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Factors Predicting Adherence to Covid-19 Preventive Measures Among Marketers in Saki Town

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Abstract

The incidence of Covid-19 grew steadily in Nigeria, moving from an imported case and elitist pattern to community transmission. . However, still now there is no effective treatment for the infection. Henceforth, adherence with Covid-19 preventive measures is the only option to stop its spread and minimize its disastrous impact in developing nation like Nigeria. Therefore, this study investigated factors predicting adherence to Covid-19 preventive measures among marketers in Saki town Oyo state, Nigeria. The descriptive survey adopted a quantitative research design. The study took place in four (4) major markets in Saki town. Two hundred and sixty one (261) participants were selected following cluster and convenience sampling. Data was collected using a battery of 30-item self- report questionnaire. Data collected were analysed using descriptive and inferential statistics. The findings of the study revealed that knowledge, expressed virulence, trust in health care system, perceived risk of being infected and attitude of the marketer towards Covid-19 are factors predicting adherence to Covid-19 preventive measures among marketers. It was recommended among others that public health campaigns should continue to highlight compassionate attitudes towards social distancing and awareness programmes be intensified by the three tiers of the government - local, state and federal governments of Nigeria.

Keywords: Factors, Adherence, Covid-19 Preventive Measures,

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Introduction

The new coronavirus disease 2019 (COVID-19) is the main public health burden in the globe. The morbidity and mortality of global community due to this virus is increasing at alarming rate from time to time (Ding, et al., 2020). The world is a global village so individuals' health is intrinsically affected irrespective of distance. As a result, it is not surprising that the novel disease was declared a public health emergency of global concern on January 30, 2020; it has now risen to over one hundred and thirty million cases worldwide claiming over two million lives as of April 2021 (WHO 2021). According to Nigerian Centre for Disease Control (NCDC) (2021), a total number of Six Thousand Eight hundred and thirty eight (6,838) confirmed cases have been recorded in Oyo state, ranking it the 6th most hit state with the pandemic in Nigeria where a total of one hundred and twenty three deaths have been reported.

The cases of Covid-19 steadily increased in Nigeria, moving from an imported case and elitist pattern to community transmission. The death rate stood at 2.8 %. The country observed an upsurge (52% of total cases) in the transmission of Covid-19 during the little time the lockdown was relaxed in the year 2020 (Ahmed, et al, 2020). However, till now there is no actual treatment for the infection. Henceforth, compliance with Covid-19 preventive measures is the only way to stop its spread and minimize its fatal impact in a developing nation like Nigeria. It is quite amazing to see that the community adherence to the recommended Covid-19 protocol is still at low level. Despite enforced restrictions imposed as regards Covid-19 preventive measures by the government, inconsistencies in carrying out these measures are evident in various communities.

Understanding the possibility of and compliance with Covid-19 preventive measures, it is important for both health system planning and preparedness and modelling exercised predicting the further evolution of the pandemic at national and local levels. These social and behavioural control measures are considered to be effective in defeating the exponential increase in Covid-19 cases (Nemati, Ebrahimi & Nemati, 2020). Considering the widespread of the disease and absence of effective treatment, authorities across the world have designed strategies to combat spread of Covid-19. Although, adherence to preventive measures is the only way to tackle the virus, non-adherence has been reported to be a main problem everywhere (Zhong, et al., 2020).

Azlan, et al., (2020) submitted that the level of understanding of the community about the virulence of Corona virus could affect their involvement in carrying out the preventive measures. It may also include understanding about the means of the disease transmission. Alobuia, et al., (2020), stated that community behavior towards infectious diseases is related to the level of panic among the populace which can continue to complicate means to combat the spread of the disease. Research suggests that trust in government can increase compliance by reassuring citizens that guidelines are necessary and effective (Zhan, et al., 2020). In Nigeria, the disposition of the government towards health care financing and budgeting is nothing to write home about as it was revealed in the year 2020 budgetary allocation to health sector where the total cost allocated to health sector was calculated to be Two thousand naira [#2000] per citizen without having consideration for health emergencies such as Covid-19 pandemic.

