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## Psychological distress experiences of Nigerians during Covid-19 pandemic; the gender difference

Abayomi O. Olaseni<sup>a</sup>, Olusola S. Akinsola<sup>b</sup>, Samson F. Agberotimi<sup>c,\*</sup>, Rotimi Oguntayo<sup>a</sup>

<sup>a</sup> Department of Psychology, University of Ilorin, Ilorin, Nigeria

<sup>b</sup> Department of Psychology, University of Ibadan, Ibadan, Nigeria

<sup>c</sup> Lifestyle Diseases Research Entity, North-West University, Mafikeng Campus, South Africa

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### ABSTRACT

This study examine the psychological distress experience of Nigerians during the COVID-19 pandemic, across gender. From March 20, 2020, to April 12, 2020, this descriptive survey used a snowballing sampling technique to select 502-Nigerians with an online semi-structured questionnaire detailing the impact of Event Scale-Revised, Generalized Anxiety Disorder – 7 item scale, Patient Health Questionnaire and Insomnia Severity Index. Gender had an insignificant difference in the level of insomnia ( $\chi^2 = 04.93$ ;  $df = 3$ ;  $p > 0.05$ ), however, 20.8% of males had sub-threshold of insomnia, 8.2% experienced moderate insomnia and 5.9% had severe insomnia; 32% females reported sub-threshold of insomnia, 12.4% had moderate insomnia while 3.6% had severe insomnia. Also, gender had an insignificant difference in the measures of depression ( $\chi^2 = 01.94$ ;  $df = 4$ ;  $p > 0.05$ ); 55.4% males reported minimal depression, 22.3% had mild depression, 11.9% had moderate depression; 6.7%–3.7% males had moderate to severe depression while, 49.3% of the females had minimal depression, 26.7% reported mild depression, 14.29% had moderate depression, 4.4%–5.3% had moderate to severe depressive symptoms. Posttraumatic Stress Symptoms (PTSS) has no gender difference among respondents ( $\chi^2 = 02.51$ ;  $df = 3$ ;  $p > 0.05$ ); 23% of males reported partial PTSS, 17.5% presented clinical PTSS, and 21.6% males had severe PTSS; while 29.3% of females had severe PTSS, 24% reported partial PTSS and 18.7% had clinical PTSS. Respondents reported insignificant gender differences on anxiety ( $\chi^2 = 0.08$ ;  $df = 1$ ;  $p > 0.05$ ), while 51% reported moderate anxiety and 49% exhibited severe anxiety during the COVID-19 pandemic in Nigeria. Findings revealed that Nigerians experienced psychological distress during COVID-19 pandemic. The government and stakeholders should initiate tele-mental health services to serve as alternative to traditional treatment to manage present and future pandemic psychological implications among Nigerians.

### 1. Introduction

A great threat of a novel virus – coronavirus otherwise known as COVID-19 pandemic rocked the entire world in the wake of the year 2020. COVID-19 which was first reported in December 2019 in Wuhan China, declared as Public Health Emergency of International Concern in January 2020 and later a pandemic in March 2020 by the World Health Organisation (WHO) (Web news, 2020; World Health Organisation, 2020). The threat is so strenuous that the entire world was placed on lockdown in the matter of social restriction such as on international and national transport links, market or business transaction, school and organisation activities, and all related social and religious gatherings.

Being a novel disease that is highly contagious, spreading fast across

the world, and the fact that there is yet to be an established cure for it, the COVID-19 pandemic has created a lot of panic in every part of the world. Also, information and misinformation about such factors as those associated with the transmission of the virus, period of incubation, and impact on the socio-economic, political and psychological livelihood of people in the society put the general population at risk of mental health distress. In Nigeria, there is no empirical finding (to the best knowledge of the investigators) establishing the impact of COVID-19 pandemic on the mental health of the general populace. However, several studies especially in Asia and Europe (Bao et al., 2020; Brooks et al., 2020; Kang et al., 2020; Shigemura et al., 2020) have reported serious psychological distress experiences of members of the society in response to the COVID-19 pandemic.

