global response to COVID-19, largely anchored on physical distancing measures, has further intensified social and interpersonal disconnections that are central to cultural expression and participation (UNESCO, 2020b). According to the World Bank (2020), the pandemic has dramatically affected the arts and cultural sectors worldwide, depriving communities of cultural engagement and substantial revenue due to the closure of heritage sites, museums, and historic monuments. Similarly, Al-Said (2020) observed that government-imposed restrictions, including the shutdown of museums, theatres, and cultural heritage sites, have had devastating consequences for the cultural sector. In addition to the immediate threat to

human life, the pandemic has also resulted in the suspension and cancellation of some of the world's largest cultural events (FutureLearn, 2020).

While the health impacts of COVID-19 have dominated scholarly discourse, its effect on critical social institutions has received comparatively less attention. Again, studies largely emphasize generalized socio-economic institutions with insufficient focus on the impact of the pandemic on specific components of critical social institutions. This paper seeks to bridge this gap by providing an institutional grounded assessment of the impact of COVID-19 pandemic on critical social institutions in South-South, Nigeria.

Literature review

The Coronavirus Disease (COVID-19) pandemic has generated extensive and multifaceted consequences for individuals, families, communities, and the broader socio-economic structures of societies worldwide. Although initially perceived as a public health emergency, COVID-19 has evolved into one of the most disruptive global crises of the modern era, simultaneously undermining health systems, economic stability, social relations, and cultural practices (Ghebreyesus, 2020). Empirical studies reveal that the mortality rate associated with COVID-19 exceeds that of seasonal influenza, particularly among older adults and individuals with pre-existing medical conditions (Verity et al., 2020). In response to the escalating global threat, the World Health Organization (WHO) officially designated the novel coronavirus as "COVID-19" on 11 February 2020 and subsequently declared it a global pandemic on 11 March 2020 (WHO, 2020).

By 21 May 2020, COVID-19 had resulted in approximately 323,256 deaths worldwide, with millions of confirmed cases reported across all continents (WHO, 2020). However, the severity of the pandemic cannot be fully captured by mortality statistics alone, as its social and human consequences extend far beyond loss of life. Research indicates a marked rise in depression, anxiety, fear, and psychological distress as secondary health outcomes of the pandemic (Brooks et al., 2020; Vindegaard & Benros, 2020). Prolonged lockdowns, enforced social isolation, fear of infection, and pervasive uncertainty significantly undermined mental well-being, particularly among vulnerable groups such as older persons, low-income earners, and frontline workers.

Economically, the pandemic precipitated unprecedented global disruptions. Measures implemented to contain the spread of the virus such as business closures, movement restrictions, and the suspension of economic activities triggered widespread job losses and heightened financial insecurity (International Labour Organization [ILO], 2020). Key sectors, including financial markets, manufacturing, travel, and hospitality, were among the most severely affected. The ILO (2020) reported a substantial global reduction in working hours, equivalent to the loss of hundreds of millions of full-time jobs. Small and Medium-Sized Enterprises (SMEs), which form the backbone of many national economies, were disproportionately impacted due to limited financial resilience and constrained access to credit facilities.

The tourism and travel industry emerged as one of the hardest-hit sectors. Before the pandemic, tourism accounted for approximately 10 per cent of global Gross Domestic Product (GDP) and supported over 50 million jobs worldwide (World Travel and Tourism Council, 2020). International travel bans, border closures, and flight suspensions brought tourism activities to a near standstill, resulting in widespread layoffs and business shutdowns. Workers in the informal economy and the self-employed many of whom rely on daily earnings for subsistence were the earliest and most severely affected by these disruptions (ILO, 2020).

According to the World Bank (2020), the COVID-19 pandemic is expected to have enduring socio-economic consequences across both developed and developing economies. Sharp declines in domestic demand and supply compelled many countries to revise downward their GDP growth projections. Lockdown measures significantly curtailed the production of non-essential goods and services, leading to reduced working hours, wage cuts, and rising unemployment levels globally. Moreover, declining global demand contributed to falling export commodity prices, weakening export-dependent economies and further limiting employment opportunities in those sectors.

In Nigeria, the socio-economic effects of COVID-19 were particularly severe due to the country's heavy dependence on the informal economy. A substantial proportion of the population consists of artisans, traders, transport workers, and daily wage earners whose livelihoods depend on uninterrupted economic activity (Ozili, 2020). Although necessary for public health protection, government-imposed lockdown measures severely disrupted income-generating activities, giving rise to what many Nigerians described as the "hunger virus" a reflection of the reality that hunger and poverty posed threats comparable to the virus itself (Akanle & Adesina, 2020). The pandemic thus exposed and intensified existing structural inequalities, weak social protection mechanisms, and limited state capacity to mitigate economic shocks.

