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Influence of the COVID-19 pandemic on the mental health of secondary school students

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***Abstract*—** There have been increasing reports on the impact of social, psychological, and environmental factors on the mental health of secondary school students in recent years. The COVID-19 pandemic has further exacerbated students' vulnerability with its negative economic and health implications. Therefore, this study examined the influence of the COVID-19 pandemic on the mental health of secondary school students in Ibadan North-West Local Government Area, Oyo State. It adopted a quantitative approach through the descriptive survey research design. A multi-stage sampling procedure was adopted, and data were collected using a self-developed questionnaire with a Cronbach's alpha coefficient of 0.70. The study sampled 500 students, 296 females, and 204 males. Findings revealed that students faced significant mental health challenges during the pandemic, including difficulties with online classes (87%), fear of infection (76.8%), sleep disturbances (70.4%), and feelings of loneliness (53.2%). Further analysis identified the most common mental health issues as confusion (84.4%), stress (78.6%), eating problems (75.4%), and depression (75.2%). These findings underscore the severe mental health challenges students experience when their daily academic routines are disrupted. There is an urgent need to develop effective interventions to address these growing mental health concerns, particularly during periods of significant disruption.

Keywords: COVID-19 pandemic, Mental health, Online classes, Social restrictions, Secondary school students

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I. INTRODUCTION

THE COVID-19 pandemic profoundly affected livelihoods worldwide, with developing countries like Nigeria experiencing severe social and economic consequences. The first confirmed case in Nigeria was reported in Lagos on February 27, 2020 (Nigeria Centre for Disease Control and Prevention, 2020). The pandemic triggered widespread anxiety and distress due to high mortality rates, stigma, job losses, and economic instability. In response, government agencies, international health organisations, and non-governmental organisations implemented containment measures, including national lockdowns, which significantly impacted mental health, particularly among young people (Brooks et al., 2020).

The uncertainty surrounding the pandemic heightened psychological distress, with studies reporting increased anxiety, depression, sleep disturbances, and emotional distress among various populations (Wang et al., 2020; Rajkumar, 2020b). COVID-19-related restrictions, such as physical distancing, led to substantial socio-economic challenges, including mass unemployment (United Nations, 2020). Key pandemic-related stressors included fear of infection, uncertainty, frustration, lack of essential supplies, economic hardship, and social stigma (Brooks et al., 2020).

Although college students have been recognised as vulnerable (Bruffaerts et al., 2018), limited research exists on the pandemic's psychological impact on secondary school students. Lee (2020) noted that over 91% of students worldwide, accustomed to in-person learning, were significantly affected by school closures. The forced confinement of children and adolescents disrupted education, physical activities, and social interactions (Jiao et al., 2020). Prolonged absence from structured school environments disrupted routines, reduced academic engagement, and decreased motivation and creativity.

Some children showed little concern about missing school-related social interactions (Lee, 2020; Liu et al., 2020; Zhai & Du, 2020). However, outline disruptions made many increasingly dependent on their parents for attention and support. Experts warn that prolonged school closures could lead to long-term socialisation challenges upon returning to physical classrooms (Lee, 2020). Additionally, constructivist, student-centered teaching approaches that emphasise collaboration were largely abandoned in favor of virtual learning, which posed challenges for students without digital resources (Qian & Jiang, 2022).

Beyond education, the pandemic's economic impact severely affected students and their families. Financial hardships disrupted children's schooling, altered living arrangements, and deprived many of essential resources for online learning. Previous health crises, such as the 2014–2016 West African Ebola outbreak, resulted in increased child abuse, neglect, and exploitation. Similarly, COVID-19 school closures limited access to mental health resources for students with pre-existing conditions. According to MacLachlan et al. (2022), a survey by Young Minds of 2,111 UK participants under 25 with a history of mental illness found that 83% experienced worsened mental health during the pandemic. In contrast, 26% struggled to access support due to service

cancellations. Many young people found online or phone-based mental health support ineffective.

The pandemic also exposed digital inequalities. Before the COVID-19 pandemic, students from low-income backgrounds relied on school libraries, computer labs, and campus Wi-Fi, which became inaccessible during lockdowns. Increased home confinement escalated children's internet use, increasing risks of cyberbullying, harmful content exposure, and compulsive behaviour (Cooper, 2020; United Nations Children's Fund [UNICEF], 2020b). Furthermore, legal and protective services were limited, preventing children from reporting abuse. Students with special needs faced additional barriers in accessing educational and mental health support.

This study examines the pandemic's influence on the mental health of secondary school students. The disruptions caused by COVID-19 affected students' academic progress, delayed entrance examinations, and severed social connections with teachers and peers. These challenges highlight the urgent need for targeted interventions to support students' mental well-being during and beyond crises.

