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Assessment of the Attitude towards Covid-19 Safety Measures among Health Care Workers in Edo State, Nigeria

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Abstract **Original Research Article**

This study examined the attitude towards COVID-19 safety measures among health workers in Edo State, Nigeria, and determined whether significant differences existed in their attitudes according to sex, age, years of professional experience, and educational qualification. A descriptive cross-sectional research design was adopted. The population comprised 3,223 health workers from Irrua Specialist Teaching Hospital, Irrua, University of Benin Teaching Hospital, and Central Hospital, Benin City, Edo State. A sample of 1,617 health workers was selected using a stratified random sampling technique, while 1,601 completed questionnaires were available for analysis. Data were collected using a researcher-developed questionnaire, and the attitude section consisted of nine items measured on a four-point Likert scale. The instrument demonstrated acceptable reliability, with a split-half reliability coefficient of 0.82 for the attitude section. Data were analysed using mean, standard deviation, and independent-samples t-test at the 0.05 level of significance. Findings revealed an overall mean attitude score of 2.43, which was below the criterion mean of 2.50, indicating an unfavourable attitude towards COVID-19 safety measures. Significant differences were found according to sex ($t = -8.046$, $p < .001$), years of professional experience ($t = -7.728$, $p < .001$), and educational qualification ($t = -7.931$, $p < .001$). Female health workers, more experienced health workers, and better-qualified health workers recorded more favourable attitude scores than their respective counterparts. However, no significant difference was found according to age ($t = 1.459$, $p = .145$). The study concluded that health workers in Edo State had an overall unfavourable attitude towards COVID-19 safety measures, although attitudes varied significantly according to sex, professional experience, and educational qualification. It was recommended that healthcare institutions implement targeted and continuous training programmes, with particular attention to groups demonstrating less favourable attitudes, to strengthen acceptance and adherence to COVID-19 safety measures.

Keywords: COVID-19, safety measures, Attitude, Health Workers, Healthcare workers, Edo State, Nigeria.

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Introduction

Health is an essential component of human development and plays a vital role in the social and economic progress of individuals, organizations and nations. A functional healthcare system depends greatly on the

availability of competent and committed health workers who provide preventive, promotive, curative and rehabilitative services to the population. Health workers are particularly important during public-health emergencies because they serve as frontline personnel in disease prevention, treatment, health education and infection control. Their attitudes towards health-related interventions can influence their willingness to adopt recommended safety measures and can also affect the quality of care provided to patients. Therefore, understanding the attitudes of health workers towards disease prevention and control measures is important for strengthening healthcare delivery and protecting both health workers and the communities they serve.

One of the major public-health emergencies that have challenged healthcare systems globally in recent years is Coronavirus Disease 2019 (COVID-19). COVID-19 is a respiratory infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease emerged in 2019 and rapidly spread across countries, becoming a major global public-health concern. Dong, Du and Gardner (2020) described COVID-19 as a rapidly spreading disease that generated significant international concern following its emergence. COVID-19 primarily affects the respiratory system and can produce clinical manifestations ranging from mild illness to severe respiratory complications. Individuals who are elderly or have underlying health conditions such as hypertension, obesity, diabetes mellitus and kidney disease are more likely to develop severe forms of the disease (Guan, Ni, Hu & Liang, 2020).

The seriousness of COVID-19 was further heightened by its ease of transmission and diverse clinical presentation. Common symptoms include fever, cough, myalgia, weakness, malaise and headache, although some infected individuals may remain asymptomatic (Hageman, 2020). The disease can spread through respiratory droplets and close contact with infected individuals, as well as through contact with contaminated surfaces followed by touching the face, nose or mouth (WHO, 2020). The possibility of asymptomatic transmission and the rapid spread of the disease created considerable challenges for healthcare systems. Consequently, health authorities introduced several preventive measures intended to reduce transmission and protect individuals, communities and healthcare workers.

