

Mental health of Adults in Kwara State Nigeria during COVID-19 Pandemic Lockdown

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Abstract

The emergence of COVID-19 did not only affect the health of people but also negatively affected their socio-economic situations in most cases, with a resultant effect on their mental health. This study aimed to assess the well-being and mental health of adults in Kwara State Nigeria during the period of covid-19 lockdown, and the factors associated with the presence of psychiatric morbidity. The study was a cross-sectional online-community survey done in the first two weeks of October 2020. A structured questionnaire was used to obtain socio-economic variables, world health organization WHO wellbeing index (WHO-5), Patient health questionnaire (PHQ-2), and generalized anxiety disorder questionnaire (GAD-7) to assess general wellbeing, depressive symptoms, and anxiety symptoms respectively. Data was analyzed using the statistical package for social sciences SPSS 20. Descriptive and inferential statistic was done, level of significance was set at $P < 0.05$ and confidence interval at 95%. Four hundred of the filled forms were complete and analyzable. The mean age was 41.82 ± 10.8 years. Majority of the respondent were healthcare workers among whom 25% were frontline workers in the management of COVID-19. About 8% reported low well-being, 7.3% and 16.5% were positive for anxiety and depressive disorders respectively. Young age, single marital status, and unemployment predicted poor well-being. Male gender, young age, unemployment, polygamous family setting, and inability to get government relief package (palliative) predicted anxiety disorder while the inability to get palliative also predicted the development of the depressive disorder.

This study found that Covid-19 negatively affected the wellbeing of the populace and a sizeable number developed psychiatric morbidity. It is recommended that government provide adequate financial and psychosocial support to its citizen during a pandemic period to reduce the development of psychiatric complications.

Key words: Covid -19, Anxiety, Depression, Well-being, Kwara State

Introduction:

Coronavirus disease 2019 (Covid-19) is a newly emerged infection caused by a new strain of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2).¹ It was pronounced by the World Health Organization (WHO) as a global pandemic due to spread across international boundaries and continents.² Covid-19 is of public health concerns not only because it rapidly spreads and infects so many people within a short time, but also for the fact that it is associated with so many uncertainties and unpredictability in terms of its nature, mode of spread, presentations, clinical features as well as its immediate and long term consequences.³ The emergence of covid-19 also induced so much public fear and anxiety resulting in increased negative psychological responses, emotional distress, and maladaptive behaviours.⁴ Before the pandemic, mental disorders already contributed to 14% of the global burden of diseases.⁵ This is expected to rise with the emergence of the pandemic especially in poorly resourced countries like Nigeria where there already exist a wide treatment gap with only 20% of the population receiving the needed care in the previous year.¹

Deterioration of psychological well-being of people during the pandemic is expected to worsen and may be due to anxiety provoked by fear of being infected by a new disease that is not well known, worsened by the proliferation of misinformation about the infection especially through social media (infodemia), and financial and economic implications of measures put in place to control its spread.^{6,7} Such measures include lockdown which may be partial or total resulting in restrictions of socio-economic as well as academic activities. Schools, markets, stores,

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businesses, recreational centers and religious centers were closed down. Citizens were also forced to practice physical and social distancing. Aside from the lockdowns, suspected and probable cases were also subjected to quarantine and isolations.^{8,9} These measures may worsen already existing mental illnesses as well as precipitating new cases in predisposed individuals.¹⁰

Psychological impacts of covid-19 vary from sleep disturbances, frustrations, loneliness, anxiety, depression, and increase the use of maladaptive coping mechanisms such as the use of psychoactive substances and suicidal behaviours.^{11,12} Public fear of the coronavirus infection can manifest in discrimination, stigmatization, and scapegoating of different populations.¹³ In a study in the Philippines, one-fourth of the population studied reported moderate-to-severe anxiety while one-sixth reported moderate-to-severe depression.¹⁰ In a similar study in China, the prevalence of depression was above 25% ranging from mild to severe depression.¹⁴