II. BACKGROUND TO THE STUDY

The COVID-19 pandemic began in late 2019 and became a global health crisis that disrupted nearly every aspect of daily life. Governments worldwide imposed lockdowns, closed schools, and enforced social distancing measures to curb the spread of the virus. While these measures were necessary to protect public health, they had far-reaching consequences, particularly for vulnerable populations such as secondary school students. The sudden and extended closure of schools and the shift to remote learning interrupted students' education, social interactions, and established routines (Wills & van der Berg, 2024). This disruption, compounded by the pandemic's economic, social, and psychological effects, created unique student challenges.

Mental health problems, which had already been a growing concern among adolescents before the pandemic, were exacerbated by the uncertainty and stress caused by COVID-19. The fear of contracting the virus, the loss of familiar structures such as in-person learning, and the isolation resulting from physical distancing measures contributed to heightened anxiety, depression, and emotional distress among students (Waters et al., 2021). The economic impact of the pandemic also placed additional strain on families, further affecting students' psychological well-being (Andrade et al., 2022). Social isolation, the lack of face-to-face interactions with peers and teachers, and the abrupt transition to online learning created an environment where many students felt disconnected and unsupported (Almeida et al., 2021).

Research has shown that prolonged school closures, lack of social engagement, and increased screen time during the pandemic led to negative mental health outcomes in young people (Choi et al., 2023). Students reported feeling stressed, anxious, and disconnected, and many struggled to maintain academic motivation (Pascoe et al., 2019). Those with pre-existing mental health conditions were particularly vulnerable, as they lost access to vital school-based mental health resources (Murphy et al., 2021). In Nigeria, as in many other countries, the pandemic's impact on students' mental health remains underexplored. Although studies have highlighted the general psychological effects of the pandemic, few have specifically focused on secondary school students in the Nigerian context (Lalin et al., 2024). This gap in research is concerning, as it leaves a critical need for understanding the mental health challenges faced by this group of learners during the pandemic.

The background of this study is grounded in the need to understand how the COVID-19 pandemic has influenced the mental health of secondary school students in Nigeria. Given the significant disruption to students' education, social lives, and routines, assessing the psychological influence of this unprecedented event is essential. By exploring the mental health conditions that students experienced, this study aims to contribute to a more comprehensive understanding of the pandemic's effects on young people's well-being and to inform the development of effective interventions and support systems for students in future crises.

III. RESEARCH PROBLEM

The COVID-19 pandemic has caused widespread disruption across various sectors globally, with the education system being one of the most affected. In response to the pandemic, governments worldwide, including Nigeria, closed schools, imposed social distancing measures, and transitioned to remote learning. While these efforts were essential for mitigating the spread of the virus, they also created significant challenges for secondary school students. The closure of schools, the shift to online learning, social isolation, and the uncertainty surrounding the future have negatively impacted the psychological well-being of students (Mazrekaj & De Witte, 2024).

Secondary school students, already facing developmental and academic pressures, were further burdened by the sudden changes imposed by the pandemic (Engels et al., 2019). The loss of in-person social interactions with peers and teachers, the disruption of daily routines, and the overwhelming anxiety surrounding the health crisis have been associated with increased levels of stress, anxiety, depression, and other mental health challenges among adolescents (Mucci et al., 2024). Despite growing concerns about the mental health of young people during the pandemic, there is limited research focusing on the specific psychological impact of COVID-19 on secondary school students in Nigeria (Álvarez-Iglesias et al., 2021). The lack of a clear understanding of the mental health conditions experienced by secondary school students during the pandemic presents a significant gap in existing knowledge. Without detailed insight into the types of mental health challenges faced by these students, it becomes difficult for educators, policymakers, and mental health professionals to develop targeted interventions and support mechanisms for this vulnerable group.

Therefore, the problem this study seeks to address is the lack of comprehensive data on the influence of the COVID-19 pandemic on the mental health of secondary school students in Nigeria. Specifically, there is a need to explore the mental health conditions that students experienced during the pandemic, how these conditions manifested, and the factors contributing to their psychological well-being during this challenging period. This research aims to fill this gap by examining the mental health challenges faced by secondary school students and providing critical insights that could inform future educational and psychological support strategies.

IV. THEORETICAL FRAMEWORK

Stress and coping theory provided the theoretical foundation for the study. This is because it enhanced the study's framing to highlight the contextual factors that affected students' mental health when exposed to unfamiliar situations, especially situations that restrict them from social interactions with their peers, which is the focus of this study.

