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A RETROSPECTIVE STUDY OF THE IMPACT OF COVID-19 STRESS AND CONFINEMENT ON THE EMOTIONAL WELL-BEING OF HIGH SCHOOL STUDENTS IN DELTA STATE, NIGERIA

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Abstract

This quantitative study examines the impact of the COVID-19 pandemic on the emotional well-being of 950 high school students in Delta State, Nigeria. This study was done after the lockdown period, it investigates students' attitudes, behaviours, and emotional experiences, stress levels, emotional health, and coping mechanisms. The findings reveal that while most students believed in the existence of COVID-19, there are varying levels of doubt and uncertainty, with awareness of preventive measures but decreasing adherence over time. Students aware of COVID-19-related mortality in their community exhibited significantly lower emotional well-being, increased stress, and depression. The study highlights the importance of context-specific insights and recommends targeted interventions, including health literacy development, improved mental health support in schools, and investment in community-based mental health services.

Keywords: *COVID-19 epidemic, high school students, emotional well-being, COVID-19-related mortality, mental health*

Introduction

The COVID-19 epidemic, which originated in late 2019, quickly developed into a worldwide crisis, impacting millions of individuals across continents. The pandemic, marked by the extensive spread of the SARS-CoV-2 virus, resulted in unparalleled health difficulties, overwhelming healthcare systems, and generating substantial rates of death and illness (Atzrodt, Maknojia, McCarthy, Oldfield, Po, Ta, ... & Clements, 2020). Governments globally enforce diverse public health interventions, like lockdowns, social distance, and travel restrictions, to mitigate the transmission of the virus. Although essential for pandemic containment, these actions significantly disrupted normal life and had major socio-economic and psychological consequences (Oyinlola, Osayomi, & Oluwatosin, 2020).

The pandemic had a diverse influence in Nigeria, affecting various aspects like as public health, the economy, and social structures. In late February 2020, the country documented its initial instance of COVID-19, and by mid-2020, the virus had disseminated to all states, encompassing Delta State as well. The Nigerian government enforced nationwide lockdowns, shut down educational institutions, and imposed movement restrictions, significantly impacting the daily activities and livelihoods of the population. Internationally, the COVID-19 pandemic resulted in a sequence of lockdowns and confinement measures that dramatically transformed people's lives. The stress caused by the epidemic originated from health anxieties, financial insecurity, and social seclusion (Kraut, Li & Zhu, 2022). Educational facilities were closed, and the shift to online learning posed further difficulties, particularly in areas with insufficient digital infrastructure (Dhawan, 2020, Obododike & Okekeokosisi, 2020). In Nigeria, the consequences were

particularly severe due to existing economic and infrastructural obstacles. The closing of schools and transition to online learning revealed the existence of the digital divide, as numerous pupils faced a lack of access to essential technology and internet connectivity. The epidemic worsened pre-existing disparities and posed distinctive obstacles to the educational sector (Ajide, Ibrahim, & Alimi, 2020).

Delta State, situated in the southern portion of Nigeria, encountered substantial obstacles throughout the pandemic. The state's economic activities, primarily focused on oil production, were interrupted, resulting in financial hardship for several households (Joseph-Raji *et al.*, 2020). The closure of schools had a negative impact on students' academic progress, as the absence of a strong online learning system hindered the continuation of effective education (Ozili, 2020). High school students in Delta State and other States in Nigeria faced increased stress and uncertainty because of prolonged school closures, disruptions in academic schedules, and the transition to remote learning environments. A significant number of students faced a lack of access to digital devices and dependable internet, which posed challenges in maintaining their academic progress. In addition, the implementation of confinement measures and social distancing protocols restricted students' opportunities for social connections, which are essential for their emotional and psychological growth (Etinosa *et al.*, 2022).

The emotional welfare of high school children is crucial, as adolescence is a crucial stage characterised by substantial physical, psychological, and social growth. The COVID-19 pandemic's stress and confinement disrupted the developmental trajectory, potentially causing long-term negative impacts on students' mental health and academic performance (Sholihah *et al.*, 2022). Therefore, it is crucial to study the emotional well-being of high school students in Delta State during this pandemic for various reasons. Firstly, it offers valuable insights into the distinct difficulties encountered by students in this locality, which may vary from those in other regions of the country or the globe due to distinctive socio-economic and infrastructural issues (Ilesanmi *et al.*, 2022). Comprehending these difficulties might guide the creation of specific interventions and support systems to assist students in managing stress and preserving their emotional well-being in the case of another eventuality (Sholihah *et al.*, 2022, Lopez, 2024). The psychological consequences of long-term incarceration should not be underestimated, although the home environment provides protection against the virus, it typically lacks the social and emotional support that schools give. Adolescents in high school were denied the opportunity to engage with their peers, participate in extracurricular activities, and follow the regular schedule of a school day (Etinosa *et al.*, 2022, Lopez, 2024). These aspects are crucial for their social growth and psychological well-being. The state of being isolated and the absence of social interaction might have resulted in emotions of solitude, melancholy, and a feeling of detachment from their regular sources of assistance (Eric *et al.*, 2020). The increased stress levels among students can be attributed to factors such as parental worry, economic instability, and health concerns during the epidemic.

The economic repercussions of the pandemic led to financial difficulties for numerous families across Nigeria, thereby impacting the pupils' sense of security and overall well-being (Andam *et al.*, 2020, Singh *et al.*, 2020). The combination of academic pressures, social isolation, and economic instability in families creates a complex challenge that affected the emotional and psychological well-being of students (Joab-Peterside, 2021). Although the pandemic clearly

affects the emotional health of teenagers, there is a lack of research specifically focused on high school students in Delta State, Nigeria. Although there have been several research on the overall effects of COVID-19 on education and mental health at a global and national level, the specific situations and difficulties encountered by students in Delta State have not been sufficiently investigated.

The impact of the pandemic on high school pupils in Delta State may vary depending on local circumstances including socio-economic conditions, cultural influences, and the accessibility of educational resources (Ifesiokwu, Onyekw, & Maha, 2022). Gaining a comprehensive understanding of these distinct experiences is essential for developing successful approaches to promote students' emotional well-being. In the absence of targeted research, policymakers, educators, and mental health professionals may lack the essential knowledge needed to effectively address the unique requirements of this demographic. Also, the lack of focused research on this group results in the underrepresentation of the perspectives and experiences of high school students in Delta State in the broader discussion on the impact of the pandemic on young people (Ozili, 2020, Etinosa *et al.*, 2022, Lopez, 2024). The lack of proper representation can result in a uniform approach in policy and intervention design, which may not effectively tackle the unique issues encountered by students in this area.