In response to the spread of COVID-19, national and international health authorities recommended a range of safety measures. These included regular handwashing with soap and clean water, use of alcohol-based hand sanitizers, physical and social distancing, wearing of face masks, avoiding unnecessary physical contact, disinfection of frequently touched surfaces, isolation of suspected or confirmed cases, testing and contact tracing (NCDC, 2021). The effectiveness of these measures depends not only on their availability but also on people's willingness to accept and comply with them. Thus, attitude represents an important component of COVID-19 prevention and control.

Attitude refers to an individual's favourable or unfavourable disposition, feelings, beliefs or perceptions towards an object, person, issue or behaviour. In the context of COVID-19, attitude encompasses the extent to which individuals perceive preventive measures as necessary, effective, safe, beneficial and acceptable. A health worker may possess adequate knowledge about COVID-19 safety measures but may not necessarily have a positive attitude towards applying them. Therefore, knowledge alone may not guarantee compliance with recommended safety measures. A positive attitude is important because it can encourage individuals to accept preventive interventions and consistently apply recommended practices.

Health workers occupy a particularly important position in the prevention and control of COVID-19 because of their direct contact with patients and their responsibility for providing health information to individuals, families and communities. During the COVID-19 pandemic, health workers served as frontline personnel involved in screening, diagnosis, treatment, isolation, health education, contact tracing and infection prevention and control. Their attitudes

towards COVID-19 safety measures may therefore influence not only their own protection but also the safety of patients, colleagues and members of the community.

The importance of health workers became particularly evident during the early response to COVID-19 in Nigeria. Isolation centres were established for individuals who tested positive, while healthcare workers provided treatment and supportive care using personal protective equipment and other recommended precautions (Africa Centre for Disease Control, 2020). Vaccination subsequently became an important component of the global and national response to COVID-19. The development and availability of COVID-19 vaccines provided an additional strategy for reducing the burden of the disease and protecting healthcare workers and other high-risk groups (Owhonda, Maduka & Nwadiuto, 2020). However, vaccine introduction was accompanied by concerns about vaccine effectiveness, safety, side effects and long-term consequences. Misinformation, conspiracy theories and distrust also affected public perceptions and vaccine acceptance (NCDC, 2021). These concerns make attitude particularly important in understanding health workers' responses to COVID-19 vaccination and other preventive measures.

Attitude towards COVID-19 safety measures may therefore include health workers' perceptions of the seriousness of COVID-19, perceived susceptibility to infection, perceived benefits of preventive measures, confidence in vaccines, willingness to comply with safety protocols and perceptions concerning the effectiveness of infection-prevention measures. A positive attitude may motivate health workers to adhere to safety protocols, encourage vaccination and promote appropriate preventive behaviour. Conversely, negative attitudes may result in reluctance to comply with safety measures, disregard for recommended protocols and reduced willingness to participate in vaccination programmes. Therefore, assessing attitude separately from knowledge is important in determining whether health workers are favourably disposed towards recommended COVID-19 safety measures.

Sex is one socio-demographic characteristic that may influence attitudes towards health-related issues. Sex refers to the biological classification of individuals as male or female, while gender relates more broadly to socially constructed roles, expectations and characteristics. Differences in social experiences, health-seeking behaviour and perceptions of risk may influence how males and females respond to COVID-19 prevention and vaccination. Amirhossein, Shahriarirad, Keivan, Alireza and Moghadami (2021), for example, reported a significant relationship between female gender and perceived benefits of COVID-19 vaccine safety. Similarly, Shahid, Ikram, Haroon, Amna, Tariq and Ahmad (2021) identified gender as one of the factors associated with COVID-19 vaccine acceptance among hospital staff. These findings suggest that sex may be relevant in assessing health workers' attitudes towards COVID-19 safety measures.

Age may also influence attitudes towards COVID-19 safety measures. Age is the chronological length of time an individual has lived and may be associated with accumulated experience, exposure to health information and perceptions of disease risk. Older health workers may have greater professional and life experience, while younger workers may have greater exposure to newer forms of information and communication technology. These differences may contribute to variations in attitudes towards COVID-19 prevention and vaccination. Shahid et al. (2021) identified age as one of the factors associated with COVID-19 vaccine acceptance among hospital staff.

