Mental Health Burden and Resilience among Nigerians Undergoing Covid-19 Isolation in Kaduna-Nigeria

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Abstract

Background: The coronavirus pandemic and Its "pandemic-fear" is expected to come with lots of mental health challenges. Despite several global health vanguards sounding this alarm, there is a paucity of systematic analysis of mental health distress and resilience being experienced by individuals undergoing treatments in isolation centers for coronavirus disease (Covid-19).

Objectives: This study evaluated the pattern of mental distress and resilience in Covid-19 patients undergoing isolation care in some treatment facilities in Kaduna-Nigeria.

Method: Data were collected cross-sectionally from 261 participants. These were sociodemographic and clinical variables, measures of mental distress (i.e., depression and anxiety), and well-being (i.e., resilience). Statistical analysis was carried out using SPSS version 21.

Results: The mean age of participants was 35.6 years (SD = 11.1), with the majority being males (73.6%) and without prior chronic medical conditions (73.9%). Mental distress rates were 33.0% for depression and 19.2% for anxiety. The majority (97.1%) had good resilience characteristics. A significant variable associated with low mental distress and high resilience is belonging to the age group 40 years and above. Also, resilience was moderately and significantly related to mental distress.

Conclusion: Mental distress is relatively high among Covid-19 patients undergoing isolation treatment. This rate is associated with the age group below 40 years and has low resilience characteristics. Efforts to boost resilience among Covid-19 might institute preventive measures against mental distress.

INTRODUCTION

The pandemic coronavirus pneumonia (i.e., Covid-19), first diagnosed in Lagos-Nigeria on 27 February 2020, later spreads across Nigeria[1]. The spread led the Nigerian government to implement a nationwide containment quarantine lockdown of all to stay at home, apart from the essential frontline workers. This action in a low-middle income country and the global "pandemic fear," as well as the "coronaphobia," make the World Health Organization (WHO) and the Africa Centre for Disease Control (Africa CDC) offer guidelines for addressing the expected associated mental health challenges[2-6].

Despite sounding the mental health alarm, the effects of Covid-19 "pandemic fear" and possibly associated other mental health implications on the infected, their relations, and the community at large are yet to be systematically assessed. This study filled part of these gaps by evaluating the prevalence of mental health burden and resilience among individuals that underwent treatment for Covid-19 in some isolation facilities in Kaduna State.

METHODS

Study population

The participants were individuals that underwent isolation in some treatment facilities in Kaduna State, Nigeria, from 01 June to 30 November 2020. Only participants who gave informed consent and without previous psychiatric illnesses were recruited into the study, which ran for a period of 6 months. Sample size as determined by Raosoft Scientific Calculator,[7] were 261, at a margin of error of 6.03% and confidence level of 90%. The participants filled out the study instruments, which comprised two parts, a sociodemographic questionnaire and mental health burden measures.

Instruments of study

Sociodemographic questionnaire

This self-developed instrument collected data on the participants' current age, gender at birth, the outcome of the coronavirus PCR test, number of days spent in isolation before discharge, and type of pre-existing health condition before admission into the treatment facilities.

The Hospital Anxiety and Depression Scale

The Hospital Anxiety and Depression Scale (HADS), as developed by Zigmond and Snaith, comprised 14 item[8]. A group of 7-item screens for the presence of symptoms of anxiety disorders, and the other 7-item screens for features of depressive disorder. This measuring scale has been widely used in Nigeria, and a score of 8 and above on either of the two subscales are suggestive of the presence of anxiety and/or depressive symptoms.

The Brief Resilience Scale

The Brief Resilience Scale (BRS) was created by Smith and colleagues as the shortest measure of resiliency[9]. It is a six-item questionnaire with an equal number of positively and negatively worded questions. It can divide participants' results into three categories: low, medium, and high resilience.

Ethical approval/Data analysis

Ethical approval to carry out the study was obtained from the Federal Neuro-Psychiatric Hospital Ethical Review Board. Data collected were analyzed using the IBM-SPSS version 21.

The sociodemographic variables and mental distress prevalence were described using frequency tables. Mental burden distributions according to their sociodemographic were determined using measures of central tendency and the student t-test. A test of correlation coefficient was used to determine the association among the test variables. All test significance was carried out at p<0.05, two-tailed.

RESULTS

As shown in Table 1, the mean age of the 261 participants was 35.6 years (SD = 11.2 years), and most of them were males (192 [73.6%]), and they were not having a pre-existing medical condition (193 [73.9%]). The most common pre-existing medical condition was a chronic headache.

Table 2 shows that about one-third (33.0%) of the participants were cases of depression, with less than that (19.2%) having anxiety symptomatology, and most of them (93.1%) had average to high resilience characteristics.

As shown in Table 3, being less than 40 years of age is statistically significant with having more depressive symptoms. Also, statistically significant with age is resilience which is more in those 40 years and above. Both gender and pre-existing medical conditions were not significantly related to the mental health characteristics of the participants.

Table 4 shows the association among the mental health characteristics of the participants was moderately significant for all measures, with those measuring vulnerability (i.e., depression and anxiety) being inversely related to the tool measuring strength, i.e., resilience.