The impact transverse diverse groups of population within the community from frontline workers, those infected, their relatives and caregivers, to people with pre-existing mental and physical illnesses as well as the general populace. Frontline workers that worked directly with patients with coronavirus infection are expected to have heightened anxiety because of the increased chance of exposure to and contracting the diseases especially in low-resource countries where Personal Protective Equipment (PPE) may not be readily available.^{5,16,17} Tee et al reported that healthcare workers in the Philippines were less likely to report anxiety symptoms due to the pandemic as a result of adequate and reliable information available to them.¹⁰ Relatives and caregivers of infected individuals are also at risk of developing the psychological impact of Covid-19 because of the effects of subjecting them to isolation/quarantine.⁹ The death of loved ones as a result of the disease may also negatively affect the mental health of those left behind.¹⁸ People with pre-existing mental and physical illnesses are also adversely affected during the pandemic.¹⁹ Aside from the fact that some chronic medical conditions such as diabetes, asthma, and chronic obstructive pulmonary diseases have a higher risk of contracting Covid-19, the lockdown also prevented them from assessing their routine follow-up. The same applied to those with pre-existing mental illnesses who are at risk of relapses.²⁰ Studies have highlighted factors that may predisposed individuals to the psychological impact of the pandemic such as female gender, young age, and being single, having relatives or acquaintances infected with covid-19 and a perception of having poor health status.^{10,14} Studies have similarly described protective factors against the psychological impact of Covid-19.^{6,9,11} These include the provision of adequate

information, trust in government to provide adequate protective measures, having confidence in healthcare workers, availability of social support from relatives or authority,⁴ living in urban areas and stability of one's income during the pandemic which was observed to protect against the development of anxiety and depression.^{4,10}

To curb the spread of infection and its consequences, it is important to provide timely and adequate health education and information.²¹ Public behaviour is known to be influenced by trust in government authorities and perception regarding their ability to manage the pandemic.^{8,15} The degree of this trust determines the extent to which the populace participates in reducing health risk by engaging in behaviours designed to help avoid the infection, treat and prevent its spread such as Improved hygiene practices and social distancing being canvassed by the World Health Organization.²²

Covid-19 infection is a new disease with likely differences in presentation and challenges in management across regions, research would open doors for exploration of the impacts in our clime and findings may assist with developing actionable policies to help mitigate the associated mental health burden. This study aimed to explore the impact of the Covid-19 pandemic on people's mental health. It assessed the proportion of the respondents with anxiety and depressive symptoms, and perception of their feeling of general wellness.

Materials and Methods:

This online cross-sectional community survey was carried out in the first two weeks of October 2020 within the Ilorin metropolis. Participants were recruited using convenience sampling via social media platforms as restriction to movement was still in place and paper-based questionnaire distribution was difficult.

Instruments: A web-based structured questionnaire using Google forms (Alphabet inc, California, USA) was used. It consisted of different sections:

1. Pro forma questionnaire. This was designed by the authors to collect socio-demographic variables and other relevant covid-19 related information.
2. The WHO wellbeing index (WHO 5) questionnaire which measures current mental well-being. The score is calculated by adding the figures of the five answers. The raw score ranges from 0 to 25, 0 representing the worst possible and 25 representing the best possible quality of life.
3. The *General Anxiety Disorder-7* (GAD 7) questionnaire used to screen for presence and severity of anxiety in the general populace. It is a 7 item questionnaire that is scored from 0 to 21 where 0–4 indicate no or minimal anxiety, scores of 5–9 indicate

mild anxiety, 10–14 mean there is moderate anxiety and score between 15–21 indicated severe anxiety.

4. The Patient Health Questionnaire-2 (PHQ-2) which enquires about the frequency of depressed mood and anhedonia over the past two weeks. It is a quick way to screen for depression. It has a score ranges from 0-6. A score of 2 is considered as the optimal cut-off point when using the PHQ-2 to screen for depression. If the score is 3 or greater, major depressive disorder is likely. Data was analyzed using a statistical package for social sciences SPSS 20 for descriptive and inferential statistics as well as regression analysis to predict factors associated with mental wellbeing and ill health. Levels of significance were at $P < 0.05$ and confidence interval at 95%.

Ethical approval was obtained from the ethical review board of the University of Ilorin Teaching Hospital, Ilorin (UITH/CAT/189/19^A/079).

Results

There were Four hundred respondents with age range between 21 to 74 years, with mean age of 41.82 ± 10.81 years. Majority (31.5%) of the respondents were in the age range 40-49 years. There were more females (51.5%) than male. Three hundred and sixty-eight were of the Yoruba tribe. Fifty-seven percent were Muslims and 308 were married. More than 62% of the respondents had postgraduate qualifications. Fifty-two out of the 400 respondents were not employed at the time of the survey.

