

Assessment of the Psychosocial Effect of Covid-19 Among Adults in Ebonyi State During the Outbreak of the Pandemic in Nigeria

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Abstract

The COVID-19 pandemic with its unique measures to attenuate the spread has created a public hysteria especially among the adult. This study aimed at assessing the psychosocial effect during the outbreak of Covid-19 among the elderly in Ebonyi state. The descriptive cross-sectional survey was employed. A snowballing sampling technique was used in the study due to lockdown and movement restriction at the time of the study. An online semi-structured questionnaire was developed using Google forms. The link of the questionnaire was sent through emails, WhatsApp and other social media platform for people to fill. 81 adults between 18 years and above participated. This comprised 41 (50.6%) males and 40 (49.4%) females. Data collected were analyzed using percentages while, ANOVA and T-tests were used to test the null hypotheses at .05 significant levels. Results indicated that 50% of adult 18 years-24 years had anxiety, 50% had distress, 66.6% had insomnia and 25% had depression. Also adult between 25 years-44 years, 66.7% had anxiety, 31.3% had distress, 62.5% had insomnia and 14.6% had depression. While more psychosocial effects were reported among 45 years-64 years with 72% having anxiety, 36% with distress, 66.6% with insomnia and 16% with depression. By gender, the females had more psychological effects than the males. As greater number of women 72.5% indicated anxiety, 30% indicated distress, 45% show insomnia and 22.5% indicated depression whereas 61% men shows anxiety, 34.1% shows distress, 34.1% indicated insomnia and 9.8% shows depression. The result of the null hypothesis tested indicated age difference with ($p=0.006$) and gender ($P<0.035$) in psychosocial effects of COVID-19. The study concluded that an intervention programme such as psychosocial health care services among adult population in Ebonyi state is required against future epidemic.

Keywords: Psychosocial effects • COVID-19 • Adult population • Ebonyi state

Introduction

In December 2019, multiple cases of viral pneumonia like, which related to the South China Seafood Market, was reported in Wuhan, Hubei Province of China. Those cases were later known to be caused by a novel corona virus (2019-nCoV) [1]. The World Health Organization (WHO) later in January, 2020, declared the outbreak of the novel virus COVID-19 with a public health emergency desiring international intervention [2]. The WHO further disclosed that there is a high risk of COVID-19 spreading to other countries around the world. This prompted WHO in 11th March 2020, to declare COVID-19 a pandemic due to its global significant morbidity and mortality rate [3]. The COVID-19 pandemic which is causing untold fear and suffering especially among the older people across the world with both physical and social reasons; firstly, the older people in particular do not have as strong an immune system hence they are more vulnerable to

infectious disease. Again they're also more likely to have conditions such as heart disease, lung disease, diabetes or kidney disease, which weaken their body's ability to fight the novel virus [4].

The United Nation has noted that the fatality rate is more on the older people. UN further observed that as at 26 April 2020, the virus itself has already taken the lives of some 193,710 people, and fatality rates for those over 80 years of age is five times the global average [5]. "Although all age groups are at risk of contracting COVID-19, older persons are at a significantly higher risk of mortality and severe disease due to the infection". "An estimated 66% of people aged 70 and over have at least one underlying condition, placing them at increased risk of severe impact from COVID-19" [6]. Older persons may also face age discrimination in decisions on medical care, triage, and life-saving therapies. World Health Organisation (WHO) has observed that as the coronavirus pandemic rapidly sweeps across the world, it is inducing a considerable degree of fear, worry, and concern in the population at large among certain groups in particular, such as older adults, care providers and people with underlying health conditions [7]. Age wise, older people have been reported to be more vulnerable to COVID-19 and its consequential effects. For such people to know and be told that they are vulnerable can be extremely scary and much fear-inducing.