\* Corresponding author. Department of Psychology, North West University, Private Bag X2046, Mmabatho, 2735, South Africa.

E-mail address: [femiagberotimi@gmail.com](mailto:femiagberotimi@gmail.com) (S.F. Agberotimi).

Considering its grave impact, the COVID-19 pandemic has been likened to natural disasters (Morganstein & Ursano, 2020), mass dispute, and war outbreaks (Fiorillo & Gorwood, 2020). The present pandemic is, however, more devastating because unlike during a natural disaster or war outbreak whereby people can relocate or build a sophisticated defence system to minimize or escape any foreseeable negative impact, there is nowhere to run to escape the impact of COVID-19 pandemic (Olapegba et al., 2020). The effect is far-reaching beyond a specific geographical location as the political and socio-economic structure of the whole world is disrupted and crashing, thus putting people more at risk of experiencing psychological distress (Raviola et al., 2020). It has also been argued that in periods of disease outbreaks, anxiety in the community can rise after the first death of a patient is being reported, also misinformation from media and increasing number of new cases can predispose people to serious psychopathology (Rubin & Wessely, 2020). Kang et al. (Kang et al., 2020) also opined that the present COVID-19 pandemic will drastically increase global stress and mental health burden.

According to Xiang (Xiang et al., 2020), the experience of the ongoing COVID-19 pandemic is triggering tension and a timely understanding of mental health is very essential for the government, health agencies and the public. Recent studies affirm the high and huge level of psychosocial consequences of outbreaks like COVID-19 on individuals, the general public, and the international community (Hall et al., 2008; Wang et al., 2020). For instance, in the period of SARS outbreak, many that were examined on the psychological consequence showed substantial psychological complications that were found to be related with young people and exacerbated blaming of self (Sim et al., 2010), while those older people who were females and highly schooled, displayed higher anxiety feelings for SARS positivity, while the less educated had a moderate anxiety rate; those with known contact history with the infected individuals, perceived they have symptoms of SARS and have more tendency to indulge in preventive measures against the disease (Leung, 2003).

Furthermore, the means of containing the pandemic such as; self-isolation, quarantine, social distancing, and treatment of infected persons can further pose a detrimental effect of psychological distress (Fiorillo & Gorwood, 2020; World Health Organisation, 2020). Specifically, the loneliness effect of reduced social interactions is a risk factor for several psychological disorders such as; anxiety, drug use, insomnia, major depression, and suicidal ideation especially among vulnerable populations like the elderly and those with health challenges. According to Rubin et al. (Rubin & Wessely, 2020), excessive quarantine tends to give rise to anxiety significantly, for multiple reasons; even the elevated anxiety may also trigger and initiate the implications for some related mental health issues. Barbisch et al. (Barbisch et al., 2015) had earlier pointed out the implication of confinement on the psychological well-being of the public, by identifying hysteria, rejection and dejection feelings, obsessive-compulsive symptoms and mood challenges as conditions that can lead to complicated health issues in the victims and the public.

Despite the devastating effect that dealing with highly contagious and threatening disease expose healthcare workers to in Sub-Saharan Africa, a concern has been raised that the government in the region has not paid enough attention to the psychological distress implications of a pandemic such as a coronavirus on her healthcare workers (Higgins, 2014). In Nigeria, it has been opined that despite financial aid and infrastructural support being received from both local and international organizations, the government pays little or no attention to the necessary psychological well-being of healthcare professionals on the frontline of combating coronavirus pandemic (Guardian, 2015; Web news, 2020).

Concerning the aforementioned, it is noteworthy that seeking to devise a better approach to addressing the imminent and present psychological problems of people who witnessed the COVID-19 outbreak is a necessity. This, therefore, calls for objective assessment of levels and patterns of possible psychological distress among the general population

to inform necessary interventions. As at the time of data collection for this study, no study (to the best of knowledge of the investigators) existed that investigated the psychological impact of COVID-19 on the general population in Nigeria, therefore this study becomes very relevant.