To comprehend the effects of COVID-19 stress and confinement on the mental well-being of high school children, a comprehensive theoretical framework is required. This study utilises two main theories: Stress and Coping Theory and Bronfenbrenner's Ecological Systems Theory. These frameworks offer a thorough perspective for analysing the intricate interaction between stressors, coping strategies, and environmental factors that affect students' emotional well-being. The Stress and Coping Theory, formulated by Richard Lazarus and Susan Folkman, provides a fundamental framework for understanding how humans perceive and react to stress (Lazarus, 2006, Folkman & Lazarus, 2013). According to this view, stress is caused by a discrepancy between the requirements placed on an individual and their ability to handle those requirements. The idea highlights the cognitive appraisal process, in which individuals evaluate the importance of a stressor and their capacity to handle event deal with it. Coping mechanisms can be classified into two distinct types: problem-focused coping, which directly deals with the root cause of stress, and emotion-focused coping, which focuses on managing the emotional reaction to the stressor (Baqutayan, 2015). This theory is particularly useful in understanding how high school students perceive and handle the stressors related to remote learning, social isolation, and health concerns during the COVID-19 pandemic. It also offers a structure for examining the different coping mechanisms utilised by students, whether they are attempting to alleviate the academic difficulties presented by online learning or controlling their emotional reactions to the absence of social connections and routine.

Bronfenbrenner's Ecological Systems Theory provides a comprehensive viewpoint on human development, highlighting the impact of many environmental systems. This theory proposes that an individual's growth is influenced by interactions within *five interconnected systems*: the microsystem (immediate surroundings, like family and school), mesosystem (interactions between microsystems), ecosystem (indirect environmental influences, such as parents' workplaces), macrosystem (cultural and societal context), and chronosystem (changes over time) (Perron, 2017). Applying this theory to the examination of high school students in Delta State, Nigeria,

emphasizes the diverse factors that impact their emotional well-being during the pandemic. The microsystem encompasses the direct effects of family dynamics and the closure of schools. The mesosystem refers to the relationships between the home and school environments, which have been disrupted due to the transition to remote learning. The exosystemic encompasses the wider socio-economic difficulties experienced by families within the epidemic, while the macrosystem encompasses cultural perspectives on education and mental health. The chronosystem emphasizes the time-related aspect, considering the long-lasting impact of the epidemic on pupils' growth and progress.

The COVID-19 epidemic has had a widespread influence on pupils globally, causing disruptions in educational systems and impacting the emotional well-being of young individuals in several nations. Research (Bozkurt *et al.*,2020, Akorede, Ajayi, Toyin & Uwadia, 2021). conducted in multiple countries, including the United States, China, and Italy, has identified common stressors and coping mechanisms among high school students. These studies have found that school closures and the transition to remote learning have significantly disrupted students' lives. Notable stresses cited encompass the challenges of adjusting to online education, the absence of social engagement, and anxieties around academic achievement and career prospects. These studies also demonstrate that students utilise various coping strategies, such as participating in hobbies and physical activities, as well as utilising internet platforms for social interaction and academic assistance.

Students from various cultural backgrounds have consistently reported heightened levels of anxiety, despair, and stress as a direct result of the ongoing pandemic. Common coping strategies that have been discovered include obtaining social support from family and friends, participating in creative and physical activities, and utilising technology to maintain connections with peers (Ilevbare, Adelowo, & Adegbite, 2020, Olaseni, Akinsola, Agberotimi & Oguntayo, 2020). The findings emphasise the widespread effect of the pandemic on students, while also emphasising the significance of contextual factors in shaping individual experiences. In Nigeria, the pandemic worsened existing challenges in the educational sector and had a significant impact on students' mental well-being. Nationwide surveys and reports((Yunusa *et al.*,2021) offer valuable insights into the precise difficulties encountered by Nigerian students throughout this period. Multiple nationwide studies have emphasised the educational disruptions brought about by the epidemic, such as the shutdown of schools and the shift to remote learning. These results suggest that numerous students in Nigeria encounter substantial obstacles to successful remote learning because of restricted availability of digital gadgets and dependable internet connections (Yunusa *et al.*,2021, Etinosa *et al.*,2022, Lopez, 2024).

The academic disruptions are further intensified by wider socio-economic difficulties, such as financial instability and health issues. Nigerian students, notably those in Delta State, encounter distinctive obstacles that affect their mental welfare. The digital gap is a substantial problem, as some students lack the requisite resources to fully engage in online education. Moreover, the pandemic's economic repercussions have imposed financial burdens on families, resulting in heightened levels of stress and uncertainty (Onyeaka, 2021, Oladimeji, 2022). The cultural backdrop is also a factor, as societal views regarding mental health might impact the inclination of kids and their families to seek assistance.

Adolescence is a crucial phase for emotional and psychological growth, and the COVID-19 epidemic brought new sources of stress that could have a substantial effect on this stage of development (Ajide, 2020). It is crucial to comprehend the overall factors that affect the emotional well-being of adolescents and the significance of school and peer interactions to understand the impact of the pandemic. Various factors, such as biological changes, family dynamics, academic pressures, and social relationships, have an influence on the emotional health of adolescents. Amidst the epidemic, these characteristics have been disturbed, resulting in heightened susceptibility to stress and mental health concerns. Adolescents are very responsive to alterations in their social surroundings, and the absence of normal school schedules and contacts with peers can significantly impact their emotional well-being (Ozili, 2020, Etinosa *et al.*, 2022, Lopez, 2024).

Adolescents' emotional and social development is significantly influenced by their interactions with peers and within the school environment. Education institutions offer a well-organised setting for acquiring knowledge and developing social skills, while classmates provide crucial assistance and camaraderie. The epidemic has hindered these social exchanges, resulting in sentiments of seclusion and detachment among students (Ifesiokwu, Onyekw, & Maha, 2022). The significance of these relationships elucidates the reason why the absence of regular school attendance and peer interaction has had such a deleterious effect on students' emotional welfare. While there is some research on the influence of COVID-19 on education and mental health in Nigeria, there is a dearth of specific studies that concentrate on the emotional wellbeing of high school students in Delta State, thus this this current study aims to fill this age.

Prior studies on the ramifications of COVID-19 in Delta State have predominantly concentrated on the economic and public health dimensions, while paying comparatively little heed to the emotional and psychological repercussions experienced by students. Although there have been some studies on the overall mental health situation in Nigeria during the pandemic, there is a lack of detailed research on the specific experiences of high school students in Delta State. This study aims to comprehensively investigate the diverse effects of the COVID-19 pandemic on high school students in Delta State, Nigeria. The following research Questions were raised to guide this study:

- Were students convinced of the existence of COVID-19?
- Did students possess knowledge of and have faith in preventive measures?
- Did students implement preventive measures both during and after the lockdown?
- Did students experience emotional distress during the lockdown?
- Did students suffer from depression during the lockdown?
- Did students encounter anxiety during the lockdown?