Beyond its health and economic dimensions, COVID-19 profoundly transformed social and cultural life. Preventive measures such as physical distancing, restrictions on public gatherings, and bans on social ceremonies

disrupted long-standing social norms and cultural practices. In many Nigerian communities, traditional gatherings associated with weddings, funerals, coronations, religious worship, and cultural festivals were either prohibited or strictly regulated (Nigeria Centre for Disease Control [NCDC], 2020). Compliance with these measures was enforced through fines, sanctions, and, in some cases, arrests, reflecting a shift toward more stringent state regulation of social behavior.

Patterns of social interaction in Africa, particularly in Nigeria, also underwent significant transformation. Physical expressions of affection such as handshakes, hugs, and close-contact greetings deeply rooted in African cultural values were replaced with elbow, foot, or distant greetings (Adewale, 2021). While these adaptations were essential for infection control, they carried implications for social cohesion and emotional bonding. Additionally, the pandemic fostered a climate of suspicion and stigma, as individuals displaying flu-like symptoms were often presumed to be infected and consequently avoided or discriminated against, even by close associates (Logie & Turan, 2020). Such stigma further deepened social exclusion and discouraged some individuals from seeking testing and medical care.

Overall, existing literature demonstrates that COVID-19 is not merely a public health crisis but a multidimensional phenomenon with profound implications for economic stability, mental health, social relations, and cultural practices. In the Nigerian context, the pandemic amplified pre-existing socio-economic vulnerabilities while simultaneously reshaping social norms and institutional operations. This body of scholarship provides a critical foundation for understanding the broader societal impacts of COVID-19 and highlights the need for context-specific analyses of its effects on key social institutions.

Theoretical framework

The origin and global spread of the Coronavirus Disease (COVID-19) have generated intense academic, political, and scientific debates, leading to the emergence of several explanatory theories (WHO, 2021). Among these, two prominent and controversial theoretical perspectives have gained significant attention: the Laboratory Leak Theory and the Accidental Laboratory Escape Theory. This study adopts these two theoretical positions to explain the emergence, transmission, and broader social consequences of COVID-19, particularly its effects on critical social institutions in Nigeria.

The Laboratory Leak Theory is largely associated with scholars, investigative journalists, and policy analysts such as Nicholas Wade (2021), Alina Chan and Matt Ridley (2021), as well as political actors and institutions in the United States and allied countries. The main thrust of this theory is that COVID-19 originated from scientific experiments involving bat coronaviruses conducted at the Wuhan Institute of Virology (WIV), a biosafety level-4 laboratory, and possibly the Wuhan Centre for Disease Control, a biosafety level-2 facility (Chan & Ridley, 2021). Proponents argue that gain-of-function research and genetic manipulation of coronaviruses may have inadvertently resulted in the release of the virus into the human population (Wade, 2021). Although this theory remains contested, its advocates emphasize concerns about transparency, laboratory safety standards, and bioethical accountability in global health governance (Relman, 2020).

The relevance of the Laboratory Leak Theory to this study lies in its emphasis on human agency, institutional responsibility, and global interconnectedness in the spread of pandemics. By framing COVID-19 as a product of scientific and institutional failure, the theory provides a lens for understanding how global crises can rapidly transcend national boundaries and overwhelm state capacities (Fidler, 2020). In the Nigerian context, this perspective helps explain why a virus originating outside the country had profound consequences for its healthcare system, economy, education sector, religious institutions, and governance structures. It underscores how actions or lapses within global scientific and political institutions can directly affect vulnerable social systems in developing countries (Adegboye et al., 2021).

The Accidental Laboratory Escape Theory, though closely related, is conceptually distinct and is supported by public health experts and biosafety researchers such as Richard Ebright and other scholars within the biosecurity community (Ebright, 2020). This theory does not necessarily assume deliberate experimentation or manipulation of pathogens but suggests that COVID-19 may have escaped accidentally from a laboratory while handling naturally occurring virus samples due to inadequate safety protocols, insufficient training, or systemic lapses in laboratory management (Bloom et al., 2021). The central thrust of this theory is that accidental releases of pathogens are not unprecedented and have occurred even in advanced research environments with established biosafety frameworks.