The Stress and Coping theory by Lazarus and Folkman (1984) provides the theoretical foundation for this study. The theory posits that individuals constantly evaluate stimuli in their environment, and this evaluation process generates emotional responses. When stimuli are perceived as threatening, harmful, or challenging (i.e., stressors), they cause distress in the individual, prompting them to initiate coping strategies. These coping processes alter the relationship between the individual and their environment, which is reassessed as favorable, unfavorable, or unresolved. Research has shown that when stressors lead to favorable outcomes, positive emotions arise; however, when outcomes are unresolved or unfavorable, distress is provoked, prompting individuals to explore additional coping strategies (Lazarus & Folkman, 1984; Lazarus et al., 1985; Folkman & Lazarus, 1988; Lazarus, 1990; Folkman, 1997).

The COVID-19 pandemic subjected secondary students to

academic uncertainty, social isolation, and health concerns, creating significant psychological burdens. These conditions required substantial psychological adjustment, which varied depending on the students' coping strategies (problem-focused vs. emotion-focused). The experiences of anxiety, loneliness, and depression among secondary school students were exacerbated by the pandemic. School closures and social distancing measures led to a lack of physical peer interaction, a vital component of adolescent emotional development. Research has found that the disruption of school routines and increased screen time contributed to emotional distress (Loades et al., 2020).

Furthermore, remote learning introduced numerous challenges, including disparities in access to technology, limited teacher-student interaction, cognitive overload due to self-directed learning, and inadequate academic support. These issues intensified stress and diminished students' motivation (Van Lancker & Parolin, 2020). Peer interaction, essential for adolescent development, was also obstructed by the pandemic, leading to heightened feelings of isolation. Orben et al. (2020) noted that virtual interactions could not replace the emotional benefits of face-to-face connections. As a result, family environments became a primary source of socialisation during the pandemic. For some students, increased time spent with family proved beneficial (Patrick et al., 2021), while others experienced heightened stress due to economic insecurity, parental conflict, or the loss of loved ones. These factors further contributed to emotional distress and mental health challenges.

Relevance of stress and coping theory to the study

Lazarus and Folkman's Stress and Coping Theory (1984) provides a comprehensive framework for understanding how individuals experience and manage stress. According to the theory, stress is a response to demands that exceed an individual's resources or coping abilities. The theory emphasises two key components: primary appraisal (the initial evaluation of whether an event is perceived as stressful) and secondary appraisal (the evaluation of available coping resources and options). Coping, in turn, involves using strategies to manage or reduce the perceived stress. In this study, the following key findings can be interpreted through the lens of Lazarus and Folkman's theory.

V. OBJECTIVE OF THE STUDY

The study examined the profound impact of the COVID-19 pandemic on the mental health of secondary school students. Specifically, the study focused on the following objectives:

To explore the challenges faced by secondary school students because of the switch to online classes due to the impact of the COVID-19 pandemic

Examine the extent to which students experienced mental health conditions during the COVID-19 pandemic.

Identify the specific mental health challenges they encountered

VI. METHODS

Research approach

The study adopted the quantitative approach, which is particularly suitable for examining patterns, relationships, and trends within large populations using numerical data. This approach allowed researchers to systematically collect and analyse data from a sizable sample of secondary school students to understand the mental health impacts of the COVID-19 pandemic.

Research design

The study employed a descriptive survey research design, chosen for its effectiveness in collecting data through straightforward descriptions of respondents' opinions and experiences. The primary aim of this design is to gather data on respondent' experiences, providing researchers with a comprehensive understanding of the variables without the need to focus on lived experiences or develop theory (Bradshaw et al., 2017; Doyle et al., 2020). Additionally, Neergaard et al. (2009) highlighted that this design is beneficial as it allows researchers to maintain close contact with respondents' rich descriptions, making it ideal for studies seeking first-hand experiences.

Population

The study selected 500 students from secondary schools in the Ibadan North-West Local Government Area of Oyo State. A multi-stage sampling procedure was used to choose the respondents from the study area, which included the following stages:

Stage One: Ten (10) out of twenty (20) secondary schools in Ibadan North-West were randomly selected using a simple random sampling technique, specifically the fishbowl method, without replacement.

Stage Two: All secondary education levels, except Junior Secondary School One (JSS1), were purposively selected. This was because these students had experience in secondary education and could relate to the feelings of loneliness caused by COVID-19 restrictions.

Stage Three: Convenience sampling was employed to select 10 respondents from each of the chosen classes.

Data collection instrument

A self-developed questionnaire titled "Influence of COVID-19 Pandemic on the Mental Health of Students in Schools Questionnaire" was used as the primary instrument for data collection. The questionnaire consisted solely of dichotomous (YES/NO) questions.

