Demographics and Depression as Determinants of Perceived Quality of Life During COVID-19 Lockdown among Nigerians

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Abstract

The quality of life of Nigerians has been threatened due to the COVID-19 lockdown. This different experiences during this period could have been detrimental to their mental health. This study therefore investigated demographics and depression as determinants of quality of life among the general population during the COVID-19 lockdown in Nigeria.

A descriptive design was adopted in this study. Two hundred and sixty-six (266) persons participated in the study. Five hypotheses were generated, tested and analysed.

The result revealed that depression had a significant influence on the quality of life of Nigerians during the lockdown [t (164) = 7.45; P<.01]. Further, those with low depression levels were reported to have a higher quality of life (Mean = 77.87; SD = 13.98) compared to those with high levels of depression (Mean = 64.78; SD = 14.36). It was

shown that no significant gender difference existed in the quality of life [t (264) = .50; P>.05].

The findings also revealed that employment status had no significant influence on quality of life [F (3, 262) = 1.13; P>.05]. Psycho-demographic predictors (depression, age and level of education) jointly predicted quality of life [R = .44; R^2 = .19; F (3. 262) = 20.53; P<.01] and collectively accounted for about 19% variance in quality of life. However, only depression had a significant independent influence on quality of life (β = -.43; t = -7.71; P<.05).

The study concluded that depression had a significant influence on quality of life during COVID-19 lockdown among the general population in Nigeria. It is therefore recommended that urgent intervention should be organized for the general population in terms of assessment and treatment of depression to avoid post-COVID psychological breakdown among Nigerians.

Keywords: Quality of life, Depression, Demographics, COVID-19 lock down, General population

Introduction

The coronavirus disease (COVID-19) was first discovered in Wuhan, China in December 2019. It is caused by infection with the severe acute respiratory syndrome coronavirus 2 and its symptoms include dry cough, sore throat, nausea, vomiting, fever and diarrhoea. It has been established that individuals with a medical history of underlying infections or diseases are more likely to be infected easily with the virus and are vulnerable to worse medical outcomes (WHO, 2020). The cases of COVID-19 have greatly increased, not only in China where it originated, but in the world at large. COVID-19 outbreak has been reported in all continents of the world and over thirty-seven million people have been infected; it has also led to the death of over 1 million people worldwide.

According to Gilbert et al. (2020), the first case of coronavirus in Africa was discovered in Egypt, in February 2020. However, Nigeria recorded its first coronavirus case on the 27th of February 2020; it was an Italian citizen who was working in Nigeria. The disease spread across

several states in Nigeria and the number of cases increased daily. The majority of cases were imported from other countries, while most of the recent cases had an importation history or contact with people who had travelled outside the country. In year 2020, about 59,001 cases were confirmed in Nigeria, with 1,112 deaths recorded across the 36 states and the Federal Capital Territory (NCDC, 2020).

As a result of the high rise in cases of coronavirus, the Nigerian government, on March 20, 2020, like other countries declared a state of health emergency and quarantine for affected people. On March 30, 2020, a lockdown on public activities was declared in the three states of the country that had the highest number of cases, while a partial lockdown was declared in some other states; the lockdown involved a cessation of all social and religious gatherings. In obedience to directives from the Federal Government of Nigeria, there was a declaration to shut Nigeria's international borders, impose curfews and lockdowns, close both government and non-governmental organizations, clubs, hotels and also an imposition of interstate travel ban (Alagboso & Abubakar, 2020). The lockdown led to a disruption of daily activities, social interaction, and employment, with increased fear, anxiety, and depression among the general populace (Berger, Evans, Phelan & Silverman, 2020). The effect was enormous, as it affected the people's quality of life.

The WHO (1996) has defined the concept of quality of life as 'individuals' perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns. Quality of life has different dimensions and multiple levels of concept. Moreover, the WHO (1996) expanded the concept of quality of life into three levels, which include: global quality of life, generic health-related quality of life, and disease-specific quality of life. Global quality of life involves an individual's general life satisfaction and it covers general feelings of well-being and other aspects of one's life such as economic situation, health, social or spiritual aspects of life. Generic quality of life is a broader and more comprehensive concept, because it explains more than the current health status of an individual. It involves domains such as psychological, physical, social, and environmental evaluations of life including both positive and negative aspects. Disease-specific quality of life measures the

condition that is most critical in contributing to an individual's physical limitation and functioning.