This theory is particularly relevant to the present study because it highlights the unintended consequences of institutional negligence and weak regulatory frameworks in global health systems. Applied to the Nigerian context, it facilitates an examination of how global health emergencies irrespective of intent can expose and exacerbate structural weaknesses within national institutions (Onyeaka et al., 2021). The accidental escape

perspective aligns with the study's focus on consequences rather than culpability, allowing for an analysis of preparedness, response capacity, and institutional resilience. It provides a useful framework for assessing how Nigerian social institutions responded to lockdown measures, public health directives, economic disruptions, and widespread social dislocation caused by the pandemic.

The adoption of the Laboratory Leak Theory and the Accidental Laboratory Escape Theory provides a comprehensive framework for understanding COVID-19 as a globally generated crisis with localized consequences. These theories collectively emphasize institutional accountability, systemic vulnerability, and the cascading effects of pandemics on social structures (WHO, 2021). Within this study, they serve as analytical tools for examining how COVID-19 disrupted and reshaped critical social institutions in Nigeria, thereby contributing to broader sociological and policy debates on pandemic preparedness, governance, and institutional resilience.

Methodology

The study area

The study was carried out in South-South states of Nigeria. The South-South states comprise of the area that covers the natural Delta of the Niger River. It is strategically located at the point where the Y tail of the River Niger joins the Atlantic Ocean through the Gulf of Guinea. Its appropriate northern boundaries is located close to the bifurcation of the Niger River at Agbor, while the western and eastern boundaries are around the Benue river and Imo River respectively. The area is approximately 25,900 square kilometres (ERML, 1997). The South-South consists of six states Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers State. The region is extremely import due to its rich cultural diversity.



Source: Ukpe (2020)

Two states were selected from the South-South states: Cross River and Akwa Ibom States.

This study adopted a survey design that followed these steps:

The study adopted a survey design, implemented through a systematic sequence of steps over six months. It began with a preliminary survey of selected states in the South-South region of Nigeria, conducted in November 2024. This was followed by stakeholder interactions and interview sessions, which provided baseline data on the research indicators during December 2024. During the same period, valid research instruments were designed, and test-retest procedures were conducted in January 2025 to ensure their content validity and reliability. The modified research instruments, including questionnaires, were then administered to selected participants from the affected critical institutions, complemented by focus group discussions (FGDs) and key informant interviews (KIIs) between January and February 2025. The data collected were subsequently coded and analyzed from February to March 2025, and the research report was written within two weeks in March. The findings were shared with relevant stakeholders over a two-week period in April 2025, followed by publication of the results within the same month. Overall, the study was successfully conducted over a six-month period.

Innovation

The study acknowledged the fact that armchair researches on the impact of Covid-19 on various sector of society are not novel. Even at that, most of these studies lack local peculiarities as there do not reflect the Nigeria content. More so, there is near absence of empirical research on the impacts of Covid-19 on culture and critical social institutions in South-South Nigeria and where they exist, such studies are often very narrow in scope. This study bridged these gaps by generating baseline/empirical information on the causes, spread and the impact of Covid-19 on critical social institutions in South-South, Nigeria.

Data management and analysis

Duly completed instruments were carefully retrieved from respondents, coded and analysed using Statistical Package for Social Sciences (SPSS) Version 21. Interviews and focus group discussions (FGDs) was reported while ZY index was used to further analysed quantitative data.

Ethical and environmental consideration

Research ethics were fully adhered to in the study. Consent of stakeholders and appropriate authorities was sort. Respondents were duly informed of the nature of the study and their involvement(s). The anonymity and confidentiality of participants was ensured. The study posed no danger to the social and physical environment of the study area. States covered would not suffer any social and physical environmental damage but rather, the outcome of the research will help in many ways to improve the study area.

Monitoring and evaluation mechanism

The project was critically monitored by the principal researcher in collaboration with six relevant scholars. The evaluation process involved visiting pertinent institutions and consulting experts within the study area to validate the research indicators. This was followed by interview and interactive sessions, which helped to elucidate baseline information and assess it against the validated data. A data collection instrument was then designed, pilot-tested to ensure its validity and reliability, and subsequently administered to the selected participants. The instrument was successfully retrieved, and the data collected were coded and analyzed. Verbal and interview results were interpreted, forming the basis for report writing. Finally, the findings were shared with relevant stakeholders and published, marking the successful completion of the project.

Dissemination strategies

Stakeholders including critical social institutions, as well as relevant government agencies and representatives, sampled communities were briefed of the study findings. Findings of this study were published in open access electronic and print medias.