Data analysis

Validity and Reliability of the Instrument: The instrument's validity was ensured through expert reviews in Health Education. A trial test was conducted, and the instrument's reliability was determined using Cronbach's Alpha, which yielded a reliability coefficient 0.71. Descriptive statistics were used to analyse the collected data, specifically frequency counts and percentages. These methods were considered suitable for interpreting the natural occurrence of the variables.

Ethical considerations

The study strictly followed ethical principles governing research involving human participants. Specifically, the following measures were taken to ensure the protection of participants' rights and well-being:

Informed consent: All participants were provided with detailed information about the study's purpose, procedures, potential risks, and benefits. Written informed consent was obtained from each participant before data collection. For students under 18, consent was also obtained from their parents or legal guardians, per ethical guidelines for research involving minors.

Participation and right to withdraw: Participation in the study was entirely voluntary. Students were informed of their right to decline participation or withdraw from the study at any point without any consequences or loss of benefits.

Confidentiality and anonymity: All data collected were anonymised to protect respondents' privacy. Personal identifiers were removed, and responses were coded to ensure confidentiality. Data was stored securely and accessed only by authorised research personnel.

Minimisation of harm: Given the sensitive nature of mental health topics, care was taken to ensure that the questionnaire was designed to avoid distress. Participants were assured that there were no right or wrong answers and that their responses would not affect their academic standing or relationships with school authorities.

Support for participants: In cases where students expressed distress or disclosed serious mental health concerns (e.g., suicidal thoughts), referrals were made to school counselors or appropriate mental health professionals. The study team coordinated with school authorities to ensure support systems were in place.

Consent from school authorities: Before the commencement of the study, formal permission was obtained from the management of the selected secondary schools. This facilitated a supportive environment for data collection and ensured institutional cooperation.

VII. RESULTS

Table 1 presents the age distribution of the 500 respondents included in the study. The respondents' ages were 10-15, 16-20, and 21 years and

above. Most respondents, 252 students (50.4%), fall within the age group of 10-15 years. This indicates that half of the study's participants are in the early stages of secondary education, likely in the Junior Secondary School levels. A smaller proportion of respondents, 142 students (28.4%), are in the age range of 16-20 years. This group includes students likely in the Senior Secondary School levels, typically in their late teens. The remaining 106 students (21.2%) are in the 21 years and above age group. This category includes students who may have repeated grades or delayed their progression due to various factors. Overall, the total number of respondents surveyed is 500, with all age categories contributing to the sample. The distribution highlights a significant concentration of students in the 10-15 age group, with a substantial representation from the older age groups.

Table 1: Distribution of respondents' age in years

Age in Years	Frequency	Percentage
10-15 years	252	50.4%
16-20 years	142	28.4%
21 and above	106	21.2%
Total	500	100%

Table 2 illustrates the religious distribution of 500 respondents in the study. The respondents were categorised into three religious groups: Christianity, Islam, and Traditional religion. Christianity emerged as the predominant religion among the respondents, with 358 students (71.6%) identifying as Christians. This majority reflects the significant presence of Christianity in the region where the study was conducted. Islam was the second most reported religion, with 142 students (28.4%) identifying as Muslim. This indicates a notable, but smaller proportion of Muslim respondents compared to the Christian group. The study did not represent traditional religion, as evidenced by the 0% recorded in this category. This absence could be due to the regional or cultural context of the study, where traditional religions may have minimal representation among secondary school students. In summary, the total number of respondents is 500, with the vast majority identifying as Christian, a smaller proportion as Muslim, and no respondents reporting adherence to traditional religions.

Table 2: Distribution of the respondents by religion

Religion	Frequency	Percentage
Christianity	358	71.6%
Islam	142	28.4%
Traditional	0	00.0%
Total	500	100%

Table 3 presents the gender distribution of the 500 respondents in the study. The respondents were categorised into two gender groups: Female and Male. Female respondents comprised the majority, with 296 students (59.2%) identifying as female. This indicates a higher representation of female students in the sample than male students. Male respondents accounted for 204 students (40.8%), representing a smaller sample proportion. The total number of respondents in the study was 500, with the majority being female. The gender distribution reflects a greater involvement of female students in this secondary school sample.

Table 3: Distribution of respondents by gender

Gender	Frequency	Percentage
Female	296	59.2%
Male	204	40.8%
Total	500	100.0%

Table 4 shows the frequency and percentage distribution of secondary school students' experiences regarding mental health conditions during the COVID-19 pandemic. The table presents responses to several questions that explore various aspects of students' well-being during the pandemic.

Interest in physical activities

A significant number of respondents (297, or 59.4%) reported that they maintained interest in physical activities during the pandemic, while 203 (40.6%) did not engage in physical activities. This suggests that more than half of the respondents sustained interest in physical activities despite the lockdown restrictions.