Years of professional experience constitute another factor that may influence attitudes towards COVID-19 safety measures. Professional experience exposes health workers to different diseases, infection-prevention procedures, healthcare environments and public-health interventions. Health workers with longer professional experience may have encountered several infectious diseases and may therefore have developed stronger appreciation of infection-prevention protocols. Conversely, less experienced workers may require additional orientation and training to strengthen their

confidence in applying safety measures. Differences in professional exposure may therefore contribute to differences in attitudes towards COVID-19 safety measures.

Educational qualification is another important factor that may influence health workers' attitudes. Education enhances an individual's ability to obtain, understand, evaluate and apply health information. Health workers with higher educational qualifications may have greater exposure to scientific information and may be better equipped to critically evaluate information concerning COVID-19, vaccination and infection prevention. Educational attainment may consequently influence perceptions of the seriousness of COVID-19, the benefits of preventive measures and willingness to comply with safety protocols. Shahid et al. (2021) identified educational level as an important factor associated with COVID-19 vaccine acceptance among hospital staff.

The importance of assessing attitude among health workers is further strengthened by their role as sources of health information. Health workers interact regularly with patients, relatives, colleagues and community members and are often regarded as credible sources of health information. Their attitudes towards COVID-19 safety measures may therefore influence the advice and information they provide to others. A health worker who demonstrates confidence in vaccination, hand hygiene, social distancing and other preventive measures may encourage patients and community members to adopt similar behaviours. Conversely, negative attitudes may contribute to doubt, misinformation and poor adherence among members of the public.

Previous studies have examined knowledge, attitudes, perceptions and preventive practices concerning COVID-19 in Nigeria. Reuben, Danladi, Saleh and Ejembi (2020) and Hager, Odetokun, Bolarinwa, Zainab, Okechukwu and Al-Mustapha (2020) investigated aspects of COVID-19 knowledge and preventive behaviour among Nigerians. Other studies conducted in Edo State and neighbouring states included mixed populations comprising civil servants, artisans, contractors, educators and other occupational groups (Olugbenga-Bello et al., 2020; Oyetunde et al., 2020; Owhonda et al., 2020). Although these studies provide useful information about COVID-19 responses, their findings may not adequately represent health workers because individuals from different occupational backgrounds may have different levels of exposure to health information, professional training and infection-prevention practices.

Some previous investigations also relied substantially on online surveys. Although online surveys are useful for collecting data rapidly during a pandemic, they may produce samples that are disproportionately composed of individuals with internet access and higher levels of literacy. Consequently, the findings may not fully reflect the attitudes of health workers across different healthcare institutions and professional categories. This creates a need for studies that specifically examine the attitudes of health workers towards COVID-19 safety measures within defined healthcare settings.

The problem is particularly important because negative attitudes towards COVID-19 safety measures may undermine infection-prevention efforts. Health workers who perceive COVID-19 as less serious, doubt the effectiveness of preventive measures or have concerns about vaccine safety may be less willing to comply with recommended protocols. Such attitudes may increase the risk of infection among healthcare workers and patients and may also weaken health education efforts. On the other hand, positive attitudes may promote compliance, strengthen infection-prevention practices and improve confidence in vaccination and other interventions. Despite the contributions of previous studies, there remains a paucity of empirical evidence specifically addressing the attitude of health workers towards COVID-19 safety measures in Edo State, Nigeria. There is therefore a need to determine whether health workers are favourably or unfavourably disposed towards recommended safety measures and whether their attitudes vary according to relevant socio-demographic characteristics.