Data analysis

In its null form, hypothesis one posits that the COVID-19 pandemic has no significant impact on educational institutions, including tertiary, secondary, primary, and nursery schools, in South-South Nigeria. In this analysis, the COVID-19 pandemic functions as the independent variable, while educational institutions serve as the dependent variable. The results of the data analysis presented in Table 1 show a correlation coefficient (r) of 0.284^a, indicating a positive but moderate relationship between the variables. The correlation coefficient is a standardized measure used to assess the strength and direction of the relationship, with values of ± 0.1 representing a small effect, ± 0.3 a medium effect, and ± 0.5 a large effect. Additionally, the coefficient of determination (R^2) of 0.081 indicates that approximately 8.1% of the total variance in educational institutions can be attributed to the COVID-19 pandemic.

Table 1: Summary of simple linear regression results on the effect of the covid-19 pandemic on educational institutions

Variables	mean	std. deviation						
Covid 19 pandemic	14.4543	7.51342						
Educational institution	33.9253	11.74331						
Model	sum of squares	DF	Mean square	F	R	R	Adjusted square	sig R
Regression	16150.971	1	16150.972	112.784	.284 ^a	.082	.070	.000 ^a
Residual	185267.631	621	148.401					
Total	222418.364	622						

Source: Fieldwork 2025

Furthermore, the regression ANOVA results indicate that the model was statistically significant, $F(1, 623) = 112.784$, $p < .05$. Consequently, the null hypothesis was rejected, while the alternative hypothesis was accepted. This finding demonstrates a significant linear relationship between the COVID-19 pandemic and educational institutions including tertiary, secondary, primary, and nursery schools in South-South Nigeria. The adjusted R^2 value of 0.070, which shows minimal shrinkage from the unadjusted R^2 value of .082, suggests that the model is stable and can be generalized to the population. Based on these results, it was concluded that the COVID-19 pandemic had a significant impact on educational institutions in South-South Nigeria.

In its null form, hypothesis two states that the COVID-19 pandemic has no significant impact on the family institution specifically income, source of livelihood, and family relationships in South-South, Nigeria. In this analysis, the COVID-19 pandemic constitutes the independent variable, while the family institution serves as the dependent variable. Simple linear regression analysis was employed to test the hypothesis at the 0.05 level of significance, and the results are presented in Table 2.

Table 2: Summary of simple linear regression analysis of the impact of the covid-19 pandemic on family institutions

Variables	mean	Std. deviation						
Covid 19 Pandemic	14.5112	8.53274						
Family institution	35.3251	12.64331						
Model	Sum of squares	DF	Mean square	F	R	R	Adjusted square	sig R square
Regression	1153.024	1	1226.044	74.778	.288 ^a	.076	.064	.000
Residual	211132.613	613	163.562					
Total	211414.334	622						

Source: Fieldwork 2025

The results of the data analysis presented in Table 2 show a correlation coefficient (r) of .288^a, indicating a positive relationship between the COVID-19 pandemic and the family institution. The correlation coefficient, which measures the strength and direction of the relationship between variables, suggests a moderate effect size, given that values of ± 0.1 indicate a small effect, ± 0.3 a medium effect, and ± 0.5 a large effect. The coefficient of determination (R^2) of .076 indicates that approximately 76 percent of the total variance in family institutional outcomes specifically income, source of livelihood, and family relationships is explained by the COVID-19 pandemic.

Further analysis using regression ANOVA revealed that the model was statistically significant, $F(1, 613) = 74.778$, $p < .05$. Consequently, the null hypothesis was rejected, while the alternative hypothesis was accepted. This result confirms a significant linear relationship between the COVID-19 pandemic and the family institution. The adjusted R^2 value of 0.064, which shows only a slight reduction from the unadjusted R^2 value of .076, indicates minimal shrinkage and suggests that the model has good generalizability to the population. Based on these findings, it was concluded that the COVID-19 pandemic had a significant impact on the family institution in terms of income, sources of livelihood, and family relationships.

Discussion of findings

Covid-19 pandemic and educational institution

The test of the first hypothesis revealed that the COVID-19 pandemic had a statistically significant impact on educational institutions in South-South Nigeria. Regression analysis showed an R^2 value of 0.081, indicating that variations in educational outcomes were significantly associated with the COVID-19 pandemic. This finding underscores the severe disruption the pandemic imposed on Nigeria's education system. Prolonged containment measures, including school closures that lasted over six months, exacerbated existing structural challenges such as teacher attrition and rising school dropout rates. Many students became reluctant to return to school due to fear of infection, uncertainty surrounding the virus, and its perceived mortality risks. Similarly, teachers withdrew from the profession, further weakening instructional capacity. Consequently, school

administrators encountered serious difficulties in restoring effective teaching and learning following the extended shutdown.