Methods

The study employs a cross-sectional survey design because it allows for the collection of data at a single point in time from a large sample, providing a snapshot of the students' stress levels, emotional health, and coping mechanisms. The population for this study consists of high school students in Delta State, Nigeria. A total of 950 students were selected using stratified random sampling to ensure representation across different regions and school types within the state. The sample was stratified by gender, location (*Delta South, Delta Central, Delta North*), and school type (*public and private*). This stratification helps to ensure that the sample accurately reflects the diverse demographic characteristics of the student population in Delta State.

Data were collected using a structured questionnaire designed to capture various aspects of students' experiences during the pandemic. The questionnaire included sections on demographic information, stress levels, emotional wellbeing, and coping mechanisms. The stress and emotional wellbeing sections were adapted from validated scales, ensuring the reliability and validity of the measures. This study gathered demographic information across seven categories: gender, age, location, school type, religion, parental occupation, and living situation during lockdown.

Stress levels were quantified using the Perceived Stress Scale (PSS), a validated instrument assessing situation-specific stress appraisals. Emotional well-being was evaluated via the General Health Questionnaire (GHQ-12), a widely used measure of overall emotional health and psychological distress.

Coping mechanisms were assessed using the Brief COPE Inventory, which identifies diverse strategies employed by individuals in response to stressful situations. Data were collected from students from the different schools after ethical approval for the study was obtained from the relevant institutions. All participants were assured of the confidentiality and anonymity of their responses. The survey included an introduction explaining the purpose of the study, the voluntary nature of participation, and the measures taken to protect their privacy

The collected data was analysed using both descriptive and inferential statistical methods. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarise the demographic characteristics and the responses to the stress, emotional wellbeing, and coping mechanism questions. Inferential statistics, such as *t-tests* and *ANOVA*, were employed to examine differences in stress levels and emotional wellbeing across different demographic groups. Correlation and regression analyses were conducted to explore the relationships between stress levels, emotional wellbeing, and coping mechanisms

Results

Demographic Information

Table 1: Demographic characteristics of secondary school students in Delta State (N=950)

Variable	Category	Frequency	Percentage (%)
Gender	Male	395	41.6
	Female	555	58.4
Location	Delta South	307	32.4
	Delta Central	274	28.8
	Delta North	369	38.8
School Type	Public	510	53.7
	Private	440	46.3
Religion	Christianity	935	98.5
	Islam	7	0.7
	ATR	8	0.8
Father's Occupation	Self employed	459	48.3
	Work with government	225	23.8
	Work with private establishment	156	16.4
	Unemployed	103	10.8

	Retired	7	0.7
Mother's Occupation	Self employed	594	62.5
	Work with Government	196	20.6
	Work with private establishment	30	3.2
	Unemployed	86	9.1
	Housekeeper	36	3.8
	Retired	8	0.8
Location during lock down	Both Parents	649	68.3
	Only mother	134	14.1
	Only father	37	3.9
	Relations/Guardian	104	10.9
	With friends	8	0.8
	Alone	18	1.9
Age			

Table 1, shows the percentage distribution of the demographic characteristics of the secondary school students that took part in the study, The participants, 41.6% and 58.4% are male and female respectively. About 32.4%, 28.8% and 38.8% of them were resident in Delta South Senatorial District, Delta Central Senatorial District and Delta North Senatorial District respectively. Ninety-eight (98%) percent of them were Christians while less than two percent (2%) were Islam and Traditional. Delta is a predominant Christian state. Their parents/guardian were mainly self-employed (48.3% - fathers and 62.5% - mothers). Majority of the students were with both parents (68.3%) during the lockdown period. However, some of them lived alone (1.9%), some with friends (0.8%), relations/guardian (10.9%), with only their fathers (3.9%), or with only their mothers (14.1%).

Research Question 1: Did the students believe that COVID-19 was real?

Table 2: Secondary School Students believe on the reality

S/N	Variables	Responses	Frequency	Percentage
1.	Do you believe that COVID-19 is real	Not at all	109	11.5
		Yes, a little bit	245	25.8
		Yes, very well	596	62.7
2.	Do you believe that: COVID -19 was a political game by some few people to make money?	Not at all	395	41.6
		Yes, a little bit	227	23.9
		Yes, very well	328	34.5
3.	Do you know the meaning of COVID-19?	Not at all	221	23.3
		Yes, a little bit	194	20.4
		Yes, very well	535	56.3
4.	Are you aware that many people died during COVID-19?	Not at all	95	10.0
		Yes, a little bit	74	7.6
		Yes, very well	781	82.2
5.		Not at all	779	82.0

	Did you know anyone that died because of COVID-19 disease around your community?	Yes, a little bit	52	5.5
		Yes, very well	119	12.5
6.	Are you aware of the preventive measures (that is, how not get infected) with COVID-19?	Not at all	687	72.3
		Yes, a little bit	111	11.7
		Yes, very well	152	16.2
7.	Do you believe in those preventive measures?	Not correct	560	68.9
		Partially correct	243	23.6
		Correct	147	15.5

Table 2, Shows that the students believed about COVID-19: Only 11.5% of them did not believe that COVID-19 is real as opposed to 62.7% of them who believed that it is real. However, 25.8% did not fully affirm to its reality. About 34.5% of them believed that the pandemic was a clear political game by some few people to make money. The percentage of the student who knows the meaning of COVID-19 is a little bit above average (56.3%). Also, majority of them were aware that many people died of the viral disease around their community (82%). Among the students, 58.9% said they do not believe any of their relations can get infected with this Virus, while 16.2% claimed their relative could be infected and 11.7% of them were not too sure. Finally, 58.9%, 25.6%, and 15.5% of the respondents gave the meaning of COVID-19 wrongly, partially correct and correctly respectively.

Research Question 2: Did they believe in preventive measures

Table 3:

S/N	Variables	Responses	Frequency	Percentage
6	Are you aware of the preventive measures there	Not at all	123	12.9
		Yes, a little bit	111	11.7
		Yes, very well	716	75.4
7	Do you believe in those preventive measures?	Not at all	161	16.9
		Yes, a little bit	277	29.2
		Yes, very well	512	53.9

Respondents were asked if they were aware of the preventive for COVID-19. Table 3 shows that 12.9%, 11.7% and 75.4% of respondents were not aware, a little bit aware and very much aware of the preventive measures for COVID-19. They were also asked if they believe in these preventive measures. Their response shows that over 50% of them believed in preventive measures while about 16.9% of them did not believe in those preventive measures

Research Question 3: Did they still practice the preventive measures

Table 4:

S/N	Variables	Responses	Frequency	Percentage
8	Do you still practice the preventive measures during the lockdown like wearing of nose mask, washing of hands etc.	Not at all	113	11.9
		Yes, a little bit	194	20.4
		Yes, very well	643	67.7
9	Do you still practice the preventive measures now?	Not at all	423	44.5
		Yes, a little bit	305	32.1
		Yes, very well	222	23.4

The percentage of the respondents that practiced the preventive measures during the lockdown is 67.7%, 20.4% practiced a little bit of the measures while 11.9% of them did not practice them at all.