The perceived risk of people developing Covid-19 is known to be the major reason for engaging in preventive behaviours targeted against the transmission of the disease. In Saki community, most of the dwellers are of the opinion that their geographical location places them at a vintage position of not developing the virus asserting that the disease is for the foreign countries. Specifically, research on whether the aforementioned factors could jointly

or independently predict adherence to Covid-19 preventive measure is scanty. Most studies have not explored this extent. This is a gap identified in literatures. Therefore, the aim of this study is to determine factors predicting adherence to Covid-19 preventive measures among marketers in Saki town. This study specifically:

1. assessed factors predicting adherence to Covid-19 preventive measures among marketers in Saki town
2. investigated if level of the knowledge about the virulence of Covid-19 virus and attitude towards Covid-19 infections predict adherence with preventive measures; and
3. determined if trust in health care system, perceived risk of being infected with COVID-19 virus predict adherence to COVID-19 preventive measures.

Research Question

This research question was raised for this study:

1. What are the factors predicting adherence to Covid-19 preventive measures among marketers in Saki town?

Research Hypothesis

The following hypotheses were postulated for this study:

1. The level of the knowledge about the virulence of Covid-19 virus and attitude towards Covid-19 infections will not significantly independently and jointly predict adherence with preventive measures
2. Trust in health care system, perceived risk of being infected with COVID-19 virus will not significantly independently and jointly predict adherence to COVID-19 preventive measures

Methodology

The study adopted a quantitative design (descriptive survey method) for the purpose of obtaining information as regards factors predicting adherence to COVID-19 preventive measures among marketers in Saki town Oyo State, Nigeria. All markets men and women including young adolescents and adults who conduct businesses/marketing of goods in the four markets irrespective of their age, gender, size/capacity of businesses, religion and social status. The statistics of marketers in the four markets given as: Gbawojo market – 57, Ajegunle market – 32, Sango market – 431 and Igboro (Oja oba) – 305. Sample size of 261 was selected from the population using Cochrane formula. Convenience and cluster sampling techniques were adopted to select participants across the four major markets in Saki town.

The instrument that was used for the study was a self- designed questionnaire. The questionnaire was presented to the experts in Nursing Science who made necessary modification to give face and content validity. Comments, suggestions and modifications made were used to improve the quality of the instrument to make sure that it is related to the aim, specific objectives and the hypotheses of the study. Pre-test of the questionnaire was done with 20% of the sample size respondents in a community market that will not participate in this study. The data collected was used to estimate the reliability of the instrument using Cronbach Alpha (R) which yielded reliability index of 0.814.

Data were collected by administering the questionnaire and the researchers were accompanied with translators who translated into local languages (Yoruba, Hausa and Igbo). Data collected were analysed using descriptive and inferential statistics.

Results

Research Question 1: What are the factors predicting adherence to Covid-19 preventive measures among marketers in Saki town?

Table 1: Factors predicting adherence to Covid-19 preventive measures

	Strongly Agreed	Agreed	Disagreed	Strongly Disagreed	Total	X^2	Sig
Knowledge	160 (61.3)	20 (7.7)	39 (14.9)	42 (16.1)	261 (100)	13.881	.000
Expressed virulence	90 (34.5)	63 (24.1)	50 (19.2)	58 (22.2)	261 (100)	9.676	.007
Trust in health care system	43 (16.5)	16 (6.1)	100 (38.3)	92 (35.2)	261 (100)	17.213	.011
Perceived risk of being infected	112 (42.9)	30 (11.5)	37 (14.2)	82 (31.4)	261 (100)	10.364	.000
Attitude of the marketer	117 (44.8)	40 (15.3)	53 (20.3)	51 (19.5)	261 (100)	8.654	.038

Table 1 shows that the chi-square value obtained for knowledge is (x^2 = 13.881, p = .000); expressed virulence (x^2 = 9.676, p = .007); trust in health care system is (x^2 = 17.213, p = .011); Perceived risk of being infected is (x^2 = 10.364, p = .000); and Attitude of the marketer is (x^2 = 8.654, p = .038) all at the significant levels of less than 0.05. Since these p-values were equal to or less than 0.05 values. It could be said that knowledge expressed on virulence, trust in health care system, perceived risk of being infected and attitude of the marketer towards Covid-19 are factors predicting adherence to Covid-19 preventive measures among marketers in Saki town.