Findings from the qualitative data further reinforced these results. Participants consistently reported that the pandemic significantly hindered educational activities. A key informant interview (KII) with a lecturer at the University of Calabar revealed that school closures caused students to miss several months of learning, forcing many to extend the duration of their academic programmes. The respondent noted that some students incurred additional financial burdens, including extra tuition fees, due to the prolonged disruption. Moreover, upon resumption, students were required to proceed directly to examinations without adequate revision, resulting in widespread academic failure. To mitigate this situation, some lecturers reportedly adjusted students' scores in recognition of the extraordinary circumstances surrounding the pandemic.

Quantitative findings also showed that only 14 percent of respondents reported receiving instruction through online platforms during the lockdown, while 86 percent indicated that no virtual teaching occurred. This reflects the limited adoption of digital learning tools in public educational institutions, as online instruction was largely restricted to privately run schools. Interview responses further confirmed the absence of structured virtual learning during the pandemic. A female student from the University of Calabar stated that neither students nor lecturers were informed about or trained in the use of online platforms, noting that many educators had never used applications such as Zoom prior to the pandemic. Virtual learning mechanisms were only introduced recently, primarily for academic defenses. As a result, many students disengaged entirely from academic activities during the lockdown.

Additionally, 56 percent of respondents reported that students forgot most of what they had been taught prior to the school shutdown. This outcome was echoed in the qualitative interviews, where students described having to relearn course materials from the beginning upon resumption. The disruption significantly affected academic performance, with many students failing examinations due to inadequate preparation and loss of learning continuity.

These findings align with existing literature. Ogunode (2020) found that COVID-19 disrupted school calendars and negatively affected students' literacy levels in Nigeria. Aristovnik et al. (2020), using data from 30,383 students across 62 countries, reported a strong correlation between the pandemic and diminished educational capacity among higher education students. Similarly, Omang and Angioha (2021) documented the negative effects of COVID-19 measures on secondary school students' educational development in Calabar South. While Gonzalez et al. (2020) observed some positive academic outcomes associated with confinement and autonomous learning, such benefits were context-dependent and limited to systems with stable instructional continuity.

Other studies further highlight the broader consequences of the pandemic on education. Katoch, Pathania, and Chopra (2021) reported heightened anxiety, frustration, and academic stress among university students, while Aamir and Winkel (2021) observed significant deterioration in students' mental health within four weeks of lockdown. Alghamdi (2021) found moderate to high impacts of COVID-19 on students' social and educational lives, with social aspects more severely affected. Edeh et al. (2020) demonstrated that COVID-19 adversely affected learning access, research activities, employment, and student finances, with online education constrained by poor infrastructure and limited digital skills. Similar adverse educational impacts were reported in Ethiopia (Habtewold, 2021), Afghanistan (Hashemi, 2021), and globally among veterinary medical students (Mahdy, 2020), further confirming the widespread and damaging effects of the COVID-19 pandemic on education systems worldwide.

COVID-19 pandemic and family institution

The second analysis examined the impact of the COVID-19 pandemic on the family institution, with specific focus on income, sources of livelihood, and family relationships. The results revealed that the pandemic had a statistically significant effect on family life. The R^2 value of 0.066 indicates that approximately 66 percent of the total variance in family institutional outcomes was explained by the COVID-19 pandemic. Further evidence from the regression ANOVA showed that the model was significant, $F(1,623) = 73.774$, $p < .05$. Consequently, the null hypothesis was rejected, while the alternative hypothesis was accepted, confirming a significant linear relationship between the COVID-19 pandemic and the family institution. This finding demonstrates that the pandemic made a meaningful contribution to changes in household income, livelihood sources, and family relationships.

The family institution was uniquely and deeply affected by the COVID-19 crisis. Restrictions on physical interaction, sudden disruptions to daily routines, and limited access to economic resources resulted in profound changes in family life, particularly for households with young children. Families were forced to rapidly adjust to

new social rules, habits, and behavioural expectations. Financial instability emerged as a major source of household tension, especially among families struggling to meet basic needs such as food, rent, and school-related expenses. Households living in overcrowded conditions, with limited internet access, food insecurity, and multiple dependents, faced compounded challenges that severely tested their resilience. Overall, the pandemic forced families out of their comfort zones and into unfamiliar and often distressing ways of living.

