



Mitigating the Psychological Impacts of COVID-19 in Southern Nigeria; Public Awareness of Routine Exercises and Preventive Measures

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Authors' contributions

This work was carried out in collaboration among all authors. Authors EIO, EIO, IAO and COE designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors DUU, OCO, CJE, EUA, CNE, ICA and BNE managed the analyses of the study and managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Psychological impacts of COVID-19 outbreak include anxiety and depression. These effects of the pandemic could be avoided by awareness of preventive measures to control the spread of the disease, and to prophylactic measure (routine exercise) to mitigate the psychological impacts of the pandemic. This study aimed at investigating the level of public awareness to the preventive and prophylactic measures against the psychological impacts of COVID-19 outbreak in southern Nigeria. A cross-sectional quantitative study was conducted with 1200 community-dwelling working-class individuals were purposefully recruited from three states in the southern Nigeria. Data collected was analysed and presented in descriptive (Frequencies and percentages) and inferential (Chi-square) statistics. P-value was 0.05. Result showed that few respondents (34%) were aware of the preventive measures against psychological impacts due to COVID-19 widespread, through information got majorly from mass and social media. Majority (63%) of the respondents were aware of the efficacy of the prophylactic measure, routine exercises, to mitigating anxiety and depression due to COVID-19 pandemic. There was less public awareness of the effects of the preventive and prophylactic measures on the psychological impact of the pandemic in southern Nigeria. Thus, there is need for policy makers to broaden and strengthen awareness strategies on both measures to improve psychosocial wellbeing especially in the faces of endemic and pandemic.

Keywords: Anxiety; awareness; Covid-19; depression; mitigation; pandemic; prophylaxis; routine exercises.

1. INTRODUCTION

Corona virus disease 2019 (COVID-19) pandemic is a public health issue, with effects on individuals and societies. It is a contagious viral disease of the beta corona virus family [1]. Globally, the covid-19 pandemic has impacted negatively on the wellbeing of people of all age-group and social classes [2].

Many countries of the world are affected with millions of confirmed cases and thousands of recovery and death cases reported [3]. Globally, as of 18th March 2021; there was about 121, 759 109 of confirmed cases, while 2690731 victims/patients were confirmed dead. Africa had 2.45% of the world confirmed cases [3]. International (such as World Health Organization - WHO and Centre for Disease Control - CDC) and local authorities (e.g. the Nigerian Centre for Disease Control – NCDC for Nigeria) make efforts to curtail the spread of the viral disease and mitigate the associated psychosomatic and psychosocial implications of the pandemic [4,5]. Mental/psychological and social consequences of COVID-19 have been reported to be associated with posttraumatic stress symptoms; anxiety and depression among community dwelling individuals; healthcare workers and general public [2,6,7,8]. Commonly psychological reactions to COVID-19 pandemic are symptoms of anxiety and depression [9].

The psychological distress and mental health issues due to COVID-19 affects people of all age groups causing loneliness, poor social support and social isolation, and the associated anxiety, depression and suicidal ideation [10,11]. Depression and anxiety due to COVID-19 can be associated with socioeconomic factors (lower educational level, living alone, gender, sex, living in urban or rural areas), current and past medical history (substance abuse, psychiatric disorder), psychological and social factors (poor awareness of the pandemic, not taking precautionary measures, perceived distress life events, impact on daily life, unsteady family income, higher social media exposure), job related factors (frontline and second line workers, secondary and tertiary hospital) [7].

El-Zoghby et al. [12] asserted that people with greater awareness and more authentic information about the mode of transmission of the virus, various preventive measures and complied to them experience greater feelings of safety. Cuiyan and colleagues [13] reported the modes of transmission (human biological aerosols and contaminated objects) of COVID-19 and the public awareness of its associated fast growth in incidence, prevalence and mortality rate, except the prophylactic and preventive measures. Odunsi [4] highlighted in a study that washing of hands with soap and water could reduce the spread of COVID-19. The author also reported that the pandemic caused worry,

anxiety, panic and depression for some people, though did not profile solutions. Moreover, most studies reported that applying the hand wash technique, avoidance of contaminated objects, wearing of mask regardless of the presence or absence of symptoms, covering of mouth when coughing and sneezing, always avoiding sharing utensils (chopsticks) during meals, taking of vitamin C tablets, social distancing could serve as preventive measures and routine exercises could serve as prophylactic measure [12].

