

CITY'S LIFE IN THE PANDEMIC ERA: A SURVEY OF AWARENESS AND PRACTICE OF COVID-19 MEASURES AMONG OUTDOOR RECREATIONISTS IN KANO METROPOLIS

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Abstract

The Corona Virus Disease (COVID-19) has directly and indirectly affected the global social, economic and even political systems. Prevention and management of the disease are among the important policy issues of many nations today. This paper examined the awareness and compliance to preventive measures of COVID-19 among outdoor recreation participants in Kano city, Nigeria. The study equally examined empirically, the effects of the pandemic on participation in outdoor recreation. Survey approach has been adopted through contacting the subjects at various recreational places (n=384). Regarding awareness of the disease, although 72.7% of the respondents considered COVID-19 to be a deadly disease, 54.2% viewed the phenomenon as being highly misinformed. The commonest sources of information are; radio, (25.3%), social networks (18.8%) and National Centre for Diseases Control (NCDC) official website (17.4%). The least preventive measure being complied with is avoidance of handshake (with a mean score of 2.92) while the highest being covering of mouth during cough or sneeze (with a mean score of 3.58). The study concluded with the need for additional research aimed at characterising and understanding the awareness and practice of preventive measures among different social groups.

Keywords: Recreation, Outdoor, Corona Virus, Wellbeing, Planning

Introduction

Novel Coronavirus Disease popularly known as COVID-19 is a deadly virus disease spanning all over the world. It is an RNA positive virus which shares similar clinical manifestations to the other members of the same family, such as Middle East Respiratory Syndrome Coronavirus (MERS-coV) and Severe Acute Respiratory Syndrome (SARS) that has killed thousands of people in Saudi Arabia, 2012 and Guangdong, Southern China, 2002 (Ajay *et al*, 2020; Labban, Thallaj and Labban, 2020; Singh *et al*, 2020; and Mubeen *et al*, 2020). COVID-19 traces its origin from Wuhan City, Hubei Province, China and was declared a pandemic by the World Health Organisation (WHO) on March 11, 2020; caused serious public health threat (Tripathi, *et al*, 2020). It is a global pandemic that has emerged and it is rapidly spreading throughout the world and subsequently causing great damage to the global economy and health-care (Ajay *et al*, 2020).

The primary symptoms include fever, tiredness, dry cough, sore throat, and difficulty breathing. One of the most concerning aspects of this virus is its rate of transmission, predominantly from

person-to-person contact. Therefore, applying preventive measures are the most critical intervention (Tripathi *et al*, 2020). Many preventative measures have been imposed by Health organizations and Ministries etc. which primarily serve to limit direct physical interaction within large groups, inclusive of regularly hand washing with chemical sanitizers, and use of face mask among others. The best mitigation strategy is through a decrease in person-to-person contact (Ajay *et al*, 2020).

In Nigeria, the first confirmed case was announced on 27th February 2020, by the Nigeria Centre for Disease Control (NCDC) when an Italian citizen in Lagos tested positive for the virus. Similarly, Kano recorded its first case on 11th April, 2020 (NCDC, 2020). However, within a short period of time, the state gradually became a blazing hot spot for COVID-19 infections with the number of confirmed cases rising steadily. With this, strict prevention measures to curtail the spread of the virus including general lockdowns, obligatory home quarantine, flight restrictions, proper hand washing, and bans on public places and gatherings places among others were put in place (Odukoya and Omeje, 2020).

Outdoor recreational activities also include physical activity and social interaction amongst other different types. Participation in outdoor recreation involves the using up of both markets (travel, food, lodging, guiding, etc.) and non-market (landscape scenery, public trails, safety services, health promotion, etc.), goods and services (Javed *et al*, 2015). The research literature on outdoor recreation as it relates to human health is vast and growing (Godbey, 2009). Studies explained the relationship between outdoor recreation and subjective wellbeing (Godbey, 2009), Life Satisfaction (Evren, 2014; Mehmet, Celil and Eray, 2015) and Quality of Life (Lloyd and Auld, 2002; Baker, and Palmer, 2006; Aksoy *et al*, 2017). Although, there are large body of literature that explore the link between outdoor recreation and health improvement as well as the various dimension of human wellbeing. The researches however, were mainly placed on how outdoor recreation benefits the participants or improve health. Yet, based on available literatures, no any published evidences attempting to explain the relationship between outdoor recreation and public health challenges. Therefore, this study forms a significant part of the latest leisure and health research constructs.