Depression as one of the aftermath effects of lockdown of activities during the coronavirus pandemic has become a major health concern, and this calls for rigorous research. Most people experienced depression during the lockdown because of their inability to move freely and to meet their needs through their daily engagements. Different studies have described depression as a costly but most common mental disorder associated with low quality of life. The World Health Organization (WHO) predicted that by 2020, depression will become the third leading cause of disability worldwide. Risk factors for depression include: older age, poor coping abilities and strategies, physical morbidity, impaired level of functioning, reduced cognition, and bereavement. Depression has been associated with increased risk of mortality and poor outcome of treatment of physical disorders. Also, depression can negatively influence the quality of life (Fahad, Sehar-UnNisa, Bandar & Rafat, 2021).

The World Health Organization (WHO) considered depression to be the second greatest cause of disability in the world in 1997 (WHO, 2007), where the burden of depression was compared with that of chronic illnesses including angina, arthritis, asthma and diabetes. Almost one quarter of a million people in 60 countries were studied in the research. Apart from socioeconomic factors and other health conditions, depression had the largest effect on worsening people's health; and when people with depression and other chronic illness were studied, the result showed that these set of people had the worst health measures of all diseases stated (Shumye, Belayneh & Mengistu, 2019). Considering that depression is one of the immediate results of lockdown of activities and people, it is crucial to understand its implications on the quality of life of the Nigerian populace (Samlani, Lemfadli, AitErrami, Oubaha & Krati, 2020).

Moreover, COVID-19 is caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and results in severe stress to health care systems. Most infected patients have mild symptoms including fever, fatigue, and cough, but in severe cases, the disease can progress quickly to acute respiratory distress syndrome, septic shock,

metabolic acidosis, and coagulopathy. Even with different standards of living between countries, the quality of life of individuals of studied populations reported with COVID-19 had worsened (Tanu, 2020). It is therefore important to understand the implications of activity and movement restrictions on the health and well-being of people and communities. Hence, this study investigated the impact of COVID-19 lockdown measures and depression on perceived quality of life of the Nigerian populace.

Statement of the Problem

The World Health Organization (WHO, 2020b) has declared that the coronavirus disease 2019 (COVID-19), which is highly infectious with a rapid spread rate, has resulted in a number of fatalities globally and was declared an international public health emergency with potential threat to human health. Different procedures and measures have been suggested to curtail the spread of the disease, but COVID-19 continues to spread globally. The spread of the disease needed to be urgently curtailed. Some measures towards this included quarantine, lockdown and curfew, with varying levels of intensity and enforcement depending on each country's response to the disease. Lockdown measures included: closure of markets, industries and schools; stay at home; social isolation; and local and international travel restrictions, to curb the spread of the disease. As at late April 2020, there were 2.4 million cases of COVID-19 and over 175,418 deaths in 185 countries around the world (COVID-19 Dashboard, 2020; Gutierrez, 2020).

Several authors have researched on the COVID-19 lockdown and mental health in different countries; this reflects the severity of the effect of the disease on people's mental health. Li, Yang, Dou, Wang, Zhang and Lin (2020) conducted a study of 4,607 Chinese and found that individual cognitive appraisal, that is, perceived severity of the COVID-19 lockdown in particular, was related to a number of undesirable emotional reactions. This was found to be in the form of increase in negative emotion, boredom and increase in sleep problems. Another study by Li, Yang, Dou, and Cheung (2020) revealed that the effect of self-control was also significant, suggesting that participants with high self-control reported fewer mental health problems.

Wang et al. (2020) found that 53.8% of respondents rated the psychological impact of the outbreak as severe; 16.5% reported moderate to severe depressive symptoms; 28.8% reported moderate to severe anxiety symptoms, and 8.1% reported moderate to severe stress levels. Torales, O'Higgins, Castaldelli-Maia and Ventriglio (2020), in their study also reported that the COVID-19 lockdown has led to numerous psychological problems such as stress, anxiety, depressive symptoms, insomnia, denial, anger and fear, globally. Cuiyan et al. (2019) also reported the psychological impact of the lockdown as moderate to severe, as about one-third of the study participants reported moderate-to-severe anxiety during the initial phase of the COVID-19 outbreak in China.