Consequently, this study represents the first one examining the psychological impact of COVID-19 among the general population in Nigeria. This study aims to establish the prevalence of common psychological distress among the general public, and identify the specific pattern of occurring psychopathology among Nigerians during the pandemic.

### 1.1. Objectives

To address the aim of this study, the following objectives were raised:

1. To examine the prevalence of insomnia outcomes among residents of Nigeria among residents in Nigeria during the COVID-19 pandemic.
2. To investigate the prevalence of depression symptoms across categories of male and female residents in Nigeria during the COVID-19 pandemic.
3. To assess the prevalence of posttraumatic stress symptoms across male and female residents in Nigeria during the COVID-19 pandemic.
4. To investigate the prevalence of anxiety symptoms among residents in Nigeria during the COVID-19 pandemic.

## 2. Materials and methods

### 2.1. Design

This study utilised a cross-sectional descriptive survey research design that entailed collecting quantitative data on more than one case at a single point in time or simultaneously in survey research. The main variables of interest are depression, generalized anxiety, insomnia, and posttraumatic stress. This design was found applicable to describe the psychological distress experiences of Nigerians during the COVID-19 pandemic.

### 2.2. Sampling

A snowballing sampling technique was used in this study because data collection was conducted during a nationwide lockdown in response to the COVID-19 pandemic 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, with a consent form appended to it. 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 and so on.

### 2.3. Participants

Five hundred and two (502) Nigerians aged between 18 years and 78 years ( $M = 28.75$ ,  $SD = 8.17$ ) participated in the study. The participants comprised 269 (53.6%) males, 225 (44.8%) females, while 8 (1.6%) did not disclose their sex. In terms of ethnic affiliations, the majority of the participants (86.3%) identified with ethnic groups in the Southern region of Nigeria, while 9.4% indicated they were from ethnic groups in Northern Nigeria, the remaining 4.4% did not disclose any specific Nigerian ethnic affiliation. In terms of religious affiliation, the majority (67.1%) are Christians, 31.7% are Muslims, while only 0.8% practiced other religions, and 0.4% of the respondents identified themselves with traditional religion. Data on the marital status of participants showed that 32.9% were married, 66.3% unmarried, and 0.8% were separated. Finally, categorization based on the highest level of education, only 4.4% of the participants had secondary school education, 27.1% reported incomplete tertiary education, 39.4% completed tertiary education, and

the remaining 29.1% had postgraduate education.

#### 2.4. Instrument

Data were collected via an online self-reported questionnaire designed by the investigators. The questionnaire contained five sections. The first section consisted of information assessing demographic attributes such as sex, age, religion, and marital status of participants.

The second section contained the 22-item Impact of Event Scale-Revised (IES-R). The scale was developed to measure the subjective response to a specific traumatic event, especially in the response sets of intrusion, avoidance, and hyperarousal, as well as total subjective stress IES-R score. The IES-R is not meant to be diagnostic. The total IES-R score was divided into 0–23 (normal), 24–32 (mild psychological impact), 33–36 (moderate psychological impact), and >37 (severe psychological impact). Weiss (Weiss et al., 2007) affirmed the validity and reliability of the scale. Cronbach's alpha 0.82 was established as the reliability coefficient for the scale in this study.

In section three of the questionnaire is the Generalized Anxiety Disorder 7-item (GAD-7) scale (Spitzer et al., 2006) consisting of 7 questions assessing generalized anxiety disorder, focusing on the frequency of symptoms during the preceding 2-week period. The GAD-7 requires approximately 1–2 min to administer and for each symptom queried provides the following response options: “not at all,” “several days,” “over half the days” and “nearly every day” and these are scored, respectively, as 0, 1, 2 or 3. A score ranging from 0 to 21 is obtainable by respondents. Scores of 5, 10, and 15 are taken as the cut-off points for mild, moderate and severe anxiety, respectively. Cronbach's alpha 0.81 was established as the reliability coefficient for the scale in this study.

