

Acceptability of COVID-19 Vaccination among Healthcare Workers in Adamawa State, Nigeria

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Abstract

The aim of this study was to determine the acceptability of COVID-19 vaccine amongst health workers in Adamawa state, Northeast Nigeria. The study used a cross-sectional design and collected data from the eligible participants through google online form. Information regarding the respondents' such as socio-demographic, risk exposures, risk perceptions and attitude towards COVID-19 vaccine were collected. Multivariable binary logistic regression will be used to determine the factors affecting the acceptability of COVID-19 vaccine after controlling for key demographic variables. Data analysis was using STATA version 14 (StataCorp LP, Texas USA). A total of 272 healthcare workers from Adamawa State Nigeria participated in this study. About 70% of the respondents were females, one-third were younger than 40 years and majority (57.7%) were non-frontline workers. Two hundred and thirty-nine (87.9%) of the participants have had COVID-19 vaccine while 33(12.1%) have never received. Of those who have been vaccinated, only 130(54.4%) were fully vaccinated. Among the unvaccinated, 69.7% insisted they will not take the vaccine if made available because COVID-19 infection has reduced globally (33.3%) and probable side effects of the vaccine (33.3%). Age (OR = 0.11, 95% CI: 0.02 – 0.55, p value = 0.007), sex (OR = 5.23, 95% CI: 1.78 – 15.39, p value = 0.003) and years of work experience OR = 21.44, 95% CI: 3.58 – 12.85, p value = 0.001) were significant predictors of acceptability of COVID-19 vaccine.

Keywords: COVID-19, Healthcare Workers, Predictors, Vaccination.

Introduction

Since the declaration of the Coronavirus disease 2019 (COVID-19) pandemic as a global threat by WHO in March 2020 (1), a total of 453,774, 980 confirmed cases and 6,051,450 deaths were recorded by 11th March 2021 [2]. In Nigeria, the total number of confirmed cases within this same period was 254,861 and 3,142 associated deaths and for Adamawa State the figure was 1203 confirmed cases and 32 deaths [3]. The whole world experienced a global humanitarian disaster due to the rapid spread and infectiousness of the COVID-19 disease. This pandemic affected the way we lived because all countries of the world were forced to implement strict precautions and control

strategies to limit the extent of the outbreak. Such measures included social distancing and compulsory use of face masks. Other measures that were imposed by governments include international travel bans, lockdowns, frequent handwashing with soap and water or with the use of hand sanitizers [4, 5].

The pandemic was not just a health crisis, it also resulted in social, economic and political effects with potential for deep and longstanding scars. According to a study conducted by [21] Andam et al (2020) which analysed the five-week lockdown implemented by the federal government across the Federal Capital Territory of Abuja and Lagos and Ogun states from late March to early May 2020, the federal

lockdown for Kano from mid-April, and the state-level lockdowns that were implemented from mid-April for around seven weeks in Akwa Ibom, Borno, Ekiti, Kwara, Osun, Rivers, and Taraba states, It was estimated that during these lockdown periods, Nigeria's GDP suffered a 34.1 percent loss due to COVID-19, amounting to USD 16 billion, with two-thirds of the losses coming from the services sector. Also, the agriculture sector, which happens to be the major means of livelihood for most Nigerians, suffered a 13.1 percent loss in output (USD 1.2 billion). Therefore, to avert these health and socio-economic maladies and end the COVID-19 pandemic, an important strategy will be to develop a safe and efficacious vaccine to curtail the virus, and the success of the vaccination program will depend on whether people refuse or accept the vaccine.

Health workers worldwide were not spared from the burden of the pandemic. Globally, the World Health Organization estimated that between 80 000 and 180 000 health and care workers could have died from COVID-19 in the period between January 2020 to May 2021, converging to a medium scenario of 115 500 deaths [1]. In Adamawa state, as at 20th January 2022, 61 health workers have been confirmed positive with only 1 death [7].

To quickly limit the spread of COVID-19 associated infection and death, researchers and pharmaceutical companies have collaborated and still doing same to develop safe and effective vaccines for mass vaccination. This has led to the development of several vaccines such as Pfizer, Oxford/AstraZeneca, Moderna, Janssen, Sputnik V, Sinovac, and Sinopharm which have been found to be safe and effective for use in humans [8-11]. Despite this technological progress, the supply of these COVID-19 vaccines globally for use have been inadequate leading to governments prioritising high risk groups such as health care workers, older persons especially those with chronic co-morbid conditions, and those in essential services to be given the vaccine before other

persons [11].