Findings from the descriptive analysis showed that a majority of respondents reported that people within their communities experienced severe hardship during the lockdown measures implemented to curb the spread of the virus. The qualitative interviews further illuminated these experiences, revealing widespread suffering among families. A community member from Akpabuyo recounted instances of extreme food insecurity, describing neighbours who went days without food and depended on assistance from others for survival. Similarly, a civil servant from Calabar reported that school closures combined with job losses placed enormous financial pressure on households, particularly those with many children. A trader from Calabar also narrated how job loss and the collapse of spousal businesses due to supply chain disruptions resulted in frequent nights without food for his family.

The economic hardship, occasioned by the pandemic placed significant strain on family relationships. Survey results showed that a large proportion of respondents reported increased tension and conflict within households during the lockdown period. Qualitative accounts echoed this finding, as respondents described heightened stress resulting from prolonged cohabitation, financial uncertainty, and the presence of children at home due to school closures. A civil servant from Calabar South noted persistent household conflict during the period, while a businesswoman from Calabar Municipal explained that extended time at home intensified interpersonal friction, despite also fostering deeper familiarity among family members.

Taken together, these findings confirm that the COVID-19 pandemic had a significant and multidimensional impact on the family institution. This conclusion is consistent with earlier studies. Gadermann et al. (2021) found that parents reported changes in family interactions, deterioration in children's mental health, and shifts in support systems during the pandemic. Janssen et al. (2020) observed increased negative affect among parents, with intolerance of uncertainty playing a key role in emotional distress. Feinberg et al. (2021) documented substantial increases in child behavioural problems and parental depression, particularly among mothers and low-income households. Similarly, Tang and Li (2021) reported severe social and relational impacts of COVID-19 on rural migrants, while Ur Rahman et al. (2021) found that low socioeconomic status households were more vulnerable to income shocks and poverty relapse during the pandemic.

Additional evidence from Almeida et al. (2021) and Kansiime et al. (2021) further supports these findings, showing that COVID-19 significantly reduced household income and food security, with poorer households disproportionately affected. Collectively, these studies, alongside the present findings, underscore the profound economic, social, and relational disruptions caused by the COVID-19 pandemic, highlighting its far-reaching consequences for family institutions.

Conclusion

This study investigated the effects of the COVID-19 pandemic on educational and family institutions in South-South, Nigeria, using the Laboratory Leak Theory and the Accidental Laboratory Escape Theory as its analytical framework. The findings revealed that COVID-19 had a significant and negative impact on education at all levels, with prolonged school closures, fear of infection, inadequate preparedness for remote learning, and weak digital infrastructure leading to learning loss, increased dropout rates, teacher attrition, and poor academic performance. The limited availability and accessibility of online learning during the lockdown, particularly in public institutions, further widened educational inequalities and exposed long-standing structural weaknesses within Nigeria's education system.

The study also established that the pandemic significantly disrupted the family institution, particularly household income, sources of livelihood, and family relationships. Lockdown measures increased unemployment, reduced income, and intensified food insecurity, especially among low-income and informal-sector households, resulting in widespread economic hardship often described as the "hunger virus." In addition to financial strain, prolonged confinement and school closures heightened domestic tension, emotional stress, and psychological pressure within families, although some households experienced increased bonding. Overall, the study concludes that COVID-19 constituted a systemic social shock that magnified existing inequalities and exposed institutional fragilities, demonstrating how global crises can generate profound local consequences in societies with weak social protection and institutional resilience.

Recommendations

Based on the findings of this study, it is recommended that government at federal and state levels prioritize investments aimed at strengthening institutional resilience, particularly within the education sector. This includes expanding digital infrastructure to support blended and online learning across all levels of education, especially in public schools located in rural and semi-urban areas. In addition, regular capacity-building programmes should be organized to improve teachers' digital literacy and enhance school administrators' competencies in crisis management and adaptive educational planning. Education authorities should also institutionalize comprehensive emergency education policies that clearly outline procedures for school closures, virtual learning, assessment methods, and student support during public health emergencies, with special attention given to inclusivity and equity for disadvantaged learners.

Furthermore, government should strengthen social protection mechanisms to cushion the socio-economic impacts of future crises on families and vulnerable populations. This can be achieved through expanded cash transfer programmes, food assistance, and unemployment benefits targeted at low-income households and informal-sector workers. Post-pandemic recovery efforts should also focus on livelihood restoration by providing small businesses, artisans, and informal workers with access to soft loans, grants, and skills development initiatives. In addition, mental health and psychosocial support services should be integrated into community health systems to address pandemic-induced stress and family conflict. Improved coordination among government agencies, educational institutions, and community organizations is essential for effective crisis preparedness and response, while further research is encouraged to examine the long-term impacts of pandemics on social institutions across different regions of Nigeria.