Ninety respondents had at least a known chronic illness. Close to one-fifth of the respondents lived alone and about 30.7% felt their financial status had worsened in the last 3 months. Only 105 (26.3%) got any form of Covid-19 palliative distributed by the government during the period. One hundred (25%) reported the use of psychoactive substances in the last 3 months. About 62% of the respondents were healthcare workers of which 25.5% (102) were frontline workers in Covid-19 education, prevention, and management.

Assessment of the financial situation of the respondents during the pandemic revealed that 45% maintained their pre-covid-19 financial state, 30% reported worsening of their financial situations and the rest experienced an improvement in their financial situations.

Four in every five respondents reported living with their relatives during the pandemic period and about 1/4 of respondents benefited from various palliative measures in form of cash, food items, loans, and covid-19 allowances that were put in place by the Nigerian government to alleviate the condition of the citizens during the lockdown.

Thirty-two of the 400 (8%) respondents scored below 50% on the WHO wellbeing questionnaire, 16.5% of the respondents had positive scores for

depression using PHQ-2 and 7.3% of the respondents were positive for anxiety with GAD-7.

Table 2 shows that all factors that were statistically significantly associated with low wellness were retained when subjected to logistic regression for living arrangements.

Table 1: Socio-demographic variables

Variable	Frequency (%) n=400
Age groups	
< 30	66 (16.5)
30 – 39	98 (24.5)
40 – 49	126 (31.5)
50 – 59	98 (24.5)
>= 60	12 (3.0)
Mean $\pm$ SD	41.82 $\pm$ 10.81
Gender	
Female	206 (51.5)
Male	194 (48.5)
Religion	
Christianity	172 (43.0)
Islam	228 (57.0)
Marital Status	
Married	308 (77.0)
Separated	4 (1.0)
Single	76 (19.0)
Widowed	12 (3.0)
Type of family	n= 308
Monogamous	270 (87.7)
Polygamous	38 (12.3)
Educational Level	
Postgraduate	250 (62.5)
Tertiary	146 (36.5)
Secondary	4 (1.0)
Employment Status	
Employed	348 (87.0)
Unemployed	52 (13.0)
Front liner In COVID Care	
Yes	102 (25.5)
No	298 (74.5)
Chronic Illness	
Yes	90 (22.5)
No	310 (77.5)
Living Arrangement	
Live Alone	79 (19.8)
Live With Relatives	321 (80.2)
Assessment of private financial Situation In the Last 3 Months	
Improved	97 (24.3)
The Same	180 (45.0)
Worse	123 (30.7)
Received palliatives	
Yes	105 (26.3)
No	295 (73.8)

Table 2: Predictors of WHO wellbeing

Variables	Wald	p-value	Odd ratio	95% C I
Age groups				
< 30	RC			
30 – 39	9.866	0.002	6.327	1.980 – 20.216
40 – 49	8.485	0.004	3.971	1.570 – 10.044
50 – 59	7.495	0.006	4.128	1.496 – 11.391
>= 60	0.010	0.999	0.434	0.034 – 0.976
Marital Status				
Married	RC			
Unmarried	7.871	0.005	0.346	0.165 – 0.726
Type of family				
Monogamous	RC			
Polygamous	6.816	0.009	0.248	0.087 – 0.706
Educational Level				
Postgraduate	RC			
Secondary	4.406	0.036	0.104	0.012 – 0.861
Tertiary	0.430	0.512	0.772	0.356 – 1.674
Employment Status				
Employed	RC			
Unemployed	6.415	0.011	0.331	0.141 – 0.779
Health care professional				
No	RC			
Yes	7.678	0.006	2.891	1.364 – 6.126
Living arrangement				
With relatives	RC			
Alone	3.457	0.063	3.969	0.928 - 16.975

