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ACCEPTANCE AND PRACTICE OF COVID-19 PREVENTIVE MEASURES IN A COMMUNITY SETTING IN IBADAN, NIGERIA

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ABSTRACT

covid-19 is a global issue and a major threat to public health. The global impact of this disease cannot be overemphasized. Control of covid-19 can only be achieved if the preventive measures (hand hygiene, social distancing, use of facemasks and vaccination) are accepted and accurately practiced among the populace. The study was conducted to assess the acceptance and practice of covid-19 preventive measures among residents of Laniba community in Ibadan, Nigeria. The study was a cross-sectional descriptive study and sample size was determined using sample size formula for small populations. Random sampling technique was employed to select participants and a semi structured questionnaire was used elicit responses from 406 members of the community. Data was analysed using descriptive statistics and chi-square. The result of this study observed that respondents' attitudes towards the prevention of covid-19 is highly positive (79%), the level of acceptance of preventive measures of covid-19 is high (91%) and the level of practice of covid-19 preventive measures among Laniba residents is very high. (87.1%). The factors influencing acceptance and practice of covid-19 preventive measures in this study are Soap and water is readily available, The hand washing procedure is not hectic, I feel it is not necessary, Sanitizers are expensive, Sanitizers are not readily available in the community shops, I do not always remember to wash my hands as I should, I do not remember because I am used to socializing with others, I have to worship with others in my church/mosque, Face masks are expensive, I cannot breathe properly when I use face masks, I sometimes forget to use them, The government should provide free face masks for me, I don't want to be taken away from my family members, It is just a normal disease, I cannot be infected with minor exposure, My business will suffer if I stay at home for that long, God will protect me, The vaccine is not freely available, Vaccine is only available to Govt officials, It is people that want to travel abroad that take covid. The hypothesis tested revealed that there is no significant association between attitude and practice of covid-19

prevention as the calculated $\chi^2(1.48)$ yielded a p-value of 0.223 which is greater than 0.05. In conclusion. The findings suggested that the participants in the study have positive attitude and high level of acceptance of Covid-19 preventive measures. Some practices of Covid-19 preventive measures (isolation, use of sanitizers and vaccine) need to be improved on.

Keywords: Covid-19; Attitude; Acceptance; Practice; Preventive measures.

INTRODUCTION

COVID-19 was declared as a pandemic on March 11, 2020, due to the alarming levels of spread and severity of the infection (AlHajri et al., 2021). Acceptance and practice of guidelines to curb the spread of Covid-19 by a population will determine the effect of the disease on the population. This coronavirus disease pandemic has been a major public health issue and has had a significant impact on all aspects of life, including its economic burden which cannot be overemphasised. It has also caused a substantial reduction in the workforce and an increase in unemployment globally (Al-Qerem & Jarab, 2021). The extensive impact of Covid-19 globally has called for immediate actions and drastic steps to curb the spread of the disease. These actions were subsequently termed the preventive measures of Covid-19 and these series of measures as recommended by the World Health Organization (WHO) include regular hand washing with water and soap, social distancing, covering nose and mouth while coughing and avoiding touching eyes, nose and mouth (Nwonwu et al., 2020). While these measures were in place, the results of the negative impacts of Covid-19 also pushed and

encouraged pharmaceutical companies to develop a vaccine for Covid-19 (Al-Qerem & Jarab, 2021). And therefore, in addition to the preventive guidelines in place to limit the spread of Covid-19, vaccination was added.

Despite the established guidelines for Covid-19 prevention, the disease continues to persist in Nigeria, with new cases being confirmed daily (Abioye et al., 2021). This can be attributed to the poor adherence to preventive measures among the general population (Nwonwu et al., 2020). In Ibadan, there is a notable gap between awareness and adherence to Covid-19 preventive measures and protocols, such as hand washing and the use of face masks, despite high levels of awareness about these measures. Laniba, a rural community in Akinyele Local Government Area of Ibadan (Sonibare & Abegunde, 2012), is characterized by a communal lifestyle where individuals often cluster together, potentially exposing themselves to Covid-19. Since the desired goal of reducing the incidence and prevalence of Covid-19 has not been fully achieved globally, it is crucial to examine public behavior and responses towards the adoption of preventive measures, particularly in rural areas like Laniba. Therefore, this study aimed to assess the acceptance and practice of Covid-19 preventive measures among residents of the Laniba community in Ibadan, Nigeria.