Test of Hypotheses

Hypothesis 1: The level of the knowledge about the virulence of Covid-19 virus and attitude towards Covid-19 infections will not significantly independently and jointly predict adherence with preventive measures.

Table 2: Summary of Multiple Regression Analysis of relative and composite influence of level of the knowledge about the virulence of Covid-19 virus and attitude towards Covid-19 infections on adherence with preventive measures

Model	Unstandardized Coefficients		Standardized Coefficients	T	p-value
	B	**Std. Error**	**Beta**		
(Constant)	5.102	.555		9.199	.000
Knowledge	.040	.026	.378	5.715	.000
Attitude	.069	.024	.245	3.858	.004
Source of variation	**Sum of Squares**	**Df**	**Mean Square**	**F-Ratio**	**P**
Regression	54.648	2	27.324	5.996	.000
Residual	1175.706	258	4.557		
Total	1230.354	260			

R = 0.572; Multiple R (Adjusted) = 0.327; Multiple R² (Adjusted) = 0.321; Stand error estimate = 5.131

The relative contribution of each predictor variable (level of the knowledge about the virulence of Covid-19 virus and attitude towards Covid-19 infections) to the variance in the adherence with preventive measures revealed that level of the knowledge about the virulence of Covid-19 virus has a beta value of .378 and t-value of 5.715 significant at less than .05 alpha level, and attitude towards Covid-19 infections has a beta value of .245 and t-value of 3.858 significant at less than .05 alpha level. Therefore, level of the knowledge about the virulence of Covid-19 virus and attitude towards Covid-19 infections independently and jointly predict adherence with preventive measures.

Furthermore, adherence with preventive measures yielded a coefficient of multiple regression (R) of 0.572 and a multiple correlation square of 0.327. This shows that 32.7% of the total variance in the adherence with preventive measures is accounted for by the knowledge about the virulence of Covid-19 virus and attitude towards Covid-19 infections. The Table also indicates that the analysis of variance of the multiple regression data produced an F-ratio value significant at 0.00 level (F $_{(2,260)}$ = 5.996; P = .000). The level of the knowledge about the virulence of Covid-19 virus and attitude towards Covid-19 infections significantly independently and jointly predict adherence with preventive measures. Therefore, the null hypothesis was rejected.

Hypothesis 2: Trust in health care system and perceived risk of being infected with COVID-19 virus will not significantly independently and jointly predict adherence to COVID-19 preventive measures

Table 3: Summary of Multiple Regression Analysis of relative and composite influence of Trust in health care system and perceived risk of being infected with COVID-19 virus on adherence with preventive measures

Model	Unstandardized Coefficients		Standardized Coefficients	T	p-value
	B	Std. Error	Beta		
(Constant)	6.260	.683		7.164	.000
Trust	.596	.275	.110	2.170	.000
Risk	.028	.030	.048	1.942	.012
Source of variation	**Sum of Squares**	**Df**	**Mean Square**	**F-Ratio**	**P**
Regression	46.958	2	23.479	4.780	.017
Residual	1267.296	258	4.912		
Total	1314.254	260			

R = 0.426; Multiple R (Adjusted) = 0.181; Multiple R² (Adjusted) = 0.181; Stand error estimate = 2.629

The relative contribution of each predictor variable (trust in health care system and perceived risk of being infected with COVID-19 virus) to the variance in the adherence with preventive measures revealed that level of the trust in health care system has a beta value of .110 and t-value of 2.170 significant at less than .05 alpha level, and perceived risk of being infected with COVID-19 virus has a beta value of .048 and t-value of 1.942 significant at less than .05 alpha level. Therefore, trust in health care system and perceived risk of being infected with COVID-19 virus independently and jointly predict adherence with preventive measures.