Challenges with online classes

Most respondents (435, or 87%) experienced challenges with online classes, while only 65 (13%) did not face difficulties. This highlights students' struggles adapting to remote learning during the pandemic.

Enjoyment of hobbies: A smaller proportion of students (188, or 37.6%) could enjoy their hobbies during the pandemic, while 312 (62.4%) could not engage in their usual hobbies. This indicates that the restrictions significantly hindered students' ability to partake in activities they normally enjoy.

Impact on sleeping patterns: The pandemic notably affected students' sleeping patterns, with 352 (70.4%) students reporting disturbances in their sleep, and 148 (29.8%) did not experience sleep disruptions. This suggests that many students face challenges in maintaining a normal sleep routine.

Fear of contracting coronavirus: The fear of contracting the virus was prevalent, as 392 (78.4%) students reported concerns about potentially contracting COVID-19, while 108 (21.6%) students did not have such fears. This shows that most students were anxious about the risk of exposure to the virus.

Feelings of loneliness: Over half of the respondents (266, or 53.2%) reported feeling lonely during the pandemic, whereas 234 (46.8%) did not experience loneliness. This reflects the emotional toll social isolation and lockdown measures had on students.

Awareness of coronavirus and mental health impacts: A substantial number of students (384, or 76.8%) were aware that COVID-19 could lead to mental health conditions, while 116 (23.2%) were unaware. This indicates a high level of awareness about the mental health consequences associated with the pandemic.

In summary, the table reveals that most students faced various challenges related to their mental health during the COVID-19 pandemic. Most notably, the challenges with online learning, fear of contracting the virus, disruptions to sleep, and feelings of loneliness were prevalent among the students. These factors reflect the pandemic's significant psychological impact on their daily lives.

Table 4: Mental Health Conditions Experienced During the COVID-19 pandemic

Item	Yes	No	Total
Did you harbor an interest in physical activities during the COVID-19 pandemic?	297 59.4%	203 40.6%	500 100%
Did you have challenges with online classes?	435 87%	65 13%	500 100%
Were you able to enjoy your hobbies during the COVID-19 Pandemic?	188 37.6%	312 62.4%	500 100%
Did the COVID-19 pandemic affect your sleeping patterns?	352 (70.4%)	148 (29.8%)	500 (100%)
Did you at any point feel you would contract coronavirus?	392 (78.4%)	108 (21.6%)	500 (100%)
Were you lonely during the COVID-19 Pandemic?	266 (53.2%)	234 (46.8%)	500 (100%)
Did you know that the coronavirus caused mental health conditions during the COVID-19 pandemic	384 (76.8%)	116 (23.2%)	500 (100%)
Total Number of Responses	2282	1218	3500
Percentage	65.2%	34.8%	100%

Table 5 presents the frequency and percentage distribution of secondary school students' experiences with various mental health conditions during the COVID-19 pandemic. The table highlights the emotional and psychological impact of the pandemic on students, as reflected in their responses to different aspects of their mental health.

Depression: A significant majority of respondents (376, or 75.2%) reported feeling depressed during the pandemic, while 124 (24.8%) did not experience depression. This indicates that a large portion of students struggled with feelings of sadness and despair during this period.

Stress from Online Classes: A high number of students (393, or 78.6%) found the online classes to be very stressful, with only 107 (21.4%) not experiencing significant stress. This suggests that the shift to remote learning added considerable academic pressure on students.

Anxiety about school resumption: Over half of the respondents (284, or 56.8%) expressed anxiety about the return to school, while 216 (43.2%) did not share this concern. This points to many students' emotional uncertainty and nervousness about reopening schools after the lockdown.

Confusion due to the pandemic: A striking 422 students (84.4%) reported that the pandemic caused significant confusion for them, while only 78 (15.6%) did not experience this. This highlights the overwhelming sense of disorientation and uncertainty that many students felt due to the rapid and unforeseen changes brought on by the pandemic.

Suicidal thoughts and disillusionment: A small but concerning proportion of students (52, or 10.2%) admitted to feeling disillusioned and having thoughts of suicide during the pandemic, while 448 (89.6%) did not have such thoughts. Although the percentage is relatively low, it points to a serious mental health issue that affected some students.

Impact on self-esteem: When asked whether the pandemic affected their self-esteem, 162 students (32.4%) reported a decrease in self-esteem, while 338 (67.6%) did not notice any negative impact. This suggests that for many students, the pandemic did not lead to a decline in self-esteem, but for some, it did cause a decrease in their confidence and sense of self-worth.

