



## Impact of the COVID-19 Pandemic on the Psychological Well-Being of Undergraduate Students in Rivers State, Nigeria

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**Abstract:** The current study investigated the impact of the covid-19 pandemic on the psychological well-being of undergraduate students in Rivers State, Southern Nigeria. The study adopted the descriptive longitudinal research design with a sample of 108 students drawn using the convenience sampling technique. Using six research questions and corresponding null hypotheses, the study further ascertained the impact of the pandemic on the psychological well-being dimensions of autonomy, environmental mastery, personal growth, positive relations with other, purpose of life and self-acceptance. Data for the study was collected before and during the pandemic using traditional paper-and-pencil format and Google Forms® respectively. Collected data were analyzed using mean, standard deviation and mean difference to answer the research questions, while dependent sample t-test was used to test the corresponding null hypotheses. Result revealed that the COVID-19 pandemic had a significant negative impact on the psychological functioning of the students with the positive relations with others dimension having the greatest impact. On the basis of the result, it was therefore recommended that it is important for students to undergo psychological screening to ascertain their mental health functioning so as to provide them with support system to not only stabilize their psychological health, but also their improve their holistic functioning.

**Keywords:** Covid-19, psychological Rivers State students.

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## INTRODUCTION

It is widely acknowledge that the COVID-19 pandemic has caused significant challenge to the world population resulting in economic, social and health losses that may take a relatively long time to quantify. According to Beasley (2020), writing for the World Economic Forum, as at September 29 2020, the total death worldwide from COVID-19 has exceeded 1 million. Yet, scientist are still grappling to determine the total fatality rate of the virus. While experts estimate coronavirus kills 0.5% to 1% of people infected, it is an established fact that the fatality figures varies greatly with age and one of the most vulnerable groups are the elderly. While young people, especially those in secondary schools might

not be considered part of the vulnerable groups, it is fully acknowledged that just like other population, the pandemic has had some impact on their psychological functioning. Without assuming that the concept of pandemic is universally understood, it is pertinent to situate the concept of the COVID-19 pandemic within the context of the present study.

Outside of the medical and health profession, the word “pandemic” has not been a very common term until early 2020 when the COVID-19, a new type of coronavirus was seen affecting countless number of people globally. According to Kinanee (2020), the word “pandemic derives from Greek meaning “everybody”. In a more literal

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context, the Greek word “pan” means “all” while “demos” refers to people or the population. On the basis of this etymological definition, various definitions of the term pandemic has been proposed. According to the Madhav, Oppenheim, Gallivan, Mulembakani, Rubin and Wolfe (2018), the term “pandemic” is defined as a large scale outbreak of infectious diseases that can greatly increase morbidity and mortality over a wide range of geographical region resulting significant social, economic and political disruptions. The World Health Organization (2011) defined a pandemic as an epidemic occurring worldwide or over a very wide area, crossing international boundaries and usually affecting a large number of people. From these definitions provided, two major criteria must be met before a disease outbreak is considered a pandemic. The first is that it must occur across international boundaries (in many nations) and secondly it must be spreading very fast.

However, other scholars such as Torrey in Kinanee (2020) have shown that for a disease to be classified as a pandemic it must have the following characteristics namely:

- **Sporadic:** This term refers to a disease that occurs infrequently or irregularly. Sporadicity indicates that people do not often report the symptoms of the disease. Rather, it comes when least expected.
- **Endemic:** The endemic nature of a pandemic indicates that there is a constant presence of the disease when an outbreak occurs with little or no sign of naturally abetting.
- **Outbreak:** This refers to a sudden increase in the number of cases of a disease above what is normally expected in a geographic area of population.
- **Cluster:** This refers to a disease that occurs in large numbers even though the actual number of cause may be uncertain.

Throughout human history, there have been incidences of diseases that have meet these criteria which were shown by Kinanee (2020:189) including the Plague of Justinian, the Black Death Plague, the Spanish Flu, the Asian Flu, the Swine Flu and others. However, the recent COVID-19 pandemic is the most widespread in modern history. The history and nature of this pandemic is what we now turn our attention to.

As previously stated, there have been different pandemics all through human history. However, none has made as much an impact on human society as much as the novel COVID-19. According to the World Wide Fund (2020), the disease is caused by Severe Acute Respiratory Syndrome Coronavirus 2. It was therefore on this

basis that the International Committee on Taxonomy of Viruses (ICTV) has assigned the condition with the name SARS-CoV-2. For the WHO, the official name given to the virus is drawn from the name of the disease and the year it was discovered: Corona Virus 2019 (COVID-19).