Global inequalities mean that, already pre-COVID-19, as many as half of older persons in some developing countries including Nigeria did not have access to essential health services [8]. The Experts have cited this from the onset of COVID-19 and worried about the novel virus spreading to Africa, due to obvious inadequacies of the healthcare systems in the continent, having problems such as lack of equipment, lack of funding, insufficient training of healthcare workers, and inefficient data transmission. Melinda and Bill Gates observed that COVID-19 spreading to African countries would be horrible as millions of dead bodies would be littered on the streets [9, 10]. The UN further observed that as the virus spreads rapidly to developing countries including Nigeria, the mortality rate for older persons could climb even higher as a result of fragile health and social protection systems [6]. The situation in Nigeria was worrisome with the arrival of the index case convened by an Italian business man on February 28, 2020. This Italian who was confirmed as Nigeria's first coronavirus case and the first in sub-Saharan Africa after arriving from Milan, Northern Italy was in Nigeria for almost two full days, traveling through Lagos and visiting another state before being isolated (Akwaygiram 2020). Lagos, with about 20 million people, is the biggest city in Nigeria, Africa's most populous country with a population of over 200 million people. The identification of the COVID-19 index case in the country actually created panic among the individuals both the old and the young including the authorities in the country that the virus could spread quickly due to the Nigerian weak health systems and the government ineptitude in handling emergencies of this nature [11]. This uncertainty and fast spreading of the novel virus had been causing universal worry, anxiety and distress, all of which according to WHO are natural psychosocial responses to the randomly changing condition [12]. Adverse psychosomatic outcomes among common people especially the adult population is nevertheless expected to increase significantly due to the pandemic itself and also due to constant flow of readily available information and reinforced messaging obtained from internet-based social websites or social network sites such as Face book, WhatsApp, Instagram, Twitter, Pinterest, LinkedIn, YouTube among others that serve as instrument for interaction between person to person, or group of persons. The consequences of this infomedics, misinformation,

misconception, conspiracy theory about COVID-19 pandemic in the country are rapidly expanding mass hysteria and panic regarding COVID-19. This online infodemics can hamper an effective public health response and create confusion and distrust among people and would trigger an enduring psychological problem which may be more detrimental in the long run than the virus itself [13, 14]. The psychological feelings associated with COVID-19 pandemic may vary from panic behaviour or collective hysteria to pervasive feelings of hopelessness and desperation which may associate with negative outcomes including suicidal behavior [15, 16]. Other health measures may also be compromised by abnormally elevated anxiety [17]. As the society became increasingly exposed to anxiety-provoking topics, fear, depression, insomnia and distress related to the outbreak of COVID-19.

A study conducted by Hasan and Kazmi to explore the impact of COVID-19 and lockdown on mental health of individuals found significant difference among depression, anxiety and stress across age, gender and employment [18]. Depression was found to be high among the respondents of age range 15 years to 35 years. Anxiety was found to be prevalent among those between 21 years and 25 years of age. Stress was found to be high in individuals of 21 years -25 years of age. On gender, greater number of women (39%) when compared with men (31%) worried more about COVID-19 infection. About 31% of the women worried that they will not be able to afford testing or treatment of corona virus if the need arises. The same study also showed that women were more likely to worry about the consequences of coronavirus except with regards to investments [19]. Another study found that women were more likely to show worse feeling than men in corona virus fallout [20]. While domestic violence; a psychosocial health problem can affect men or women. However, women experience it more. In the United States of America, women are two more times likely to suffer violence from their partners and 14 times likely to be harassed sexually or raped within the lockdown period. Another study assessed rates of mental health outcomes in Italian general population three to four weeks into lockdown measures and explores the impact of COVID-19 related potential risk factors. Being a woman and younger age were associated with PTSS, depression, anxiety, insomnia, high perceived stress and adjustment disorder. Quarantine was associated with PTSS, anxiety and ADS [19]. The psychosocial effects on adults can differ by age and gender respectively. According to a study by Haozheng, Baoren and Quan, in Hubei, China, found that medical staff within the age of 31 and 40 was more worried about infecting their families compared with other groups. Also staffs who were over 50 years were more stressed on seeing their patients' die due worry about their safety and lack of protective device including exhaustion due to increased workload [21].

Prior studies have revealed that mental well-being had been heavily affected by this kind of global pandemic [22, 23]. The level of loneliness, depression, harmful alcohol and drug use, and self-harm or suicidal behaviour which is not unconnected to the measures adopted by the government in the containment of the novel virus (COVID-19) especially quarantine and lockdown and its effects across society, presents a range of particular risks especially for older persons [6,7]. The social activities that have been restricted in most countries including Nigeria, where almost all not essential individual movements were prohibited due to lockdown and quarantine, while the local hospitals received suddenly thousands of critically ill COVID-19 patients and were forced to implement their emergency protocols [24]. In this situation, the general population as well as the older adult became vulnerable to the emotional impact of COVID-19 infection due to both the pandemic and its consequences worldwide [25, 26]. Many psychological problems and important consequences in terms of mental health including stress, anxiety, depression, frustration, uncertainty during COVID-19 outbreak emerged progressively [26]. As the society became increasingly exposed to anxiety-provoking topics, infodemics and misinformation among others related to the outbreak of COVID-19 which has created panic, fear, depression, insomnia, anxiety and distress among the people. It is imperative to investigate the psychosocial effect of COVID-19 among selected adult in Nigeria. To determine the various possible ways in which COVID-19 pandemic outbreak and its containment measures affect psychosocial aspect of the adult population in Nigeria.