The fourth section contained the Patient Health Questionnaire (PHQ-9). The PHQ-9 is a nine-item depression scale that has the potential of being a dual-purpose instrument to establish the diagnosis of a depressive disorder, as well as the grade of symptom severity (Kroenke et al., 2001). Statements measuring depressive symptoms such as “little interest/pleasure in doing things” were rated from 0 (not at all) to 3 (nearly every day) by respondents as applicable to them over the past two weeks. PHQ-9 score can range from 0 to 27. The scale has strong psychometric properties and has been widely used. Cronbach's alpha 0.87 was established as the reliability coefficient for the scale in this study.

The fifth section contained the Insomnia Severity Index, a 7-item self-report questionnaire assessing the nature, severity, and impact of insomnia. Participants were required to rate their sleep condition in the last 2 weeks as described by each item of the scale. Questions on the ISI cut across the severity of sleep onset, sleep maintenance, and early morning awakening problems, sleep dissatisfaction, interference of sleep difficulties with daytime functioning, noticeability of sleep problems by others, and distress caused by the sleep difficulties. The scale is responded to on a 5-point Likert scale with a score ranging from 0 to 4; thus, yielding a total score ranging from 0 to 28. The total score is interpreted as follows: the absence of insomnia (0–7); sub-threshold insomnia (8–14); moderate insomnia (15–21); and severe insomnia (22–28). Previous studies have reported adequate psychometric properties for both the English and French versions (Bastien et al., 2001). Cronbach's alpha 0.78 was established as the reliability coefficient for the scale in this study.

#### 2.5. Procedure

This was an online study. Participants with access to the internet were invited to participate in the study. Participants with age more than 18 years, able to understand English and willing to give informed consent were included. A link to the survey on Google form was sent to all participants. On receiving and clicking the link, the participants got auto directed to the information about the study. A detailed informed consent form was attached at the beginning of the online questionnaire and consent was a prerequisite to continue in the survey. Therefore, only

individuals who gave their consent participated in the study. The data collection was initiated on March 20, 2020 and closed on April 19, 2020. The sampling technique employed allowed the investigators to collect data from across various states of Nigeria. Five hundred and two (502) correctly filled questionnaires were recovered through the Google form and processed for statistical analysis.

#### 2.6. Data analysis

The collected data was analyzed using the SPSS package (version 25) and GraphPad Prism (v8.4.2). The analyzed data respond to the four research questions stated in the early paragraph. The analyses include prevalence estimate analysis, and chi-square analysis was therefore presented.

### 3. Results

This phase presents the results and interpretation of data collected on the prevalence of psychological distress among five hundred and two (502) residents in Nigeria during the outbreak of the pandemic.

The prevalent rate of psychological distress outcomes was reported among residents of Nigeria across the six geopolitical zones. Based on the exploratory process, outcomes of the evaluated psychological constructs were presented in the chart below (see charts 1-4).

Chi-square contingency chart (see chart 1) revealed that there was no significant difference in the reported severity of insomnia among female and male residents in Nigeria during pandemic ( $\chi^2 = 04.93$ ;  $df = 3$ ;  $p > 0.05$ ). However, prevalence estimates analysis revealed that majority of the male respondents (65.1%) had no clinical insomnia, 20.8% of the male participants reported sub-threshold level of insomnia, 8.2% of the respondents had moderate insomnia symptoms, while 5.9% of the male respondents presented severe clinical insomnia during the COVID-19 pandemic. It was further reported that majority of the female respondents (52%) had no clinical insomnia symptoms, 32% reported sub-threshold level of insomnia, 12.4% had moderate insomnia symptoms, while 3.6% of the female respondents presented severe clinical insomnia during the COVID-19 pandemic.

Further analysis that aimed to reveal the prevalence of depression symptoms across categories of male and female residents in Nigeria was tested using a contingency analysis of the GraphPad prism (see chart 2).

