Original Article :

Prevalence and Associated Factors of Stress, Anxiety, and Depression among Healthcare Workers at Federal Medical Centre, Abeokuta, Nigeria: A Cross-Sectional Study

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Abstract

Background and Aims:
Healthcare workers are increasingly experiencing high levels of stress, anxiety, and depression, which could impact their overall health and productivity at work. This study examined the prevalence of perceived stress, anxiety, and depression among healthcare workers at the Federal Medical Centre (FMC), Abeokuta, Nigeria. It also examined the relationships between these mental health problems and the associated factors.

Methods:
318 healthcare workers participated in a cross-sectional survey by answering validated, self-administered questions. To ascertain prevalence rates of the mental health problems and their associated factors among healthcare workers. The standardized psychological assessment instruments of the perceived stress scale (PSS), the Beck anxiety inventory (BAI), and the Beck depression inventory (BDI) for measuring perceived stress, anxiety, and depression were employed. The data were then analyzed using SPSS 25.

Result:
The study found that 55% of participants experienced high levels of perceived stress, 52.2% reported severe anxiety, and 57.5% reported severe depression. Chi-square test showed significant associations were observed between perceived stress and job title with p-value=0.001, anxiety with job title (p-value=0.001), department (p-value=0.001), and years of experience (p-value=0.043). Depression showed significant association with job title (p-value=0.001), and department (p-value=0.001).

Conclusion:
Targeted mental health interventions are needed, as evidenced from the outcomes of this study showing higher frequency of perceived stress score, anxiety score, and depression score among healthcare workers. These mental health outcomes are strongly influenced by sociodemographic and occupational characteristics, including department, years of experience, and job title.

Keywords:
Perceived stress, anxiety, depression, healthcare workers, socio-demographic factors, occupational factors

Introduction:

The mental health of healthcare workers has become a critical focus, especially in light of recent global health crises that have exacerbated stress and anxiety levels. It is imperative to comprehend the psychological consequences on healthcare workers (HCWs)[1]. These frontline professionals experience significant levels of stress, which can lead to serious mental health difficulties.[2] This stress is exacerbated by long work hours, the emotional toll of patient care, and the risk of infection. Using theoretical frameworks and current research, this background section examines the prevalence of depression, anxiety, and perceived stress (DAS) in healthcare workers, describing the scope and implications of the problem.

Perceived stress refers to how an individual feels or thinks about the amount of stress they are experiencing at any one time, and this can vary significantly throughout medical professionals.[3] Describe perceived stress as the degree to which an individual views particular situations in their life as stressful. Research indicates that healthcare workers, particularly those in roles that directly entail patient care, such as physicians and nurses, report higher levels of perceived stress than the general population.[4,5]

Concerns about their personal safety and the well-being of their patients, the constant pressure to make critical judgments, and the fear of making medical errors are all common causes of anxiety in healthcare workers.[6] The prevalence of anxiety symptoms among healthcare workers has been found to be much greater during health crises, with rates varying depending on specific employment, exposure to infected patients, and the availability of protective measures.[7] The uncertainty and rapid changes in protocols that occur during health crises further exacerbate the anxiety levels of these professionals.[8]

Research indicates that depression is relatively prevalent among healthcare professionals, which is concerning since it might affect their capacity to perform their duties, deliver high-quality patient care, and preserve their own well-being.[9,10] The emotionally demanding nature of the healthcare industry, emotional exhaustion, and the pain of losing patients can all worsen depressive symptoms. Because mental health issues are stigmatized in the medical community, healthcare practitioners may not receive the necessary assistance, which can lead to a cycle of mental anguish.[11]

The emotional well-being of healthcare workers is vital to the smooth functioning of healthcare systems. The quality of patient treatment, the way healthcare is delivered, and the system's overall resilience are all impacted by excessive levels of stress,

anxiety, and depression in addition to an individual's health.[12] These issues require a comprehensive approach that includes organizational support, mental health resource access, and work-related stress reduction strategies.[13] The high prevalence of perceived stress, anxiety, and depression among healthcare workers highlights a significant problem facing the sector. Understanding these issues is necessary to create effective interventions and support systems that safeguard the mental health of these essential professionals.