Research questions

1. What is the attitude of Laniba community members towards prevention of Covid-19?
2. What is the level of acceptance of Covid-19 preventive measures among residents of Laniba community?
3. What are the practices of Covid-19 preventive measures among Laniba residents?
4. What are the factors affecting acceptance and practice of Covid-19 preventive measures among residents of Laniba community?

Hypothesis

There is no significant association between attitude and practice of Covid-19 prevention.

METHODOLOGY

The study was a cross-sectional descriptive design. This study was conducted in Laniba, a rural community in Ibadan. Ibadan is the capital and most populous city of Oyo State, Nigeria, the country's largest city by geographical area and located in south-western Nigeria. According to Odetola et al. (2018), the community was established in 1845 by a man called Laniba, one of the children of Pa Onawusi from Ogbomoso, a popularly known artisan; it is a sparsely populated community with about two hundred and eight houses, many uncompleted buildings and plots of land occupied with bushes. Laniba is bounded in the east by Geeru Ibikunle, west by Awumora Ajibode, north by Adeogun and south by Soode and Apete. Majority of the population are employed with most of them being traders. Laniba community has a well-structured administrative system under a traditional head called Baale, and the political chairman, it also has three chairmen in charge of the three zones of the community.

Sample size determination: The sample size for this study was calculated using the sample size formula for small populations. The sample size determined was 406.

Sampling technique: Consenting adults in the community were selected through random sampling technique to participate in the study until the sample size was achieved. A semi-structured, self-administered questionnaire was used to collect data on participants' socio-demographics, attitudes towards prevention, acceptance, practice of Covid-19 preventive measures and factors influencing acceptance and practice of the measures. The copies of the questionnaire were firstly administered to 10% of the sample size (41 participants) in Agbowo community in Ibadan. This community has

similar characteristics with Laniba community. Internal consistency was measured using Cronbach's alpha. The questionnaire was translated to Yoruba language (using back-to-back translation method) to ensure correctness and unambiguity. The Haccoun's unique group approach was used to test the bilingual milieu (Hachey et al., 2018) where a group of bilingual participants (participants who spoke both Yoruba and English) was given both versions of the questionnaires at two different times in a random order to verify the stability between the original and translated versions at the test and retest. Bilingual participants were able to provide equivalent response to questions in either language, making the translation reliable.

The attitude and acceptance responses were scored and scores below 50% for attitude, and acceptance of measures were categorised as poor/low while scores 50% and above were categorized as good/high level. Descriptive and inferential statistics were used for data analysis; level of significance was set at $P \leq 0.05$.

Ethical consideration: Ethical approval for this study was obtained from the Oyo State Ministry of Health (Approval number: AD13/479/4455^A). Consent was gained from the head of the community (referred to as Baale), the purpose of the study was explained in detail to the participants, and they were assured that all responses would be treated with strict confidentiality.

RESULTS

Socio-demographic characteristics of respondents

Table 1 shows the socio-demographic characteristics of respondents. About 52% of the respondents are male. More than two-fifths of the respondents' age falls between ages 30-39 with the average age of the respondents 36.85. About three-fifths of the respondents being self-employed. Few (37.2%) of the respondents had secondary education as the highest level of their education, with the majority (83.7%) of the respondents' tribe being Yoruba. About (60%) of the respondents were married, with many (68.2%) of the respondents being Christian.