Table 1: Sociodemographic and clinical variables distribution of participants (N=261)

Variables	Frequency (n)	Percentage (%)
Age (years)		
18-29	90	34.5
30-39	85	32.6
40-49	52	19.9
50-59	25	9.6
60-76	9	3.4
Age range = 18 – 76	Mean (Standard Deviation) = 35.6 (11.1)	
Gender		
Female	69	26.4
Male	192	73.6
Pre-existing medical condition		
Yes*	68	26.1
No	193	73.9

*: asthma = 5 (1.9%); hypertension = 17 (6.5%); diabetes = 16 (6.1%); chronic headaches = 20 (7.7%); others = 10 (3.8%) [endometrosis (1); heart disease (1); hepatisis (3); sickle cell anaemia (1); peptic ulcer diseases (4)]

Table 2: Mental health characteristics of participants (N=261)

Mental health burden	Variables	Frequency [n(%)]
HADS depression subscale	Case	86 (33)
	Noncase	175 (67)
HADS anxiety subscales	Case	50 (19.2)
	Noncase	211 (80.8)
Resilience characteristics	Low	18 (6.9)
	Normal	190 (72.8)
	High	53 (20.3)
HADS: Hospital and Anxiety Depression Scale		

Table 3: Crosstabulation of participants' sociodemographic and clinical variables with their mental health characteristics

Variables	HAD depression subscale		HADS anxiety subscale		Resilience	
	Mean	t-value	Mean	t-value	Mean	t-value
Age (years)						
< 40	7.01 (3.1)	2.002*	5.26 (3.1)	1.745	3.65 (0.6)	2.995*
≥40	6.19 (3.2)		4.57 (2.6)		3.88 (0.5)	
Gender						
Female	7.14 (3.5)	1.248	4.55 (3.1)	1.552	3.81 (0.6)	1.361
Male	6.59 (3.0)		5.20 (3.0)		3.70 (0.6)	
Pre-existing condition						
No	6.52 (3.0)	1.877	4.90 (2.9)	1.218	3.75 (0.6)	0.899
Yes	7.35 (3.5)		5.41 (3.2)		3.67 (0.7)	
*: p<0.05						

Table 4: Correlation of participants' mental health characteristics

	1	2	3	Cronbach's alpha (α)
1. HADS depression	1	0.692*	-0.408*	0.749
2. HADS anxiety		1	-0.407*	0.548
3. Resilience			1	0.589
*: p<0.01				

DISCUSSION

The present study, which aimed to assess the level of mental health characteristics among participants diagnosed with Covid-19 infection, revealed high mental distress (33.0% for depression and 19.2% for anxiety) compared to the average Nigerian adult population prior to the pandemic (3.1-5.5% for depression and 3.5-5.8% for anxiety disorder) [10-12]. The rate in this study is also higher than in previous hospital-based studies among patients with a

chronic-illnesses like hypertension[13]. Such observation might be due to the present study being among participants with an infectious disease, Covid-19, with lots of unknown outcomes about it. Also, this infection is responsible for the ongoing pandemic, and the pandemic-related factors that could also contribute to higher mental distress, like the stigma often associated with the infection, the unpredictability of the short- and long-term outcomes, disruption of economic and family routines, and the barrage of information spread from the different platforms of conventional and social media that may also further compound the risks.

The rate of resilience in this study for the majority of the participants is normal to high. This rate (97.1%) is higher than in a previous study (53%) in Nigeria[14]. However, this difference might be due to different population groups (i.e., patients vs. undergraduates), the difference in tool utilization (Brief Resilience Scale vs. Resilience Scale), and the mean higher age (35.6 vs. 22.5 years), respectively in this study vs. the undergraduate study.

The age group of 40 years and above is significantly related to lower depressive symptoms scores and higher resilience scores. This is expected and supported by previous studies that identified resilience as an intermediator of vulnerability when low and wellness were high[15,16].

Furthermore, the significant moderate and inverse relationship of resilience with mental distress might suggest that the study prevalence should have been lower than observed, especially when compared with previous mental distress rates in Nigeria.[10-12] Speculatively, it suggested that the high resilience might also be related to apparently social media facilitated good family nurturance/functioning, helpful social networking/participation, and high community/governmental support like free medical services and feeding at the time of data collection. In addition, some individual attributes like female gender, self-practice of gratitude and mindfulness, trust in the healthcare system, greater feelings of meaning and purpose in life, boosting self-efficacy, etc., have all been associated with high resilience and these factors perhaps could also be of relevance among participants in our study.[14-17] Ultimately, the average to high resilience reported among the participants might also be pointing to the specialist psychiatric services available to the participants during isolation and the related boosted sound psychological health they (as survivors) were enjoying before discharge from the hospital.

Despite the practical implication of our study that resilience enhancement is vital to the well-being of Covid-19 patients, our study is limited by being a cross-sectional study, being carried out in a state in Nigeria, not looking for the impact of Covid-19 stigma on the patients and for not doing a follow-up study. These should be taken into consideration in planning future studies.

CONCLUSION

In conclusion, this study documented that mental health distress among Covid-19 patients in Kaduna State is higher than in the general adult population in Nigeria. The significant risk factors for experiencing higher mental distress scores are belonging to the age group below 40 years and having lower resilience characteristics. Health care professionals and policymakers should be aware of these and

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institute appropriate preventive measures like resilience enhancement to reduce mental distress in the immediate, short, and long-term among individuals undergoing treatment for Covid-19.

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DISCLOSURE STATEMENT

The authors declare no conflict of interest.

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