It is against this background that the present

study investigates the attitude towards COVID-19 safety measures among health workers in Edo State, Nigeria. The study specifically examines the attitudes of health workers towards recommended COVID-19 safety measures and determines whether significant differences exist according to sex, age, years of professional experience and educational qualification. The findings are expected to provide useful evidence for health administrators, policymakers and healthcare institutions in designing targeted health education, training and infection-prevention programmes that can strengthen positive attitudes and promote compliance with COVID-19 safety measures among health workers in Edo State, Nigeria.

The relationship between age and perception of covid-19 vaccine safety has been investigated in various studies. The COVID-19 vaccine acceptance among healthcare workers in the United States was carried out by Shekhar, Sheikh, Upadhyay, Mriganka, Saket, Hamza, Eileen Barrett and Suman (2021); using a cross sectional study, the attitude of HCWs toward COVID-19 vaccination was examined. 4080 responses were received out of which 3479 were complete responses and were included in the final analysis. 36% of respondents were willing to take the vaccine as soon as it became available while 56% were not sure or would wait to review more data. Only 8% of HCWs do not plan to get vaccine. A smaller percentage of female (31%), Black (19%), Lantinx (30%), and rural (26%) HCWs were willing to take the vaccine as soon as it became available than the overall study population while perceived benefits of the vaccine increased with age

Dzieciolowska, Hamel, Gadio, Maude, Gagnon, Robitaille, Erin, Caron, Talib and Leighanne (2021) assessed willingness to be vaccinated and reasons underlying hesitancy. Cross-sectional survey across 17 healthcare institutions. HCWs eligible for vaccination (Pfizer- BioNTech mRNA) in December 2020 were invited to receive immunization. Multivariate logistic regression was performed to identify predictors of acceptance. Reasons for refusal among those who never intended to be vaccinated (ie, firm refusers) and those who preferred delaying vaccination (ie, vaccine hesitants) were assessed. Among 2,761 respondents (72% female, average age, 44), 2,233 (80.9%) accepted the vaccine. Physicians, environmental services workers and healthcare managers were more likely to accept vaccination compared to nurses. Age of workers of over 50, rehabilitation center workers, and occupational COVID-19 exposure were associated with fear of vaccine safety by multivariate analysis.

In the United States, Gadoth, Halbrook and Martin-Blais (2021) in a survey completed online by 609 participants between September 24 and October 16, 2020; examined healthcare workers' attitudes about vaccine safety, efficacy, and acceptability in the context of the COVID-19 pandemic, including acceptance of a novel coronavirus vaccine. Design, Setting, A cross-sectional survey was distributed to participants enrolled in a longitudinal cohort study surveilling SARS-CoV-2 infection among 1,093 volunteer sampled University of California, Los Angeles (UCLA) Health System employees. Results shows that 47.3% of workers above 40 years had greater fears about the safety of the vaccine.

The relationship between educational status and perception of covid-19 vaccine safety has been investigated in various studies. Community attitudes and perceptions towards COVID-19 vaccinations in Bangladesh was investigated in Islama, Siddiquea, Aktera, Rafia, Sujana, Paul and Sikder (2021). An exploratory and anonymous population-based e-survey was conducted among 1658 general individuals and the survey was conducted using a semi-structured and self-reported questionnaire containing informed consent along with four sections (i.e., socio-demographics, attitudes). Multiple linear regressions was performed to determine the variables predicting attitudes towards COVID-19 vaccinations. The result showed that the mean scores of attitudes were 2.83±1.48 (out of 5) and 9.34±2.39 (out of 12) respectively. About a quarter of participants thought that the COVID-19 vaccination available in Bangladesh is safe, only 60% will have the vaccination and about two-thirds will recommend it to family and friends. In the

multiple regression model, higher educational status were associated with knowledge; whilst attitudes were significantly associated with vaccine safety attitude and uptake.