Chi-square contingency chart (see chart 2) revealed that there was no significant difference in the reported severity of depressive symptoms among female and male residents in Nigeria during pandemic ( $\chi^2 = 01.94$ ;  $df = 4$ ;  $p > 0.05$ ). However, prevalence estimates analysis revealed that majority of the male respondents (55.4%) had minimal depressive symptoms, 22.3% reported mild depressive symptoms, 11.9% of the respondents had moderate depressive symptoms, 6.7% had moderately severe depressive symptoms, while 3.7% of the male respondents presented severe depressive symptoms during the COVID-19 pandemic. It was further reported that majority of the female respondents (49.3%) had minimal depressive symptoms, 26.7% reported mild depressive symptoms, 14.29% had moderate depressive symptoms, 4.4% had moderately severe depressive symptoms, while 5.3% of the female respondents presented severe depressive symptoms during the COVID-19 pandemic.

Based on the study objectives, the analysis that aimed to reveal the prevalence of posttraumatic stress symptoms across male and female residents in Nigeria was tested using a contingency analysis of the GraphPad prism (see chart 3).

Chi-square contingency chart (see chart 2) revealed that there was no significant difference in the reported severity of Posttraumatic Stress Symptoms (PTSS) among female and male residents in Nigeria during pandemic ( $\chi^2 = 02.51$ ;  $df = 3$ ;  $p > 0.05$ ). However, prevalence estimates analysis revealed that the majority of the male respondents (37.9%) had no PTS symptoms, 23% reported partial PTS symptoms, 17.5% presented clinical PTS symptoms, while 21.6% of the male respondents presented

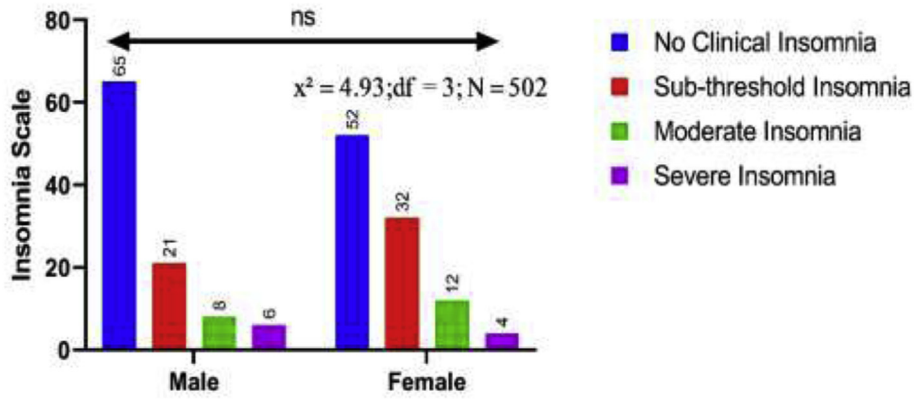


Chart 1. Showing the prevalence of insomnia outcomes across respondents' sex amidst Covid-19 pandemic.

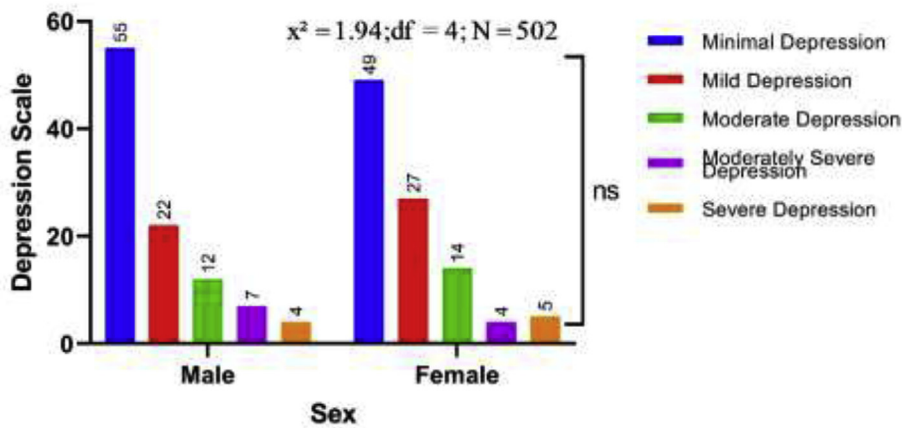


Chart 2. Showing the prevalence of depression across respondents' sex amidst Covid-19 pandemic.