Unlike China, limited research has so far been undertaken on depression and quality of life due to the COVID-19 lockdown among Nigerians. Based on the spread of COVID-19, lockdown measures and its effect on the well-being of Nigerians, this study investigated demographics and depression on perceived quality of life during COVID-19 lockdown among the general population in Nigeria.

Hypotheses

1. Respondents with high level of depression will significantly report lower on quality of life, compared to those with low level of depression.
2. Female respondents will significantly report higher on quality of life than male counterparts.
3. Employed respondents will significantly report higher on quality of life compared to students, the unemployed and the self-employed.
4. Respondents with higher educational qualifications will significantly report higher on quality of life compared to those with primary or secondary educational qualifications.
5. Psycho-demographic factors (depression, age, and education) will jointly and independently predict quality of life among Nigerians during the lockdown.

Method

Research design

The researchers adopted the descriptive survey research design for the study. This design was chosen because the researchers collected data through a questionnaire and no variable was manipulated. The general population in Nigeria was the target population for the study. The independent variables in the study were demographics and depression during the COVID-19 lockdown while perceived quality of life was the dependent variable.

Participants

Two hundred and sixty-six participants were drawn from the general population from 19 states in Nigeria, namely: Oyo, Lagos, Ogun, Kwara, Abuja, Rivers, Ondo, Osun, Abia, Enugu, Kaduna, Benue, Nasarawa, Ekiti, Plateau, Gombe, Sokoto, Anambra, and Katsina. The age range of the participants was 17 to 65 years with a mean of 31.5, a standard deviation of 9.6. The participants comprised 138(41.9%) males and 128(48.1%) females. The participants willingly volunteered and were therefore not compensated for participating in this study.

Measures

An self-report questionnaire was used to collect relevant data for the study online. The questionnaire consisted of three sections: A-C Section A measured the demographic information of participants which included age, gender, ethnicity, level of education, religion, marital status, employment status and state of origin. Section B consisted of World Health Organization Quality of Life (WHOQOL-BREF), which measured the perceived quality of life of the participants. The items (26) on the WHOQOL-BREF were rated on a 5-point Likert scale in a positive direction. Gureje, Kola, Afolabi and Olley (2008) recorded internal reliability Cronbach's alpha of 0.86 for WHOQOL–BREF. Section C consisted of 7 items rated on a 6-point Likert scale, measuring the participants' depression during the COVID-19 lockdown.

Procedure

The research started during the COVID-19 lockdown. Ethical procedures were observed before the administration of the questionnaire, and only those who gave consent for participation were requested to complete the online questionnaire. Participants were encouraged to send out the survey instrument to as many people as possible. The researchers forwarded the questionnaire link to people in Nigeria and implored them to forward it to friends and other people on their contact list.

When the participants received the message and clicked on the link they were automatically directed to the information about the study which included informed consent. Since the study was online, only participants who understood English and had access to internet facilities could participate in the study. After the participants accepted to take the survey and clicked on the link, an introductory message would come up containing a brief introduction on the background, objective, procedure, statement on voluntary nature of participation, declaration of anonymity and confidentiality, as well as notes for filling in the questionnaire. After this participants were directed to input demographic details and then move on to the rest of the items on the questionnaire.

Ethical Considerations

The researchers ensured that each participant filled the informed consent form prior to participation. The participants' information were made anonymous and they were requested to provide honest answers, the confidentiality of which was strictly maintained throughout the study; the information was used strictly for the research study only. Eligible participation in this survey was voluntary and participants were not compensated.

Data Analysis

The data collated from the participants responses were analysed using percentage, frequency, t-test, multiple regression analysis (MRA) and analysis of variance (ANOVA).

RESULTS

The results of gathered data from the two hundred and sixty-six (266) participants are presented in this section. Table 1 presents the demographic information of the respondents.