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The attitude of health workers towards COVID-19 safety measures is a matter of concern because health workers are expected to serve as role models in infection prevention and control. A health worker may possess adequate knowledge of COVID-19 but may still be reluctant to comply with recommended safety measures if the measures are perceived as unnecessary, ineffective, inconvenient or unsafe. Similarly, negative perceptions about COVID-19 vaccination may reduce vaccine acceptance and weaken efforts to protect healthcare workers and patients. During the pandemic, misinformation, rumours, misconceptions and concerns about vaccine safety contributed to hesitancy among members of the public and healthcare workers (NCDC, 2021). Such attitudes could potentially affect adherence to infection-prevention measures and the quality of health education provided to patients and communities.

The problem may also be influenced by differences in the characteristics of health workers. Sex, age, years of professional experience and educational qualification may shape how individuals perceive health risks, evaluate health information and respond to recommended interventions. Evidence from previous studies suggests that socio-demographic characteristics may be associated with perceptions and acceptance of COVID-19 preventive measures and vaccination (Shahid et al., 2021; Amirhossein et al., 2021). However, the extent to which these characteristics influence attitudes towards COVID-19 safety measures among health workers in Edo State remains insufficiently established.

Several studies have examined COVID-19 knowledge, attitudes, perceptions and preventive behaviours among Nigerians (Reuben, Danladi, Saleh & Ejembi, 2020; Hager, Odetokun, Bolarinwa, Zainab, Okechukwu & Al-Mustapha, 2020). However, some of these studies were conducted using online surveys, which may have been influenced by unequal access to the internet and may not adequately represent healthcare workers across different professional and institutional settings. In addition, studies conducted in Edo State and neighbouring states have included mixed populations such as civil servants, artisans, contractors, educators and other service professionals (Olugbenga-Bello et al., 2020; Oyetunde et al., 2020; Owhonda et al., 2020). Findings from mixed populations may not accurately reflect the attitudes of health workers because healthcare workers have specific professional responsibilities, training and exposure to infection-prevention practices.

Therefore, despite the growing body of research on COVID-19 knowledge, vaccination and preventive practices, a gap remains regarding the attitude of health workers towards COVID-19 safety measures in Edo State, Nigeria. It is against this background that the study seeks to assess the attitude towards COVID-19 safety measures among health workers in Edo State, Nigeria and to determine whether significant differences exist in their attitudes based on sex, age, years of professional experience and educational qualification. Hence, the main research question guiding this study is:

1) What was the attitude towards COVID-19 safety measures among health workers in Edo State, Nigeria?

Hypotheses

The following research hypotheses were formulated and tested in this study:

1) There is no significant difference between male and female health workers' attitude of COVID-19 safety measures in Edo State, Nigeria
2) There is no significant difference between young and old health workers' attitude of COVID-19 safety measures in Edo State, Nigeria
3) There is no significant difference between less and well experienced health workers' attitude of COVID-19 safety measures in Edo State, Nigeria
4) There is no significant difference between less and well-educated health workers' attitude of COVID-19 safety measures in Edo State, Nigeria

Methods

The retrospective cross-sectional survey research design was adopted for this study. Salvatore and Reagle (2002) described retrospective cross-sectional survey design study as one that is a good strategy for data collection or investigations of events, experiences or outcomes that have already occurred by collecting data from direct contact that experienced them. In this regards, retrospective cross-sectional survey research design was employed to reach a fairly large number of workers or target audience.

The population of the study covers all the 3,223 staff in Irrua Specialist Teaching Hospital (ISTH), Irrua, University of Benin Teaching Hospital (UBTH) and Central Hospital Benin city, Edo State. The staff covers only the 591 Doctors, 1,515 Nurses, 267 Medical Laboratory Scientists, 105 Pharmacists, 22 Physiotherapists, 23 Radiographers and 701 Clinical Assistants (Orderlies, Community Health Education, and Social and Environmental Health workers). A sample of 1617 staff was drawn for the study. The stratified random sampling technique was used to draw a sample. 50 percent of the staff was drawn as sample from each of the teaching hospitals. Hence, each hospital constitutes a stratum.

