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Assessment of the mental health status of emergency room nurses in two tertiary hospitals in Ogun State, Nigeria

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Abstract

Introduction: Emergency Room (ER) nursing can be very stimulating, but can also be demanding. Nurses in the ER may be exposed to traumatic events which have a toll on their mental wellbeing; these however have not been adequately studied especially in developing climes. This study therefore sought to assess the mental health status of ER nurses in selected tertiary hospitals in Ogun State.

Materials and Methods: The research utilized a quantitative cross-sectional design conducted within a six-week period between February 2024 to March, 2024 in Ogun State, Nigeria. An aggregate of 117 nurses were engaged for the study adopting a structured questionnaire composed of standardized instruments to evaluate mental health status of emergency room nurses. Data was analyzed using descriptive statistics, Chi-square test, and SPSS version 28.0.

Results: There was an even age distribution among the study participants with majority (88%) being females and staff nurses (44.6%). The findings showed that 61.4% of the respondents stated to have had signs of burnout, anxiety or depression within the space of a year. However, 45.8% did not feel adequately supported in managing work related stress and mental health challenges. On standardized assessment, it was further revealed that 27.7% were shown to have mild to severe levels of anxiety while a substantial proportion (81.9%) were assessed as having moderate to severe clinical insomnia.

Conclusion: Emergency room nurses are prone to work related mental health challenges which may often be neglected and left without adequate management.

Keywords: Anxiety, Emergency room nursing, Insomnia, Mental health status, Work related stress

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Introduction

Emergency Room Nursing (ERN) can be very stimulating, but can also be unpredictable. ER nurses are routinely involved in multiple stressful incidents that are nerve-wracking and emotionally draining which may have direct or indirect impact on their mental status (1). These incidents include resuscitation efforts to those requiring urgent medical attention, witnessing the deaths of persons that may not respond to the urgent attention administered. ER nurses are also exposed to violent behavior from families or careers of patients on a regular basis (2). In addition to the ER nurses' role in emergency situations, they also play vital roles in speaking with hysterical family members who may have deep concerns about their relatives in life threatening conditions.

Furthermore, the activities of the emergency room often leads to long irregular working hours, coupled with shortage of staff as a result of high turn-over (3). This ultimately induces significant stress for individuals engaged in emergency nursing, so elevating their susceptibility to anxiety, burnout, depression and post-traumatic stress disorder, conditions that may impair their effectiveness and compromise the care outcome.

Poor psychological health among healthcare providers exerts detrimental effects on both personal well-being and professional functioning. At the individual level, such psychological distress is associated with heightened risks of suicide, substance use disorders, and the development of physical morbidities, including disorders of the heart, muscles, bones, and metabolism (4) is linked to diminished clinical competence, increased likelihood of medical errors, impaired communication, higher rates of absenteeism, reduced job performance, and elevated staff turnover. These negative outcomes ultimately jeopardize patient care quality and safety at the emergency room. More specifically, there are concerns that ER nurses' working in high-risk clinical environments characterized by persistent patient overload are particularly susceptible to adverse mental health outcomes. The continuous exposure to such demanding conditions may result in a disproportionate psychological burden compared to those in lower-risk settings (5,6).

Mental health disorders among health workers have been the subject of several researches over the years. In a study conducted by Silva and Marcolan in the eastern part of Sao Paulo, it was observed that 95.24% of emergency room nurses were diagnosed with depressive symptoms with most having it at a mild to moderate level of intensity (7). In the same vein, Nobre et al. in a burn-out assessment of nurses in the regional emergency response services of Lisbon noted that 59.4% of nurses presented total burn-out which was work related. The study pointed out that decreasing age combined with extended years of service in the institution adversely increase the level of burnout (8).

An individual's cognitive and emotional health is usually assessed by the psychiatric status examination, contextually that of the emergency room nurses. Assessment of mental health status to aid prompt diagnosis and intervention should be a routine for nurses working in the emergency unit. The mental status examination evaluates an individual's current psychological functioning by assessing general appearance, behavior, the presence of abnormal beliefs or perceptions (such as delusions or hallucinations), mood, and various domains of thought process, including alertness, awareness and recall. This assessment is indicated for individuals presenting with altered mental status or progressive cognitive impairment, whether acute or chronic in nature which the peculiarity of the emergency room can predispose a nurse to (9-14).