The growing prevalence of mental health issues among healthcare workers (HCWs) is a significant issue that requires immediate and focused attention from the healthcare sector. This complicated issue, which includes depression, anxiety, and perceived stress, poses a severe danger to the standard of patient care, worker productivity, and the overall efficacy of the healthcare system. The strains that healthcare personnel face—such as high stress levels, exposure to pain and death, and the constant risk of infection—exacerbate the problem, which is particularly noticeable during global health emergencies.

Even though the need of mental health assistance for healthcare professionals is recognized, there is still a severe paucity of resources available in Nigeria.[14] To the best of our knowledge, this article is one of the first to report on the prevalence of perceived stress, anxiety, and depression (DAS) among healthcare workers (HCWs) in Nigeria after the recent pandemic. Since the existing support networks are often inadequate, underfunded, or unable to meet the specific requirements of health care workers, there aren't many effective interventions that could reduce these mental health difficulties in Nigeria.[14]

Although there is a scarcity of research focusing especially on Nigerian healthcare workers, understanding the perceived stress, anxiety, and depression levels among healthcare workers is crucial for developing targeted interventions that can enhance their well-being and productivity. Recent studies have revealed the increasing occurrence of mental health crises among healthcare workers globally.[15] This study intends to close this gap by investigating the perceived levels of stress, anxiety, and depression among Nigerian healthcare workers as well as the association of these levels with sociodemographic, and occupational factors. To give a thorough grasp of the variables influencing stress and mental health issues in this setting, this study uses validated scales for measuring perceived stress, anxiety, and depression. The results should help healthcare administrators and policymakers implement stress management programs

and efficient mental health support systems in Nigeria's healthcare system. This study aims to determine the respondents' levels of stress, anxiety, and depression as well as the variables, such as socio-demographic and occupational factors, that are associated with these conditions.

Materials and Methods:

Study Design and Study Population:

This cross-sectional survey was conducted between July 4 and July 18, 2024. The study effectively gave a quick overview of how often a particular phenomenon is in a population. In this instance, the design is appropriate for comprehending the present reported stress, anxiety, and depression levels among the healthcare workers at the Federal Medical Center in Abeokuta, Nigeria.

For this cross-sectional study, 326 questionnaires were distributed in total; however, 318 participants consented to participate and returned their surveys, resulting in a 97% response rate. As a result, 318 participants in all were used in the study. English is the official language, and all study participants are medical and non-medical healthcare professionals working at the Federal Medical Center in Abeokuta, Ogun State. These professionals include doctors, nurses, pharmacists, laboratory technicians, physiotherapists/occupational therapists, medical laboratory scientists, secretaries, administrative/clerical officers, work/engineering, computer/ICT, and transport officers.

Sample Size Calculation:

Cochran's Sample Size Formula Cochran's:

This is used to compute an ideal sample size for a desired level of precision; it is recommended to be used for studies with infinite populations.

$$n = \frac{z^2 x\ p(1-p)}{d^2}$$

Whereby:

n is the calculated sample size.

z is the statistic that defines the level of confidence required.

p is an estimate of the key indicator to be measured by the survey in the population group of interest.

d is the desired level of precision, or the margin of relative error to be obtained.

Generally, z = 1.96, which is the z-statistic for the 95% confidence level.

If the expected estimate of the key indicator (*p*) is not known, the value of 0.5 (or 50%) is used because it produces the largest sample size (for a given value of *d*).

Common values for d for national level estimates are usually around ±5% for indicators with estimated prevalence in the range of 20%–80%.

$$n = \frac{(1.96)2 \times 0.5\ (1 - 0.5)}{(0.05)^2} = 384$$

Cochran's Modified Formula for Finite Populations:

A slightly modified formula was used when the size of the population was known.

$$n = \frac{n_0}{1 + \frac{n_0 - 1}{N}}$$

n0: Cochran's sample size computed using the formula for ideal sample size = 384

N: the size of the population = 2158 Health CareWorkers.

As an example, let's look at the same problem as before but for a finite population of N = 2158 health care workers. While the theoretical sample of 384 participants computed before could still be used, was it necessary? The necessary sample size may be smaller.

$$\mathbf{n} = \frac{\mathbf{384}}{\mathbf{1 + \frac{384-1}{2158}}} = \mathbf{326}$$

The result of this computation indicated that for smaller populations the number of subjects (sample size) could be smaller (326 vs. 384) for the researchers to be reasonably confident of the findings. This sample size of 326 is deemed sufficient to provide reliable estimates of the prevalence of perceived stress, anxiety, and depression among healthcare workers.