A researcher developed the questionnaire was used as the instrument for data collection. This questionnaire was developed following an extensive reading of relevant related literature glean from peer-reviewed published articles (Elengoe, 2020; Zhong, Luo, Li, Zhang & Liu, 2021; Mohamed, Solehan, Mohd Rani, Ithnin & Che Isahak, 2021). The questionnaire elicits responses on demographic variables of health workers such as sex, age, years of experience and educational status. The questionnaire was structured into four sections A and B. Section A: Demographic data - obtained information on the demographic profile of the respondents consisting of sex, age, educational level, occupation and religion.

Section C measures the attitude towards of COVID-19 safety**.** The 9-items cover: cognition of the subject (items 1-3), affective domain of attitude (items 4-6) and behavioural domain of COVID-19 safety (items 7-9). As measured on a four point response scale type of Strongly Disagree (SD) = 1, Disagree (D) = 2, Agree (A) = 3 and Strongly Agree (SA) = 4, an overall score point of 2.50 or higher was considered high level of COVID-19 safety while an overall score point below 2.50 was considered low level of COVID-19 safety measures.

The split-half reliability method was adopted for this study. In using this technique, the instrument was administered on a pilot study respondents. The pilot study comprised twenty local government health care workers drawn from a population outside the study area. This implies that the pilot test was carried out among local government workers that are not in the state. The relationship between the responses on even and odd numbers was analysed using the Pearson Product Moment Correlation analysis. The correlation value was taken as the reliability alpha of the instrument. The split-half reliability coefficient of 0.82 was obtained on attitude towards covid-19 safety. After the approval was granted by the committee, the researcher proceeded in the company of three trained research assistants (one per senatorial district) to

administer copies of the instrument to the respondents. The research assistants were trained by the researcher on how to administer the instrument.

Data obtained from questionnaires was coded and entered into IBM SPSS (International Business Machine Statistical Package for the Scientific Solution) Version 26 which is suitable for both descriptive and inferential statistical analysis (IBM SPSS, 26). Research question 1 on attitude of COVID-19 safety measures was a benchmark mean of 2.50 was used since it was a four point response scale type. An average score point of 2.50 or higher was considered positive attitude or good practice while an average score point below 2.50 was considered poor attitude or poor practice respectively. For hypotheses 1 to 4, the t-test for two independent sample means was used to test for possible differences in attitude of COVID-19 safety measures. The statistical level of significance was set at 5 percent significance level which is otherwise known as 95 percent confidence level.

Results

Research Question 1: What is the attitude towards COVID-19 safety among health workers in Edo State, Nigeria?

Table 1: Mean score and Standard Deviation on the Attitude towards COVID-19 Safety among Health Workers in Edo State, Nigeria

		N = 1617		
s/n	**Items**	**$\bar{X}$**	**SD**	**Remarks**
1	COVID-19 safety practice are important	2.60*	.908	Favourable attitude
2	I know COVID-19 is highly infectious and the vaccine is effective	2.80*	1.034	Favourable attitude
3	I know it is safe to maintain good hand hygiene to stay safe from COVID-19	2.34	.993	Unfavourable attitude
4	Hearing people talk about COVID-19 safety makes me scared	2.24	1.129	Unfavourable attitude
5	I feel COVID-19safety should not be taken as serious as health authorities have claimed	2.60*	1.228	Favourable attitude
6	The many rumors I have heard about COVID-19 and safety practices has been discouraging	2.59*	1.284	Favourable attitude
7	I wish I could help people infected with the COVID-19 stay safe from the virus	2.44	1.067	Unfavourable attitude
8	I wish to donate my personal resources like funds to support COVID-19 vaccine production	2.12	1.114	Unfavourable attitude
9	I think attention should be given more to healthy hand hygiene to prevent COVID-19	2.15	1.061	Unfavourable attitude
	Overall mean score of Attitude = 2.43			

**Significant mean ($\bar{X} \geq 2.50$)*

The results in Table 1 showed that the health workers had good, positive or favourable attitude on items 1, 2, 5, and 6 at mean score of 2.59 to 2.80 and poor or unfavourable attitude on items 3, 4, 7, 8 and 9 at a mean score range from 2.12 to 2.44. The overall mean score of 2.43 is less than the criterion mean of 2.50 (i.e $\bar{X}$ = 2.43 < 2.50). Hence, this implies that health workers in Edo State Nigeria had poor attitude towards COVID-19 safety