Research Question 4: Were the students emotionally stressed during the lockdown?

Table 5: Responses of Secondary School Students on the stress score

S/N	STATEMENT	RESPONSE (FREQUENCY (%))			
		<i>Did not apply to me at all</i>	<i>Applied to me to some extent</i>	<i>Applied to me considerable</i>	<i>Applied to me very much</i>
1	I found it difficult to relax because of fear	520 (54.7%)	234 (24.6%)	69 (7.3%)	127 (13.4%)
2.	I always over react to situation because of fear	513 (54.7%)	238 (25.1%)	91 (9.6%)	108 (11.4%)
3.	I felt I was nervous	527 (54.0%)	230 (24.2%)	102 (10.7%)	91 (9.6%)
4	I found myself getting agitated	577 (60.7%)	188 (19.8%)	94 (9.9%)	91 (9.6%)
5	I found it difficult to play because of fear	529 (55.7%)	210 (22.1%)	78 (8.2%)	133 (14.0%)
6	I was not able to tolerate anything that kept me from being focused	522 (54.9%)	216 (22.7%)	96 (10.1%)	116 (12.2%)
7	I felt I was getting very touchy (easily angry)	588 (61.9%)	154 (16.2%)	82 (8.6%)	126 (13.3%)

Table 6: Secondary School Students’ Emotional Well-being Level

Variable	Level	N	%
Stress	No stress	882	92.8
	Having depression	68	7.2
Depression	No stress	823	86.6
	Having depression	127	13.4
Anxiety	No stress	799	84.1
	Having depression	151	15.9

Table 5 and 6 shows that 92.8% students were not stressed. From Figure 1, the stress level of the students and their awareness of anyone that died due to COVID-19 disease in their community was show with the aid of violin plots. The calculated *Kruskal-Wallis* = 6.64 was significant at $p=0.04$, which is also significant at $p=0.05$. It implies that the stress level at the three levels of responses not at all; yes, a little bit; yes, and very well to the questions “did you know anyone that died as a result of COVID-19 disease around your community?” differs significantly. A closer look at the violins shows that those students that stated that they were not aware of anyone that died of COVID-19 in their community were less stressed.

In Figure 2, the violin plot shows the stress level of the students based on their belief that their relatives can get infected with the Virus. The *Kruskal-Wallis* value of 30.73 is significant at $p=0.001$ which is equally significant at $p=0.05$. Hence, the distribution of stress for the three levels of responses (not at all; yes, a little bit; yes, very well) differs significantly. A closer look at the violin plot show that the students whose response falls under the first level (not at all) were less stressed.

Figure 1: Violin Plot on Stress Level and Awareness of Anyone that Died due to COVID-19 Disease

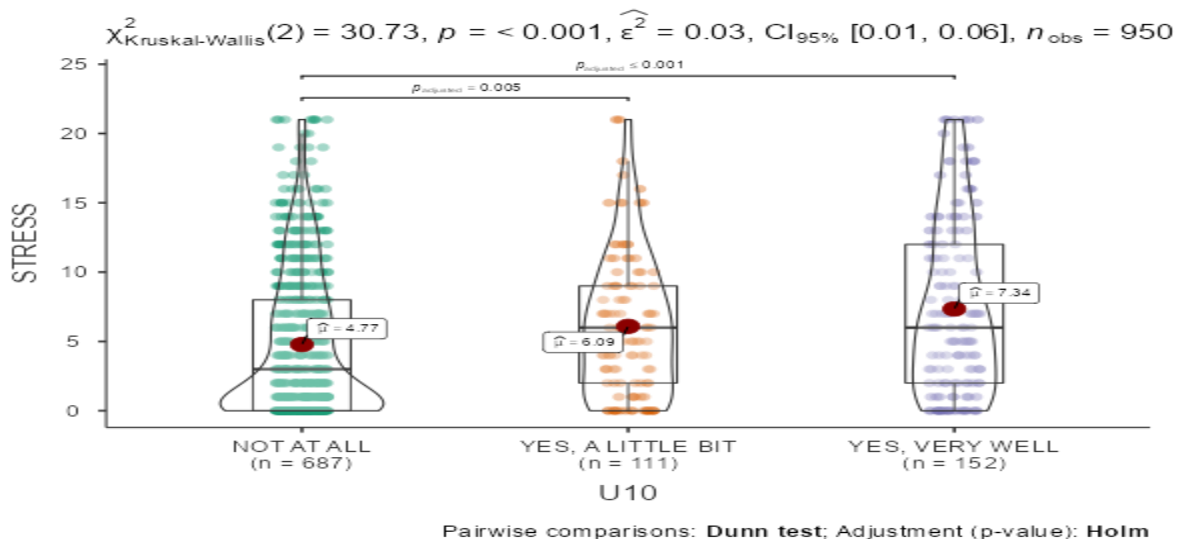
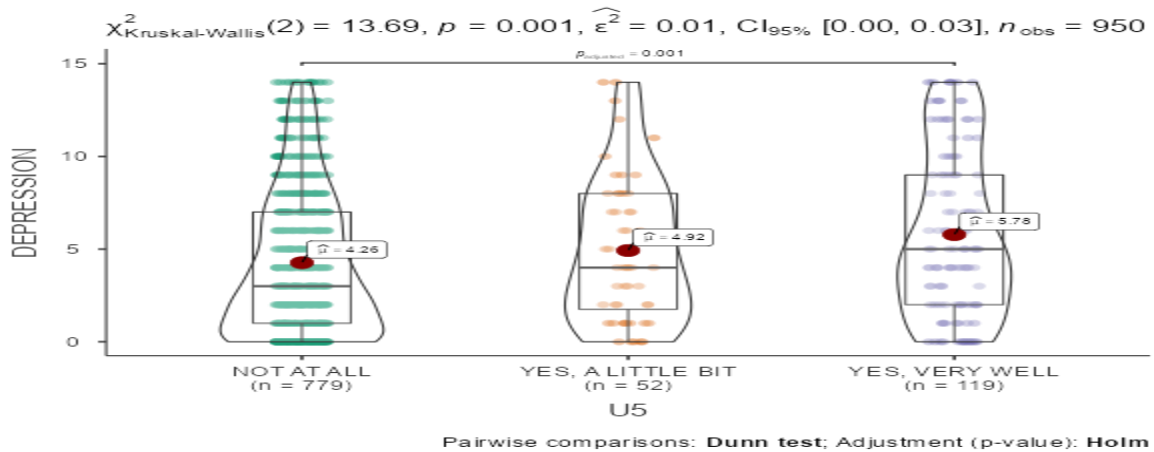