SamplingTechniqueandDataCollection:

Stratified sampling technique was employed in recruiting participant for the study. Healthcare workers were divided into strata based on their job titles and simple random sample was drawn from each stratum to ensure that every member of both medical and non-medical staff has an equal chance of being selected for the study. The selected healthcare workers were given questionnaires to complete in order to collect data. Clear instructions were given to guarantee accurate completion of the surveys, which were administered in person. As a result, 318 participants in all were chosen for the study, and they were given 15 minutes to finish the questionnaire.

Questionnaire:

The study's questionnaire has already been validated in several populations, including healthcare professionals. However, from June 27, 2024, to July 4, 2024, a pilot test was carried out using 20% of the main study's sample size (326 sample size) in order to guarantee the validity of the instrument in the setting of this investigation.[16] The self-administered questionnaire was therefore pre-tested on 20% of the sample size before the study was conducted among the respondents. This was done among healthcare workers at Sacred Heart Hospital, Lantoro Road, Abeokuta, Nigeria, who shared similar characteristics with the subjects in order to verify the questionnaire's validity and reliability as well as its clarity.

The standardized psychological assessment instruments were used to collect data. These are validated tools that are used consistently and reliably across various people and contexts to measure perceived stress, anxiety, and depression. The validated standardized self-administered questionnaire was given at random to the healthcare workers at Federal Medical Center in Abeokuta, Nigeria. Examples are the Perceived Stress Scale (PSS), Beck Anxiety Inventory (BAI), and Beck Depression Inventory (BDI). High reliability and validity for assessing the prevalence of perceived stress, anxiety, and depression in the study population as well as identifying factors linked to higher levels of these conditions were confirmed by the validation of the Perceived Stress Scale (PSS), Beck Anxiety Inventory (BAI), and Beck Depression Inventory (BDI) among healthcare workers.

Data Analysis:

SPSS version 25 was used to analyze the data. All variables were described using descriptive statistics, and the normality of all numerical data was checked. Descriptive summary measures were used to present the respondents' descriptive characteristics: frequency and the percentage were used for categorical variables (e.g., gender, job title, department, and working more than 40 hours per week) and median and interquartile range (IQR) were used for non-normally distributed numerical variables (e.g., age, years of experience, and so on).

Additionally, to facilitate bivariate analysis (chi-square), the non-normally distributed continuous data representing perceived stress, anxiety, and depression were transformed into categorical data. In the domains of research, policy formulation, and practical application, continuous variables are frequently transformed into categorical variables through the establishment of cut points that delineate the boundaries among different categories. This process necessitates critical decisions regarding the number of categories to be established as well as the specific cut-point values to be employed.[17] The respondents' perceptions of depression, anxiety, and stress did not follow a normal distribution. Therefore the median was used as the cut-off point to categorize mental health. The perceived stress scores were categorized into normal perceived stress (score below the median value) and high perceived stress (score equal and above the median value). The anxiety scores into normal and high anxiety, and the depression scores into normal and high depression, respectively. This allowed for the investigation of the association between perceived stress, anxiety, and depression and the independent variables

(respondents' sociodemographic and occupational characteristics). At $p<0.05$, a significant level was established.

The Federal Medical Centre, Abeokuta Health Research Ethics Committee (HREC) for Research Involving Human Subjects granted ethics approval to carry out the study on June 26, 2024, with HREC Assigned Number: NHREC/08/10-2015. All healthcare workers who agreed to take part in the survey were then given an informed consent form that was described on a sheet.

Results:

Forty five % of them fell into the normal perceived stress group, with a median of 81.0 and an interquartile range of 4.0. The perceived stress ranged from 69 to 93. 47.8% of them fell into the normal anxiety group, which had a median of 43.0 and an interquartile range of 5.0, with anxiety ranging from 35 to 48. With a median of 73.0 and an interquartile range of 8.0, the depression ranged from 57 to 81. Of them, 42.5% fell into the normal depression category, which is defined as having a depression score of less than 73. According to socio-demographic and occupational characteristics, the majority of respondents are under 32 years old, female (58.5%), administrative officers (43.4%), non-medical (60.1%), and have less than 11 years of experience (75.0%). Table 1 also shows that 36.4% of respondents work more than 40 hours per week.

Table1: Distribution of socio-demographic, occupational characteristics and perceived stress, anxiety and depression among the respondents.