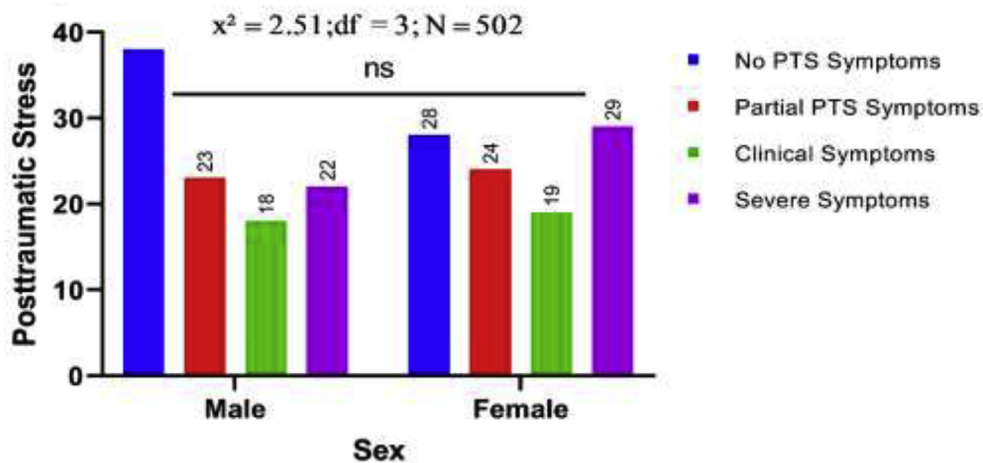


Chart 3. Showing the prevalence of posttraumatic stress symptoms across respondents' sex amidst Covid-19 pandemic.

severe PTS symptoms during the COVID-19 pandemic in Nigeria. It was further reported that the majority of the female respondents (29.3%) had severe PTS symptoms, 24% reported partial PTS symptoms, 18.7% had clinical PTS symptoms, while 28% of the female respondents presented no PTS symptoms during the COVID-19 pandemic.

Further objective to explore the prevalence of anxiety symptoms among residents in Nigeria during COVID-19 pandemics was tested using prevalence estimate analysis of the GraphPad prism (see chart 4).

Chart 4 revealed that there was no significant difference in the disparity of anxiety symptoms among residents of Nigeria during the COVID-19 pandemic ( $\chi^2 = 0.08$ ;  $df = 1$ ;  $p > 0.05$ ). Based on chart 4, it was revealed that the majority of the residents in Nigeria insignificantly had moderate anxiety symptoms during the COVID-19 pandemic. In other words, 51% of the participants in the study had moderate anxiety symptoms (i.e. incapacitating level of anxiety), while approximately 49% of the residents exhibited severe anxiety symptoms in Nigeria.



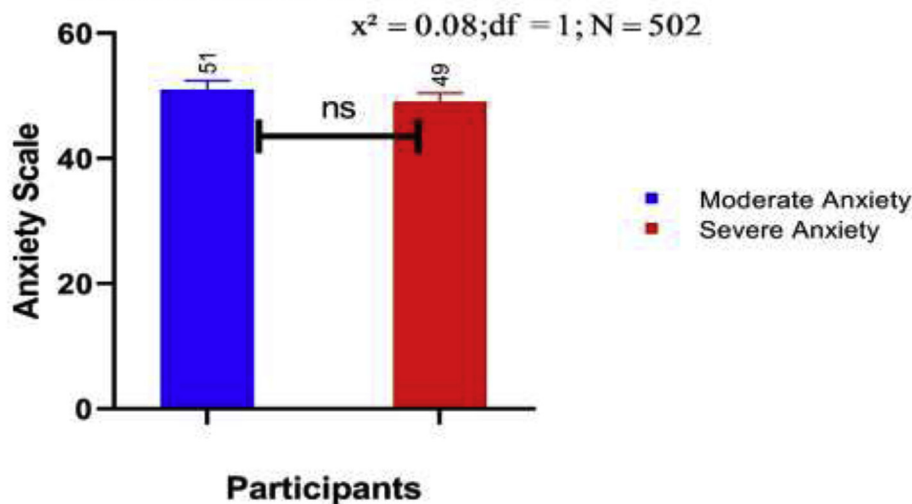


Chart 4. Showing the prevalence of anxiety symptoms across residents in Niger amidst Covid-19 pandemic.