Health care workers can easily be infected with COVID-19 virus because they often have direct contact with body secretions, patients, visitors and other health care workers who might have been exposed to COVID-19. Although, COVID-19 vaccines have been made available by governments to health workers and other high-risk individuals, this may not readily translate into uptake because vaccine uptake is voluntary. The literature has also shown that health care workers are not willing to accept COVID-19 vaccines when made available in their country [12–14]. Reasons for refusing the vaccine include safety, side effects and the rapid speed of vaccine development/approval [15–17].

Health care workers have been identified to be a reliable source of correct information on vaccination to the patients and general population [12, 18], thus their acceptance or refusal of COVID-19 vaccines may influence the uptake of COVID-19 among the general population. It has been shown that health workers' counsel on exclusive breastfeeding and complementary feeding influence the practice of exclusive breastfeeding among mothers [19, 20], reiterating the influence of health care workers' information and actions to guide the decision of the public healthcare. Therefore, this study sought to assess and identify the predictors of COVID-19 vaccine acceptability among health care workers in Adamawa State, Northeast Nigeria.

Materials and Methods

Study Area

This study was carried out in Adamawa State, Northeastern Nigeria. Adamawa State, popularly referred to as the “Land of Beauty” is one of the 36 States of the Federal Republic of Nigeria. It came into existence on the 27th of August 1991 occupying more than half of the old Gongola State.

Study Population

The study population for this study comprised of all health workers in Adamawa State who were members of the WhatsApp groups created for health workers in the State.

Study Design

This was an online cross-sectional study employing a quantitative method of data collection. Health care workers (HCWs) including but not limited to doctors, nurses, midwives, and laboratory technicians, aged 18 years or older, currently working in any health facility in Adamawa State and a member of any of the WhatsApp groups created for health workers in the State were eligible to participate.

Sample Size Determination

The sample size was calculated using the proportion of health workers in Nigeria who had received at least one dose of the COVID-19 vaccine according to a study conducted by Ilori *et al* (2021).

$$n = \frac{(Z\alpha)^2 pq}{d^2}$$

Where: n= Sample size; $Z\alpha$ = Z statistic for the level of confidence of 95% (1.96), $Z\alpha$ = Z statistic for the level of confidence of 95% (1.96), p = proportion of health workers in Nigeria who had received at least one dose of the COVID-19 vaccine (80.3% or 0.803), q = 1 – p = 0.197, d = Desired level of precision (5% or 0.05), n=243, with Adjusting for non-response using a rate of 10%, Minimum sample size = 267.

Sampling Technique

This study recruited participants from the WhatsApp communication platform dedicated to healthcare workers (HCWs) in Adamawa State. Invitations to participate in the study was shared on this platform using a self-reported questionnaire that will be made in google forms. Eligibility criteria include being 18 or older and currently a healthcare worker (HCW) in Adamawa State. Younger (aged less than 18

years) HCWs and those who had no access to WhatsApp were excluded.

Measures

COVID-19 Vaccine Acceptance. This was assessed by asking the HCWs one question Have you taken COVID-19 vaccine now that it is available? Response to this question was either “yes” or “no”. Follow-up questions to the earlier one will be, if yes, how many doses of COVID-19 vaccine have you taken, If no, what are your reasons for not taking the vaccine.

COVID-19 Risk Exposure: This was measured with 2 items. The first item is “I am at high risk of COVID-19 because of my work exposure” and the second item is “I am at high risk of COVID-19 because of my personal exposure.” Participants had 3 response options (1 true, 2 false, 3 not sure). Response on each item was dichotomized into 0 (false or not sure) and 1 (true) to indicate occurrences of exposure. Sum score was generated, with a higher score representing a higher level of COVID-19 risk exposure.

Perceived Susceptibility to COVID-19:

This was assessed with 2 items that described scenarios associated with COVID-19 risk including “I am at high risk of COVID-19 because of my family medical history” and “I am at high risk of COVID-19 because my own underlying medical conditions.” Participants responded to these items on a 3-option scale (1 true, 2 false, 3 not sure) to indicate if the scenarios apply to them. Responses were dichotomized into 0 (false or not sure) or 1 (true). Sum scores were generated, with high scores indicating higher perceived susceptibility of COVID-19.