Factors	Frequency	Percentage (%)	Median (IQR)
Gender			
Male	132	41.5	
Female	186	58.5	
Age group (years)			32.0 (14)
<32	161	50.6	
≥32	157	49.4	
Job title			
Medical doctor	21	6.6	
Nurse	56	17.6	
Physiotherapy/occupational therapy	2	6	
Medical laboratory scientist	11	3.5	
Medical technician	32	10.1	
Pharmacist	5	1.6	
Secretary	12	3.8	
Administrative officer/clerical	138	43.4	
Work/engineering	17	5.3	
ICT/computer	17	5.3	
Transport officer	7	2.2	

Department			
Medical	129	39.9	
Non-medical	191	60.1	
Working more than 40 hours per week			
Yes	16	36.4	
No	28	63.6	
Years of experience			11.0 (2)
<11	33	75.0	
>11	11	25.0	
Perceived stress score			81.0 (3)
<81 (normal)	143	45.0	
≥81 (high)	175	55.0	
Anxiety score			42 (7)
<42 (normal)	152	47.8	
≥42 (high)	166	52.2	
Depression score			73 (8)
<73 (normal)	135	42.5	
≥73 (high)	183	57.5	

Notes: Median value is the cut-off point for all non-normally distributed variables, statistical test = normality test, and $p<0.05$

Association of perceived stress with socio-demographic and occupational characteristics of the respondents:

The analysis shows that 143 (45.0%) of the respondents had normal perceived stress and 175 (55.0%) had high perceived stress among the respondents.

Table 2: Association of Socio-Demographic, Occupational Characteristics and Perceived Stress.

Level of Perceived Stress among the Respondents					
Factors	**Normal n = 143 (45.0%)**	**High n=175 (55.0%)**	**df**	**X^2**	**p-value**
Gender			1	1.666	0.197
Male	65	15			
Female	78	35			
Age group (years)			1	2.215	0.137
<32	79	82			
≥32	64	93			
Job title			10	29.383	0.001*
Medical doctor	6	15			
Nurse	21	35			
Physiotherapy/occupational therapy	1	1			
Medical laboratory scientist	5	6			
Medical technician	21	11			
Pharmacist	1	4			
Secretary	0	12			
Administrative officer/clerical	62	76			

Work/engineering	8	9			
ICT/computer	12	5			
Transport officer	6	1			
Department			1	0.236	0.627
Medical	55	72			
Non-medical	88	103			
Working more than 40 hours per week			1	0.023	0.879
Yes	100	121			
No	43	54			
Years of experience			1	0.765	0.382
<5	81	90			
≥5	62	84			

Statistical test = Chi-square test, p<0.05 from bivariate analysis.

Table 2 shows the results of the bivariate analysis examining the association between perceived stress and the independent variables which include socio-demographic and occupational characteristics. However, from the bivariate analysis, most of the independent variables did not show any significant association with perceived stress level except using job title (p=0.001).

Association of anxiety with socio-demographic and occupational characteristics of the respondents:

The analysis shows that 152 (47.8%) of the respondents had normal anxiety and 166 (52.2%) had high anxiety among the respondents.

Table 3: Association of Socio-Demographic, Occupational Characteristics and Anxiety.

Level of Anxiety among the Respondents					
Factors	**Normal n = 152 (47.8%)**	**High n=166 (52.2%)**	**df**	**X^2**	**p-value**
Gender			1	1.249	0.264
Male	68	64			
Female	84	102			
Age group (years)			1	1.238	0.266
<32	72	89			
≥32	80	77			
Job title			10	99.793	0.001*
Medical doctor	21	0			
Nurse	56	0			
Physiotherapy/occupational therapy	2	0			
Medical laboratory scientist	9	2			
Medical technician	3	29			
Pharmacist	1	4			
Secretary	1	11			

Administrative officer/clerical	80	58			
Work/engineering	10	7			
ICT/computer	8	9			
Transport officer	4	4			
Department			1	13.952	0.001*
Medical	77	50			
Non-medical	75	116			
Working more than 40 hours per week			1	0.413	0.521
Yes	103	118			
No	49	48			
Years of experience			1	4.115	0.043*
<5	73	98			
≥5	79	67			

Statistical test = Chi-square test, p<0.05 from bivariate analysis.

Table 3 shows the results of the bivariate analysis examining the association between anxiety and the independent variables which include socio-demographic and occupational characteristics. However, from the bivariate analysis, most of the independent variables did not show any significant association with anxiety level except job title (p=0.001), department (p=0.001), and years of experience (p=0.043).