Adult population of Nigeria in the context of this paper refers to those from 18 years upward with matured minds (mental and physical maturity) who know about the current health crisis in the country and what it may portend at the end of the day. The psychosocial effects seem to manifest in these adult's daily basis as precautionary measures which was imposed

in order to attenuate the COVID-19 spread in Nigeria continues without enough attention to the social and psychological impacts of the mental health of Nigerians adult population [27]. Given to the reviewed literature, most of the studies on the psychological impact of COVID-19 were mostly done outside the shores of this country. Different writers expressed their perceptions of the psychosocial effects. Nonetheless, none specifically sought to practically determine the psychosocial effects on the adult populace that seem to be bearing the brunt of it all. Also, from the reviewed literature, it could be seen that there is dearth of literature in determining level of knowledge on mechanisms of coping with the psychosocial effects of COVID-19 and not necessarily the psychosocial effect of COVID-19 among adult in Nigeria. It is in the light of this gap that the present study aimed to investigate the psychosocial effect of COVID-19 among selected adult in Nigeria. The variables such as age and gender have not been explored in recent studies however these in the main formed the basis for the present study to determine the psychosocial effects of COVID-19 among the selected adults in Nigeria based on age and gender.

Materials and Methods

The descriptive online survey research design was employed in the study. This design was found applicable to describe the psychosocial effect of COVID-19 among adult in Ebonyi state. The population of the study comprised 81 adults who were purposefully used because they responded to the Google instrument within the time limit purposely set for the study. A snowballing sampling technique was used in this study due to the present lockdown and movement restriction which made it very difficult to physically access people at the time of data collection. An online semi-structured questionnaire was developed by using Google forms, accompanied with consent letter. The link of the questionnaire was sent through emails, WhatsApp and other social media to people on the contact of the investigators. The prospective respondents were then encouraged to roll out the survey to as many of their colleagues as possible. Thus, the link was forwarded to people apart from the first point of contact. Eighty-one (81) Nigerian adults aged between 18 years and above participated in the study. The participants comprised 41 males and 40 females.

A total of 25 questions were administered which comprised two sections namely; Socio-demographic variables and psychosocial effects of COVID-19 among the adults. The completed instrument was automatically recorded by the Google and thus used for data analysis. The analysis was done using SPSS version 20. Frequencies and percentages were used to answer the research questions while Pearson Chi square, ANOVA and t-test statistic were used to test the hypotheses at 0.05 level of significance. The results were represented using tables and figures.

Results

Data in (Table 1) shows that out of 81 respondents that participated in the study, 9.9% are between ages 18-24. 59.3% are between ages 25-44 and 30.9% are between ages 45-64. The table further shows that 50.6% of the respondents are males while 49.4% are females adult. The findings in Table 2 indicated that the 50% of adult between the age brackets 18 years-24 years had anxiety, 50% had distress, 66.6% had insomnia and 25% had depression. 66.7% of adult between the age brackets 25 years-44 years had anxiety, 31.3% had distress, 62.5% had insomnia and 14.6% had depression. Also 72% adult between the age bracket 45 years -64years had anxiety, 36% had distress, 66.6% had insomnia and 16% had depression. The (Table 2) further showed that 50% of the age bracket 18-24 had no anxiety, 50% had no distress, 33.4% had no insomnia and 75% had no depression. Also, 33.3% of those in the ages 25 years-44years had no anxiety, 68.7% had no distress, 37.5% had no insomnia and 85.4% had no depression. Also 28% of those between the ages 45 years-64years had no anxiety, 64% had no distress, 33.4 had no insomnia while 84% had no depression. Data in (Table 3) shows that 72.5% of female adult indicated having anxiety, 30% indicated distress, 45% show insomnia and 22.5% indicated depression while 61% male adult shows anxiety, 34.1% shows distress, 34.1% indicated insomnia and 9.8% shows depression. However, 27.5% of female had no anxiety, 70% had no distress, 55% had no insomnia and 77.5% had no depression also 39% of male had no anxiety, 65.8% had no distress, 65.8% had no insomnia and 90.2% had no depression (Figure 1, 2).