There are mental health instruments which are various assessment tools employed to evaluate a person's mental health wellbeing and to detect possible indicators of psychological distress or disorders. These instruments assist clinicians in gaining insight into a person's condition and in informing therapeutic decisions; however, they are not diagnostic in themselves and are primarily intended to highlight areas of concern. Commonly used examples include the assessment instruments used included the General Health Questionnaire (GHQ), Generalized Anxiety Disorder scale (GAD-7), Insomnia Severity Index (ISI), Patient Health Questionnaire (PHQ), and the Depression, Anxiety, and Stress Scale (DASS-21) is another standardized measure frequently applied across diverse contexts, with demonstrated effectiveness in differentiating manifestations of depressive, anxious, and stress-related conditions in clinical and community populations (10).

Though regular assessment of the mental health status of health professionals have gained recent attention and proved effective in other climes especially among patients, there is a want of data on the mental health status among emergency room nurses in Nigeria, where a high burden of occupational mental strain exists. There is therefore a need to systematically evaluate the mental health status of the emergency room nurses to see the possibility of adapting the tool as a routine practice in health institutions in Nigeria. Hence, this study aims at assessing the mental health status of emergency room nurses in tertiary hospitals in Ogun State.

Materials and Methods

This study was conducted using cross-sectional design on emergency room nurses of the two selected tertiary hospitals in Ogun State, Nigeria for a six-week period between February 2024 to March, 2024. A total of 117 emergency room nurses (from children emergency unit, adult emergency unit and gynecology emergency unit) were recruited for the study. The study adopted the quantitative method. This design also allowed for an assessment of the mental health status of emergency room nurses in two selected tertiary hospitals in Ogun State. The quantitative phase involved a cross-sectional survey conducted within a six-week period among emergency room nurses in the tertiary hospitals in Ogun State using a structured questionnaire. This phase quantified the mental health status of emergency room nurses to gain insights of respondents' experience and perspective on the subject of mental health status and standardized instruments used for its assessment.

The research setting included Babcock University Teaching Hospital, Ilisan Remo and Federal Medical Center, Abeokuta all in Ogun State. These hospitals are the main tertiary hospitals in Ogun State where emergency room nurses are frontline caregivers.

Sample size for this research was derived using the Slovin's formula and a total of 117 emergency room nurses were recruited. The study utilized purposive sampling technique to engage emergency room nurses in tertiary hospitals in Ogun State which are participants who met the eligibility criteria. All the hospitals used in the context of this study operate a shift duty schedule on rotational basis. Hence all nurses participating had experienced all the types of shift duty.

Inclusion criteria: All registered nurses in the emergency room which includes children and adult emergency units from different cadres will participate in the study.

Exclusion criteria: All other nurses and other health workers that do not work in the emergency room were excluded. Nurses already diagnosed with any mental health disorder were excluded from this study. Also, nurses with history of smoking and any other established underlying diseases were excluded as well.

A well-structured questionnaire adapted from a list of standardized and globally used instruments including Beck's Depression Inventory (15), Beck's Anxiety Inventory (16), Insomnia Scale (17), and Depression Anxiety Stress Scale-21 (18) was used for data collection. Other questions for general mental health status assessment were also included. A preliminary test was carried out to determine the credibility of the instrument which yielded a positive outcome. A reliability test was further conducted to ascertain the consistency and dependability of the questionnaire which gave Cronbach's alpha value of 0.915, a standard criterion.

A letter of introduction was collected from the nursing department of Babcock University to Chairman of Hospital Research Committee of Babcock University Teaching Hospital and Federal Medical Center, Abeokuta respectively. The questionnaire was administered as an online survey but paper-based and was printed for those that could not access the form online. The questionnaire was administered by the researcher using English language.

Approval letter and written permission were collected from the tertiary hospitals prior data collection. Informed consent was duly signed by each respondent before completing the questionnaire. No participant's name was required as part of the study and preservation of each respondent's records was highly emphasized and maintained throughout the study. Each participant's termination at any point in time of the study was also voluntary. The collected information for the quantitative data was reviewed, coded and statistically analyzed by using the statistics package for the social science (SPSS) version 28.0. Descriptive analysis was also carried out with categorical variables expressed as frequency and percentages. Relationship between variables was derived using Chi-square test.