Association of depression with socio-demographic and occupational characteristics of the respondents

The analysis shows that 135 (42.5%) of the respondents had normal depression and 183 (57.5%) had high depression among the respondents.

Table 4: Association of Socio-Demographic, Occupational Characteristics and Depression.

Level of Depression among the Respondents					
Factors	**Normal n = 135 (42.5%)**	**High n=183 (57.5%)**	**df**	**X^2**	**p-value**
Gender			1	0.049	0.825
Male	57	75			
Female	78	108			
Age group (years)			1	0.284	0.594
<32	66	95			
≥32	69	88			
Job title			10	158.340	0.001*
Medical doctor	21	0			
Nurse	52	4			
Physiotherapy/occupational therapy	2	0			
Medical laboratory scientist	0	11			
Medical technician	0	32			

Pharmacist	0	5			
Secretary	1	11			
Administrative officer/clerical	43	95			
Work/engineering	0	17			
ICT/computer	13	4			
Transport officer	3	4			
Department			1	23.856	0.001*
Medical	75	52			
Non-medical	60	131			
Working more than 40 hours per week			1	0.201	0.654
Yes	92	129			
No	43	54			
Years of experience			1	1.761	0.184
<5	67	104			
≥5	68	78			

Statistical test = Chi-square test, p<0.05 from bivariate analysis

Table 4 shows the results of the bivariate analysis examining the association between depression and the independent variables which include socio-demographic and occupational characteristics. However, from the bivariate analysis, most of the independent variables did not show any significant association with depression level except job title (p=0.001), and department (p=0.001).

Discussion:

Prevalence of Perceived Stress, Anxiety and Depression among the Respondents:

A smaller percentage of respondents reported lower levels of stress, while the majority reported higher levels, according to this study's findings. Similar findings were reported in a related study by Oni et al[18] that examined the prevalence and correlates of job stress among medical staff in secondary health centers in a city in Nigeria. The likelihood of experiencing occupational stress was higher among physicians (42.1%), health administration staff (31.3%), pharmacists (28.6%), nurses (23.5%), and laboratory workers (23.1%).[18] This study found that occupational stress is more common among physicians and other healthcare workers. The results of this study were likewise similar to those of another study by Olude et al.[19] The study showed that 62.4% of the population experienced stress, and nurses were more likely than doctors to suffer from these mental health conditions.

The results of the present study showed that most respondents reported higher degrees of anxiety, whereas fewer respondents reported lower levels. In a related study by Adibi et al,[20] the GAD-7

and GAD-2 instruments revealed that the prevalence of anxiety by health care workers was 32.04% (95% CI: 26.89–37.19, I2 = 98.2%, p < 0.001) and 22.62% (95% CI: 9.01–36.24, I2 = 97.7%, p < 0.001). 30.5% was the overall prevalence of GAD (95% CI: 25.58–35.42, I2 = 98.4%, p < 0.001).

According to this study's findings, the majority of respondents reported higher degrees of depression, whilst a smaller percentage reported lower levels. A related study was conducted in Egypt, a cross-sectional survey by Aly et al,[21] examined the prevalence of stress, anxiety, and depression among healthcare personnel. The data was analyzed using descriptive statistics, which revealed that 94% of individuals had mild to severe depression, 90.5% had some degree of anxiety (with mild anxiety being the most common), and 98.5% had moderate to severe stress.

Associated factors of perceived stress, anxiety and depression with socio-demographic and occupational characteristics:

Job title is the only occupational and socio-demographic factor in this study that has a statistically significant association with respondents' perceptions of stress (p=0.001). This finding is in line with another study by Prasad et al,[22] which was a nationwide cross-sectional survey study that examined the prevalence of stress and burnout among US healthcare professionals. According to the study, the prevalence of reported stress among nurses (p=0029), nursing assistants (p=0.001), and respiratory therapists (p=0.014) was significantly associated with job title. Compared to the other job titles, doctors are around 15 times more likely to have high perceived stress, while nurses and pharmacists are about 10 and 24 times more likely to have high perceived stress, respectively.