Table 3: Predictors of PHQ 2

Variables	Wald	p-value	Odd ratio	95% C I
Age groups				
< 30	RC			
30 – 39	1.082	0.298	0.350	0.048 – 2.529
40 – 49	0.074	0.785	1.282	0.215 – 7.638
50 – 59	0.235	0.628	1.571	0.253 – 9.736
>= 60	0.154	0.695	0.630	0.063 – 6.334
Gender				
Female	RC			
Male	3.234	0.072	1.888	0.944 – 3.774
Type of family				
Monogamous	RC			
Polygamous	7.268	0.007	3.458	1.403 – 8.524
Employment Status				
Employed	RC			
Unemployed	0.334	0.563	1.708	0.279 – 10.498
Received palliatives				
No	RC			
Yes	7.438	0.006	0.209	0.068 – 0.644
Healthcare professional				
Yes	7.438	0.006	0.209	0.068 – 0.817
No	RC			

Factors that were associated with the presence of depressive symptoms were younger age group, male gender, not married, being from a polygamous family, unemployment, non-health professional and not receiving government palliatives. Being from polygamous homes and inability to get any form of palliatives retained significance when subjected to regression (Table 3).

Factors significantly associated with presence of anxiety disorder include being from polygamous family setting ($p = 0.013$), non-health professionals ($p < 0.001$), respondents with chronic underlying medical illnesses ($p = 0.011$) and not receiving palliative ($p = 0.014$). When subjected to second stage analysis, health workers had lower odds ($OR = 0.223$, $CL\ 0.096-0.517$) and ability to get palliative was predictive of lower odds for anxiety disorders with $OR\ 0.274$, $CL\ 0.0112-0.667$.

Discussion

The covid-19 pandemic is not just a public health crisis but also a socio-economic crisis. It causes devastating effects on countries as well as individuals' economies and overwhelmed the health resources of the Nations.^{23,24} It negatively affected the quality of life of people as well as their general feeling of well-being.²⁵ Grover et al reported that 71% of respondents in their study had feelings of low well-being.¹¹ This was greater than 8% found in this study. The difference may be due to the timing of the study. This study was carried in the first two weeks of October 2020, while that of Grover et al¹¹ was done between March and April same year, at the earlier period of the COVID-19 pandemic, when there was almost no prior knowledge about the infection leading to inadequate or out rightly wrong information among people, which may result in a negative perception of the overall wellbeing.

We found that younger people viewed their well-being to be below satisfaction. Restriction due to isolation and quarantine are associated with increased boredom and more likely to be more among the younger age group that are hitherto more mobile.²⁶ Unemployed respondents reported more feeling of unwell so also those that were not educated beyond secondary school level. This might not be unconnected with socio-economic factors.

Cao et al looked into the well-being of people of college students in China during the period of pandemic and reported that a sizable proportion of their respondents had the feeling of low well-being.¹⁴ Similarly, Tee et al in the Philippines, reported that a significant proportion of their respondents had the feeling of low well-being however, timely and adequate health information had a psychological protective effect.¹⁰

We found fewer symptoms of depression in healthcare workers. This maybe due to more access to correct and adequate information about the covid-19 pandemic than non-health workers making them more equipped to face the pandemic in terms of how to protect themselves from being infected as well as other safety guidelines. This was similar to the finding by Tan et al who reported that medical professionals are less likely to develop depression than nonmedical professionals even within the hospital setting.¹⁷

However, in a study done in Wuhan, China at the early period of pandemic found significant psychological stress among health workers.²⁷ Similarly, in a review by Bashar and Bammidi among health care workers and medical professional, it was reported that COVID-19 caused significant psychological stress among these groups of workers due to the need for the direct care of COVID-19 patients, vicarious trauma, and frequent need for self-isolation because of exposure to the disease.²⁸

The inability to get palliative support during the covid-19 pandemic, was predictive of the development of anxiety and depression in this present study, not getting the government relief packages may conote neglected by their government, which in the first instance, prevented them from doing their legitimate work with the implementation of lockdown. Studies have shown that inadequate supplies and lack of social support are associated with increased distress and development of psychological symptoms.^{26,29} while support in form of cash and food items during a humanitarian crisis reduced symptoms of depression among people.³⁰

Conclusion

This study revealed that Young age, being single, having a low level of education and unemployment, inability to get government palliatives were among factors associated with psychiatric morbidity..

It is recommended that the Nigerian government put in place plans and protocols for equitable health and socioeconomic measures to help soften the negative impact of Covid-19 pandemic and indeed future pandemics. There should be collaboration between the government and non-government agencies to create awareness for correct and adequate information on the course, prevention and coping strategies required per time during such pandemics.

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