#### 4. Discussion

The outbreak of deadly disease is not a new occurrence in Nigeria; the country has faced so many outbreaks of emerging and reoccurring diseases such as malaria, avian influenza, Ebola virus, HIV/AIDS, meningitis, Lassa fever, tuberculosis, monkeypox and many more (Nigeria Centre for Disease Control, 2020) and yet, it thrived above all these outbreaks. For a country that has no recent serious prior experience with natural disasters such as tsunami and earthquake (Hansen, 2018), and infectious disease such as SARS, the country and its occupants seem overwhelmed with the COVID-19 pandemic. The novel COVID-19 pandemic has brought along with it, innovation and changes that Nigerians are not used to which can lead to psychological distress. Nigerians are distinct people with a rich social culture such as; partying, hanging out and routine dropping off and picking up of children at school, termed “school runs”, is a social activity and opportunity of networking for most parents. Therefore, the lockdown, physical and social distancing, closure of schools and the imposition of the use of face/nose mask could serve as stressors among this population.

Also, amidst the fear and risk of contagion of the COVID-19, the changes in the day to day activities of so many Nigerians would have caused the prevailing psychological distresses. The overall prevalence of insomnia indicated was 15% among the general public in Nigeria (4.75% severe insomnia and 10.3% moderate insomnia), a little less than a quarter (23%) indicated experience of moderate depression to severe depression and a quarter (25%) of the population indicated experiencing symptoms of severe posttraumatic stress and 18.1% indicated experiencing symptoms of clinical posttraumatic stress.

On April 28, 2020, the Nigeria Centre for Disease Control reported that Nigeria has recorded 1532 confirmed cases of COVID-19 and 24 deaths in 33 states and the Federal Capital Territory (Nigeria Centre for Disease Control, 2020), this figure seems quite low in comparison to the figures reported in China and the global recorded death. The low reported confirmed cases (as at the time of data collection) may have culminated in the lower prevalence of depression reported (moderate depression 13.1%, moderately severe depression 5.55% and severe depression 4.5%) among Nigerians as against higher reported prevalence of depression due to COVID-19 pandemic among Chinese citizens (Gao et al., 2020). The researchers reported the prevalence of depression among general Chinese citizens has 48.3% and reported prevalence of depression among hospitalized patients in Wuhan, China has 28.7% (Gao et al., 2020). Confirming the output of our study, clinical psychological scientists at the University of Washington have requested the need to prepare for a possible clinical depression epidemic because of COVID-19

(The Conversation, 1345).

Consistent with our study findings of the prevalence of psychological distress among the public in Nigeria, Wang, et al. (Wang et al., 2020) reported prevalence of moderate or severe psychological impact of the COVID-19 outbreak among the public in China and Bo et al. (Bo et al., 2020) reported that before discharge, most clinical stable COVID-19 patients suffered from significant posttraumatic stress symptoms. Importantly, the prevalence of posttraumatic stress symptoms during COVID-19 was lower among Chinese citizens; Sun et al. (Sun et al., 2020) reported 4.6% posttraumatic stress symptoms and 7% in China hardest-hit areas (Liu et al., 2020), while the public in Nigeria reported higher experience of posttraumatic stress symptoms (25%). The difference in prevalence between the two populations can be attributed to the direct experience of the COVID-19 devastation by the Chinese population at the early stage of the outbreak and the Nigerian population observation of the event through mass media. The several misleading information on the social media relating to the COVID-19 from its inception and the increase in confirmed cases in Nigeria could have heightened the experience of posttraumatic stress symptoms of the Nigerian population.