Notwithstanding the fact that, issues of public health is not only limited to fighting diseases, but also a phenomenon that aims to protect and improve the life of individual, the family, and society (Aksoy *et al*, 2017). Within this context, investigating awareness and knowledge concerning the health improvement among recreationists is an important precondition to subsequent attitudes and behaviours that promotes public health. Moreover, places of outdoor recreation are places of public gatherings and as such knowledge and awareness of COVID-19 among participants is critical in order to determine their level of compliance with preventive measures to avoid being infected unknowingly and transmitting it to the other people. With the emerging increase of the trend of the novel virus in the state due to the second wave of COVID-19 in the metropolis, such a study will provide useful information for the prevention and control the spread of the disease to compliment the effort of the government. It will equally serve as a green light to the management of the recreation places or areas in handling COVID-19 pandemic effectively for safer and healthy recreational life. The research questions driving this study are as follows:

- What is the level of awareness and compliance to preventive measures of COVID-19 among outdoor recreation participants in Kano Metropolis?
- How does the COVID-19 pandemic affect participation in outdoor recreation in the metropolis?

STUDY AREA

The study location is Kano metropolis; the administrative headquarter of Kano State, Nigeria. The area lies between latitudes $11^{\circ}52'N$ to $12^{\circ}08'N$ and longitudes $8^{\circ}24'E$ to $8^{\circ}39'E$ (Fig. 1). It is made up of eight Local Government Areas including Dala, Fagge, Gwale, Kano Municipal, Kumbotso, Nassarawa, Tarauni, and Ungoggo. The city also encompasses some part of the Gezawa L.G.A to the east, Madobi L.G.A to the south, and Dawakin Kudu L.G.A. to the southeast; in addition to the eight Local Government Areas earmarked as metropolitan areas for planning purpose. This makes it the third largest town in Nigeria after Lagos and Ibadan. It is also considered as the most influential commercial centre in the Sudan Region (Falola, 2002). It has large number of different recreational facilities and centres such as recreational parks, zoo, botanical gardens, event centres, polo field, race course, golf course, football stadiums and fields, lawn tennis courts, among others. The area has a total population of 2.8 million in 2006 and 4.5 million in 2018 (Mohammed, 2020).