Hypothesis 1: There is no significant difference between male and female health workers attitude of COVID-19 safety measures in Edo State, Nigeria

Table 2: T-test analysis gender differences in Health Workers Attitude of COVID-19 safety Measures in Edo State, Nigeria

Variable	Sex	N	$\bar{X}$	S.D	t-cal.	P-value	Remark
Attitude of COVID-19 safety	Male	785	2.30	.659	-8.046	..000	Reject null hypothesis
	Female	816	2.56	.613			

** T-calculated is significant at 0.05 level (2-tailed test taken in absolute terms)*

Result in Table 2 shows that the calculated t-value of -8.046 is statistically significant ($p<0.05$). This explains that there is a significance difference between male and female health workers attitude of COVID-19 safety measures in Edo State, Nigeria. Based on the mean scores, it is evident that female health workers have higher mean score ($\bar{X}$) on attitude of covid-19 safety measures at 2.56 more than their male counterparts at a mean score of 2.30. That is, female $\bar{X}$ at 2.56 > male at 2.30. This implies that there is a significance difference between male and female health workers attitude of COVID-19 safety measures in Edo State. As female health workers' possessed more favourable attitude towards COVID-19 safety more than their male counterparts. Therefore, the null hypothesis was rejected.

Hypothesis 2: There is no significance difference between young and old health workers attitude of COVID-19 safety measures in Edo State, Nigeria

Table 3: T-test analysis on Age differences in Health Workers Attitude of COVID-19 Safety Measures in Edo State

Variable	Age	N	$\bar{X}$	S.D	t-cal.	P-value	Remark
Attitude of COVID-19 safety	Below 40yrs	898	2.45	.728	1.459	.145	Retain null hypothesis
	40yrs and above	703	2.41	.530			

** T-calculated is significant at 0.05 level (2-tailed test taken in absolute terms)*

Result in Table 3 shows that the calculated t-value of 1.459 is not statistically significant ($p<0.05$). This explains that there is a significance difference between young and old health workers attitude of COVID-19 safety measures in Edo State, Nigeria. Based on the mean scores, it is evident that below 40years health workers have higher mean score ($\bar{X}$) on attitude of covid-19 safety at 2.45 than 40years and above counterparts at a mean score of 2.41. This implies that there is a significance difference between young and old health workers. Therefore, the null hypothesis was retained.

Hypothesis 3: There is no significant difference between less and well experienced health workers attitude of COVID-19 safety measures in Edo State

Table 4: T-test analysis on Years of Experience differences in Health Workers Attitude of COVID-19 Safety Measures in Edo State

Variable	Experience	N	$\bar{X}$	S.D	t-cal.	P-value	Remark
Attitude of COVID-19 safety	Less experienced	997	2.34	.634	-7.728	.000	Retain null hypothesis
	Well experienced	604	2.59	.643			

** T-calculated is significant at 0.05 level (2-tailed test taken in absolute terms)*

Result in Table 4 shows that the calculated t-value of -7.728 is statistically significant ($p<0.05$). This explains that there is a significance difference between less experienced and well experienced health workers attitude of COVID-19 safety measures in Edo State, Nigeria. Based on the mean scores, it is evident that below well experience health workers have higher mean score ($\bar{X}$) on attitude of covid-19 safety at 2.59 than less experience counterparts at a mean score of 2.34. This implies that there is a significance difference between less experienced and well experienced health workers attitude towards COVID-19 safety measures in Edo State, Nigeria. Therefore, the null hypothesis was rejected.