Adult females and even children (female) provide unpaid care in families (Sandoiu, 2020) in Nigeria, which ranges from cooking, washing, taking care of kids, and general cleaning of the house. Due to the lockdown, stay at home mandate of the Federal Government and cleaning of surfaces mantra, most female household chores have been doubled or tripled in most cases and this can be distressing. There has been an upsurge in the issues of domestic violence against women and the girl child, which prompted Amina Mohammed (UN Deputy Secretary-General) to call on all governments, civil society, and individuals to consider gender-based violence as a dominant issue of all domestic plans on COVID-19 response (United Nations, 2020). So many women in Nigeria, especially those in abusive marriages and relationships have no escape because of the restriction of movements and lockdown in most states of the country (Daniels, 2020). Against this backdrop, it was expected that females should indicate the higher experience of psychological distress but our study found no substantial variation between male and females’ experiences on psychological distresses during COVID-19 pandemic, though articles and studies have contrary opinions.

Women in eight countries across Africa (Nigeria not included) and Asia were reported to have consistently self-reported higher sleep problems than men based on series of roles they play in families (Stranges et al., 2012), female more than their male counterpart were confirmed to be susceptible to insomnia (Zhang & Wing, 2006) and high posttraumatic stress symptoms (Liu et al., 2020). Similar to our findings of 15%

experience of insomnia (moderate to severe), a Korean population reported an overall prevalence of insomnia symptoms of 10.7% which included difficulty in initiating sleep, difficulty in maintaining sleep and early morning awakening but the symptoms were more prevalent in female than in male (La et al., 2020). The similarity of the genders on their psychological distress during the COVID-19 based on the peculiarity of the population can be attributed to a deep culture that has made women in Nigeria believe that it is socially acceptable to be hit and discipline (Standard, 2013; Trust, 2013), hence, they might have adapted to the situation at a significant level that it does not cause them psychological distress.

## 5. Conclusion

In conclusion, our findings expose the prevalence of insomnia, depression and posttraumatic stress symptoms among Nigerians during the COVID-19 pandemic. Though this study recorded no significant difference between the gender (male and female) experiences of insomnia, depression, posttraumatic stress symptoms and anxiety, the study result reported a relevant prevalence of outcomes of psychological distress among the general public in Nigeria. The government of Nigeria should make available, if not for all, psychological health services for survivors of COVID-19.

### 5.1. Limitation of the study

The study does not involve larger numbers of Nigerians to ascertain the generalizability of the current findings. It is also possible that outcomes would vary if measured over a thousand or more participants. Some socioeconomic factors should have been included in this study to ascertain the comorbid factors that could aggravate psychological distress in the current pandemic among Nigerians. Finally, the issue of response bias, which is prevalent in self-report surveys could have influenced the result and considered a limitation to this study.

### 5.2. Recommendations

Considering the findings of this study, the following are suggested to enhance psychological wellbeing among Nigerians during the pandemic period:

1. Tele-psychotherapy means of managing psychological distress among the public should be adopted by stakeholders during a lockdown and infectious disease outbreak like this. This intervention has been found to be effective in treating disorders such as; anxiety, depression, suicide attempts, trauma-related problems, insomnia, etc in the face of a pandemic that strains health care resources (Augenstein, 2020; National Quality Forum, 2017). Especially when face-to-face appointments are risky.
2. Federal and state governments should initiate a bill honoring the tele-mental health services to manage present and future pandemic psychological implications.
3. Healthcare stakeholders needed to collaborate with psychotherapists in the management of pandemic or disease outbreak to regulate residents' emotions and promote people's psychological wellbeing in society.
4. Experts should start an awareness campaign on basic means of overcoming psychological distress on media and in communities generally in Nigeria to foster mental healthiness.

## CRediT authorship contribution statement

**Abayomi O. Olaseni:** Conceptualization, Investigation, Formal analysis, Writing - original draft, Writing - review & editing. **Olusola S. Akinsola:** Investigation, Writing - original draft, Writing - review & editing. **Samson F. Agberotimi:** Conceptualization, Investigation,

Writing - original draft, Writing - review & editing. **Rotimi Oguntayo:** Conceptualization, Investigation, Writing - original draft, Writing - review & editing.

## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ssaho.2020.100052>.

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