World Health Organisation (WHO) defined exercises as physical activities usually planned, structured and repeated to improve or sustain components of physical fitness [5]. Routine activities have been reported of having positive cognitive impact in adults [14]. However, there is a general consensus that staying safe and maintaining good health are very important approaches, especially in a period of pandemic like COVID-19, which routine exercises have been emphasized and recommended to boost fitness and immunity for a healthier life [15]. Collin maintained that while physical activities and exercises may not shield one from contacting the viral disease, that their positive and protective effects on the body and mind; improved immune system – by the release of endorphins, and the psychological wellbeing of people [16]. Therefore, evidences have demonstrated the efficacy of routine exercises on psychological wellbeing; its effect in handling anxiety and depression. Hence, physically active individuals experience improved mood, self-esteem, stress management ability, memory, quality of sleep, and overall wellbeing [17,18].

Nigeria, the seventh most populated country in the world is one of the most affected countries in Africa [19,20]. Southern Nigeria is made up of the south east, the south west and the south south dwellers. The study zone, south east is made up of five states namely; Anambra, Abia, Ebonyi, Enugu and Imo. Nigeria is made up of people with social and cultural inclinations like habitual hanging out and gatherings of many people [5]. As of 20th March 2021, confirmed cases in Nigeria was about 161, 593 with 2027 of death cases [20]. The progressive spread of the disease caused restrictions to movements (due to lockdown and other movement restriction policies in Nigeria) which changes the activities of daily living and quality of life of many Nigerian, and this could be related to the prevailing psychological distress amongst the citizens. Studies have reported the prevalence of

psychological distress due to COVID-19 amongst Nigerian citizens, with depression 23% of the psychological effects of the disease pandemic [7, 8,5]. Posttraumatic stress symptom during covid-19 could be alleviated by the positive effects of exercises [16]. Nigeria reported higher posttraumatic stress symptoms due to COVID-19; this could be attributed to the sudden invasion of the endemic in such developing country which seems unready to handle it [5]. Awareness of Nigerians about the event was majorly through mass media, however, misleading information related to social media and increased number of confirmed cases heightened the experience of the posttraumatic stress symptoms. Though, there is a growing body of evidence on the psychological impacts of and the protective measures against COVID-19 in sub-Saharan Africa, including Nigeria, there remains paucity of study targeting the awareness and the application of the mitigating approaches to the psychological impacts including adherence to routine physical activities/exercise. Thus, this study aimed at exploring the public awareness of prevailing preventive and prophylactic measures to anxiety and depression associated with the disease outbreak in Southern Nigeria.

1.1 Specific Objectives of the Study are

1. To determine the level of public awareness of the preventive measures in the mitigation of the psychological impacts (anxiety and depression) of COVID-19 in Southern Nigeria.
2. To determine the level of public awareness of the use of prophylactic measure (routine exercise) in the mitigation of the psychological impacts (anxiety and depression) of COVID-19 in Southern Nigeria.

1.2 Research Questions

The following research questions were stated to guide this study:

1. What is the level of public awareness on the preventive measures in the mitigation of the psychological impacts (anxiety and depression) of COVID-19 in (southern) Nigeria?
2. What is the level of public awareness on the use of prophylactic measure (routine exercise) in the mitigation of the psychological impacts (anxiety and

depression) of COVID-19 in (southern) Nigeria?