Incidence of the virus was first reported in Wuhan, China as early as November 2019 and has since spread rapidly globally. According to British Broadcasting Service (BBC, 2020), there are over one million death and 10 million infections worldwide of the virus as at September 29<sup>th</sup> 2020. Specifically, Nigeria has experienced close to 60,000 infections with about 1,112 deaths according to the National Center for Disease Control (NCDC, 2020). As this shows, the country has had its fair of the spread of the virus with Lagos state being the epicenter of the disease.

Considering the spread, prevalence and mortality ratio of the virus, it has been shown that while the Americas and Europe continues to battle with high case number, infections have been declining in many African countries. This has been attributed to a number of factors such as a younger population, less dense populations and hot humid climates. The World Health Organization (2020), through its Regional Director for Africa, Dr Matshidiso Moeti, reported in September 2020, there was a drop to 77,147 cases from the 131,647 cases reported in the previous month. This was further attributed to the “robust and decisive public health measures taken by governments across the region.” While this might be true, another factor which has contributed to the poor rate of reported cases is the low level of testing when compared to other regions of the world. Therefore, international public health experts, he World Health Organization and United Nations has encouraged African countries to maintain public health measures and warns against complacency as some countries such as Ivory Coast and Cameroon bucking the trend by seeing a slight increase in cases.

Within the Nigerian context, like most other African countries, the prevalence and the mortality of the virus has been small compared to other regions of the world such as Asia, Europe and America. While this has been attributed to the young population of the African region, it is important to note that beyond the physical effect of the virus and the associated pandemic, it is highly likely that there are psychological impacts on individuals and communities including young people which might affect their psychological well-being. This become more glaring when we consider the World Health Organization (1984) definition of health as a state of complete physical, mental and social well-being and

not merely the absence of disease or infirmity. As this definition recognizes, it is important to establish the impact of the coronavirus pandemic on the psychological well-being of young people.

Like most other psychological concepts, the term “psychological wellbeing” has been defined and described using various criteria. For some authors, it is similar to mental health, while others have operationalized it as subjective well-being. It is this difference in conceptualization and operationalization that has made a consensus definition difficult to achieve. However, this study will adopt the definition of psychological well-being as provided by Burns (2016:1) who defined psychological well-being as “inter- and intra-individual levels of positive functioning which include one’s relatedness with others and self-referent attitudes that include one’s sense of mastery and personal growth. This definition as previously stated is not universal and is open to professional and personal perspectives and interpretations.

A search of the literature showed that although there are different models of psychological well-being, the most popular is that of Carol Ryff (Ryff, 1989; Ryff & Keyes, 1995). According to this model, there are six dimensions of psychological well-being which are autonomy, personal-growth, self-acceptance, purpose in life, environmental mastery. Burns (2016:3) operationalized these dimensions as follows:

Self-acceptance is a significant construct within theories that define self-actualization and fully functioning individuals and emphasizes an ability to develop warm trusting relationships with others and being empathetic and affectionate toward others. However, these individuals remain autonomous, resisting societal expectations to change and conform. Environmental mastery reflects an ability of self to manipulate and function within constraints, while purpose in life reflects the capacity for goal selection and developing a sense of life direction which contribute to meaning in one’s life. Personal growth reflects individuals’ capacity to grow and realize one’s own inner potential.

While the concept of psychological well-being has taken a relatively large space of the mental health literature, the impact of the novel coronavirus on the psychological functioning of the individual is only beginning to emerge. Recent survey showed that adults are significantly worried about potential negative impact of isolation on mental health (World Health Organization, 2020). Furthermore, in countries like the United States, there have been a reported increase in substance abuse since the outbreak of the coronavirus pandemic. In addition,

as reported by Otu, Charles and Yaya (2020), it would take a relatively considerable time for the actual scale of mental health burden to be fully understood. The threat of COVID-19 on the mental health of individuals is likely to be invisible, ambiguous, widespread and persistent (Hopkins & Russell, 2020).

This reality notwithstanding, ample effort has been expended to investigate the possible impact of COVID-19 on the mental health and psychological wellbeing of students and other population. For example, Khan, Sultana, Hossain, Hasan, Ahmed, and Sikder (2020) investigated the impact of the COVID-19 pandemic on mental health and well-being among home-quarantined students in Bangladesh. Result from their study showed that students reported a heightened level of stress, anxiety and depression. The major conclusion reached from the study was therefore that the pandemic imposes psychological consequences on people to a great extent, especially students.