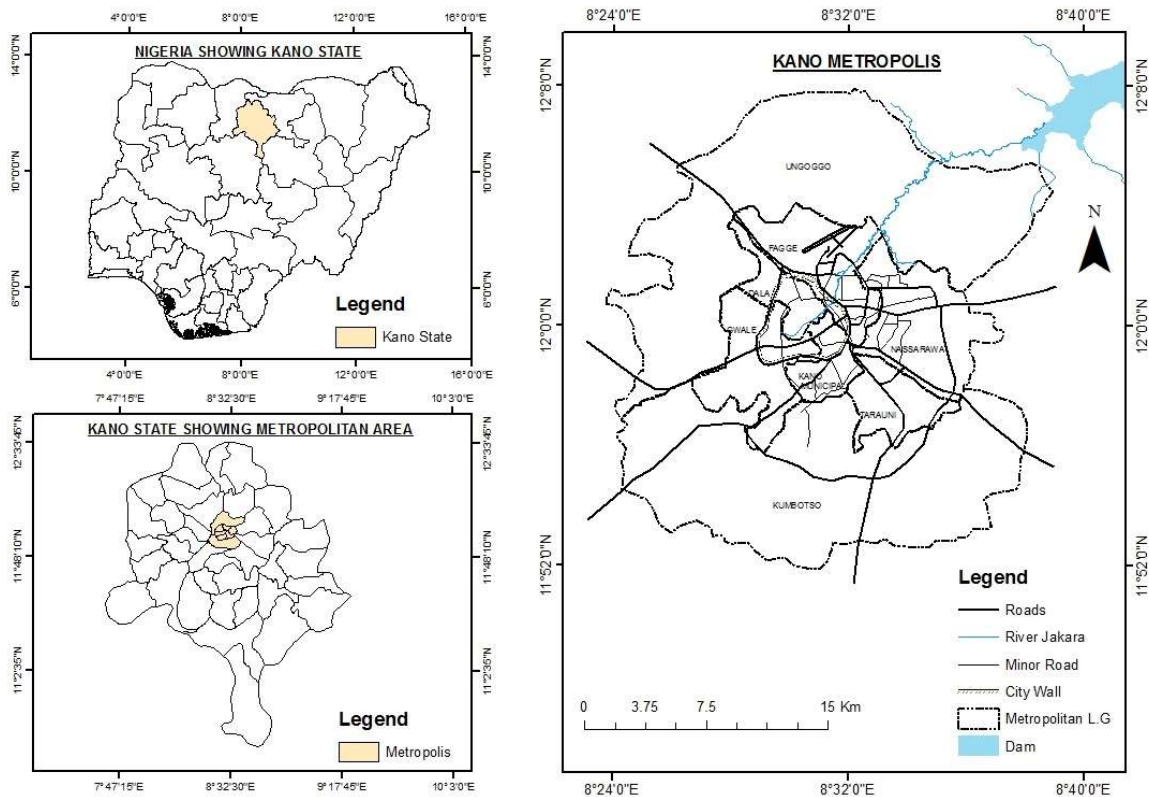


Figure 1: Kano Metropolitan Area in the National Context

Source: GIS Lab. URP Dept. KUST, Wudil

Kano state reported its first case of COVID-19 case on 11th April, 2020. Since then, the state gradually became one of the epicentres of COVID-19 infections in Nigeria, with the number of confirmed cases rising steadily (Odukoya and Omeje, 2020; Musa *et al*, 2021). The major reasons for the gradual increase of the confirmed cases in the state was due to the delay and inadequate provision of health (such as testing kits, diagnosis centres) and other protective facilities especially for the frontline health workers (such as face masks, gowns) and most significantly the suspension of diagnosis testing due to the infections by the health workers. This couple with dense population in the state make it the most vulnerable for COVID-19 infection (Musa *et al*, 2021).

Methodology

The study was quantitative in nature which allows the gauge of data in numerical terms, using closed ended questionnaire (Ayeni, 2012). The population of the study consist of residents of the metropolis who participated in different forms of outdoor recreation activities. The sample size was calculated from the formula since the population is not exactly known:

$$n = \frac{Z^2 pq}{e^2}$$

Where; Z=1.96 (Z-value from the table at 95% confidence level), p=likelihood of the event (50%=0.5), q=unlikelihood of the event (1-p), e=margin error (0.05=±5%). However, the obtained sample size was 384.16; and taken as 384. The questionnaire instrument was distributed randomly to the target respondents (18 years and above) with the help of some field assistants at various recreational places. A self-administered method was applied to participants of this study under strict observance with COVID-19 protocols (using hand sanitizers, face mask and social distancing). The questionnaire was developed based on the previous researches (Ajay *et al*, 2020; Labban *et al*, 2020; Singh *et al*, 2020; and Mubeen *et al*, 2020) on coronavirus and updated guidelines on COVID-19 by World Health Organisation (WHO) as well as National Centre for Disease Control (NCDC). The data collection period was between December, 2020 to early January, 2021. Descriptive statistics was used for data analysis and results expressed as frequency, percentage, means and cross-tabulation were used for data analysis.

Results and Discussion

Table 1 shows socioeconomic and demographic characteristics of the respondents. The findings reveal that, more than half of the participants (64.3%) were males. The mean age was 31.83 years with majority (56.5%) of youth that are between the ages of 18-30 years followed by 31.8% of those between 31-45 years. About 51.8% were single while 39.3% are married. Most of the respondents (78.9%) had household size of 1-4 persons. Majority of the participants had formal education, with about 45.1% having at least a minimum of National Diploma (ND) or Certificate, 37.0% having Secondary School Certificate, and only 8.9% had no formal education. The mean monthly income was ₦53,385.04 with majority (54.4%) being employed; working with various civil or private organisations (including self-employed). Students constitute about 25.0% while unemployed constitutes only 16.7%.