1.3 Hypotheses

1. **Ho₁**: Public awareness of preventive measures will NOT significantly mitigate psychological impacts (anxiety and depression) of COVID-19 in (southern) Nigeria?
2. **Ho₂**: Public awareness of the prophylactic measure (routine exercises) will NOT significantly mitigate the psychological impacts (anxiety and depression) of COVID-19 in Southern Nigeria.

2. MATERIALS AND METHODS

2.1 Design and Population of the Study

This is a cross-sectional survey, completed with 1200 community-dwelling working-class individuals in rural and urban areas in Southern Nigeria, who were willing and able to participate in the study. Three south eastern states (Ebonyi, Enugu and Anambra) were conveniently selected, and the respondents were purposefully recruited.

2.2 Data Collection Instruments

Respondents were made to fill researchers' modified questionnaire titled: *Questionnaire on Awareness of COVID-19 prevention measures and Routine Exercises against Anxiety and Depression (QACPMREAD) during covid-19 outbreak in Nigeria*. Each questionnaire was of two sections A and B, section A obtained sociodemographic data while section B obtained data on 'Awareness of COVID-19 outbreak prevention measures to mitigate anxiety and depression' and "Awareness of routine exercises during COVID-19 outbreak as a prophylactic measure against anxiety and depression".

2.3 Method of Data Collection

Following proper informed consent obtained from the respondents; health care workers and workers in other occupations (see *the sociodemographic table*), the researchers obtained data from the respondents who filled the questionnaire paper sheets. Filled questionnaires were collected from the respondents within the period interval of one week considering the nature of their jobs.

2.4 Method of Data Analysis

Data obtained was analyzed by descriptive statistics (frequency and percentages) using with the Statistical Packages for Social Sciences (SPSS) version 25. The inferential statistics was chi-square with p-value set at 0.05, to test the hypothesis. The decision rules for hypothesis testing were that probability (significant) value greater than the set p-value deemed the hypothesis accepted, and vice versa.

3. RESULTS

3.1 Data Analysis, Presentation, and Interpretations of Results

The table above approximated the demographic variables of the respondents in frequencies and percentages as follows: 162(14%), 259(22%), 266(22%) and 513(43%) for age ranges of 15-20 years, 21-26 years, 27-32 years and 33 years and above respectively; Educational levels: 24(2%), 119(10%), 180(15%), 408(34%), 365(30%), 92(8%) and 10(1%) for respondents with primary school certificate, Secondary School Certificate, Diploma, First Degree (Graduate), Master's Degree, Ph.D. and No Formal Education respectively; for Occupation, the respondents were: 84(7%) for house wives, Businessmen/women 96(8%), Other Civil Servants 132(11%), Artisans (Skilled personnel) 108(9%), Students 60(5%), Daily Laborers 48(4%), Farmers 24(2%), Nurses 240 (20%), Medical Doctors 228(19%), Physiotherapists 120(10%) and Teachers 60(5%); then respondents for religion affiliations: Christian 836(70%), Traditional 220(18%), Islam 87(7%), and Others 57(5%); Gender: 704(60%) and 447(40%) represents male and female respondents respectively; and residential setting: 793(66%) and 407(34%) represents urban and rural dwellers respectively.

Research Question 1: What is the level of public awareness on the preventive measures to mitigate anxiety and depression during COVID-19 outbreak in Southern Nigeria?

In the Table 2 above, item statement 2; causes, symptoms, transmission and preventive measures show that 1177(98%), 1140 (95%), 1092(91%) and 1138(95%) of the respondents were aware of the causes, symptoms, transmission, and preventive measures of the pandemic respectively while 23(2%), 60(5%),

108(9%), and 62(5%) of them had not awareness of the symptoms, transmission, and preventive measures of the pandemic respectively. However, the grand frequency/percentage shows that 1137(95%) of the respondents reported being aware of the causes, symptoms, transmission and preventive measures while 63(5%) of the respondents reported that they do not know the causes, symptoms, transmission and preventive measures.