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References

- Adèwale, A. R. (2021). COVID-19 and changing social interactions in Africa. *African Journal of Social Sciences*, 11(2), 45–60.
- Agba, A. M. O., Ocheni, S. I., & Agba, M. S. (2020). COVID-19 and the world of work dynamics: A critical review. *Journal of Education and Social Research*, 10(5), 119–130. <https://doi.org/10.xxxx/jesr.v10i5.xxx>
- Agba, A. M. O., Ushie, E. M., Abam, F. I., Agba, M. S., & Okoro, J. (2010). Developing the biofuel industry for effective rural transformation in Nigeria. *European Journal of Scientific Research*, 40(3), 441–449.
- Agba, M. S., Agba, A. M. O., & Chukwurah, D. C. (2020). COVID-19 pandemic and workplace adjustments/decentralisation: A focus on teleworking in a new normal. *Brain-Board Research in Artificial Intelligence and Neuroscience*, 11(4), 185–200.
- Akanle, O., & Adesina, J. O. (2020). COVID-19 and the political economy of hunger in Nigeria. *African Sociological Review*, 24(2), 1–15.
- Al-Said, N. (2020). The impact of COVID-19 on the protection of cultural heritage. *The Global Observatory*. <https://theglobalobservatory.org/2020/06/impact-covid-19-on-protection-of-cultural-heritage/>
- Aamir, A., & Winkel, J. (2021). Mental health impacts of COVID-19 lockdowns on university students. *Journal of Public Mental Health*, 20(3), 201–210. <https://doi.org/10.xxxx/jpmh.xxxx>
- Alghamdi, A. A. (2021). Impact of the COVID-19 pandemic on students' social and educational lives. *International Journal of Educational Research Open*, 2, 100031. <https://doi.org/10.xxxx/ijeropen.xxxx>
- Almeida, M., Shrestha, A. D., Stojanac, D., & Miller, L. J. (2021). The impact of the COVID-19 pandemic on women's mental health. *Archives of Women's Mental Health*, 24(5), 741–748. <https://doi.org/10.xxxx/awmh.xxxx>
- Aristovnik, A., Keržič, D., Ravšelj, D., Tomaževič, N., & Umek, L. (2020). Impacts of the COVID-19 pandemic on life of higher education students: A global perspective. *Sustainability*, 12(20), 8438. <https://doi.org/10.3390/su12208438>
- Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912–920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
- Edeh, H. C., Nwakoby, I. N., & Ogbodo, J. N. (2020). COVID-19 pandemic and its effect on education in Nigeria. *International Journal of Academic Research in Progressive Education and Development*, 9(3), 1–12.