Result

Table 1 presents the socio-demographic variables of the participants. In relation to age, the participants were categorized into different groups; 10.8% were aged under 25, 2.4% were aged 25-30, 16.9% were aged 31-35, and 9.6% were aged 36-40, 12.0% were between 41-45, 12% were also between the range of 46-50 while 20.5% aged between 51 and above. Gender distribution revealed that 12% of participants were male and 88% were female. Highest level of nursing education is as follows, 24.1% had a diploma in nursing, 59% had a baccalaureate's degree in nursing science, 14.5% had a master's degree in nursing science while 2.4% had a doctoral degree in nursing education. For their current position, 44.6% are staff nurses, 13.3% are charge nurses, 2.4 % are nurse educators, 34.9% are nurse managers and 4.8% are classified as others.

Table 1. Socio-demographic variables of the participants

Characteristics/variable	Rate (n)	Percentage (%)
Age		
Under 25	9	10.8
25-30	14	16.9
31-35	13	15.7
36-40	8	9.6
41-45	10	12.0
46-50	10	12.0
51 and above	17	20.5
Gender		
Female	73	88.0
Male	10	12.0
Years of experience as an emergency room nurse		
Less than one year	14	16.9
1-5 years	31	37.3

6-10 years	12	14.5
11-15 years	9	10.8
16-20 years	6	7.2
>20 years	11	13.3
Current position		
Staff nurse	37	44.6
Charge nurse	11	13.3
Nurse manager	29	34.9
Nurse educator	2	2.4
Others	4	4.8

Table 2 presents mental health-related variables among emergency room nurses. Personal ratings of overall mental health were predominantly high, with 24.1% of respondents rating their mental health as 8 and 20.5% rating it as 9 on a scale of 1 to 10. Around 61.4% reported experiencing symptoms of burnout, anxiety, or depression in the past year. However, only 50.6% felt adequately supported in managing stress and mental health challenges in the workplace. Additionally, a significant portion (84.3%) indicated they had not sought professional help or counseling for mental health concerns related to their work, while 10.8% had sought such help. These findings suggest a considerable prevalence of mental health challenges among emergency room nurses, with a notable gap in support and professional assistance utilization.

Table 2. Respondents' assessment of their mental health status

Variables	Frequency	Percentage	Variables	Frequency	Percentage	Variables	Frequency
Personal rating of overall mental health?			Personal rating of overall mental health?			Personal rating of overall mental health?	
2	1	1.2	2	1	1.2	2	1
3	3	3.6	3	3	3.6	3	3
4	1	1.2	4	1	1.2	4	1
5	8	9.6	5	8	9.6	5	8
6	4	4.8	6	4	4.8	6	4
7	9	10.8	7	9	10.8	7	9
8	20	24.1	8	20	24.1	8	20
9	17	20.5	9	17	20.5	9	17
10	16	19.3	10	16	19.3	10	16
Have experienced symptoms of burnout, anxiety or depression in the past year			Have experienced symptoms of burnout, anxiety or depression in the past year			Have experienced symptoms of burnout, anxiety or depression in the past year	
No	29	34.9	No	29	34.9	No	29
Yes	51	61.4	Yes	51	61.4	Yes	51
Feel adequately supported in managing stress and mental health challenges in the workplace?			Feel adequately supported in managing stress and mental health challenges in the workplace?			Feel adequately supported in managing stress and mental health challenges in the workplace?	
No	38	45.8	No	38	45.8	No	38
Yes	42	50.6	Yes	42	50.6	Yes	42
Have you sought professional help or counseling for mental health concerns			Have you sought professional help or counseling for mental health concerns			Have you sought professional help or counseling for mental health concerns	

related to your work as an emergency room nurse?			related to your work as an emergency room nurse?			related to your work as an emergency room nurse?	
No	70	84.3	No	70	84.3	No	70
Yes	9	10.8	Yes	9	10.8	Yes	9

Figure 1 outlines the assessment of depressive states among participants using Beck's Depression Inventory. The majority (84.3%) fell under the category of "normal," indicating no significant depressive symptoms. A smaller portion reported "mild mood disturbance" (12.0%), while "moderate depression" and "extreme mood disturbance" were less prevalent, at 2.4% and 1.2% respectively. Overall, most participants scored within the normal range, suggesting a relatively low prevalence of depressive symptoms, with only a minority experiencing milder or more severe forms of depression according to the standardized tool.