The Null Hypotheses

Ho1: There will be no significant difference in psychosocial effects of

Table 1. The Socio-demographic characteristics of the study participants.

Variables	Frequency (81), n (%)
Age-group (Years) (n=81)	
18-24	8 (9.9%)
25-44	48 (59.3%)
45-64	25 (30.9%)
Gender (n=81)	
Male	41(50.6%)
Female	40(49.4%)

Table 2. Frequency and percentage distribution of psychosocial effects of COVID-19 by age.

Variables	18-24 years	25-44years	45-64 years
Age-group (Years)(n=81)	8(9.9%)	48(59.3%)	25(30.9%)
Anxiety			
Yes			
No	4(50.0)	32(66.7)	18(72.0)
Distress			
Yes	4(50.0)	15(31.3)	9(36.0)
No	4(50.0)	33(68.7)	16(64.0)
Insomnia			
Yes	5(66.6)	30(62.5)	17(66.6)
No	3(33.4%)	18(37.5%)	8(33.4)
Depression			
Yes	2(25.0)	7(14.6)	4(16.0)
No	6(75.0)	41(85.4)	21(84.0)

Table 3. Frequency and percentage distribution of psychosocial effects of COVID-19 by gender.

Variables (Gender) (n=81)	Female 40(49.4%)	Male 41(50.6%)
Anxiety		
Yes	29(72.5)	25(61.0)
No	11(27.5)	16(39.0)
Distress		
Yes	12(30.0)	14(34.1)
No	28(70.0)	27(65.8)
Insomnia		
Yes	18(45)	14(34.1)
No	22(55)	27(65.8)
Depression		
Yes	9(22.5)	4(9.8)
No	31(77.5)	37(90.2)

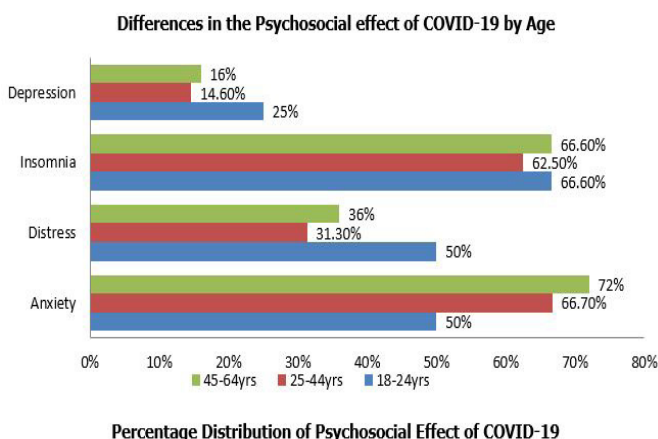


Figure 1. Percentage distribution of psychosocial effects of COVID-19 among selected adults in Nigeria by age

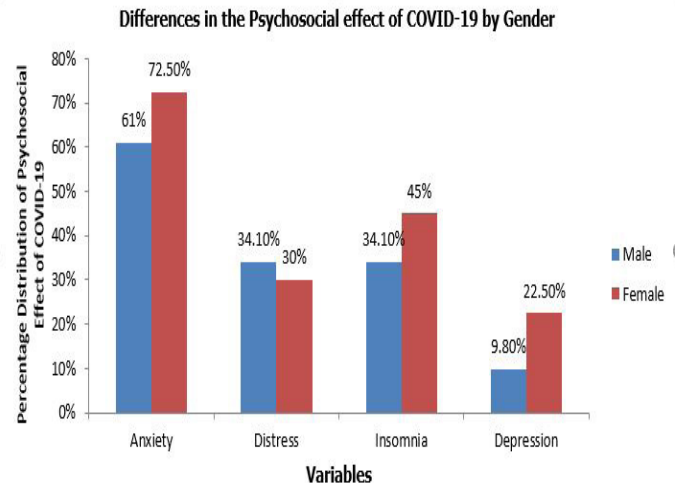


Figure 2. Percentage distribution of psychosocial effects of COVID-19 among selected adults in Nigeria by gender

Table 4. Summary of ANOVA on Psychosocial Effects on COVID-19 by Age

Source of Variance	Sum of square	Df	Mean	F-value	P-value	Decision
Between Groups	10.608	3	3.536	4.436	0.006	Significant
Within Groups	62.173	78	0.797			
Total	72.78	81				

Table 5. Summary of independent sample test of psychosocial effects on COVID-19 by gender.