- Feinberg, M. E., Mogle, J. A., Lee, J. K., Tornello, S. L., Hostetler, M. L., Cifelli, J. A., Bai, S., & Hotez, E. (2021). Impact of the COVID-19 pandemic on parent, child, and family functioning. *Family Process*, 61(1), 361–374. <https://doi.org/10.xxxx/famp.xxxx>
- FutureLearn (2020). *COVID-19: The cultural impact of coronavirus*. <https://www.futurelearn.com/info/blog/cultural-impact-of-coronavirus>
- Gadernann, A. C., Thomson, K. C., Richardson, C. G., Gagné, M., McAuliffe, C., Hirani, S., & Jenkins, E. (2021). Examining the impacts of the COVID-19 pandemic on family mental health in Canada. *Canadian Journal of Psychiatry*, 66(9), 1–10. <https://doi.org/10.xxxx/cjp.xxxx>
- Ghebreyesus, T. A. (2020). WHO Director-General's opening remarks at the media briefing on COVID-19. *World Health Organization*. <https://www.who.int>
- Gonzalez, T., De La Rubia, M. A., Hincz, K. P., Comas-Lopez, M., Subirats, L., Fort, S., & Sacha, G. M. (2020). Influence of COVID-19 confinement on students' performance in higher education. *PLOS ONE*, 15(10), e0239490. <https://doi.org/10.1371/journal.pone.0239490>
- Habtewold, T. D. (2021). Educational challenges and responses to COVID-19 in Ethiopia. *African Educational Research Journal*, 9(2), 512–520.
- Hashemi, A. (2021). Effects of COVID-19 on Afghanistan's education system. *Asian Journal of Education and Social Studies*, 14(2), 1–9.
- International Labour Organization. (2020). *ILO monitor: COVID-19 and the world of work* (3rd ed.). <https://www.ilo.org>
- Janssen, L. H. C., Kullberg, M. L. J., Verkuil, B., van Zwieten, N., Wever, M. C. M., van Houtum, L. A. E. M., Wentholt, W. G. M., & Elzinga, B. M. (2020). Does the COVID-19 pandemic impact parents' and adolescents' well-being? *Journal of Adolescent Health*, 67(6), 789–796. <https://doi.org/10.xxxx/jah.xxxx>
- Kansiime, M. K., Tambo, J. A., Mugambi, I., Bundi, M., Kara, A., & Owuor, C. (2021). COVID-19 implications on household income and food security in Kenya and Uganda. *Agricultural Systems*, 188, 103043. <https://doi.org/10.xxxx/agsy.xxxx>
- Katoch, R., Pathania, A., & Chopra, S. (2021). Mental health impact of COVID-19 pandemic on university students. *Journal of Education and Health Promotion*, 10, 1–8.
- Mahdy, M. A. A. (2020). The impact of COVID-19 pandemic on veterinary medical education among veterinary students. *Frontiers in Veterinary Science*, 7, 594261. <https://doi.org/10.3389/fvets.2020.594261>
- Nigeria Centre for Disease Control. (2020). *COVID-19 public health advisory*. <https://ncdc.gov.ng>
- Ogunode, N. J. (2020). Impact of COVID-19 on the Nigerian educational system. *International Journal of Research and Innovation in Social Science*, 4(10), 66–70.
- Omang, T. A., & Angioha, P. U. (2021). COVID-19 pandemic and secondary school students' academic development in Calabar South, Nigeria. *International Journal of Social Sciences and Management Research*, 7(2), 45–56.
- Ozili, P. K. (2020). COVID-19 pandemic and economic crisis: The Nigerian experience. *Journal of African Studies and Development*, 12(2), 1–10.
- Tang, S., & Li, X. (2021). COVID-19 and social impacts on rural migrant families in China. *Journal of Asian and African Studies*, 56(6), 1–15. <https://doi.org/10.xxxx/jaas.xxxx>
- Ukpe, W. (2020, August 16). South-South states lead in Nigerian unemployment. *Nairametrics*. <https://nairametrics.com/2020/08/16/south-south-states-lead-in-nigerian-unemployment/>
- UNESCO. (2020a). *Culture and COVID-19: Impact and response*. <https://en.unesco.org/news/culture-covid-19-impact-and-response-tracker>
- UNESCO. (2020b). *The socio-cultural implications of COVID-19*. <https://en.unesco.org/news/socio-cultural-implications-covid-19>
- United Nations Development Programme. (2020). *COVID-19 pandemic: Humanity needs leadership and solidarity to defeat the coronavirus*. <https://www.undp.org/coronavirus>
- Ur Rahman, A., Jaswal, S., & Rahman, S. (2021). Vulnerability of low-income households during COVID-19 pandemic. *Social Sciences & Humanities Open*, 4(1), 100188. <https://doi.org/10.xxxx/ssaho.xxxx>
- Verity, R., Okell, L. C., Dorigatti, I., Winskill, P., Whittaker, C., Imai, N., & Ferguson, N. M. (2020). Estimates of the severity of coronavirus disease 2019: A model-based analysis. *The Lancet Infectious Diseases*, 20(6), 669–677. [https://doi.org/10.1016/S1473-3099\(20\)30243-7](https://doi.org/10.1016/S1473-3099(20)30243-7)

- WHO. (2020). *World day for safety and health at work: WHO key facts and measures*. <https://www.who.int>
- World Bank. (2020a). *The global economic outlook during the COVID-19 pandemic*. <https://www.worldbank.org>
- World Bank. (2020b). *Culture in the COVID-19 recovery: Good for your wallet, good for resilience, and good for you*. <https://blogs.worldbank.org/sustainablecities/culture-covid-19-recovery-good-your-wallet-good-resilience-and-good-for-you>
- World Bank. (2020c). *Supporting mental health and resilience in frontline COVID-19 health care workers*. <https://blogs.worldbank.org/health/supporting-mental-health-and-resilience-in-frontline-covid-19-coronavirus-health-care-workers>
- World Health Organization. (2020). *Coronavirus disease (COVID-19) situation reports*. <https://www.who.int>
- World Travel and Tourism Council. (2020). *Economic impact reports*. <https://wttc.org>