Table 1: Demographic information of respondents

SN	Variables	Response	Frequency	Percentage
1	Age	Less than 30 years	114	42.9
		30-39 years	93	35
		40-49 years	44	16.5
		50 years above	15	5.6
2	Gender	Male	138	51.9
		Female	128	48.1
3	Level of education	Primary school	1	0.4
		Secondary school	24	9
		NCE/ND	20	7.5
		University degree	158	59.4
		Masters	57	21.4
		Ph.D.	6	2.3
4	Religion	Christianity	234	88
		Islam	31	11.7
		Traditional	1	0.4
5	Marital status	Single	144	54.1
		Married	115	43.2
		Others	7	2.6
6	Employment status	Employed	103	38.7
		Unemployed	25	9.4
		Student	77	28.9
		Self-employed	61	22.9
7	Ethnicity	Yoruba	197	74.1
		Igbo	30	11.3
		Hausa	1	0.4
		Others	38	14.3
8	Family background	Monogamous	232	87.2
		Polygamous	34	12.8
	Total		**266**	**100**

Age distribution revealed that most of the respondents, 114 (42.9%), were either less than 30 years, or between 30 and 39 years old, 93 (35%). Gender distribution revealed that more of the respondents 138 (51.9%) were males, while the other 128 (48.1%) were females.

For level of education, the data show that the majority of the respondents (83.1%) were university degree holders. Only one respondent (0.4%) was a primary school certificate holder.

Religion distribution showed that most of the respondents (88%) were Christians; the others were Muslims, and only one respondent (0.4%) was a traditionalist. Data on marital status show that more of the respondents (54.1%) were single. Others (43.2%) were married, while a few (2.6%) indicated 'other' as marital status.

Ethnic distribution revealed that most of the respondents 197 (74.1%) belonged to the Yoruba ethnic group. This was followed by those from other ethnic groups (14.3%), and Igbo ethnic group (11.3%). Only one respondent (0.4%) was Hausa. Finally, the results show that the majority of the respondents (87.2%) were from monogamous families.

Table 2 presents the results on the relationships between quality of life, depression, age and level of education among Nigerians during the lockdown. It is shown that a significant and negative relationship exists between depression and quality of life ($r = -.44$; $P<.01$). This implies that the higher the depression, the lower the quality of life among Nigerians during the COVID-19 lockdown.

Table 2: Inter-Correlation among Variables of the Study

SN	Variables	Mean	SD	1	2	3	4
1	Quality of life	72.41	15.52	-			
2	Depression	12.34	4.32	-.44**	-		
3	Age	31.56	9.66	.02	-.05	-	
4	Level of education	3.99	0.88	.08	-.14*	.41**	-

** Significant at 0.01; * Significant at 0.05

Further, the results show that quality of life had no significant relationship with age ($r = .02$; $P>.05$) and level of education ($r = .08$;

P>.05). The table also shows that a significant and negative relationship exists between depression and level of education (r = -.14; P<.05). This connotes that the higher the level of education, the lower the quality of life. However, no significant relationship exists between depression and age. Finally, a significant and positive relationship exists between age and level of education (r = .41; P<.01). This connotes that the higher the age, the higher the level of education.

Hypothesis one stated that respondents with high level of depression will significantly report lower on quality of life, compared to those with low level of depression. This was tested using the t-test for independent samples and the result is presented in Table 3.

Table 3: Summary of t-test for independent samples showing results on the influence of depression on quality of life

Dependent	Depression	N	Mean	SD	T	Df	P
Quality of life	High	111	64.78	14.36	7.45	264	<.01
	Low	155	77.87	13.98			

Table 3 presents the results on the influence of depression on quality of life among Nigerians during the lockdown. It is shown that depression had a significant influence on quality of life among Nigerians during the lockdown [t (164) = 7.45; P<.01]. Furthermore, those with low level of depression reported higher on quality of life (Mean = 77.87; SD = 13.98) compared to those with high level of depression (Mean = 64.78; SD = 14.36). This confirms the stated hypothesis.

Hypothesis two stated that female respondents will significantly report higher on quality of life than their male counterparts. This was tested using the t-test for independent samples and the result is presented in Table 4.