Irregular eating patterns: Many students (377, or 75.4%) experienced irregular eating patterns during the pandemic, while 123 (24.6%) did not. This indicates that many students struggled with maintaining healthy eating habits due to the stress, isolation, and lifestyle changes caused by the pandemic.

In summary, the table demonstrates that the COVID-19 pandemic had a profound effect on the mental health of secondary school students, with a majority reporting stress, depression, and disruptions to their daily routines, such as eating patterns. The fear of school resumption, feelings of confusion, and even thoughts of suicide were key emotional challenges faced by students, highlighting the need for targeted mental health support during such crises.

Table 5: Types of mental health conditions experienced during the COVID-19 pandemic

Questions	Yes (n/%)	No (n/%)	Total (N/%)
I felt depressed during the COVID-19 pandemic.	376 (75.2%)	124 (24.8%)	500 (100%
The online classes were very stressful for me.	393 (78.6%)	107 (21.4%)	500 (100%)
I was very anxious for school to resume.	284 (56.8%)	216 (43.2%)	500 (100%)
The coronavirus pandemic caused serious confusion for me.	422 (84.4%)	78 (15.6%)	500 (100%)
I felt disillusioned and thought about suicide during the COVID-19 pandemic.	52 (10.2%)	448 (89.6%)	500 (100%)
The COVID-19 Pandemic did not affect my self-esteem increase	162 (32.4%)	338 (67.6%)	500 (100%)
My eating pattern became irregular during the COVID-19 pandemic.	377 (75.4%)	123 (24.6%)	500 (100%)
Total number of responses	1936	1564	3500
Percentage	55.31%	44.68%	100%

VIII. DISCUSSION

The investigation into the effects of the COVID-19 pandemic on secondary school students revealed several significant findings regarding their knowledge of the virus and the mental health challenges they faced during the pandemic. Students demonstrated a basic understanding of COVID-19 and its potential mental health implications, acknowledging the anxiety, depression, and stress that often accompany such disease outbreaks, as seen in previous events like the Ebola and SARS epidemics. The pandemic, like these previous outbreaks, triggered symptoms of heightened anxiety and stress among students, compounded by the uncertainty and disruption it caused in their daily lives.

One of the key measures implemented to curb the spread of the virus was the closure of schools, which affected students' ability to attend in-person classes. To mitigate the educational disruption, online teaching methods were quickly adopted (Johnson et al., 2020; Di Pietro et al., 2020). Despite efforts to continue learning remotely, 87% of students in this study reported experiencing significant challenges and stress during online classes. These challenges included difficulties in adapting to new learning platforms, limited interaction with teachers, and a lack of peer-to-peer engagement, which is critical for academic success and emotional development.

Beyond the academic challenges, students' daily routines were also severely impacted. Their sleeping patterns were disrupted, fitness routines were neglected, and social interactions were significantly reduced. These disruptions were particularly notable in students' coping mechanisms, which varied across different age groups. Older students tended to experience higher levels of psychological anxiety, insomnia, and a worsening of pre-existing mental health conditions. If left unaddressed, these effects could lead to long-term psychological consequences (Cohen et al., 2020). The findings underscore the urgent need to assess the full scope of the pandemic's effects on students' education, health, and social lives to inform future crisis responses better.

Additionally, the investigation outcomes highlighted a significant misalignment between the duration of online classes and the guidelines provided by the Ministry of Human Resource Development (Department of School Education and Literacy, 2020). The limited classroom interaction and poorly designed online schedules resulted in students' dissatisfaction with their learning experiences. The lack of structured, face-to-face interactions with peers and educators hindered students' academic motivation, depriving them of the social interactions necessary for personal growth and development. Peer-to-peer interactions are essential for fostering teamwork, communication, and social skills—elements that are difficult to replicate online.

The study also revealed that the primary challenges of online education were rooted in inadequate digital infrastructure. Many students faced difficulties accessing the necessary technology, such as reliable broadband, mobile connectivity, and appropriate digital tools. Furthermore, the lack of digital skills among students and teachers added to the educational burden, highlighting the need for greater investment in digital education resources and training to ensure students can engage effectively with online learning platforms.

In summary, while online education provided a temporary solution to the disruption caused by the pandemic, it also exposed significant flaws in delivering education during such crises. The pandemic's emotional, social, and educational impacts on students are profound and multi-faceted, indicating the need for more comprehensive approaches to address students' well-being, academic needs, and social development during future emergencies. This study provides insight into how we can better support students in navigating the challenges of remote learning and mental health struggles in times of crisis.