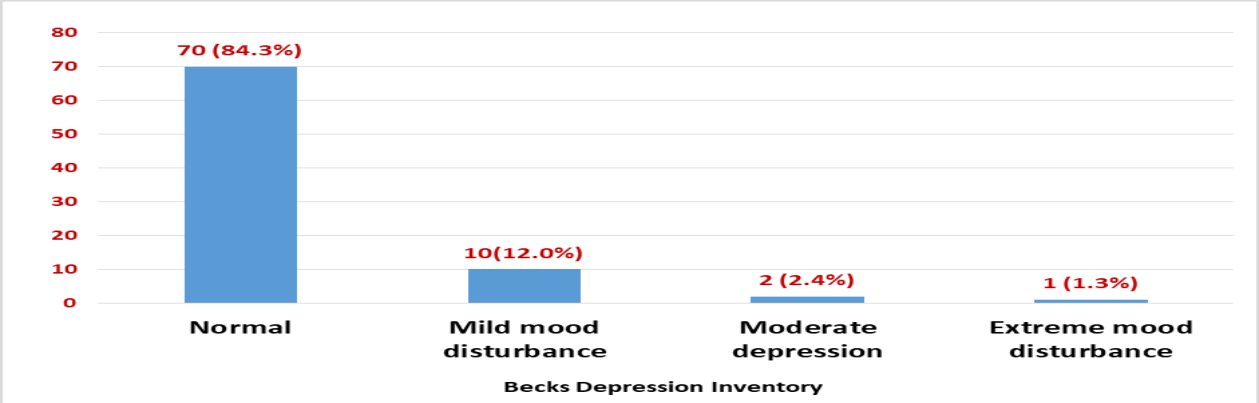


Figure 1. Assessment of participants' depressive state using Beck's Depression Inventory

Figure 2 presents the assessments of participants' anxiety levels using Beck's Anxiety Inventory. The majority (72.3%) reported "minimal anxiety," indicating no significant anxiety symptoms. A smaller proportion reported "mild anxiety" (13.3%), while "moderate anxiety" and "severe anxiety" were less prevalent, at 10.8% and 3.6% respectively. Overall, most participants scored within the minimal anxiety range, suggesting a relatively low prevalence of anxiety symptoms. However, a notable minority experienced milder to more severe forms of anxiety according to the standardized tool.