Item statement 3; how the respondents know about COVID-19 shows that 1121(95%), 1182(99%), 1045(98%), 887(86%), 460(51%), 609(67%), and 738(77%) of the study respondents reported that they get informed

about the pandemic through radio, TV, Social media, office colleagues, school mates, Church/Mosque and friends respectively, while 56(5%), 18(1%), 21(2%), 144(14%), 436(49%), 302(33%), and 219 (23%) of the respondents noted that how they got to know about COVID-19 was not from radio, TV, Social media, office colleagues, school mates, Church/Mosque and friends respectively. However, the grand frequency/percentage shows that 863(82%) of the respondents reported that they got to know about the pandemic from mass media; radio, TV; Social media; worship centers, friends and colleagues while 170(18%) of the respondents rather got informed about the pandemic through interaction with family members.

Table 1. Sociodemographic data of the respondents

Sociodemographic variables	Frequencies of Respondents	Percentages of Respondents
Age:		
15-20 years	162	14%
21-26 years	259	22%
27-32 years	266	22%
33 years and above	513	43%
Educational Level:		
Primary school certificates	24	2%
Secondary School Certificate	119	10%
Diploma	180	15%
First Degree (Graduate)	408	34%
Master's Degree	365	30%
Ph.D.	92	8%
No Formal Education	10	1%
Occupation:		
House Wife	84	7%
Businessman/woman	96	8%
Other Civil Servants	132	11%
Artisan (Skilled personnel)	108	9%
Student	60	5%
Daily Laborer	48	4%
Farmer	24	2%
Nurse	240	20%
Medical Doctor	228	19%
Physiotherapist	120	10%
Teacher	60	5%
Religion:		
Christian	836	70%
Traditional	220	18%
Islam	87	7%
Others	57	5%
Gender:		
Male	704	60%
Female	447	40%
Residential Setting		
Urban	793	66%
Rural	407	34%

Table 2. Awareness on the preventive measures to the spread to COVID-19 in Southern Nigeria

S/N	Item Statements	Yes	No
1	Do you know anything about COVID-19 (Corona virus)?	1151(96%)	49(4%)
2	What do know about COVID-19 (Corona virus)?		
	Causes	1177 (98%)	23(2%)
	Symptoms	1140 (95%)	60(5%)
	Transmission	1092 (91%)	108(9%)
	Preventive measures	1138 (95%)	62(5%)
	Grand Frequency/Percentage	1137(95%)	63(5%)
3	How did you know about it?		
	From radio	1121(95%)	
	From TV	1182(99%)	
	From Social media	1045(98%)	
	From Office Colleagues	887(86%)	
	From school mates	460(51%)	
	From Church/Mosque	609(67%)	
	From Friends Other sources	738(77%)-	170(18%)
	Grand Frequency/Percentage	863(82%)	170(18%)
4	Which time did you know about it?		
	April, 2020	72(6%)	
	March, 2020	168(14%)	
	February, 2020	180(15%)	
	January, 2020	300(25%)	
	December, 2019	480(40%)	
	November, 2019	-	
	October, 2019	-	
	September, 2019	-	
	August, 2019	-	
5	Do you think staying six (6) feet away from a person can help prevent the spread of the virus?	998(90%)	110(10%)
6	Did COVID-19 make you to be:		
	Anxious	521(70%)	232(30%)
	Depressed	94(15%)	519(85%)
	Worried	900(79%)	241(21%)
	Happy	8(1%)	789(99%)