Figure 2: Violin Plot on Stress Level and Belief that one’s Relative can be infected with COVID-19



Research Question 5: *Did they experience depression during the Lockdown?*

Table 7: *Responses of Secondary School Students on the Depression Scale*

S/N	Statement	Responses (Frequency (%))		
		Not At All	A Little Bit	Yes
	During the COVID-19 lockdown			
1	I could not seem to experience any positive feeling at all.	459 (48.3%)	219 (23.1%)	212 (28.6%)
2	I found it difficult to work or do things on my own.	582 (61.3%)	194 (20.4%)	174 (18.3%)
3	I looked at life as if there was nothing to look forward to	530 (55.8%)	227 (23.9%)	193 (20.3%)
4	I felt downhearted and sad	448 (47.2%)	244 (25.7%)	258 (27.2%)
5	I was not happy about everything	473 (49.8%)	226 (23.8%)	251 (26.64)
6	I felt life was meaningless	597 (62.8%)	186 (19.6%)	167 (17.6%)
7	I felt I was not worth a human being	720 (75.8%)	120 (12.6%)	110 (11.6%)

Table 6 and 7 shows that only 13.4% of the students experienced depression. The depression Level of the students based on their awareness of anyone that died of COVID-19 in their community was shown with aid of violin plot (Figure 3). The calculated *Kruskal-Wallis* = 13.69 was significant at $p=0.001$. It implies that the depression level at the three levels of response (not at all; yes, a little bit; yes, and very well) to the question “did you know anyone that died as a result of COVID-19 disease around your community?” differs significantly. The violin plot show that these students that said they were not aware of anybody that died of COVID-19 in their community were less depressed.

The violin plot in Figure 4, shows the depression Level of the students based on their belief that their relatives can get infected with COVID-19. The *Kruskal-Wallis* value of 31.49 is significant at $p < 0.001$. Hence, the distribution of stress for the three levels of responses differs significantly. A closer look at the violin plot shows that the students whose responses falls under the first level (not at all) were less depressed.

Figure 3: Violin Plot on Depression Level and Awareness of Anyone that Died Due to COVID-19

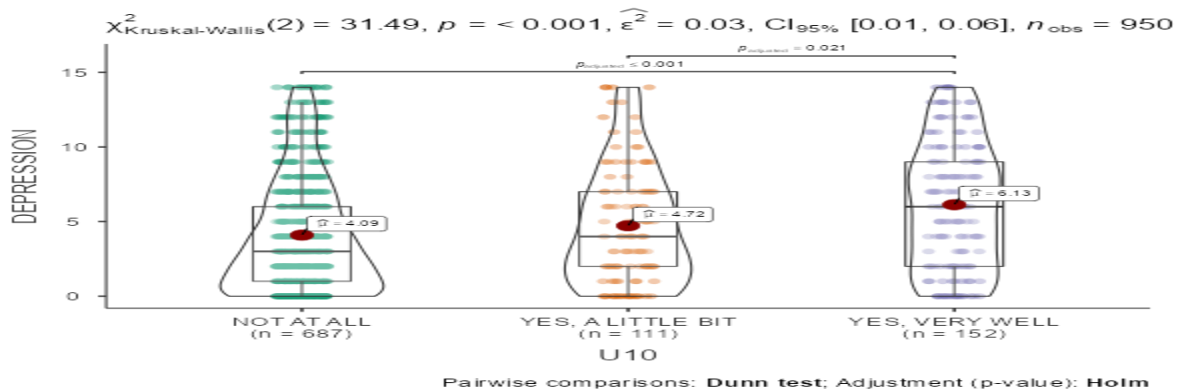
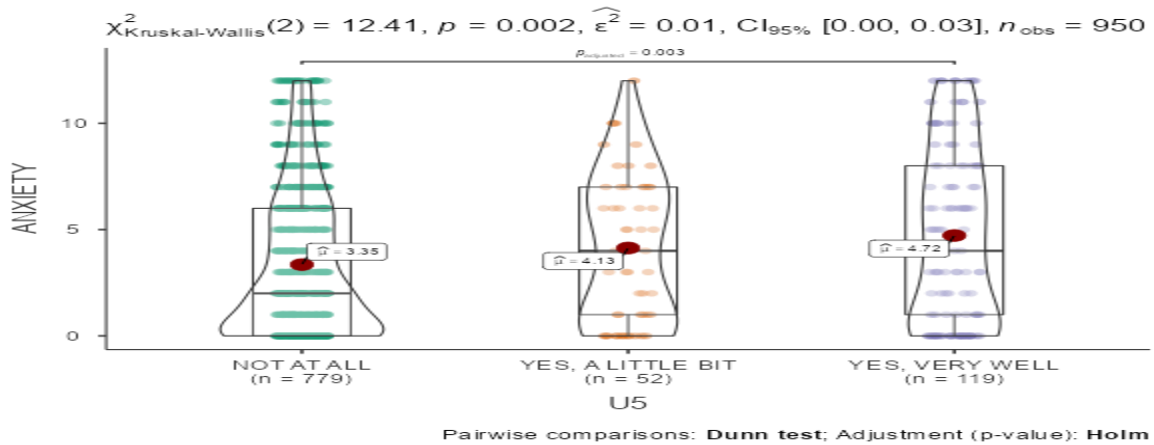


Figure 4: Violin Depression Level and Believe that one’s Relative can be infected with COVID-19



Research Question 6: *Did they experience anxiety during the lockdown?*

Table 7: *Responses of Secondary School students on the anxiety scale*

S/N	Statement	Responses (Frequency (%))		
		Not At All	A Little Bit	Yes
	During the COVID-19 lockdown:			
1	My mouth was always dry because of anxiety	630 (66.3%)	171 (18.0%)	149 (15.7%)
2	I was afraid and it affected my breathing	696 (73.3%)	125 (13.2%)	129 (13.6%)
3	I experience trembling (shaking)	636 (66.9%)	192 (20.2%)	122 (12.8%)

4	I was worried about the problem of COVID-19, it made me panic	414 (43.6%)	270 (28.4%)	266 (28.0%)
5	I felt I was close to panic (fears) because of COVID-19	482 (50.7%)	237 (24.9%)	231 (24.3%)
6	I felt scared without any good reason	552 (58.1%)	196 (20.6%)	202 (21.3%)

The anxiety level of the students during the COVID-19 lockdown was low (Table 6 and 8). From Figure 5, the calculated *Kruskal-Wallis* value for the anxiety level of the students based on their awareness of anyone that died of COVID-19 $p = 0.002$. It indicates that the anxiety level “Did you know anyone as a result of COVID-19 in your community?” differs significantly. The students who picked the response “not at all” were less anxious during the COVID-19 lockdown.