Perceived Severity of COVID-19: This was assessed by participants’ agreement of the statement “COVID-19 is just a flu-like disease and generally harmless.” The response options ranged from 1 (strongly disagree) to 5 (strongly agree). The answer was reverse-coded with a

higher score indicating a greater perceived severity of COVID-19.

Validity and Reliability

The questionnaire was examined by the research supervisor for both face and content validity. Thereafter, the link to the questionnaire (in google forms) was shared with some of the researchers' contacts who are not HCWs on the WhatsApp communication platform. Other participants were recruited using a simplified-snowball sampling technique where the invited participants (those on the researchers' contact list) were requested to pass the invitations to their WhatsApp contacts.

Survey Questionnaire and Data Collection

Data was collected with the use of a self-administered questionnaire, which was developed after rigorous literature search and consisted of two parts: demographics and a section for COVID-19 vaccine acceptance and COVID-19 risk exposure, perceived susceptibility and severity.

Data Management and Analysis

Data was screened for proper coding, univariate outliers and normality. Sociodemographic characteristics was presented as frequency tables for qualitative variables and mean $\pm$ SD (Median and Range if not normally distributed) for quantitative variables. Objectives one, two and three were analysed using descriptive statistics like proportion, mean and standard deviation and for objective four, a bivariate analysis was conducted between all the explanatory variables and the study outcome, COVID-19 vaccine acceptability and uptake using chi-square test of significance. Variables that are significant at 20% was entered into a binary

regression model to determine the factors that are independently associated with COVID-19 vaccine acceptability. All statistical analyses will be done using STATA version 14 (StataCorp LP, Texas USA).

Limitations and Potential Study Biases

A key limitation of this study is its cross-sectional design which prevented us from drawing causal inference. Second, the participants were recruited by a convenience sampling, therefore we need to exercise caution in applying the results in other settings or populations. Third, the self-report survey may be subject to social desirability. Finally, given that data collection took place after COVID-19 vaccine had been produced and distributed to all countries, this survey will assess acceptability of the vaccine by asking the health care workers if they had taken the vaccine unlike in other studies where COVID-19 vaccine acceptability was measure by the question.

Results

Socio-demographic Characteristics of the Respondents

A total of 272 healthcare workers from Adamawa State Nigeria participated in this study. About 70% of the respondents were females. About one-third were younger than 40 years while 71(26.1%) and 106(39.0%) were between 40-49 years and older than 49 years respectively. More than 80% had partners and resided in urban areas. One hundred and thirty-two (48.5%) had diploma, 87(32.0%) had bachelor's degree while 75(27.6%) had master's degree or higher. About 40% of the respondents have been working for more than 20 years, 87(32.0%) for between 11-20 years and 74(27.2%) for 10 years or less. Majority of the study participants (57.7%) were non-frontline workers (Table 1).

Table 1. Socio-demographic Characteristics of the Respondents

Variables	Frequency	Percentages
Age (years)		
<40	95	34.9
40-49	71	26.1
>49	106	39.0
Sex		
Male	82	30.2
Female	190	69.8
Marital Status		
With partner	232	85.3
Without partner	40	14.7
Education		
Diploma	132	48.5
Bachelor's degree	65	23.9
Master's degree or higher	75	27.6
Years of work experience		
≤10	74	27.2
11-20	87	32.0
>20	111	40.8
Residence		
Rural	49	18.2
Urban	221	81.8
Category of health worker		
Frontline	115	42.3
Non-frontline	157	57.7

COVID-19 Experience, Vaccination and Travel History of the Respondents

Less than 8% of the participants have any chronic conditions and were not vaccinated at childhood. Nine (3.3%) had been infected with

COVID-19 virus while 23 (8.5%) and 96(35.3) had family members and co-workers respectively that had been infected with COVID-19 virus in the past. Forty-three (15.8%) travelled outside the country in the last 12 months prior to this survey (Table 2).