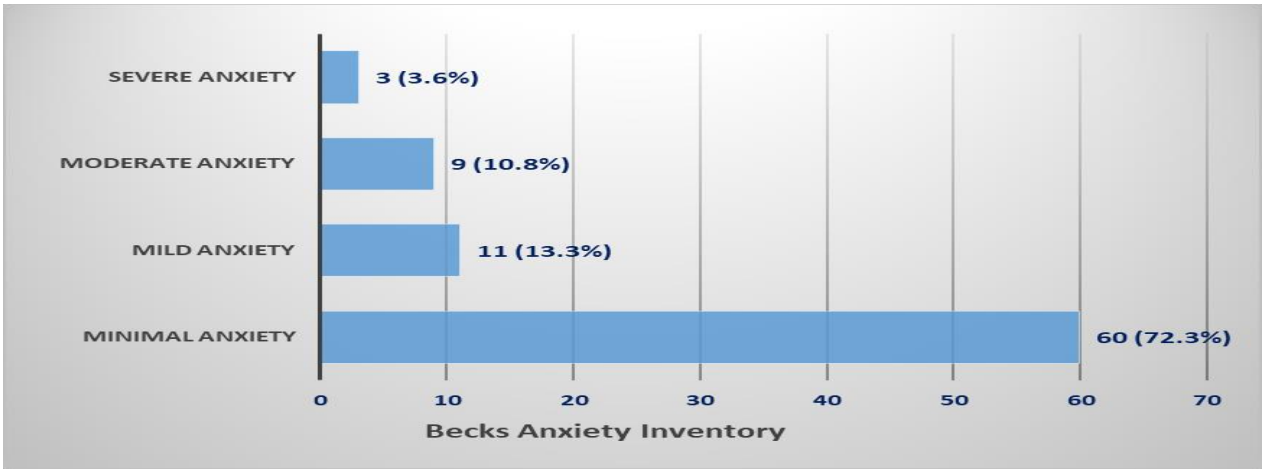
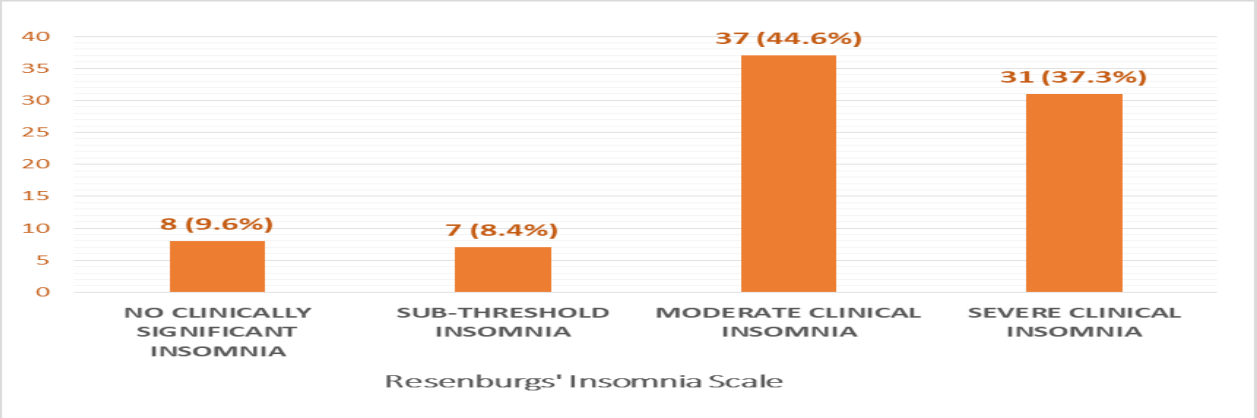


Figure 2. Assessment of participants' level of anxiety using Beck's Anxiety Inventory

Figure 3 displays data from the Rosenberg's Insomnia Scale, indicating the prevalence of various levels of insomnia among participants. A notable portion, 9.6%, reported "no clinically significant insomnia." However, a considerable proportion experienced insomnia to varying degrees, with 8.4% categorized as "sub-threshold insomnia." The majority of participants fell into categories of clinical insomnia, with 44.6% classified as "moderate clinical insomnia" and 37.3% as "severe clinical insomnia." These findings suggest a significant prevalence of insomnia among the participants, with a substantial proportion experiencing moderate to severe clinical symptoms.



Discussion

The outcomes of this study revealed substantial perspectives into the mental health challenges faced by emergency room nurses in the study area. Mental health changes were described as a change in the action of nurses, psychological distress, and a drift into depression, mental instability or emotional trauma. Overall, a majority of the participants reported experiencing symptoms of burnout, anxiety, or depression in the past year. This is consistent with prior research which has shown that emergency room nurses face a heightened susceptibility of mental health challenges, largely attributable to the demanding work related responsibilities entailing significant stress, frequent exposure to traumatic events, and extended working hours. According to Galanis et al. (19), in 16 studies including 18935 nurses among participants who met the inclusion criteria, the burden of burnout was 34.1%, self detachment 12.6%, and reduced sense of achievement 15.2% of emotional exhaustion being most significant in the study and thus establishing the fact that nurses are at greater likelihood of having mental health issues as a result of the nature of their job.

This is further substantiated by Grassman et al. (20), who investigated symptoms of depression and generalized anxiety among nurses across two years during the COVID-19 global outbreak. The findings revealed a substantial surge in both depressive and anxiety markers, with nurses exhibiting notably higher prevalence rates, largely attributed to the psychological strain of the pandemic.

Nevertheless, evaluation with Beck's Depression Inventory showed that most participants were classified within the 'normal' spectrum, suggesting no significant depressive symptoms. However, a notable proportion reported experiencing mild mood disturbance, while fewer participants reported moderate depression or extreme mood disturbance. These findings align with the notion that while emergency room nurses may not exhibit severe depressive symptoms, they may still experience fluctuations in mood and emotional well-being due to work-related stressors (7).