The Violin Plot in Figure 6 shows that anxiety level of the students with regards to their responses to the question. “Do you believe any of your relatives can get infected with COVID-19 disease?” the *Kruskal-Wallis* value of 23.06 with $P < 0.001$ inducts that the anxiety level of the students differ by the response they gave to the question. A look at the violin plots shows that the students whose responses fall under the first level (not at all) were less anxious.

Figure 5: Violin Plot on Anxiety Level and Awareness of anyone that Died Due to COVID-19

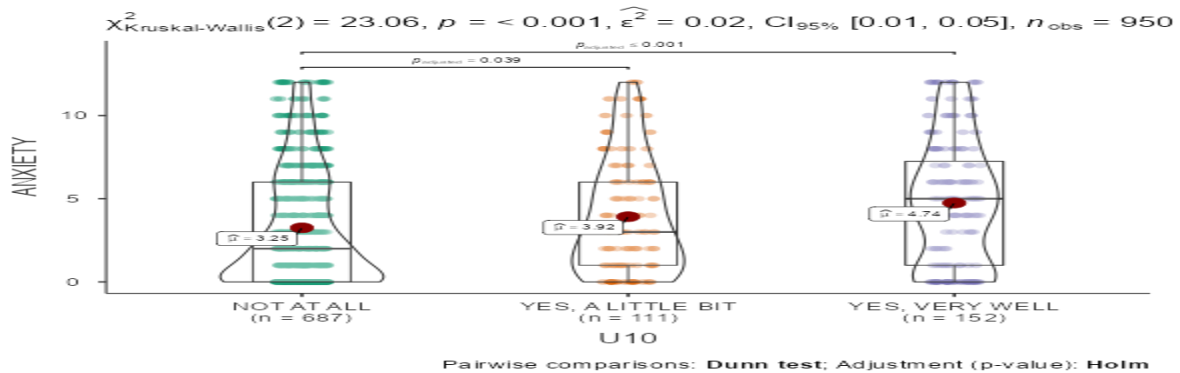
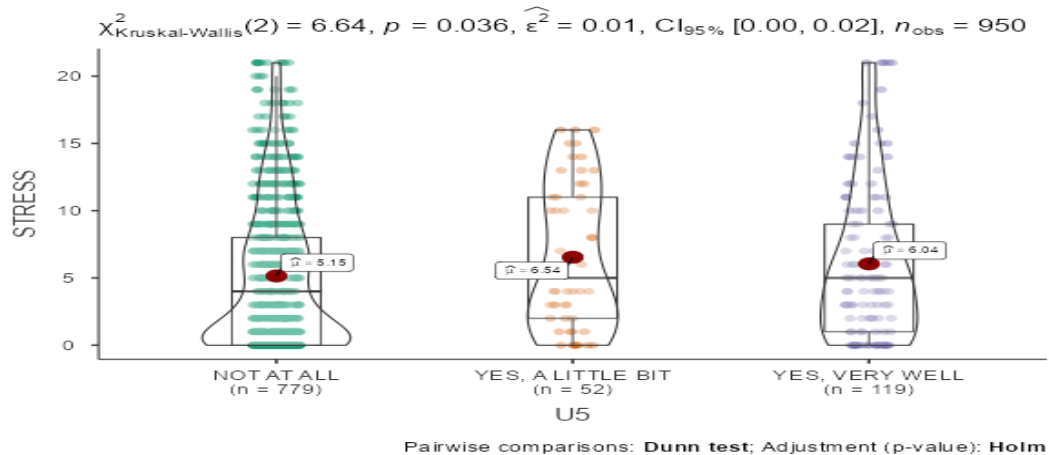


Figure 6: Violin Plot an Anxiety Level and Belief that any of their Relative can Contact COVID-19



Discussion

The study aimed to explore the impact of COVID-19 stress and confinement on the emotional wellbeing of high school students in Delta State, Nigeria. The results provide valuable insights into students' beliefs about COVID-19, their adherence to preventive measures, and their emotional stress levels during the pandemic. The major findings reveal a complex landscape of perceptions and behaviours among high school students, a significant majority of students (62.7%) believed in the reality of COVID-19, while a notable minority (11.5%) did not, and 25.8% were uncertain. Additionally, 34.5% viewed COVID-19 as a political maneuver. This indicates a mixed level of trust and understanding about the pandemic. These findings align with existing literature on the emotional impact of COVID-19 on students. Studies have shown that the pandemic has led to increased anxiety and depression among students globally, with variations based on direct exposure to the virus and related fatalities (Ominde, Jaiyeoba-Ojigho & Igbigbi, 2021). However, the high percentage of students not feeling stressed contrasts with other studies reporting widespread psychological distress during the pandemic (Nacakgedigi, O (2021).

Most students (75.4%) were aware of preventive measures, and over 50% believed in their efficacy. However, 16.9% did not believe in these measures, which could impede public health efforts. During the lockdown, 67.7% partially adhered to preventive measures. Post-lockdown, adherence dropped, with 44.5% not following them at all. This decline suggests pandemic fatigue and highlights the need for sustained public health messaging. This study's finding that 75.4% of students were aware of preventive measures aligns with existing literature, which shows varying levels of awareness and knowledge among different populations. For instance, previous research has documented similar awareness levels but also highlighted gaps in knowledge that can affect adherence to preventive practices (Tadesse *et al.*, 2021, Opeyemi *et al.*, 2023). The 16.9% of students who did not believe in the efficacy of preventive measures highlight a significant challenge. Similar findings in other studies underscore the importance of addressing misinformation and enhancing public trust in health guidelines (Feyisa, 2021, Bamidele *et al.*, 2022). Effective public health messaging and educational campaigns are crucial to sustain adherence and prevent the spread of COVID-19.

Emotional stress during lockdown, despite the challenges, 92.8% of students reported not being stressed. However, stress levels were significantly higher among those aware of COVID-19-related deaths in their community, indicating the emotional impact of the pandemic's proximity. The findings of this study align and contrast with existing literature in several ways, like global studies; the findings show a high level of awareness and belief in COVID-19 among students. However, the significant minority who viewed the pandemic as a political ploy is unique and highlights regional differences in perception shaped by local narratives and misinformation. Studies in other countries have also noted varying levels of skepticism and conspiracy theories regarding COVID-19 (Pew Research Centre, 2020). This study's findings both align with and contrast existing literature in several ways. Like global studies, a high level of awareness and belief in COVID-19 among students was observed. For instance, a study on the psychological impacts of quarantine found it was associated with feelings of anxiety and exhaustion (Talic *et al.*, 2021). Another study highlighted the negative emotional impact on students, affecting their social skills and academic performance (Pipia *et al.*, 2023).