Table 1: Socio-demographics characteristics of Respondents

Variables	N (406)	%
Sex		
Male	211	52
Female	195	48
Age		
Mean±SD	36.85±7.22	
<29	62	15.3
30-39	193	47.5
40-49	129	31.4
50-59	22	5.4
Occupation		
Student	61	15
Unemployed	34	8.4
Self-employed	244	60.1
Government	67	16.5
Education		
Primary	124	30.5
Secondary	151	37.2
Tertiary	97	23.9
Others	34	8.4
Tribe		
Yoruba	340	83.7
Hausa	24	5.9
Igbo	29	7.1
Fulani	13	3.2
Marital status		
Single	148	36.5
Married	23	59.9
Separated	11	2.7
Divorced	1	0.2
Others	3	0.7
Religion		
Christianity	277	68.2
Islam	129	31.8

Attitudes towards the prevention of Covid-19

Table 2 shows respondents' attitudes towards the prevention of Covid-19. About 81% of the respondents agreed that proper and regular hand wash with soap and water for at least 20 seconds after being in public is expedients. Many (79.1%) of the respondents agreed that the wearing of face masks in public places is too cumbersome. Four-fifths of the respondents agreed that avoiding gathering that is crowded is not culturally visible. Most (80.3%) of the respondents agreed that the increase in fruit and vegetable intake may be unduly expensive. Many (60.8%) of the respondents agreed that maintaining a social distance of about 1.5-2m from people is not part of their culture. About three-fifths of the

respondents disagreed that vaccination with Covid-19 may be dangerous. The majority (88.2%) of the respondents agreed to be isolated if they are confirmed to have Covid-19. Most (86.5%) of the respondents agreed that avoiding touches on the delegate part of the body without washing the hand prevent the spread of Covid-19. The majority (97.5%) of the respondents agreed that staying at home when sick can prevent Covid-19. This study indicated that the respondents' attitudes towards the prevention of Covid-19 is highly positive (78.3%). While 22% of the respondents had negative attitude on Covid-19.

This study observed that the attitude of respondents towards Covid-19 is positive (79%).

Table 2 Attitudes towards the prevention of Covid-19

Variables	Agreed (%)	
Disagreed (%)		
Proper and regular hand washing with soap and water for at least 20 seconds after being in public places is expedient	328(80.8%)	78(19.2%)
Wearing of face masks in public places, gathering and transport is too cumbersome	321(79.1%)	85(20.9%)
Avoiding crowded gatherings is not culturally feasible	324(79.8%)	82(20.2%)
Increasing fruit and vegetable intake may be unduly expensive	326(80.3%)	80(19.7%)
Using alcohol-based sanitizers to sanitize hands regularly is costly	321(79.1%)	85(20.9%)
Maintaining social distance of about 1.5- 2m from people is not part of our culture	247(60.8%)	159(39.2%)
Vaccination with CORONA -19 may be dangerous	154(37.9%)	252(62.1%)
Agreeing to be isolated if you are confirmed to have COVID-19 is needful	358(88.2%)	48(11.8%)
Self-isolation (quarantine) for two weeks when exposed is for safety of others only	355(87.4%)	51(12.6%)
Minimizing travels to pandemic areas is a welcome idea	361(88.9%)	45(11.1%)
Avoid touching eyes, nose and mouth with unwashed hands to prevent the spread of COVID-19	351(86.5%)	55(13.5%)
Staying at home when sick, unless to get medical care is right	396(97.5%)	10(2.5%)
Total	79%	19%

Acceptance of preventive measures of Covid-19

Table 3 shows respondents' acceptance of preventive measures of Covid-19. The majority (96.5%) of the respondents believed Covid-19 can be prevented and social distancing should be ensured in public places. About four-fifths of the respondents believed that restrictions should be made on the number of people in public, frequently use of hand wash and use of hand sanitizer to prevent Covid-19 transmission. A larger percentage of

the respondents believed the use of facemask and support the use of vaccines in the prevention of Covid-19. About (97%) of the respondents would allow them to be admitted into the isolation center if confirmed positive of Covid-19, with more than three-fifths of the respondents will be allowed their loved one to be admitted into the isolation center if they test positive to Covid-19. This study noted that the level of respondents' acceptance of preventive measures of Covid-19 is high (91%).