Table 2. COVID-19 Experience of the Respondents

Variables	Frequency	Percentages
Do you have any chronic health conditions?		
No	251	92.3
Yes	21	7.7
Did you receive any vaccination apart from childhood immunization?		
No	17	6.3
Yes	255	93.7

Have you ever been infected with COVID-19 virus?		
No	263	96.7
Yes	9	3.3
Has any of your family members been infected with COVID-19 virus?		
No	248	91.5
Yes	23	8.5
Has any of your co-worker been infected with COVID-19 virus?		
No	176	64.7
Yes	96	35.3
Did you travel outside Nigeria within the last 12 months?		
No	229	84.2
Yes	43	15.8

COVID-19 Vaccine Acceptability

Two hundred and thirty-nine (87.9%) of the participants have had COVID-19 vaccine while 33(12.1%) have never received. Of those who have been vaccinated, only 130(54.4%) were fully vaccinated. Among the unvaccinated,

69.7% insisted they will not take the vaccine if it is made available in their health facility. The major reasons given for not taking the vaccine were that COVID-19 infection has reduced globally (33.3%), not sure of the effects of the vaccine (33.3%) and that the vaccine is more dangerous than the virus (Table 3).

Table 3. COVID-19 Vaccine Acceptability among the Respondents

Variables	Frequency	Percentages
Have you received COVID-19 vaccine?		
No	33	12.1
Yes	239	87.9
If yes, are you fully vaccinated?		
No	109	45.6
Yes	130	54.4
If no, will you take the vaccine if available in your facility?		
No		
Yes		
If no, what are your reasons for not accepting the vaccine? β		
COVID-19 infection has reduced globally	18	33.3
I am not at peace with the vaccine	18	33.3
The vaccine is more dangerous than the virus	9	16.7
I have immunity against the virus, so I don't need to be vaccinated	2	3.7
The vaccine is not safe	3	5.6
The vaccine itself can cause the infection	4	7.4

Risk Exposure and Perceived Susceptibility of COVID-19

More than 80% of the respondents opined they are at high risk of COVID-19 because of work exposure. Only 62% felt they were at high risk of COVID-19 because of my personal exposure. About 8% thought they are

susceptible to COVID-19 because of family medical history while 15% felt they were susceptible because of underlying medical conditions (Table 4) When the respondents were asked 'if COVID-19 is a harmless disease because it is flu-like', 15.7% agreed, 6.0% were neutral and 78.3% disagreed (Table 4).

Table 4. Risk Exposure and Perceived Susceptibility of COVID-19

Variables	False (%)	Not sure (%)	True (%)
I am at high risk of COVID-19 because of my work exposure	18 (6.7)	26 (9.7)	225 (83.6)
I am at high risk of COVID-19 because of my personal exposure	47(17.7)	55(20.8)	163 (61.5)
I am at high risk of COVID-19 because of my family medical history	172 (63.2)	77(28.3)	21 (7.7)
I am at high risk of COVID-19 because of my underlying medical conditions	177 (65.1)	54(19.9)	41(15.1)

Associations between and Willingness to Accept COVID-19 Vaccine

Age was significantly associated with the willingness to accept COVID-19 vaccine among healthcare workers in Adamawa State ($p = 0.008$). HCWs older than 49 years (98.1%) were more willing to accept the vaccine compared to those between 40-49 years (87.3%) and those younger than 40 years (87.4%). The proportion of women willing to accept COVID-19 was significantly higher than men (96.3% vs 80.5%, $\chi^2 = 18.54$, $p < 0.0001$). Participants who have been working for more than 20 years (98.2%) and those working for

between 11-20 years (96.6%) were significantly ($\chi^2 = 33.24$, $p < 0.0001$) more willing to accept COVID-19 vaccine as against those who had been working for 10 years or less. Acceptability of COVID-19 vaccine varied significantly by location of residence and category of health worker. Those residing in rural areas were more willing to accept the vaccine compared to the urban dwellers (100.0% vs 89.6%, $\chi^2 = 18.54$, $p < 0.0001$) while non-frontline workers were more willing to accept the vaccine compared to their counterparts in the frontline (100.0% vs 90.8%, $\chi^2 = 7.67$, $p = 0.006$) (Table 5).