In line with other Nigerian studies, students exhibited mixed adherence to preventive measures. The drop in adherence over time reflects a common issue of pandemic fatigue seen both nationally and internationally. For instance, research in Lagos showed similar trends in declining adherence to preventive measures over time (Adebayo, Akintola & Olaseni, 2022). Unlike many global studies that reported high stress levels among students during the pandemic, this study found low overall stress. This contrast could be due to cultural factors or different levels of pandemic impact and response in Delta State compared to other regions. For example, a study in Italy found significantly higher stress levels among adolescents during lockdowns (Pisano *et al.*, 2020), whereas the lower stress levels reported in Delta State might be influenced by different social dynamics and coping mechanisms.

The findings have several implications for students and educators, schools need to address misinformation and conspiracy theories by incorporating accurate health education into the curriculum. Educators should engage students in critical thinking exercises to help them discern credible information sources (Lewandowsky, Ecker, & Cook, 2017). Supporting emotional well-being, despite the low reported stress; the significant emotional impact on those aware of COVID-19 deaths suggests the need for targeted mental health support. Schools should provide counseling services and create a supportive environment for students to discuss their experiences and feelings (Galea, Merchant, & Lurie, 2020).

The decline in adherence to preventive measures highlights the need for ongoing public health campaigns. Schools should reinforce the importance of these measures and model proper behaviors to encourage student compliance (Bavel *et al.*, 2020).

Conclusion

The study provides a comprehensive overview of the impact of COVID-19 on high school students in Delta State, revealing key insights into their beliefs, behaviors, and emotional wellbeing. While a majority believed in the reality of COVID-19 and preventive measures, a significant portion remained skeptical or misinformed. Emotional stress was relatively low, but the proximity of COVID-19 deaths had a significant impact on those aware of such cases. The pandemic's impact on students' emotional wellbeing is multifaceted, with stress levels influenced by personal and

community experiences. The findings underscore the importance of accurate information and mental health support in mitigating the pandemic's emotional toll on students

Recommendations

Based on the findings of this study, the following suggestions are made:

- The government, through the Ministry of Education, should:
 - integrate comprehensive health education programmes that address COVID-19 and other public health issues, focusing on building trust and dispelling myths (WHO, 2020).
 - establish school-based mental health services to support students dealing with pandemic-related stress and loss.
 - training teachers to recognise and respond to mental health issues always
 - develop strategies to combat pandemic fatigue, ensuring that students remain vigilant about preventive measures through engaging and relatable campaigns (CDC, 2020).

Limitations of the Study

The study relied on self-reported data, which may be subject to bias. The cross-sectional design also provides a snapshot in time, which may not capture changes over the course of the pandemic. The study focused on high school students in Delta State, limiting the generalizability of the findings to other regions or age groups. Further research is needed to explore these dynamics in different contexts.

References

- Adebayo, D. F., Akintola, A., & Olaseni, A. (2022). Adherence to COVID-19 preventive behaviours: The implication of life orientation and sociodemographic factors among residents in Nigeria. *Psychology, 13*(4), 469-481.
- Ajide, K. B., Ibrahim, R. L., & Alimi, O. Y. (2020). Estimating the impacts of lockdown on Covid-19 cases in Nigeria. *Transportation Research Interdisciplinary Perspectives, 7*, 100217.
- Akorede, S., Ajayi, A., Toyin, A., & Uwadia, G. (2021). Influence of COVID-19 on the psychological wellbeing of tertiary institution students in Nigeria. *Tanzania Journal of Science, 47*(1), 70-79.
- Andam, K., Edeh, H., Oboh, V., Pauw, K., & Thurlow, J. (2020). Impacts of COVID-19 on food systems and poverty in Nigeria. In *Advances in food security and sustainability* (Vol. 5, pp. 145-173). Elsevier.
- Atzrodt, C. L., Maknojia, I., McCarthy, R. D., Oldfield, T. M., Po, J., Ta, K. T., ... & Clements, T. P. (2020). A Guide to COVID-19: a global pandemic caused by the novel coronavirus SARS-CoV-2. *The FEBS journal, 287*(17), 3633-3650.
- Bamidele, E., Okebalama, V., Sodeinde, J., Ogunkoya, J., Osinaike, A., Olarewaju, S., ... & Taiwo, A. (2022). Nigerian undergraduate students' perception towards COVID-19 prevention: Implications for policy: Covid-19 perception by Nigerian Undergraduate students. *Babcock University Medical Journal, 5*(2), 150-158.
- Baqutayan, S. M. S. (2015). Stress and coping mechanisms: A historical overview. *Mediterranean Journal of Social Sciences, 6*(2), 479-488.
- Bavel, J. J. V., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M., ... & Willer, R.

- (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature human behaviour*, 4(5), 460-471.
- Bozkurt, A., Jung, I., Xiao, J., Vladimirsch, V., Schuwer, R., Egorov, G., ... & Paskevicius, M. (2020). A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education*, 15(1), 1-126.
- CDC. (2020). COVID-19: Considerations for schools.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of educational technology systems*, 49(1), 5-22.
- Emordi, P. J. (2024). Government Efforts and the Challenges of Achieving Quality Education Among Secondary Schools in Delta State, Nigeria (2012-2020). *Abari, AO, & Orunbor*, (2020), 39-52.
- Eric, N. O., Oghenebrorien, A. E., Onogimesike, A. T., & Suoke, O. P. (2020). Mental wellbeing and exercise participation during covid-19 pandemic among adult residents of Nigeria's Niger delta. *Int J Hum Move Sports Sci*, 8(6), 534-42.
- Etinosa, E. M., Gbadebo, A., Olawale, O. Y., Oke, U., & Gayus, K. A. (2022). COVID-19 and the state of mental health challenges among Women, Girls and Children: the case of Nigeria. *Adv. Soc. Sci. Res. J*, 9, 648-667.
- Feyisa, Z. T. (2021). Factors limiting youths' practice of preventive measures toward the outbreak of COVID-19 in Oromia special zone surrounding Finfinnee, Ethiopia. *PLoS One*, 16(3), e0248495.
- Folkman, S., & Lazarus, R. S. (2013). Stress and coping theory applied to the investigation of mass industrial psychogenic illness. In *Mass psychogenic illness* (pp. 237-255). Routledge.
- Galea, S., Merchant, R. M., & Lurie, N. (2020). The mental health consequences of COVID-19 and physical distancing: the need for prevention and early intervention. *JAMA internal medicine*, 180(6), 817-818.
- Ifesiokwu, C. N., Onyekw, E. C., & Maha, M. O. (2022). Determination of Factors Inhibiting the Use of Emerging Computer Technologies for Management of Secondary Schools in Era of Covid-19 Pandemic in Delta State. *UNIZIK Journal of Educational Research and Policy Studies*, 14(2), 157-173.
- Ilesanmi, O. O., Ilesanmi, F. I., Hajji, R., & Moussa, G. (2022). *A Scoping Analysis of the Psychosocial and Health Implications of COVID-19 Comorbidity-Related Complications in the African States: Recent Developments in Counseling and Therapeutic Options*. IntechOpen.
- Ilevbare, O. E., Adelowo, C. M., & Adegbite, W. M. (2020). COVID-19 lockdown and psychological distress: how Nigerians fared. *International Journal of Behavioural and Healthcare Research*, 7(2), 144-161.
- Joab-Peterside, S. (2021). Socio-economic implications of COVID-19 pandemic in Nigeria. *Global Journal of Social Sciences*, 20(1), 11-23.
- Joseph-Raji, G., Saldarriaga, N., Hernandez-Ore, M., Timmis, E., Ogebe, J., Rostom, A., ... & Jenq, C. (2020). Rising to the Challenge: Nigeria's COVID Response. *Nigeria Development Update Washington, DC: World Bank Group*.
- Kraut, R. E., Li, H., & Zhu, H. (2022). Mental health during the COVID-19 pandemic: Impacts of disease, social isolation, and financial stressors. *PloS one*, 17(11), e0277562.