Table 3: Acceptance of Covid-19 preventive measures

Variables	Yes (%)	No (%)
Do you believe Covid-19 can be prevented	391(96.5%)	15(3.7%)
Should physical social distancing be ensured in public places	394(97%)	12(3%)
Restrictions should be made on number of people in public gatherings	393(96.8%)	13(3.2%)
Frequent hand washing can help prevent transmission of Covid-19	394(97%)	12(3%)
Use of hand sanitizer especially if water is not available can help prevent transmission of Covid-19	394(97%)	12(3%)
Do you agree with the use of facemask in prevention of Covid-19	393(96.8%)	13(3.2%)
Do you support use of vaccines in prevention of Covid-19	393(96.8%)	13(3.2%)
Would you accept to take Covid-19 vaccine	393(96.8%)	13(3.2%)
Would you encourage other people to practice Covid-19 preventive measures	393(96.8%)	13(3.2%)
Would you agree to be admitted in an Isolation center if you are confirmed to be Covid-19 positive	269(66.3%)	136(33.5%)
Would you allow your loved one to be admitted in the isolation center if they test positive to Covid-19	268(66%)	137(33.7%)
Total	91%	9%

Practice of Covid-19 preventive measures

Table 4 shows the respondents practice of Covid-19 preventive measures. More than half of the respondents regularly wash their hands with soap and water for at least 20 seconds after being in public places. More than two-fifths of the respondents regularly wear face mask in public gatherings and marketplaces. Half of the respondents sometimes wear face masks in public transport. About 53% of the respondents sometimes avoid a crowded area. Half of the

respondents sometimes use alcohol-based sanitizers to sanitize their hands. About (56%) of the respondents sometimes minimize their travelling to pandemic areas. Less than three-fifths of the respondents sometimes avoid touching the eyes, nose and mouth with unwashed hands. About (70%) of the respondents sometimes stay at home whenever they are sick. This study concludes that the level of practice is high (87.1%).

Table 4: Practice of Covid-19 preventive measures

Variables	Regularly (%)	Sometimes (%)	Rarely (%)	Never (%)
Proper and regular hand washing with soap and water for at least 20 seconds after being in public places	238(58.1%)	146(36%)	15(3.7%)	9(2.2%)
Wearing of face masks in public gatherings and market Places	189(46.6%)	176(43.3%)	30(7.4%)	11(2.7%)
Wearing face masks in public transports	158(38.9%)	205(50.5%)	31(7.6%)	12(3%)
Avoiding crowded gatherings	139(34.2%)	219(53.9%)	35(8.6%)	13(3.2%)
Increasing fruit and vegetable intake	145(35.7%)	217(53.4%)	30(7.4%)	14(3.4%)
Using alcohol-based sanitizers to sanitize hands regularly	127(31.3%)	204(50.2%)	54(13.3%)	21(5.2%)
Maintaining social distance of about 1.5- 2m from people	121(29.8%)	214(52.7%)	55(13.5%)	16(3.9%)
Self-isolation (quarantine) for two weeks when exposed	124(30.5%)	219(53.9%)	6(11.3%)	17(4.2%)
Minimizing travels to pandemic areas	121(29.8%)	228(56.2%)	41(10.1%)	16(3.9%)
I avoid touching my eyes, nose and mouth with unwashed hands	131(32.3%)	226(55.7%)	33(8.1%)	16(3.9%)
I stay at home if I am sick, unless to get medical care	94(23.2%)	283(69.7%)	19(4.7%)	10(2.5%)
	34.8%	52.3%	7.9%	3.2%

Factor Affecting Acceptance and Practice of Covid-19

Table 5 shows the factors influencing the acceptance and practice of Covid-19 among respondents that lived in Laniba. More than half of the respondents agreed that soap and water are readily available in their community. Many (71.4%) of the respondents feels washing hand is likely to be hectic, with more than three-fifths of the respondents feeling the purchase of sanitizer is very expensive. Most (73.9%) of the respondents always forget to wash their hands, with more than three-fifths of the respondents believing Covid-19 is a scam. More than half of the respondents agreed that face mask is expensive to purchase, with more than three-fifths of the respondents disagreed that they don't sell face masks in their community. Many (75.4%) of the respondents don't want to be taken away from their families, with more than three-fifths of the respondents agreeing that they cannot be infected with minor exposure. About (73%) of the

respondents knows that there is a vaccine for Covid-19, with more than three-fifths of the respondents believed that God would protect us. More than half of the respondents agreed that the vaccine is not freely available, with more than half of the respondents don't support the use of the vaccine. About (61%) of the respondents thinks the vaccine is safe and not expensive. Most (74.1%) of the respondents have heard a bad experience about other vaccines, with less than four-fifths of the respondents disagreed to have taken the first dose. More than a three-fifths of the respondents' culture do not go against taking a vaccine nor cause any forms of complication after taking it. Half of the respondents that the taking of vaccines should be done by those that want to travel out of the country. This study concludes that the factors influencing the acceptance and practice of Covid-19 among respondents that lived in Laniba are Soap and water is readily available (58.6%).