With regard to outdoor recreation participation (Table 2), more than half (62.0%) were participating between daily and weekly basis while, about 16.4% and 19.0% claimed they were participating on a fortnightly and monthly basis, respectively. Only 2.6% of the participants reports participating on a yearly basis. The average duration of participation as shown in Table 2 reveals that, 26.3% were spending less than 1 hour, and 33.9% between 1 and 2 hours. Also, 30.7% were consuming between 2-3 hours while 8.1% spending between 3 and 4 hours and only 1.0% were spending four (4) and above hours in outdoor recreation.

Table 1: Socio-economic Characteristics of Respondents

Socioeconomic Characteristics	Frequency (N)	Percentage (%)
Gender		
Male	247	64.3
Female	137	35.7
Age Ranges (Years) Mean=31.83 ±SD= 11.23 Years		
Below 30	217	56.5
31-45	122	31.8
46-60	35	9.1
61 and above	10	2.6
Marital Status		
Single	199	51.8
Married	151	39.3
Widow	21	5.5
Divorcee	13	3.4
Household Size Mean=2.78 ±SD=2.74		
1-4	303	78.9
5-8	63	16.4
9-12	16	4.2
13 and above	2	.5
Education Status		
No Formal Education	34	8.9
Primary	35	9.1
SSCE	142	37.0
Tertiary	173	45.1
Employment Status		
Private	124	32.3
Public Sector	85	22.1
Unemployed	64	16.7
Retiree	15	3.9
Student	96	25.0
Monthly Income (₦) Mean= ₦53,385.04		
Below 30,000	222	57.8
31,000-45,000	74	19.3
46,000-60,000	26	6.8
61,000 and above	62	16.1

Source: Field Work, 2020/2021

The time of the day the participants engaged in outdoor recreation reveals majority 38.5% indicated participating in the evening, while 28.4% in the morning. About 24.2% were report to be participating in the afternoon and 8.9% in the night time. The findings therefore implies that, day time was the best time for outdoor recreation in Kano metropolis with more than 90% of those who claimed to be engaged between morning to evening time. Also reveals from the findings of Table 2 that, a total of 56.0% of the participants reported using private mode of transit such as foot, bicycle, motorcycle, or car among others to reach their chosen outdoor recreation venues or places. While, 44.0% reports using public transport such as commercial tricycles, buses, and taxi to their preferred outdoor recreation areas. This simply implies that, significant

proportions of outdoor recreationists in Kano Metropolis are at high risk of being infected and/or propensity of infecting others at their various public transits (bus, tricycle, etc.) on their way from or to outdoor recreational places.

Table 2: Respondent's Characteristics of Outdoor Recreation Participation

Participation Range	Frequency (N)	Percentage (%)
Daily	106	27.6
Weekly	132	34.4
Fortnightly	63	16.4
Monthly	73	19.0
Yearly	10	2.6
Average Duration (hours)		
<hour	101	26.3
1-2 Hours	130	33.9
2-3 Hours	118	30.7
3-4 Hours	31	8.1
4 Hours and above	4	1.0
Time of Participation		
Morning	109	28.4
Afternoon	93	24.2
Evening	148	38.5
Night	34	8.9
Mode of Transport		
Private	215	56.0
Public	169	44.0

Source: Field Work, 2020/2021

Awareness and Practice of COVID-19 Measures

To ascertain the level of awareness and practice of COVID-19 measures among the participants, related questions were asked to evaluate their responses about the pandemic (Table 3). The questions were design based on the previous researches on coronavirus and updated guidelines on COVID-19 by World Health Organisation (WHO) as well as National Centre for Disease Control (NCDC). From the findings, it was revealed that, more than half of the participants identified COVID-19 as a deadly disease. The majority (54.2%) participants also lamented that COVID-19 outbreak was highly misinformed.