Table 5. Associations between and Willingness to Accept COVID-19 Vaccine

Variables	Total	No. (%) willingness to accept COVID-19 vaccine	χ^2	p-value
Age (years)				
<40	95(34.9)	83(87.4)	9.68	0.008
40-49	71(26.1)	62(87.3)		
>49	106(39.0)	104(98.1)		
Sex				
Male	82(30.2)	66(80.5)	18.54	<0.0001
Female	190(69.8)	183 (96.3)		

Marital Status				
With partner	232(85.3)	213(91.8)	0.14	0.704
Without partner	40(14.7)	36(90.0)		
Education				
Diploma	132(48.5)	116(87.9)	5.03	0.081
Bachelor’s degree	65(23.9)	63(96.9)		
Master’s degree or higher	75(27.6)	70(93.3)		
Years of work experience				
≤10	74(27.2)	56 (75.7)	33.24	<0.0001
11-20	87(32.0)	84 (96.6)		
>20	111(40.8)	109(98.2)		
Residence				
Rural	49(18.2)	49(100.0)	5.57	0.018
Urban	221(81.8)	198(89.6)		
Category of health worker				
Frontline	115(42.3)	99(86.1)	7.67	0.006
Non-frontline	157(57.7)	150(95.5)		
Having chronic conditions				
No	251(92.3)	228(90.8)	2.10	0.147
Yes	21(7.7)	21(100.0)		
Infected with COVID-19				
No	263(96.7)	242(92.0)	2.28	0.131
Yes	9(3.3)	7(77.8)		
Family member infected with COVID-19				
No	248(91.5)	229(92.3)	2.57	0.109
Yes	23(8.5)	19(82.6)		
Co-workers infected with COVID-19				
No	176(64.7)	158(89.8)	2.02	0.155
Yes	96(35.3)	91(94.8)		
Perceived risk of COVID-19				
Low	225(82.7)	206(91.6)	0.0002	0.988
High	47(17.3)	43(91.5)		
Perceived severity				
Not severe	162 (60.5)	151(93.2)	1.68	0.195
Severe	106(39.5)	94(88.7)		
Perceived susceptibility				
Not susceptible	229(84.2)	208(90.8)	0.96	0.328
Susceptible	43(15.8)	41(95.4)		
Perceived susceptibility				
Not susceptible	229(84.2)	208(90.8)	0.96	0.328
Susceptible	43(15.8)	41(95.4)		

Predictors of COVID-19 Vaccine Acceptability

In this study age, sex, education, years of work experience and residence status were significant predictors of acceptability of COVID-19 vaccine. Participants aged 40-49 years are about 10 times less likely to accept COVID-19 vaccine compared to those less than 40 years (OR = 0.11, 95% CI: 0.02 – 0.55, p value = 0.007). Females are about 5 times more likely than male (OR = 5.23, 95% CI: 1.78 – 15.39, p value = 0.003) to accept COVID-19 vaccine while healthcare workers residing in urban areas have three times lower odds of

accepting COVID-19 vaccine (OR = 0.11, 95% CI: 0.02 – 0.55, p value = 0.007). The higher the year of education, the more likely healthcare workers in Adamawa were willing to uptake COVID-19 vaccine. Compare to those who had been working for 10 years or less, healthcare workers with 11-20 years' experience are 21 times more likely to accept the vaccine (OR = 21.44, 95% CI: 3.58 – 12.85, p value = 0.001) and those who had been working for more than 20 years are about 37 times more likely to accept the vaccine (OR = 37.06, 95% CI: 3.57 – 38.38, p value = 0.002) (Table 6).

Table 6. Predictors of COVID-19 Vaccine Acceptability

Variables	Odds Ratio	95% Confidence Interval	p-value
Age (years)			
<40	1		
40-49	0.11	0.02 – 0.55	0.007
>49	0.25	0.02 – 2.81	0.260
Sex			
Male	1		
Female	5.23	1.78 – 15.39	0.003
Education			
Diploma	1		
Bachelor's degree	5.20	0.80 – 34.02	0.085
Master's degree or higher	1.52	0.46 – 5.05	0.493
Years of work experience			
≤10	21.44	3.58 – 12.85	0.001
11-20	37.06	3.57 – 38.38	0.002
>20			
Residence			
Rural	1		
Urban	0.32	0.16 – 0.87	0.01
Category of health worker			
Frontline	1		
Non-frontline	2.16	0.35 – 13.22	0.405

Discussion

Emerging variants of Coronavirus disease 2019 (COVID-19) claimed over 3000 lives in Nigeria and vaccination remains a means of

reducing the death toll. Despite efforts by the government to ensure COVID-19 vaccination of most residents to attain herd immunity, myths and beliefs have adversely shaped the

perception of most Nigerians, challenging the uptake of COVID-19 vaccine. Hence this study aimed to assess the factors influencing the willingness to receive COVID-19 vaccine among health care workers in Adamawa State, Nigeria.