IX. IMPLICATIONS OF THE STUDY

One of the study's major findings is the high level of perceived stress among students during the COVID-19 pandemic. As per the **primary appraisal** in the Stress and Coping theory, students likely assessed the pandemic as a significant threat to their health, education, and overall well-being. With 78.4% of students reporting anxiety about contracting COVID-19 and 53.2% feeling lonely, many students viewed the pandemic as a stressor that disrupted their normal lives. These high stress levels align with Lazarus and Folkman's assertion that stress arises when individuals perceive an event as threatening, harmful, or overwhelming.

The study revealed that most students faced challenges with online classes, which exacerbated their stress. Regarding secondary appraisal, students likely assessed their available coping resources as insufficient to manage the demands of online learning. This is consistent with Lazarus and Folkman's idea that stress occurs when individuals feel

that they lack the necessary resources (in this case, digital skills, infrastructure, and social support) to handle the situation. The shift to online learning, technical difficulties, and social isolation may have overwhelmed students, reinforcing their stress.

The findings suggest that students exhibited varying emotional responses, such as feelings of depression, anxiety, and confusion (84.4%). These emotional reactions are part of the emotion-focused coping strategies outlined by Lazarus and Folkman. These strategies involve attempts to manage the emotional distress caused by stress, often when the individual perceives the stressor as beyond their control. The overwhelming feelings of depression and anxiety experienced by students may have resulted from emotion-focused coping mechanisms, such as rumination or avoidance, which are typically less effective in reducing stress in the long term. Additionally, **problem-focused coping** strategies, which aim to directly address the source of the stress (e.g., seeking better learning solutions or support), may have been less effective during the pandemic due to the limitations of online learning, social distancing, and the lack of face-to-face interaction. This could explain why many students continued to experience high stress levels despite efforts to adapt to the new learning environment.

The study's disruption of daily routines, including fitness activities, hobbies, and peer interactions, was another key finding. According to the coping resources aspect of Lazarus and Folkman's theory, maintaining routines and engaging in social interactions are crucial resources for students to manage stress. The pandemic's social distancing measures limited students' ability to access these coping resources, leading to increased psychological distress. The study's findings, such as some students feeling lonely and others being unable to enjoy hobbies, support the idea that social isolation significantly impaired students' ability to cope with the stress of the pandemic. Students may have been forced to rely on avoidance coping strategies (such as disengagement from schoolwork or social withdrawal) due to the absence of supportive social networks and routines. These strategies, while temporarily relieving stress, are generally associated with poorer mental health outcomes in the long run, which could explain the elevated levels of anxiety, depression, and other mental health conditions observed in the study.

The finding that 76.8% of students knew that COVID-19 could cause mental health problems indicates an awareness of the connection between the pandemic and stress. This knowledge aligns with cognitive appraisal processes in Lazarus and Folkman's theory, where individuals assess not only the stressor itself but also their resources for coping. Despite understanding the mental health risks posed by the pandemic, the study shows that students still struggled to cope effectively, highlighting the gap between awareness and practical coping mechanisms. This could be attributed to the lack of sufficient coping strategies, mental health resources, and support systems, further exacerbating the mental health crisis.

The findings suggest that the pandemic led to short-term and long-term stress responses. Some students reported feeling disillusioned and having suicidal thoughts, with few respondents acknowledging such feelings. Lazarus and Folkman's theory emphasises the importance of resilience in coping with prolonged stress. The study's results suggest that while some students may have had the resilience to navigate the challenges (e.g., coping with online learning or isolation), others struggled significantly, indicating that the stress experienced during the pandemic could have long-lasting effects on students' mental health and well-being.

In summary, the findings of this study on the influence of the COVID-19 pandemic on secondary school students' mental health align closely with Lazarus and Folkman's Stress and Coping Theory. The pandemic acted as a significant stressor for students, and their coping strategies were largely insufficient to mitigate the emotional and psychological consequences. The study highlights the importance of providing students with adequate coping resources, emotional support, and mental health services to better manage stress, particularly during times of crisis. Future interventions should improve problem-focused and emotion-focused coping mechanisms to help students navigate stress more effectively, ensuring their mental well-being is supported in future crises.

X. RECOMMENDATIONS

Based on the findings of this study on the influence of the COVID-19 pandemic on the mental health of secondary school students, several recommendations can be made to address the identified challenges and promote better mental well-being among students in the future. These recommendations aim to enhance students' academic, social, and emotional experiences during crisis and transition.

***Strengthening Mental Health Support Services*:** Educational institutions must integrate mental health support services into their operations. Schools should employ trained counsellors and psychologists who can provide ongoing mental health support and interventions for students. Programmes focused on stress management, emotional regulation, and coping strategies should be incorporated into the curriculum to better equip students to manage anxiety, depression, and other mental health issues.