Table 4 presents the results on gender differences in quality of life among Nigerians during the lockdown. It is shown that no significant gender difference exists in quality of life [t (264) = .50; P>.05]. This negates the stated hypothesis, hence it is rejected in this study.

Table 4: Summary of t-test for independent samples showing gender differences in quality of life

Dependent	Gender	N	Mean	SD	T	Df	P
Quality of life	Male	138	71.95	14.84	.50	264	>.05
	Female	128	72.90	16.28			

Hypothesis three stated that employed respondents will significantly report higher on quality of life compared to students, the unemployed and the self-employed. This was tested using the one-way analysis of variance (ANOVA) and the result is presented in Table 5.

Table 5: One-way ANOVA showing the influence of employment status on quality of life

Source	SS	Df	MS	F	P
Between Groups	816.66	3	272.22	1.13	>.05
Within Groups	63041.49	262	240.62		
Total	63858.15	265			

Table 5 presents the results of the influence of employment status on quality of life among Nigerians during the lockdown. It is shown that employment status had no significant influence on quality of life [F (3, 262) = 1.13; P>.05]. This negates the stated hypothesis; hence it is rejected in this study.

Hypothesis four stated that respondents with higher educational qualification will significantly report higher on quality of life compared to those with primary or secondary educational qualification. This was tested using one-way analysis of variance (ANOVA) and the result is presented in Table 6.

Table 6: One-way ANOVA showing the influence of educational qualification on quality of life

Source	SS	Df	MS	F	P
Between Groups	2493.42	5	498.69	2.11	>.05
Within Groups	61364.73	260	236.02		
Total	63858.15	265			

Table 6 presents the results of the influence of educational qualification on quality of life among Nigerians during the lockdown. It is shown that educational qualification had no significant influence on quality of life [F (5, 260) = 2.11; P>.05]. This negates the stated hypothesis; hence it was rejected in this study.

Hypothesis five stated that psycho-demographic factors (depression, age and educational) will jointly and independently predict quality of life among Nigerians during the lockdown. This was tested using multiple regression analysis and the result is presented in Table 7.

Table 7: Multiple psycho-demographic predictors of quality of life

Criterion	Predictors	B	T	P	R	R^2	F	P
Quality of Life	Depression	-.43	-7.71	<.01	.44	.19	20.53	<.01
	Age	-.02	-.27	>.05				
	Educational qualification	.03	.44	>.05				

Table 7 presents the results of psycho-demographic predictors (depression, age and level of education) of quality of life among Nigerians during the lockdown. It is shown that the three psycho-demographic predictors (depression, age and level of education) jointly predicted quality of life [R = .44; R^2 = .19; F (3. 262) = 20.53; P<.01]. Collectively, they accounted for about 19% variance in quality of life. However, only depression had a significant independent influence on quality of life (β = -.43; t = -7.71; P<.05). This confirms the stated hypothesis; hence it was retained in this study.

Conclusion

This study investigated demographics and depression as determinants of perceived quality of life of Nigerians during the COVID-19 lockdown. It was observed that depression had significant influence on quality of life among Nigerians during the lockdown, and those with low level of depression reported higher on quality of life than those with high level of depression. As the Nigerian populace faces the post-COVID era, our findings provide the basis for intervention for individuals at every level.

Also, psycho-demographic predictors (depression, age and level of education) jointly predicted quality of among Nigerians during lockdown but there was no significant gender difference and educational qualification influence on quality of life among Nigerians during the lockdown. The researchers therefor conclude that, psycho-demographic indices (depression, age and level of education) are good predictors of perceived quality of life among Nigerians during the 2020 COVID-19 lockdown.

Recommendations

Based on the findings of the study, the researchers recommend that:

1. The Federal Government should organize urgent intervention for the general population in terms of assessment and treatment of depression to avoid post-COVID-19 psychological breakdown among Nigerians.
2. The Federal Government should also engage psychologists at all levels and in every sector to be actively involved in the intervention to enable Nigerians smoothly transition from COVID-19 times to post-COVID times.
3. The Nigerian government should endeavour to assist the populace by giving palliatives, especially to the most affected population in the country. This will reduce the level of depression and improve their quality of life.

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