Table 5: Factors Influencing Acceptance and Practice of Covid19 preventive measures.

Variables	Agree(%)	Undecided(%)	Disagree(%)
Soap and water is readily available	234(58.6%)*	17(4.2%)	151(37.2%)
There are readily available buckets of water for hand washing at strategic points in the community	198(48.8%)	17(4.2%)	191(47%)
The hand washing procedure is not hectic	290(71.4%)*	12(3%)	104(25.6%)
I feel it is not necessary	283(70%)*	14(3.4%)	108(26.6%)
Sanitizers are expensive	283(69.7%)*	14(3.4%)	109(26.8%)
Sanitizers are not readily available in the community shops	282(69.5%)*	13(3.2%)	111(27.3%)
I do not always remember to wash my hands as I should	300(73.9%)*	14(3.4%)	92(22.7%)
I do not remember because I am used to socializing with others	289(71.2%)*	13(3.2%)	104(25.6%)
It is not realistic	168(41.4%)	27(6.7%)	211(52%)
COVID-19 is a scam	105(25.9%)	22(5.4%)	279(68.7%)
I have to worship with others in my church/mosque	236(58.1%)*	64(15.8%)	106(26.1%)
Face masks are expensive	233(57.4%)*	18(4.4%)	155(38.2%)
I cannot breathe properly when I use face masks	284(70%)*	21(5.2%)	101(24.9%)
I sometimes forget to use them	229(56.4%)*	14(3.4%)	163(40.1%)
Face masks are not sold in the community	134(33%)	16(3.9%)	256(63.1%)
The government should provide free face masks for me	335(82.5%)*	18(4.4%)	53(13.1%)
I don't want to be taken away from my family members	306(75.4%)*	17(4.2%)	83(20.4%)
It is just a normal disease	284(70%)*	19(4.7%)	103(25.4%)
I cannot be infected with minor exposure	287(70.7%)*	17(4.2%)	102(25.1%)
My business will suffer if I stay at home for that long	289(73.6%)*	17(4.2%)	90(22.2%)
God will protect me	258(63.5%)*	24(5.9%)	124(30.5%)
I did not know there was a vaccine for COVID-19	94(23.2%)	15(3.7%)	297(73.2%)
The vaccine is not freely available	241(59.4%)*	20(4.9%)	145(35.7%)
Vaccine is only available to Govt officials	203(50%)*	27(6.7%)	176(43.3%)
I do not support the vaccine	82(20.2%)	64(15.8%)	260(64%)
The vaccines are not safe	87(21.4%)	71(17.5%)	248(61.1%)
The vaccine is expensive	83(20.4%)	58(14.3%)	265(65.3%)
I heard it is an avenue to kill the black man	87(21.4%)	61(15%)	258(63.5%)
I have had bad experiences from other vaccines	47(11.6%)	58(14.3%)	301(74.1%)
I have taken the first dose and I experienced severe symptoms	39(9.6%)	52(12.8%)	315(77.6%)
Taking vaccine is against my religious belief	45(11.1%)	50(12.3%)	311(76.6%)
Taking vaccine is against my culture	47(11.6%)	50(12.3%)	309(76.1%)
The vaccine can cause complications in the future	55(13.5%)	65(16%)	286(70.4%)
It is people that want to travel abroad that take COVID	206(50.7%)*	36(8.9%)	164(40.4%)

Table 6 shows the association between Attitude and Practice towards prevention of Covid-19 measures among those in Laniba community. The proportion of respondents with a positive attitude toward Covid-19 is higher among those with a low level of practices compared to

those with a high level of practices at $P > 0.05$. Attitude was not significantly associated with practice of Covid-19 prevention as the calculated χ^2 (1.48) yielded a p-value of 0.223 which is greater than 0.05.