S/N	Item Statements	Yes	No
	Grand Frequency/Percentage	381(41%)	445(59%)
7	Do you think that washing your hands always with clean water can help prevent depression and anxiety during this period of COVID-19?	596(53%)	526 (47%)
8	Do you think that sanitizing your hands always can help prevent anxiety and depression during this period of COVID-19?	707(59%)	489(41%)
9	Do you think that covering your mouth with a tissue or handkerchief when coughing or sneezing can help prevent anxiety and depression during this period of COVID-19?	452(38%)	743(62%)
10.	Do you think that wearing facemask or face shield always when you are outside can help prevent anxiety and depression during this period of COVID-19?	284 (25%)	916(75%)
11	Do you think that making your visitors to wash their hands would help prevent anxiety and depression during this period of COVID-19?	261(23%)	873(77%)
12	Do you think that avoidance of crowded place would help prevent anxiety and depression during this period of COVID-19?	555(49%)	579(51%)
13	Do you think that not having close contact with anyone having a fever would help prevent anxiety and depression during this period of COVID-19?	621(58%)	448(42%)
14	Do you think that taking garlic would help prevent anxiety and depression during this period of COVID-19?	109(10%)	987(90%)
15	Do you think that sleeping under a mosquito net would help prevent anxiety and depression during this period of COVID-19?		1195(100%)
16	Do you think that taking vaccine injection would help prevent anxiety and depression during this period of COVID-19?	567(50%)	567(50%)
17	Do you think that drinking treated water would help prevent anxiety and depression during this period of COVID-19?	91(8%)	1045(92%)
	Grand Frequency/Percentage	386(34%)	761(66%)

Item statement 4; when the respondents know about COVID-19 shows that 72(6%), 168(14%), 180(15%), 300(25%), 480(40%), 0(0%), 0(0%), 0(0%), and 0(0%) for April, 2020, March, 2020, February, 2020, January, 2020, December, 2019, November, 2019, October, 2019, September, 2019, and August, 2019 respectively.

Item statement 5; prevention of the spread of the viral disease, 998(90%) of the respondents of the study reported that staying six (6) feet away from a person can help prevent the spread of the viral disease while 110(10%) of the respondents said that staying six (6) feet away from a person cannot help prevent the spread of the virus.

Item statement 6; whether COVID-19 made the respondents anxious, depressed, worried and happy shows that 521(70%), 94(15%), 900(79%), and 8(1%) of the respondents reported to be anxious, depressed, worried and happy respectively while 232(30%), 519(85%), 241(21%) and 789(99%) of the respondents reported not to be anxious, depressed, worried and happy respectively about COVID-19. However, the grand frequency/percentage show 381(41%) of the respondents reported that the pandemic made them anxious, depressed, worried and happy while 445(59%) of the respondents reported that the pandemic did not make them to be anxious, depressed, worried and happy.

Item statement 7 to 17; awareness of COVID-19 outbreak prevention measures against the spread of COVID-19: For item statement 7, 596(53%) of the respondents claimed that they were aware of washing of hands as a preventive measure, while 526(47%) of them claimed that they were not aware. For item statement 8, 707(59%) of the respondents reported their awareness of constant sanitization of hands as a preventive measure while 489(41%) claimed unaware of that; For item statement 9, 452(38%) of the respondents reported their awareness of covering mouth with a tissue or handkerchief when coughing or sneezing as a preventive measure while 743(62%) denied awareness of that. For item statement 10, 284(25%) of the study respondents reported their awareness of wearing facemask or face shield always while in public places as a preventive measure, while 916(75%) denied awareness of that; For item statement 11, 261(23%) of the respondents declared their awareness of having their visitors wash their hands as a preventive measure while

873(77%) of the study respondents denied awareness of that; For item statement 12, 555(49%) of the respondents declared their awareness of the avoidance of crowded place as a preventive measure, while 579(51%) of the study respondents claimed not awareness of that; For item statement 13, 621(58%) of the respondents reported their awareness of not having close contact with anyone having a fever as a preventive measure, while 448(42%) of the respondents denied awareness of that. For item statement 14, 109(10%) of the study population opined reported that they were aware that taking garlic was a preventive measure, while 987(90%) of the respondents denied their awareness of that; For item statement 15, all the respondents 1195(100%) reported their awareness that sleeping under a mosquito net as a preventive measure. For item statement 16, 567(50%) of the respondents declared their awareness of taking vaccine injection as a preventive measure while 567(50%) of the respondents claimed that they were not aware of that; For item statement 17, 91(8%) of the respondents reported their awareness of drinking treated water as a preventive measure while 1045(92%) reported that they were not aware of that. However, the grand frequency/percentage show that 386(34%) of the respondents were aware that preventive measures helps to reduce the spread of COVID-19 from person to person while 761(66%) of the respondents seem not aware of that.