Levene's Test for Equality of Variance		t-test for Equality of Means					
Error	F	Sig.	t	df	Sig (2 tailed)	Mean Difference	Standard Difference
Equal variance assumed	0.19	0.7	2.141	79	0.035	0.418	0.195
Equal variance not assumed			2.141	78.28	0.035	0.418	0.195

COVID-19 with its precautionary measure by age.

Data in (Table 4) show a statistically significance between groups as determined by one-way ANOVA (F=4.436, p=0.006). A Turkey post hoc test was used to conduct the test at $\alpha=0.05$. Hence, the null hypothesis is rejected.

Ho2: There will be no significant difference in the psychosocial effects of COVID-19 with its precautionary measure by gender

From data in (Table 5) Levene's test for equality of variance, the null hypothesis tested on psychosocial effects on COVID-19 by gender is rejected hence there is significant difference in psychosocial effects of COVID-19 by gender. With equal variances assumed, the t-statistic value is 2.141, the degrees of freedom (df) is 79 and the significance value of the test (p-value) is 0.035 less than 0.05 level of significance.

Discussion

The present study conducted an assessment of psychosocial effect of COVID-19 among selected adult population in Ebonyi state. As the disease progressed, concerns regarding health, and livelihood of adult population increased day-to-day as they are the worse hit by the novel virus. Studies have reported that COVID-19 pandemic is causing untold fear and suffering especially among the older people across the world with both physical and social reasons, that the older people in particular do not have as strong an immune system hence they are more vulnerable to COVID-19 pandemic. Also they are more likely to have conditions such as heart disease, lung disease, diabetes or kidney disease, which weaken their body's ability to fight the novel virus [4].

There are psychosocial health concerns of the adult population such as anxiety, distress, worries, insomnia and depression especially after the declaration of lockdown in Nigeria on 30th March, 2020 as people were encouraged to maintain social distancing, regular hand washing and use of sanitizers, use of face mask in public and good reparatory hygiene in Nigeria [28]. As number of cases surged, other control measures were applied such as the lockdown of the three most affected states and closing the Nigerian borders [29]. Again as some other states across the country reported the outbreak various degrees of lockdown were also carried out.

This lockdown directive involved the closing down of all schools, both primary, secondary, tertiary institutions and government parastatals, also bans on religious and social gatherings involving more than 20 persons, restrictions on businesses activities among others [28]. Further declared that there should not be any social gathering of any kind and due to this instruction, there were many cancellations of social events like burial, wedding, birthday, naming, congregational prayers, convocation ceremony. In order to ensure complete compliance on the directives both federal and state governments constituted taskforces to ensure that people in their respective states do not default. All these measures to attenuate the spread of novel COVID-19 in the country actually triggered emotionally challenges, anxiety, worry, distress, insomnia and depression especially among the adult as they were restricted from movement. World Health Organization has urged to take the necessary precautions to tackle the negative impact of the spread of Coronavirus on psychological health and well-being [30].