Table 6: Association between attitude and practices towards prevention of Covid-19

Variables	Negative	Positive	χ ²	P-values
	Attitude	Attitude		
Practice				
High level of Practice	51(24.1%)	161(75.9%)	1.48	0.223
Low level of Practice	37(19.1%)	157(80.9%)		

DISCUSSION

The study was conducted in Laniba community in Ibadan. The study was carried out to determine the acceptance and practice of Covid-19 preventive measures to establish a ground for the effective measures employed in curtailing Covid-19 infection. Demographic characteristics of the respondents shows that the age range are within 30-39years which is the working age group, self-employed (81%) and the educational level of respondents is secondary school (37.2%). Result further showed that majority of the respondents are married (59.9%), Yoruba (83.7%) and are Christians (68.2%).

This study observed that the attitude of respondents towards Covid-19 was highly positive (79%). This study correlate with the findings of Oladejo, Salmanu, Oluwatosin, Ogunsiji, & Oluwatosin, (2022) who observed that the respondents' attitudes towards the prevention of Covid-19 is highly positive. This study also is consistent with findings of Reuben et al., (2021) and Alam et al., (2020) whose respondents had positive attitude towards prevention of Covid-19.

The results of the study indicate a high level of acceptance of Covid-19 preventive measures among the respondents. This study is in line with Oladejo, Salmanu, Oluwatosin, Ogunsiji, & Oluwatosin, (2022) whose respondents accepted

and believed in the effectiveness of measures in preventing the transmission of Covid-19 and also agreed with the implementation of restrictions on the number of people in public spaces including the mandatory use of facemasks in public gatherings.

Our study noted that the level of respondents' acceptance of preventive measures of Covid-19 is high (91%). The findings of this study align with a study conducted in a southwestern state in Nigeria by Ukwenya et al., (2021) who showed that majority of their respondents expresses acceptance and willingness to take the Covid-19 vaccine.

The study also revealed a high level of practice of Covid-19 preventive measures among the residents of Laniba community. This study support Oladejo, Salmanu, Oluwatosin, Ogunsiji, & Oluwatosin, (2022) where more than half of their respondents reported washing their hands with soap and water after being in public places, indicating good hand hygiene practices. Additionally, over two-fifths of their respondents regularly wear face masks in public gatherings and marketplaces, although this practice decreases when using public transport. This study is in contrast to Nwonwu et al., (2020) where the practice of Covid-19 preventive measures was poor among household head.

The factors influencing acceptance and practice of Covid-19 preventive measures in this study are Soap and water is readily available, The hand washing procedure is not hectic, I feel it is not necessary, Sanitizers are expensive, Sanitizers are not readily available in the community shops, I do not always remember to wash my hands as I should, I do not remember because I am used to socializing with others, I have to worship with others in my church/mosque, Face masks are expensive, I cannot breathe properly when I use face masks, I sometimes forget to use them, The government should provide free face masks for me, I don't want to be taken away from my family members, It is just a normal disease, I cannot be infected with minor exposure, My business will suffer if I stay at home for that long, God will protect me, The vaccine is not freely available, Vaccine is only available to Govt officials, It is people that want to travel abroad that take COVID. These factors align with the findings of a systematic review by Sallam (2021) on vaccine acceptance.

The hypothesis tested in the study indicated that there is no significant association between attitude and the practice of Covid-19 prevention. This study support the result of Oladejo, Salmanu, Oluwatosin, Ogunsiji, & Oluwatosin, (2022).

CONCLUSION

This study aimed to assess the acceptance and practice of Covid-19 preventive measures in the Laniba community. Covid-19 is a significant public health concern, with a range of outcomes from mild infection to death. National guidelines have been established to prevent the transmission of Covid-19, including hand washing, the use of face masks, social distancing, isolation, and vaccination. The findings of this study indicate that the participants had a positive attitude and a high level of acceptance towards these preventive measures. However, certain practices, such as isolation, the use of sanitizers, and vaccination, need improvement. To enhance compliance

among the population, it is recommended that the government consider subsidizing the cost of these materials, thus reducing barriers to their practice.

Declaration of conflicts of interest: The authors declare that there is no conflict of interest.

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