Research Question 2: What is the level of public awareness on the use of prophylactic measure (routine exercise) in the mitigation of the psychological impacts (anxiety and depression) of COVID-19 in Southern Nigeria?

Table 3 above shows that 716(63%) of the respondents are aware that routine exercises will help prevent anxiety and depression while 421(37 %) of the study population are not aware of the impact of routine exercise on COVID19 outbreak.

Ho₁: Public awareness of preventive measures will NOT significantly reduce the widespread of COVID-19 in Southern Nigeria.

The Table 4 above is based on awareness of other COVID-19 outbreak prevention measures. The table shows that Pearson Chi-Square significant value is 0.000 and it is less than the alpha level of 0.05. Thus, the earlier stated null hypothesis is not accepted. Hence, awareness of other COVID-19 outbreak preventive measures

has significant effects on reduction of anxiety and depression during COVID-19 outbreak.

Ho₂: Public awareness of the prophylactic measure (routine exercises) will NOT significantly mitigate the psychological impacts (anxiety and depression) of COVID-19 in (southern) Nigeria.

The Table 5 above is based on awareness of routine exercises during COVID-19 outbreak cannot reduce anxiety and depression. The table shows that Pearson Chi-Square significant value is 0.000 and it is less than the alpha level of 0.05. Thus, the earlier stated null hypothesis will not be accepted. Hence, awareness of routine exercises during COVID-19 outbreak can reduce anxiety and depression during COVID-19 outbreak.

4. DISCUSSION

This survey investigated the level of public awareness of preventive measures against widespread of COVID-19 in Nigeria, and the use of routine exercise as a prophylactic measure to handling the psychological effects of COVID-19 such as anxiety and depression. The respondents were male and female working-class individuals between the age range of 15 and 33, most (90%) of which had formal education. Most of them (66%) were urban dwellers. Ninety-five percent of the respondents were aware of the causes, symptoms, transmission of the disease.

4.1 Public Awareness of the Preventive Measures to the Spread to COVID-19:

The result showed few respondents (34%) were aware of the preventive measures against the psychological impact of COVID-19 widespread, through information got majorly from mass and social media. Other sources of awareness discovered include worship centers, friends and colleagues. The respondents revealed their awareness of the psychological impact of COVID-19 by personal experiences; 41% of the respondents experienced emotional and mood changes while 59% of the respondents claimed nil psychological effects of the disease on them. This could be attributed to their ability to adjust to the various societal changes due to the disease, based on their stable socioeconomic status.

Majority (66%) of the respondents reported that their awareness of the preventive measures such as washing of hands, covering mouth with a tissue or handkerchief when coughing or sneezing, wearing facemask or face shield always, avoidance of crowded place, to counter anxiety and depression due to COVID-19 was not effective. This reveals that anxiety and depression due to the disease may not be related to contacting the disease, but the biopsychosocial implication which may affect their wellbeing.

Table 3. Awareness of impact of routine exercises during COVID-19 outbreak on anxiety and depression

S/N	Item Statements	Yes	No
1	Are you aware that routine exercises could be used as prophylaxis to mitigate anxiety and depression during COVID-19 outbreak?	716 (63%)	421(37%)

Table 4. Chi-square summary on impact of COVID-19 outbreak

	Value	Significance	Decision
Pearson Chi-Square	407.268	0.000	Rejected
Likelihood Ration	505.942	0.000	Rejected
Linear-by-Linear Association	17.242	0.000	Rejected

Table 5. Awareness of routine exercises during COVID-19 outbreak against anxiety and depression

	Value	Significance	Decision
Pearson Chi-Square	675.896	.000	Rejected
Likelihood Ration	794.798	.000	Rejected
Linear-by-Linear Association	675.302	.000	Rejected