Hypothesis 4: There is no significance difference between less and well-educated health workers attitude of COVID-19 safety measures in Edo State

Table 5: T-test analysis on Educational Qualification differences in Health Workers Attitude of COVID-19 safety Measures in Edo State

Variable	Edu Qual	N	$\bar{X}$	S.D	t-cal.	P-value	Remark
Attitude of COVID-19 safety	Less qualified	790	2.30	.670	-7.931	.000	Reject null hypothesis
	Well qualified	811	2.56	.602			

** T-calculated is significant at 0.05 level (2-tailed test taken in absolute terms)*

Result in Table 5 shows that the calculated t-value of -7.931 is statistically significant ($p<0.05$). This explains that there is a significance difference between less qualified and well qualified health workers attitude of COVID-19 safety measures in Edo State. Based on the mean scores, it is evident that below well qualified health workers have higher mean score ($\bar{X}$) on attitude of covid-19 safety at 2.56 more than less qualified counterparts at a mean score of 2.30. Therefore, the null hypothesis was rejected.

Discussions

The result shows that health workers in Edo State Nigeria had poor attitude towards COVID-19 safety. Perhaps, the reason for the poor attitude toward covid-19 could be traceable to the divergent public opinions, commentary, myths and misconceptions that paraded the public space about the virus and its severity. In clear terms, it was evident that during the hit of the covid-19 outbreak and lockdown directives by authorities across states in Nigeria, several misconceptions arose as the National Commission for Disease Control (NCDC) reportedly provided a daily update on the total number of covid-19 cases, covid-19 deaths and persons undergoing treatment across states.

The result agrees with that of Obaseki, Akoria and Ogboghodo (2020) who found that acceptance of workers on the covid-19 was low. Furthermore, the findings supports that of Dzieciolowska, Hamel, Gadio, Maude, Gagnon, Robitaille, Erin, Caron, Talib and Leighanne (2021) who found that vaccine novelty, wanting others to receive it first, and insufficient time for decision-making. The finding did not corroborate that of Erfani, Shahriarirad, Ranjbar, Mirahmadizadeh and Moghadami (2020), who found that acceptance towards and practice of COVID-19, an overall score of 90% and 89% of the total score were achieved among the given population respectively. The result is in consonance with that of Mahmud, Mohsin, Khan, Mian and Miah (2021) who found that the acceptance of COVID-19 vaccines was high. The result is not in line with that of Shekhar, Sheikh, Upadhyay, Mriganka, Saket, Hamza, Eileen Barrett and Suman (2021) who found that medical care providers had higher vaccine acceptance (49%). Safety (69%), effectiveness (69%), and speed of development/approval (74%) were noted as the most common concerns regarding COVID-19 vaccination in the survey.

Conclusion

Based on the findings of the study, it can be concluded that health workers in Edo State, Nigeria, generally demonstrated a positive attitude towards COVID-19 safety measures. This suggests that most health workers recognized the importance of recommended measures for preventing and controlling the spread of COVID-19 and were favourably disposed towards their adoption. The study further concludes that differences in socio-demographic characteristics, including sex, age, years of professional experience and educational qualification, may influence health workers' attitudes towards COVID-19 safety measures. Health workers with more favourable attitudes are more likely to support and comply with recommended preventive measures, thereby contributing to infection prevention and the protection of patients, colleagues and the wider community.

Recommendations

Based on the findings in this study, the following recommendations were made:

1) Young staff of teaching hospitals of older workers should be provided with on-the-job training to assist them cope with possible anxieties or concerns that they could be incubating conscious or unconsciously with engaging covid-19 safety practice in the course of discharging their duties while attending to Covid-19 patients attending teaching hospitals for treatment.
2) The male and female targeted training should be provided by the management of health care centres and institutions to help health practitioners including

nurses, doctors, community health educators and significant others have a change of disposition towards Covid-19 safety rudiments and also engaging with practices to avert them.

3) Personnel psychologist in partner with Non-Governmental Organizations (NGOs) and Community Based Organizations (CBOs) need to orient staff of teaching hospitals about how they can provide exemplary leadership by engaging with covid-safety practices and thereby encouraging others to do the same.

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