The findings of the current study indicated that the 50% of adult between the age brackets 18 years-24 years had anxiety, 50% had distress, 66.6% had insomnia and 25% had depression. 66.7% of adult between the age brackets 25 years -44 years had anxiety, 31.3% had distress, 62.5% had insomnia and 14.6% had depression. The present study was in consonance with the study conducted by Hasan and Kazmi to explore the impact of COVID-19 and lockdown on mental health of individuals which found significant depression, anxiety and distress across age, gender and employment. Depression was found to be high among the respondents of age range 15 years to 35 years. Anxiety was found to be prevalent among those between 21 years and 25 years of age. Distress was found to be high in individuals of 21 years-25 years of age. The reason may not be far-fetched given to the youthfulness of the age groups. They are within the explorative age of their life enjoying every bit of it that any calamity be it sickness or environmental disaster instills much fear of the unknown and other neurotic behaviours in them [18]. The study also found that 72% of adult between the age bracket 45 years -64 years and above had anxiety, 66.6% had insomnia. These results agree with the previous studies, who reported uncertainty of the health situation among the elderly such as stress, anxiety, and depression related COVID-19 symptoms [31, 32]. These results highlight the great negative psychological impact that the COVID-19 pandemic is having on the adult population. These also could signal future development of negative psychological outcomes that are common in the aftermath of crises and disasters, such as posttraumatic stress disorder, generalized anxiety or major depression disorders, and substance abuse [33, 34]. The study also found that 36% of adult between the age bracket 45 years-64 years and above had distress, 16% had depression. The finding is not surprising and thus expected as some literature in the field of disaster indicates that the elderly are particularly vulnerable to the negative psychological sequelae of critical situations [35]. The findings is also in line with the studies who found that age constitutes a protective effect that in older disaster victims usually show lower stress, anxiety, and depression symptoms than younger participants, and this trend may be explained by their greater life experience, previous disaster exposure or by having to face fewer life responsibilities [36]. On gender, greater number of women 72.5% indicated having anxiety, 30% indicated distress, 45% show insomnia and 22.5% indicated depression when compared with men 61% shows anxiety, 34.1% shows distress, 34.1% indicated insomnia and 9.8% shows depression about COVID-19 infection. The study agrees with those of Rodríguez-Rey, Garrido-Hernansaiz, Collado whose study demographic variables showcase that males had lesser psychological impact of COVID-19 outbreak as compared to their female counterpart as the impact on females was found to be statistically significant [36].

These findings were also similar with the study carried out in the Chinese community where females suffered a greater psychological impact due to the coronavirus outbreak [37]. Another study also found that women were more likely to show worse feeling than men in corona virus fallout [20]. The present study is also in consonance with the previously available extensive epidemiological literature which shows that women are at a higher risk [38, 39]. It is also in line with other studies carried out in China about the COVID-19 pandemic which show that women and young adults were the ones that suffered the greater psychological impact [40]. The findings are not unconnected to the fact that women are usually the informal caregivers within families, so the necessary restrictive measures, such as schools and childcare facilities closures, increase women majority of health-care workforce, therefore being more likely to be infected by the coronavirus [41]. It should also be noted that higher rates of domestic violence against women are usually registered during this time of lockdown which constitutes another source of distress [42, 43].

The result of the null hypothesis tested indicated age difference in psychosocial effects of COVID-19 ($F=4.436$, $p=0.006$). The study is in accord with the study of Hasan and Kazmi which found significant difference among depression, anxiety and stress across age [18]. It is also inconsonance with the study who indicated that the psychosocial effects on adults can differ by age [21]. The null hypothesis tested on psychosocial effects on COVID-19 by gender is rejected hence there is significant difference in psychosocial effects of COVID-19 by gender. With equal variances assumed, the t-statistic value is 2.141, the degrees of freedom (df) is 79 and the significance value of the test (p-value) is 0.035 less than 0.05 level of significance. The result is in the same as Hasan and Kazmi study which also found significant difference among depression, anxiety and stress across gender [18].

Conclusion

Based on the results of the study, all the age groups had psychosocial effects of anxiety, distress insomnia and depression. There is significant difference in psychosocial effects of COVID-19 on adult population by age ($p<0.006$) and there is significant difference in psychosocial effects of COVID-19 by gender ($P<0.035$). In recognition of these findings, it calls for urgent intervention by the Government at all levels, NCDC, Ministries of health and health Policy Makers in addressing issues surrounding adult mental health. The findings of this study could assist health officials, government and the public to provide mental health interventions and coping strategies to the adult population. This can guide researchers to plan prospective longitudinal studies for assessing treatment need as well as finding cure for the novel virus. Besides COVID-19, the 21st century is also the era of emerging pandemic of mental illnesses Thus, psychological and social preparedness of this pandemic carries global importance. The government and stakeholders must appreciate the psychosocial morbidities of this pandemic and assess the burden, fatalities and associated consequences and embark on an effective intervention programme such as.

- The Government at all levels should put in place online health sensitization on the various psychosocial effects alongside their coping mechanisms. This can be done without restrictions for all adults across all age and gender.
- Mental health doctors shall work in collaboration with other frontline workers to offer mental health services to adults in need.

Limitation of study

A key limitation of this study is that future studies should assess the psychosocial effect COVID-19 pandemic in a larger sample of adult population in Nigeria hence the present study does not involve larger numbers of Nigerians to ascertain the generalizability of the current findings. Also studies should be carried out to determine whether younger and older participants recover differently from the psychosocial sequelae of the COVID- 19 crisis.

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