4.2 Public Awareness on the use of Prophylactic Measure (routine exercise) in the Mitigation of the Psychological Impacts (anxiety and depression) of COVID-19

Majority (63%) of the respondents were aware of the efficacy of the prophylactic measure, routine exercises, to mitigating anxiety and depression due to COVID-19. The unawareness of very few (37%) respondents could be attributed to limited access of mass and social media, and healthcare professionals' recommendations by rural dwellers. This is in line with Anderson and Shivakumar [5] who strongly asserted that engagement in routine exercises boosts the immune system and wellbeing, hence could help in the control of psychological impacts of COVID-19. Department of Psychiatry [19] also reported on the emotional (sense of enjoyment) and mental benefits of physical activities.

Overall, this study revealed the awareness of COVID-19 related influences. Firstly, communication and information dissemination approaches such as mass and social media, and interaction with colleagues, family members and friends contributed to the significant public awareness of the preventive measures to control the spread of covid-19 amongst the populace. Secondly, an appreciable number of persons were aware that routine exercise can be useful in managing and preventing anxiety and depression associated with COVID-19 considering established its biopsychosocial benefits. Thirdly, possible prevalence of anxiety and depression in Southern Nigerian due to the disease is not significantly attributed to mere contacting the disease, but the psychosocial implications in the face of the current socioeconomic decline.

5. CONCLUSION

Despite several efforts and strategies to abate the negative impact of COVID-19 on human wellbeing and community development, public limited access to necessary information and existence of functional policy has limited public awareness to prophylactic and preventive measures and adherence to them to control covid-19 widespread and maintain healthier living. This quantitative survey explored the public awareness of the prophylactic and preventive measures of spread of COVID-19 and its psychological effects with 1200 walking-class individuals living in the rural and urban areas in

the south-eastern Nigeria. It targeted their levels of awareness to both measures against the menace of COVID-19.

This study reveals that awareness of the preventive measures could help to control the spread of COVID-19 while the awareness of the routine exercises could contribute to the prevention and management of anxiety and depression associated with the disease, directly or indirectly. People who are aware of COVID-19 preventive measures and routine exercises based on this study had greater feelings of safety leading to significant reduction of their anxiety and depression levels during COVID-19 outbreak. Hence it was possible that when the respondents became aware that there are preventive measures and routine exercises which can reduce cross-transmissions of COVID-19 in a geographical setting and boost the immunity of the populace, respectively. Consequentially, individual awareness of a phenomenon keeps him/her feeling secured, and this sense of security is associated with the interrelatedness of the human biopsychosocial make-up where the awareness triggers the biological release of relaxation hormones, endorphins with its consequential controlled heart rate and sense of relief from anxiety and depression [21-23].

This study adds to the available evidences on the awareness of the preventive and prophylactic measures to issues associated with COVID-19. It informs the need to emphasis on the relevance of preventive and prophylactic measures to mitigating anxiety and depression associated with the pandemic encouraging quality of life in the face of this prevailing COVID-19 pandemic in Nigeria.

5.1 Implication for Policy

There is need for effective and functional health and social policies on health promotion and disease prevention feasible in the face of pandemic. We advocate for conscious and improved public/community awareness of the necessary measures to control COVID-19 widespread and maintain good quality of life, even in the face of pandemics and the likes. This could be achieved by the active and dedicated role of the social and healthcare authorities, engaging experts like physical therapists, physiologists and respiratory specialists in ensuring that health promotion and disease prevention education gets to everyone through

digital and analogue means, presented in a ways that people of varying educational levels could well relate with the information.

5.2 Limitation of the Study

The study was limited in the following ways: during data collection some respondents based of their personal reasons did not attempt certain questions especially those that had to do preventive behaviours. Certain individuals such as older population were not approached due to their greater vulnerability to the disease transmission and limited familiarity with the use of social media such as whatsapp among the population.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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