Using a different approach, Grubic, Badovinac, and Johri (2020) opined that due to disruption in academic activities, students may experience reduced academic motivation, abandonment of daily routines and increased dropout rate which could increase pre-existing stress level and poor coping strategies thus resulting in poor mental health states. Adopting a more empirical approach, Cao, Fang, Hou, Han, Xu, Dong, & Zheng (2020), investigated the psychological impact of the COVID-19 epidemic on college students in China. Result showed that 0.9% of the respondents were experiencing severe anxiety, 2.7% moderate anxiety, and 21.3% mild anxiety. It was further shown that living in urban area and with parents were protective factors against increased level of anxiety. The study therefore recommended that educational administrators and policy makers should monitor the mental health of students, especially during pandemics.

As the brief review showed, it is very likely that secondary school students, while not a vulnerable group physically, continues to remain exposed to psychological challenges due to the pandemic. Unfortunately, the psychological functioning of these students and the mental health well-being have remained under investigated, especially within the context of Rivers State, Nigeria. It is further to fill this gap in the literature that informed the conduct of this study on the impact of the COVID-19 pandemic on the psychological well-being of undergraduate students in Rivers State Nigeria.

### **Purpose of the Study**

The purpose of the current study, is to investigate the impact of the COVID-19 pandemic on the psychological functioning of undergraduate students in Rivers State. From this broad purpose, the following research questions were developed to guide the study:

1. What is the impact of the COVID-19 pandemic on the autonomy of undergraduate students in the Rivers State?
2. What is the impact of the COVID-19 pandemic on the environmental mastery of undergraduate students in the Rivers State?
3. What is the impact of the COVID-19 pandemic on the personal growth of undergraduate students in the Rivers State?
4. What is the impact of the COVID-19 pandemic on the positive relations with others of undergraduate students in the Rivers State?
5. What is the impact of the COVID-19 pandemic on the purpose of life among undergraduate students in the Rivers State?
6. What is the impact of the COVID-19 pandemic on the self-mastery of undergraduate students in the Rivers State?

From the above research questions, the following hypotheses were further tested at 0.05 level of significance to also guide the study,

1. There is no significant difference in the autonomy of undergraduate students before and after the COVID-19 pandemic.
2. There is no significant difference in the environmental mastery of undergraduate students before and after the COVID-19 pandemic.
3. There is no significant difference in the personal growth of undergraduate students before and after the COVID-19 pandemic.
4. There is no significant difference in the positive relations with others among undergraduate students before and after the COVID-19 pandemic.
5. There is no significant difference in the purpose of life among undergraduate students before and after the COVID-19 pandemic.
6. There is no significant difference in self-acceptance among undergraduate students before and after the COVID-19 pandemic.

### **METHODOLOGY**

The descriptive longitudinal research was used for this study. This design was considered useful because the researchers were interested in the observed changes in various dimensions of psychological well-being among undergraduate students over two periods of time. Specifically, the dimensions of psychological functioning were obtained before and during the COVID-19 pandemic. The sample for the study consisted of 108 students taking an undergraduate psychology course at the Ignatius Ajuru University of Education, Port Harcourt.

The students completed the Brief Psychological Well-Being Scale (BPWBS) by Ryff & Kayes (1995) in November 2019 and also in July 2020. The BPWBS is an 18-item scale which assesses the six dimension of psychological well-being according to the model proposed by Carol Ryff. The instrument has three items each assessing six dimensions. The instrument was constructed using a seven-point Likert format of 1 = strongly agree; 2 = somewhat agree; 3 = a little agree; 4 = neither agree nor disagree; 5 = a little disagree; 6 = somewhat disagree; 7 = strongly disagree. As a standardized instrument, no further validity was conducted. However, internal consistency reliability of the instrument using Cronbach Alpha showed that it yielded a value of 0.79 when test among similar sample of students.

The initial administration of the instrument was done using a paper and pencil format while the follow-up administration was done using Google Forms due to social distancing measure during the pandemic. Obtained data were analyzed using the mean and standard deviation to answer the research questions, while dependent samples t-test was used to test the corresponding null hypotheses of the study. All analysis was done using the Statistical Package for Social Sciences (SPSS) version 23. The obtained results are shown below:

### **RESULTS**

The answers to the research questions and the results of the hypotheses testing are shown in Table 1 below:

**Table-1: Mean, SD and dependent samples t-test of the impact of COVID-19 on students' psychological functioning**

PWB Domain		Mean	SD	M.D	df	t	p	Decision
<b>Autonomy</b>	BC	15.84	2.91	3.54	107	6.08	0.000	Reject
	DC	12.30	3.24					
<b>Environmental Mastery</b>	BC	16.18	3.80	2.47	107	3.93	0.000	Reject
	DC	13.71	2.76					
<b>Personal Growth</b>	BC	15.77	2.59	3.84	107	3.84	0.000	Reject
	DC	11.93	2.19					
<b>Positive Relations</b>	BC	17.39	4.09	7.34	107	8.47	0.000	Reject
	DC	10.05	3.89					
<b>Purpose of Life</b>	BC	14.91	2.71	1.04	107	1.78	0.077	Retain
	DC	13.87	3.31					
<b>Self-acceptance</b>	BC	16.76	2.61	0.34	107	0.74	0.535	Retain
	DC	16.42	2.94					
<b>Total</b>	BC	96.85	18.71	18.57	107	5.15	0.000	Reject
	DC	78.28	18.33					

BC = Before COVID-19, DC = During COVID-19, M.D = Mean Difference

According to the result shown in Table 1, it is indicative that there was a significant negative impact of the COVID-19 on the autonomy,  $t(107) = 6.08$ ,  $p < 0.0001$ ; environmental mastery,  $t(107) = 2.47$ ,  $p < 0.0001$ ; personal growth,  $t(107) = 3.84$ ,  $p < 0.0001$ ; and positive relations with other,  $t(107) = 8.47$ ,  $p < 0.0001$ . On the other hand no significant negative impact of the COVID-19 pandemic was obtained on the psychological well-being domain of purpose of life,  $t(107) = 1.04$ ,  $p > 0.05$  and self-acceptance with  $t(107) = 0.74$ ,  $p > 0.05$ . On the whole it was shown that there was a negative mean difference of 18.57 in the psychological functioning of students before and during the pandemic which yielded a significant negative impact of  $t(107) = 5.15$ ,  $p < 0.000$ .

Furthermore, considering the mean difference of various domains of psychological well-being, it is indicative that the pandemic had the great impact on positive relations with others (7.34), followed by personal growth (3.84); autonomy (3.54); environmental mastery (2.47); purpose of life (1.04) and lastly self-acceptance (0.84).

## DISCUSSION

The purpose of this study was to investigate the extent to which COVID-19 impacted on the psychological well-being of undergraduate students in Ignatius Ajuru University of Education in Rivers State. The dimensions of psychological well-being investigated were drawn from the Ryff Model which included autonomy, environmental mastery, personal growth, positive relations, purpose of life, and self-acceptance. Using appropriate statistical tools, it was shown that the pandemic had a significantly negative impact on the psychological well-being of the students. On domain specific analysis, it was further revealed that personal

relationship with others was significantly hampered more than the other dimensions. This result is not surprising considering the fact that one of the measure implemented during the pandemic was the control of physical classes and at some point a total lockdown. This result is similar to that obtained by Cao et al. (2020) who found out that one of the challenges reported by students was an increase in anxiety level due to quarantine mandates and self-isolation policies in many countries.

The result of this study is a further confirmation of the result from that of Khan et al. (2020) who showed that the major challenges of students in Bangladesh during the COVID-19 pandemic was on their mental health. Just as students reported a heightened level of stress, anxiety and depression, students in the current study reported less autonomy, perception of personal and environmental mastery which are all indicative of poor mental health and psychological functioning.

Finally, it was reported from the result that the psychological well-being of students was negatively impacted. This result as shown here is a further attestation that young people, including undergraduate students who might not be affected physically by the pandemic, might be affected psychologically and mentally. It therefore confirms the assertion by WHO (2020) that the impact of the pandemic is ambiguous and extend beyond the context of physical health, but also mental and psychological functioning.

## RECOMMENDATIONS

In the light of the existing realities obtained from this study, it is pertinent to make some



recommendations to involve academic policies and optimal functioning of students:

- As society opens up post-pandemic, it is important for students to undergo psychological screening to ascertain their mental health functioning so as to provide them with support system to not only stabilize their psychological health, but also their improve their holistic functioning.
- Educational administrators should realize and provide ample time for students to interact and blend to the school environment before introducing any form of testing or assessment. Any attempt at doing this might likely exacerbate the already stressed and anxious situation of the students.
- Schools should drive mental health initiative and expand existing ones to promote uptake of these services. This would allow more students identify challenges in their psychological functioning and utilize available help and resources.
- Government and school authorities should ensure that information on measures to protect themselves from COVID-19 and how to access services reaches students and other population by working with community organizations and volunteers and using a variety of formats that may be accessible to a large number of students.

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