- Lazarus, R. S. (2006). *Stress and emotion: A new synthesis*. Springer publishing company
- Lewandowsky, S., Ecker, U. K., & Cook, J. (2017). Beyond misinformation: Understanding and coping with the “post-truth” era. *Journal of applied research in memory and cognition*, 6(4), 353-369.
- Lopez, J. V. (2024). COVID-19 Pandemic: The Impact on Social-Emotional Wellness, Resiliency, and Coping Strategies of Young Children (Doctoral dissertation, Northcentral University).
- Nacakgedigi, O (2021). COVID-19 Outbreak Negatively Impacted Nigerian Secondary School Students. *Journal of Research in Medical and Dental Science*. 9.
- Obododike, M. P., & Okekeokosisi, J. B. O. C. (2020). Challenges of implementing e-learning in Nigeria educational system in the Covid-19 pandemic era. *Social Sciences anEducation Research Review*, 7(2), 152-171.
- Oladimeji, A. U. (2022). *Provision of Support for the Family in the Conditions of the COVID-19 Pandemic: The Case of Nigeria* (Doctoral dissertation, Mykolo Romerio universitetas.).
- Olaseni, A. O., Akinsola, O. S., Agberotimi, S. F., & Oguntayo, R. (2020). Psychological distress experiences of Nigerians during Covid-19 pandemic; the gender difference. *Social Sciences & Humanities Open*, 2(1), 100052.
- Ominde, B., Jaiyeoba-Ojigho, J.E., Igbigbi, P.S. (2021). Impact of Covid-19 on the Mental Health of Delta State University students, Nigeria. *Acta Biomed*. 2021 Sep 2;92(4):e2021316. doi: 10.23750/abm.v92i4.10600. PMID: 34487100; PMCID: PMC8477085
- Onyeaka, H., Anumudu, C. K., Al-Sharif, Z. T., Egele-Godswill, E., & Mbaegbu, P. (2021). COVID-19 pandemic: A review of the global lockdown and its far-reaching effects. *Science progress*, 104(2), 00368504211019854.
- Opeyemi, B., Nkeiru, E. C., Bate, A. M., & Yufus, A. S. (2023). Knowledge of Preventive Measures of Covid-19 among Students of Federal College of Dental Technology and Therapy Enugu State, Nigeria. *Nigerian Journal of Health Promotion*, 15(1). Retrieved from <https://journals.aphriapub.com/index.php/NJHP/article/view/175>
- Oyinlola, M. A., Osayomi, T., & Oluwatosin, A. (2020). Empirical modelling of confirmed COVID-19 cases in Nigeria: forecasts and implications. *Available at SSRN 3596095*.
- Ozili, P. (2020). COVID-19 pandemic and economic crisis: the Nigerian experience and structural causes. *Journal of Economic and Administrative Sciences*. ahead-of-print. 10.1108/JEAS-05-2020-0074.
- Perron, N. C. (2017). Bronfenbrenner’s ecological systems theory. *College student development: Applying theory to practice on the diverse campus*, 197(23), 1-10.
- Pew Research Center. (2020). "How Americans view the coronavirus crisis and response."
- Pipia, E., Chkotua, M., Parjanadze, N., Bandzeladze, M., Mesiridze, I., Tvalchrelidze, N., & Razmadze, M. (2023). The Impact Of Students’ Emotional Well-Being on Academic Performance in the Post Covid Era. In *INTED2023 Proceedings* (pp.5150-5159). IATED.
- Pisano, L., Galimi, D., & Cerniglia, L. (2020). A qualitative report on exploratory data on the possible emotional/behavioral correlates of Covid-19 lockdown in 4-10 years children in Italy.
- Sholihah, I. F., Nurmala, I., Sulistyowati, M., & Devy, S. R. (2022). The impact physical distancing during the COVID-19 pandemic on mental health among adolescents: a systematic literature review. *International Journal of Public Health Science*

- (*IJPHS*), 11(1), 69-76.
- Singh, S., Roy, D., Sinha, K., Parveen, S., Sharma, G., & Joshi, G. (2020). Impact of COVID-19 and lockdown on mental health of children and adolescents: A narrative review with recommendations. *Psychiatry research*, 293, 113429.
- Tadesse, A.W., Abebe, N.M., Tadesse, S.E., Wube, M.C. & Abate, A.A. (2021). Preventive Practice and Associated Factors towards COVID-19 among College Students in Amhara Region, Ethiopia: A Cross-Sectional Study. *Ethiop J Health Sci*. 2021 Jan;31(1):3-14. doi: 10.4314/ejhs.v31i1.2. PMID: 34158747; PMCID: PMC8188108.
- Talic, S., Shah, S., Wild, H., Gasevic, D., Maharaj, A., Ademi, Z., ... & Ilic, D. (2021). Effectiveness of public health measures in reducing the incidence of covid-19, SARS-CoV-2 transmission, and covid-19 mortality: systematic review and meta-analysis. *bmj*, 375.
- Tuoyo-Olulu, S. U., & Oghounu, A. E. (2024). Covid-19 Anxiety among Students and Teachers and Compliance to Prevention Protocols in Selected Schools in Delta State, Nigeria. *Asian Research Journal of Arts & Social Sciences*, 22(8), 146-165.
- WHO. (2020). Coronavirus disease (COVID-19) advice for the public.
- WHO. (2021). Mental health and psychosocial considerations during the COVID-19 outbreak.
- Yunusa, A. A., Sanusi, I. T., Dada, O. A., Oyelere, S. S., Agbo, F. J., Obaido, G., & Aruleba, K. (2021). The impact of the covid-19 pandemic on higher education in Nigeria: university lecturers' perspectives. *IjEDict-International Journal of Education and Development Using Information and Communication Technology*, 17(4), 43-66.