The findings of this study are contrary with a study by Ab Aziz et al [23] in Malaysia which found that healthcare workers' job stress was more common in the medical group compared to the non-medical group. Although in this study medical professionals showed a higher perceived stress but were lower compared with the administrative/clerical workers in the hospital. This suggests that a particular job title is linked to a higher level of perceived stress. The variances in the reported levels of perceived stress may be attributable to the disparities among the nations involved, particularly regarding their infrastructure development, regulations concerning occupational health and safety, available services, complexity of work responsibilities, employee status, and overall working environments.[24]

While job title (p=0.001), department (0.001), and years of experience (0.043)

had a significant association with anxiety among healthcare workers, no other socio-demographic or occupational characteristics in this study had a statistically significant association with anxiety among the respondents. This result is in line with another study by Liu et al,[25] that examined the prevalence of anxiety and its contributing factors among Chinese medical professionals during the COVID-19 pandemic. Medical staff who had direct contact with COVID-19-infected patients reported higher anxiety scores than those who had not (β value = 2.33, confidence interval (CI) 0.65–4.00; P = 0.0068). According to the study, which also found a significant association between job title and anxiety prevalence showed that other job titles, laboratory technicians are almost 13 times more likely to have high anxiety, and secretaries are roughly 15 times more likely to experience it. The result of this study is also comparable to that of a study by Uz et al,[26] that examined the levels of anxiety, depression, and burnout among Turkish healthcare professionals in Turkey. In multivariate analysis, the study found that having any type of addiction (OR 2.562, p = 0.019), being a nurse (OR 4.671, p = 0.044) or medical secretary (OR 4.013, p = 0.048), and being required to use a mental health support line (OR 4.641, p = 0.005) greatly elevated the likelihood of anxiety.

None of the sociodemographic and occupational characteristics in this study showed a statistically significant association with depression among the respondents, with the exception of department (0.001) and job title (p=0.001), which were significantly associated with depression among healthcare workers. This result is comparable to that of a study by Xiao et al,[27] that examined the psychological effects of the COVID-19 pneumonia epidemic on healthcare workers in China. According to the study, junior employees who had greater rates of depression (56.7%) than their senior counterparts had a significant association (p=0.017) between their job title and depression prevalence. Another study by Jaber et al,[28] showed a statistically significant association between depression, and job title. The study examined depression, anxiety and stress in healthcare professionals. According to the study, participants' occupations and anxiety were significantly associated (p = 0.004), and their job titles and depression were significantly associated (p = 0.044). Stress, anxiety, depression, burnout, were all found to have significant positive associations.

In the present study, it is observed that the prevalence of depression is significantly lower within the medical staff, whereas it is considerably elevated among the non-

medical staff. Consequently, it is imperative that further research on perceived stress, anxiety, and depression be conducted among healthcare workers in Nigeria, with particular emphasis on non-medical healthcare workers, to enhance awareness regarding these mental health issues, which will ultimately mitigate the exposure of healthcare workers to such conditions in their professional environment.

Limitations:

This study does not provide definite information about the cause-and-effect relationship of the variables. This is because this study only offers a snapshot of a single moment in time and cannot consider what happens before or after the snapshot is taken.

Another limitation of this study is that it's a cross-sectional study among health workers in the study location, which involved the description of dependents in a self-reporting questionnaire. Therefore, the accuracy of the study relied on the morality and perception of respondents in answering the questionnaire.

Lastly, the samples of this study were limited only to federal medical centre healthcare workers because of the time and financial limitations and cannot be generalised for all healthcare workers in Nigeria. Thus, the findings of this study would only be generalised to the population in question.

Conclusion:

Targeted mental health interventions are needed, as evidenced from the outcomes of this study showing higher frequency of perceived stress score, anxiety score, and depression score among healthcare workers. These mental health outcomes are strongly influenced by sociodemographic and occupational characteristics, including department, years of experience, and job title. Improving the mental health of healthcare workers requires addressing these concerns through specialized training and regulatory reforms.

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Ethics and Consent Declarations:

Ethical clearance was firstobtained from Federal Medical Centre, Abeokuta Health Research Ethics Committee (HREC) for Research Involving Human Subjects, with HREC Assigned Number:

NHREC/08/10-2015, dated 26 June, 2024. All healthcare workers who agreed to take part in the survey were then given an informed consent form that was described on a sheet.

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Authors' Contribution:

Author 1: research design, questionnaire development, data analysis, writing of manuscript, and review of the manuscript.

Author 2: Proposal writing, research design, questionnaire development, and data collection.

Author 3: review of the manuscript.

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