Furthermore, adherence with preventive measures yielded a coefficient of multiple regression (R) of 0.426 and a multiple correlation square of 0.181. This shows that 18.1% of the total variance in the adherence with preventive measures is accounted for by the trust in health care system and perceived risk of being infected with COVID-19 virus. The Table also indicates that the analysis of variance of the multiple regression data produced an F-ratio value significant at 0.017 level (F $_{(2,260)}$ = 4.780; P = .000). The trust in health care system and perceived risk of being infected with COVID-19 virus significantly independently and jointly predict adherence with preventive measures. Therefore, the hypothesis that stated null hypothesis was rejected.

Discussion

The findings of the study revealed that knowledge, expressed virulence, trust in health care system, perceived risk of being infected and attitude of the marketer towards Covid-19 are factors predicting adherence to Covid-19 preventive measures among marketers in Saki town. This study is similar to the findings of Erfani, et al (2020) who reported that the level of knowledge of the community about the virulence of corona virus could determine their involvement in carrying out the preventive measures. It is also in line with the research of Chan, et al (2020), that trust in government can increase adherence by assuring citizens that guidelines are necessary and effective. This is further supported by the findings of Alobuia, et al (2020), that community attitude towards infectious diseases and the perceived risk of being infected is associated with the level of panic among the population which can further complicate attempts to prevent the spread of the disease.

The outcome of this study revealed that level of the knowledge about the virulence of Covid-19 virus and attitude towards Covid-19 infections independently and jointly predict adherence with preventive measures. This implies that good knowledge will inform positive attitude towards adherence with preventive measures. This lend credence from the findings of Ubong, et al., (2020), who reported in their study carried out in Makurdi Nigeria, that majority of the participants, 301 (98.7%) have heard about COVID-19 and the commonest source of information was via television/radio, 230 (76.4%). Most participants demonstrate a good knowledge of COVID-19 infection 302 (99.0%) and positive risk perception of COVID-19 303 (99.3%) and demonstrated good adherences on COVID-19 prevention practices 133 (43.6%).

The outcome of this study showed that trust in health care system and perceived risk of being infected with COVID-19 virus independently and jointly predict adherence with preventive measures. The use of different adherence measures can lead to discrepancies in conclusions about adherence rates and predictors of adherence. Better adherence measures are needed for public health officials who rely on adherence prevalence rates and predictors of adherence (Xu et al, 2020). Also, considering its pandemicity and absence of effective treatment, authorities across the globe have designed various mitigation strategies to combat spread of Covid-19. Although, adherence towards preventive measures is the only means to tackle the virus, reluctance to do so has been reported to be a major problem everywhere (Zhan, Yang & Fu, 2020).

Conclusion

It is concluded that knowledge of the disease is considered the first stepping stone to any health education activity that is implemented. Knowing the causes and transmission sources of a disease, increases the likelihood that people will become more aware of the spread of communicable diseases, and of the preventive measures to slow transmission. It is

further concluded that expressed virulence, trust in health care system, perceived risk of being infected and attitude of the marketer towards Covid-19 are factors predicting adherence to Covid-19 preventive measures among marketers.
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Recommendations

Based on the findings of the study, the following recommendations were made:

- It is vital to consider the communities' self-efficacy, perceived benefits, perceived barriers and perceived susceptibility of COVID-19 in order to improve the adherence of the community towards the recommended safety measures of COVID-19.
- Future interventions to improve adherence to social distancing measures should couple individual-level strategies targeting key barriers to social distancing identified herein, with effective institutional measures and public health interventions.
- Public health campaigns should continue to highlight compassionate attitudes towards social distancing
- That awareness programmes be intensified by the three tiers of the government- local, state and federal governments of Nigeria.

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