***Improving Online Learning Platforms and Infrastructure*:** The study highlighted significant challenges related to online learning, including poor digital infrastructure, unreliable internet connections, and a lack of digital skills among students and teachers. Schools and governments should invest in developing robust online learning platforms to ensure students have access to quality education during future disruptions. This includes enhancing digital infrastructure, improving internet access, and providing training for students and teachers on effectively using digital tools for learning.

***Balancing Academic Schedules and Student Well-being*:** The mismatch between online class schedules and students' well-being was a major concern raised in the study. It is recommended that schools revisit their scheduling and teaching approaches to reduce the academic burden on students. Flexibility in class schedules, with adequate breaks, should be implemented to prevent cognitive overload and stress. Furthermore, a blend of synchronous and asynchronous learning should be considered to allow students to manage their time more effectively.

***Promoting Peer Interaction and Social Support*:** The absence of peer interactions was a significant factor in the emotional distress experienced by students. Schools should explore creative ways to encourage virtual or in-person peer interactions, especially for adolescents, whose social development is crucial during this stage. Virtual study groups, online clubs, and extracurricular activities can help bridge the gap in social interactions and provide students with a sense of community and support.

***Increasing Parental Engagement and Support*:** The study also pointed to the role of the family environment in students' mental health during the pandemic. Schools should collaborate with parents to ensure students receive adequate emotional support at home. Regular communication between schools and families can help identify at-risk students and provide them with the necessary resources. Additionally, schools could offer workshops for parents on how to support their children's mental health and learning at home.

***Providing Mental Health Awareness and Education*:** Some students were unaware of the pandemic's mental health implications. Schools should include mental health education in their curriculum to raise awareness and reduce the stigma associated with mental health issues. This could involve regular sessions on the signs and symptoms of mental health conditions, ways to seek help, and the importance of self-care practices.

***Fostering Resilience and Coping Skills*:** The development of resilience and coping strategies should be a priority for educators. Programmes focusing on building emotional intelligence, resilience, and problem-solving skills can help students manage stress and adversity better. Encouraging mindfulness practices, physical activity,

and positive social interactions can also significantly improve students' mental health.

***Ongoing Research and Monitoring*:** Given the long-term effects of the COVID-19 pandemic on students' mental health, continuous research must be conducted to monitor the ongoing impact on adolescents. Regular surveys and feedback mechanisms should be implemented in schools to assess students' mental health and adjust interventions as necessary. This will ensure that schools are responsive to the evolving needs of students and can address emerging issues promptly.

In summary, addressing the mental health challenges faced by students during the COVID-19 pandemic requires a multi-faceted approach that incorporates improved support services, better online learning infrastructure, greater parental and peer support, and an emphasis on mental health education. By adopting these recommendations, schools can better prepare for future crises and provide a healthier, more supportive environment for students to thrive academically, socially, and emotionally.

XI. CONCLUSION

The study on the influence of the COVID-19 pandemic on the mental health of secondary school students has revealed significant insights into the challenges faced by students during this unprecedented global crisis. The findings underscore the considerable impact that the pandemic had on students' mental well-being, particularly in terms of heightened anxiety, depression, and stress. The closure of schools and the shift to online learning disrupted students' academic routines, social interactions, and daily habits, further exacerbating mental health conditions. A substantial proportion of students reported experiencing challenges with online classes, including difficulties adapting to new learning methods and the absence of in-person interactions with teachers and peers. The limited social interactions, vital for adolescents' emotional development, led to feelings of loneliness, isolation, and frustration. Additionally, the disruption of students' sleeping patterns and fitness routines further contributed to their overall mental distress.

The study also highlighted the misalignment between online class schedules and established educational guidelines, leading to student dissatisfaction and increased stress. Moreover, the inadequate digital infrastructure, including limited access to reliable internet and technology, posed significant barriers to effective learning, exacerbating the challenges students and teachers face. These findings suggest the urgent need for educational systems to adopt more flexible and supportive strategies that cater to students' mental health and academic needs during times of crisis. Investing in the necessary digital infrastructure and providing targeted mental health support is critical to ensure students can cope with the demands of remote learning and the emotional toll of such challenging circumstances.

In conclusion, the COVID-19 pandemic has not only highlighted the vulnerability of students to mental health challenges but also illuminated the gaps in our educational and social support systems. Moving forward, stakeholders must prioritise the well-being of students by implementing more comprehensive mental health resources, fostering better online learning environments, and ensuring equitable access to technology. These efforts will help mitigate the long-term psychological impact of the pandemic and better prepare students for future disruptions.

XII. CONFLICT OF INTEREST

There are no conflicts of interest in this article.

XIII. DATA AVAILABILITY STATEMENT

Data are available upon request.

XIV. ACKNOWLDEGEMENT

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