Table 3: Awareness of COVID-19 among Recreation Participants

Item	Frequency (N)	Percentage (%)
COVID-19 is deadly disease:		
Yes	279	72.7
No	59	15.4
Not sure	46	12.0
COVID-19 outbreak is highly misinformed:		
Yes	208	54.2
No	76	19.8
Not sure	100	26.0
COVID-19 is transmitted from person-to-person:		
Yes	276	71.9
No	47	12.2
Not sure	61	15.9
Common symptoms:		
Fever	227	60.5
Cough	347	92.5
Difficulty breathing	312	83.2
Diarrhoea	173	46.1
Sore throat	246	65.6
Running nose	251	66.9
Lack of smell	161	42.9
Others	84	22.4
Are you aware of the health facility where you can get tested for COVID-19?		
Yes	158	41.1
No	226	58.9
Do you ever carry out diagnoses test for COVID-19?		
Yes	72	18.8
No	312	81.3
Source of information about COVID-19:		
Friends	57	14.8
Family	41	10.7
Television	46	12.0
Radio	97	25.3
School	2	.5
Social Network	72	18.8
Official Website	67	17.4
Others	2	.5

Source: Field Work, 2020/2021

The findings also reveal that, about 71.9% of the participants believed the disease (COVID-19) is transmitted from person-to-person and 12.2% did not disagree its transmitted from person-to-person while 15.9% were not sure of the disease's mode of transmission. Moreover, with regard to the symptoms of the COVID-19, the participants were asked to identify as many symptoms as they know from the different symptoms of the COVID-19 pandemic. The findings reveals majority of the participants were well-informed and aware about the symptoms of the disease. The most common symptoms identified were cough (92.5%), difficulty breathing (83.2%), running nose

(66.9%), sore throat (65.6%) and extreme fever (60.5%). More than half of the participants (81.2%) stated that, they never undertake COVID-19 diagnosis test. About 58.9% of the participants also claimed that, they were not aware of the health facility where they can get tested for COVID-19.

The major source of information for most of the participants was radio (25.3%) followed by social media (18.8%) and NCDC official website (17.4%). This simply implies the relative efforts make and the role plays by Radio stations in Kano to meaningfully disseminating information about COVID-19 pandemic through various jingles. However, contrary to this result, the major source of information about COVID-19 pandemic as found in the previous studies of variant subject was social Media Networks such as Facebook, WhatsApp, Instagram, Twitter etc. (Habib *et al*, 2021; and Mubeen *et al*, 2020).

Table 4 shows the interrelationship between participant's practice of preventive measures and their mode of transit usually used to reach various outdoor recreation facility(s). The items of the preventive measures were measured on a 5-Point Likert Scale (1-Strongly Disagree to 5-Strongly Agree). According to the findings outdoor recreation participants in Kano Metropolis were in-compliance with COVID-19 preventive measures which identified 'covering mouth and nose with bent elbow or tissue while coughing or sneezing' and 'wearing face mask' as the most practice measures with a mean scores of 3.58 and 3.55, respectively. Though, this can be attributed to their good awareness about the pandemic as well as their level of educational exposure. The findings here are incongruent with Ajay *et al* (2020) which revealed individuals with diabetes were non-compliant with the preventive measures against the disease despite being adequately informed and aware about the coronavirus disease. However, this inconsistency might be explained by the differential nature of the two groups.

Table 4: Mean Scores of Practice of COVID-19 Measures and Participants Mode of Transportation

Preventive Measures	Mean Scores (mode of transport)		Total
	Private	Public	
Cover your mouth and nose with your bent elbow or tissue when you cough or sneeze	3.55	3.62	3.58
Wearing face mask	3.57	3.53	3.55
Avoid touching eyes, nose and mouth	3.38	3.44	3.41
Maintaining social distancing	3.42	3.35	3.31
Washing hands with soap or sanitizer frequently	3.16	3.02	3.10
Avoid shaking hand with people	2.99	2.83	2.92

Source: Field Work, 2020/2021

The findings also reveal that, the compliance with preventive measure varies between participants mode of transit with those using private transport complying with more measures than those using public transit. Therefore, building on our previous argument on outdoor recreation and participant's mode of transportation, the finding of Table 4 however support the argument that, participants in outdoor recreation are really contributing to the undesirable dissemination of virus among the general populace.