In this online survey, 88% of the participants were vaccinated with at least one dose of COVID-19 vaccine. This proportion of acceptability of the COVID-19 vaccines in this study is higher compared to other countries in the sub-Saharan Africa region. For example, the Nzaji et al. [21] study in the Democratic Republic of Congo found that approximately 28% of health care workers were willing to receive the COVID-19 vaccines if available. The authors explained that the low willingness to receive COVID-19 vaccines can be attributed to misinformation on the quality of vaccines and spread of COVID-19 especially on social media. Misinformation and conspiracy theories have been identified as a barrier to the fight against COVID-19 [22].

Conversely, the acceptability of the COVID-19 vaccines among health care workers in this study was also higher than that reported in Saudi Arabia [23], China [24, 25], France [26], and the United States [27, 29, 30]. For instance, Shaw et al. [27] study in the United States found that about 58% of health care workers had the intention to receive COVID-19 vaccines if available. The relatively high acceptability of COVID-19 vaccines in these countries can be attributed to high publicity on potential COVID-19 vaccines in these countries. For instance, Barry et al. [28] acknowledged that their study in Saudi Arabia was conducted during the period of high publicity on potential COVID-19 vaccines, which could have influenced the attitudes and perceptions of health care workers. Also, Gagneux- Brunon et al.'s [27] study in France was conducted during the first pandemic wave. The finding of low acceptance of the COVID-19 vaccines in the present study is worrying considering the associated consequences.

Research has shown that health care workers intending to be vaccinated plan to recommend the vaccines to family and friends [31]. This suggests that low acceptance of the COVID-19 vaccine among health care workers may have a negative impact on the general population. Also, the very high proportion of COVID-19 acceptability reported in our study may be influenced by the timing of the research. This study was conducted at a time that the vaccines were readily available worldwide.

In this study, age was significantly associated with the willingness to accept COVID-19 vaccine among healthcare workers in Adamawa State. Health care workers older than 49 years (98.1%) were more willing to accept the vaccine compared to those between 40-49 years (87.3%) and those younger than 40 years (87.4%). The fact that older HCWs accepted to get vaccinated may be due to the notion that older adults and people with serious comorbidities are particularly vulnerable to worse outcomes from COVID-19 can create considerable fear amongst the elderly [32]. Carla Felice and al. demonstrated that 10% of the infected people in Italy are HCWs [33]. Furthermore, 80 medical doctors and 25 nurses died from COVID-19 related complications in Italy. Many Italian HCWs were tested and many more may have been presenting with few symptoms, which underestimated the real impact of COVID-19 on this category [34]. In terms of sex, our results were different from other studies [21, 26, 27, 34], and we observed that more women were vaccinated compared to men. The higher likelihood for male health care workers to accept COVID-19 vaccination has been attributed to increased risk perception of the disease in men compared to women [21].

Most of the unvaccinated HCWs in this study reiterated that the likely negative effects of the COVID-19 vaccine as the main reason for their refusal. This finding is consistent with other studies [27, 28, 32]. For instance, a study in the Kingdom of Saudi Arabia found concerns about the safety of vaccines and concern about

side effects as the main reasons for unwillingness to accept COVID-19 vaccines [24].

Conclusion

The attitude and uptake of vaccination by health professionals is associated with the acceptance of vaccination by patients and compliance with vaccination schedules and thus reduces aversion or hesitation towards vaccination [17]. To enhance the acceptability of COVID-19 vaccination among health care workers and the general population in Nigeria, policymakers in the health sector should address the concerns of health care workers about the safety and side effects of the COVID-19 vaccines as early as possible. Also, policymakers in the health sector should use both traditional and social media to strengthen public education on COVID-19.

Ethical Considerations

Ethical approval was sought from the Adamawa State Research Ethical Review

Board. Letter of introduction was obtained from the researcher's institution to facilitate the process of obtaining data. All the HCWs were informed about the objectives of the study, and those that agreed to participate signed a consent form before filling the questionnaire. Participation in the study was on voluntary basis and participant's confidentiality and anonymity was assured.

Conflict of interest

The author declares that there is no conflict of interest.

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