Perceived Impact of COVID-19 Pandemic on outdoor recreation in Kano Metropolis

To determine the impact of COVID-19 pandemic on outdoor recreation within Kano metropolis, the participants were asked to rate their responses from strongly disagree to strongly agree in relation to the statement on how COVID-19 pandemic affect their outdoor recreation participation. Table 5 revealed that 38.0% (146) of the participants agree that lockdown affect their participation in outdoor recreation and 26.0% (100) strongly agree. Also, 10.9% (42) disagree while 7.6% (29) strongly disagree and 17.4% (67) neither agree nor disagree. Therefore the total participants that agree to this statement are 64% (246) and the mean is 3.64.

The finding also reveals 37.0% (142) agree that COVID-19 pandemic affect their opportunity to meet new people through outdoor recreation while 27.6% (106) strongly agree. Also, 15.9% (61) disagree while 9.4% (36) strongly disagree and 10.2% (39) undecided. This implies that, a total of 64.6% (248) of the participants agree that COVID-19 pandemic affect their opportunity to meet new people. This may perhaps be as a result of the movement restriction order imposed on the people in the state or low turnout among potential participants due to fear of infection.

Table 5: Impact of COVID-19 Pandemic on Outdoor Recreation in Kano Metropolis

COVID-19 Pandemic affect my participation in outdoor recreation in terms of:	SD Freq(%)	D Freq(%)	UD Freq(%)	A Freq(%)	SA Freq(%)	Mean
Lockdown/quarantine	29(7.6)	42(10.9)	67(17.4)	146(38.0)	100(26.0)	3.64
Opportunities to meet new people	36(9.4)	61(15.9)	39(10.2)	142(37.0)	106(27.6)	3.58
Maintain a good health condition	35(9.1)	74(19.3)	48(12.5)	110(28.6)	117(30.5)	3.52
Frequency of participation	38(9.9)	78(20.3)	50(13.0)	126(32.8)	92(24.0)	3.41
Choice of activity	46(12.0)	73(19.0)	55(14.3)	129(33.6)	81(21.1)	3.33
Mental and cognitive growth	38(9.9)	87(22.7)	53(13.8)	124(32.3)	82(21.4)	3.32
Duration of participation	34(8.9)	94(24.5)	52(13.5)	132(34.4)	3(0.8)	3.30
Experience outdoors with family	56(14.6)	103(26.8)	53(13.8)	79(20.6)	93(24.2)	3.13
Social distancing	48(12.5)	105(27.3)	52(13.5)	124(32.3)	55(14.3)	3.09
Improving skills and abilities	88(22.9)	101(26.3)	48(12.5)	49(12.8)	98(25.5)	2.92

SD=Strongly Disagree, D=Disagree, UD=indecisive, A=Agree, SA=Strongly Agree

Source: Field Work, 2019

Table 5 also revealed majority agree that COVID-19 pandemic affect their outdoor recreation participation frequency (56.8%), choice of activity (54.7%), and duration of engagement (35.2%) which as a result had effect on maintenance of their good health (59.1%), mental and cognitive growth (53.7%). Also, a total of 46.6% agree that COVID-19 Pandemic affect their participation in outdoor recreation due to social distancing.

Conclusion

Many studies explaining the relationship between outdoor recreation and health improvement are placing more emphasis on how outdoor recreation benefits the participants or improve health. Published evidences attempting to explain the relationship between outdoor recreation and global public health issues are still lacking. Understanding awareness and practice of COVID-19 preventive measures is important to protecting individuals and promoting public health. This study has been able to investigate the awareness and practice of COVID-19 measures among outdoor recreationist in Kano Metropolis. Outdoor recreationists in Kano city were well-informed and aware about the COVID-19 disease, and complied with practice of preventive measures. However, with the usages of public transit by the recreationists and the fact that most of the participants never had opportunity to undertaken diagnosis test are putting them more at risk.

Outdoor recreation nowadays is one of the strongest areas which participation has a direct influence on personal health. The manifestation of COVID-19 pandemic in the state and imposition of different mitigation measures had in many ways impacted on outdoor recreation which as a result influences individual health. Finally, although, this study was just a reflection of a particular group of people in the metropolis, the findings are importance in developing policies and improving strategies targeted at identifying high-risk individuals to ensure good compliance with preventive measures. Therefore, additional research aimed at characterising and understanding the awareness and practice of preventive measures among different groups could provide more worthwhile information from a city-wide perspective.

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