Consistent with this study is an observational research conducted by Boone et al. (21) among medical students employed standardized questionnaires, including the Beck Depression Inventory (BDI) and the

Depression, Anxiety and Stress Scale-21 (DASS-21), to assess depression, anxiety, and impaired sleep. The results revealed that the incidence rates of depression, anxiety, and disruptions in sleep were 43%, 44%, and 48%, respectively, suggesting that practically half of the students enrolled in medical programs experienced forms of psychological or sleep disturbances.

Similarly, Hussein et al. (22) reported that nearly 13.4% of hours spent at work were lost due to medical issues or emotional strain which in turn predict work productivity loss which was consistent with other studies conducted by Al Sabei et al., (23) which showed that specialized care nurses were discovered to have an increased rate of depression and anxiety than the population at large. Thus showing that the professional setting has a significant influence on nurses' overall mental functioning. Moreover, in a study by Raun et al., (24) in a completed survey obtained from 78 nursing staff in the emergency room, largely, the clinical nurses presented acute to extreme intensities of depression, anxiety or stress.

One of the notable findings from the study was the prevalence of insomnia among participants, as assessed using the Rosenberg Insomnia Scale. A considerable proportion of participants reported moderate to severe clinical insomnia, indicating significant sleep disturbances. Insomnia, is often linked to prolonged stress and anxiety both of which are prevalent among emergency room nurses due to the workload pressures (4). Comparing these findings with existing literature, it is evident that emergency room nurses face similar mental health challenges across different contexts. Studies conducted in various countries, including Brazil, Portugal, and the United States, have consistently highlighted the frequency of burnout, anxiety, depression, and other mental health issues amid emergency room nurses (5,9,14). These findings underscore the global nature of the problem and imperative need for interventions to promote mental health of emergency room nurses worldwide.

Several factors contribute to the mental health issues encountered by emergency room nurses. The demanding and unpredictable nature of their work, exposure to traumatic events, long work schedule, and limited resources all contribute to increased stress and psychological strain (3,8). These outcomes underscore necessity for comprehensive measures and support mechanisms aimed at fostering overall mental functioning of emergency room nurses, thereby ensuring provision of high-quality patient care.

Consistent with earlier studies, these results indicate that deficiencies in nurses' knowledge regarding mental health. For instance, Silva and Marcolan found that a high percentage of emergency room nurses exhibited depressive symptoms, yet many lacked awareness of mental health issues and available support services (7). Similarly, Alabi et al., noted significant levels of emotional exhaustion among emergency room nurses in Nigeria, indicating a potential gap in their understanding of coping mechanisms and mental health management strategies (9). Research by Nobre et al. (8), and Babapour et al., (14) supports the notion that inadequate comprehension of available psychological support and coping approaches may exacerbate burnout and other mental health issues among healthcare providers. Moreover, Härkänen et al. (4) emphasized the necessity for comprehensive mental health training programs aimed at overcoming particular challenges encountered by emergency room nurses. These programs should not only address the signs and symptoms of mental health disorders but also provide practical strategies for managing stress and seeking support.

Healthcare organizations key persons such as nursing administrators, director of nursing services, and heads of units must prioritize the application of wide-ranging mental health support programs designed for the specific needs of emergency room nurses. This comprises increasing knowledge of mental health issues, providing training on coping strategies and addressing systemic barriers to participation. By meaningfully contributing to the mental health and well-being of emergency room nurses, healthcare institutions ultimately improve patient care outcomes and create healthier work environments for all stakeholders involved.

Conclusion

Overall, the conclusions drawn from this research emphasize the noteworthy poor knowledge of mental health obstacles encountered by emergency room nurses in Tertiary Hospitals located in Ogun State,

Nigeria, the study also identifies notable gaps in the awareness, availability along with the implementation of mental health evaluation tools among emergency room nurses and underscores the importance of psychological debriefing as a potential intervention to support their well-being. The findings reveal a considerable occurrence of symptoms of burnout, anxiety, and depression among emergency room nurses. This study thus spotlights the urgent need for comprehensive interventions to promote mental health resilience among participants which includes the use of psychological debriefing and the assessment of the mental health status of the ER nurses.

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Conflict of Interests

The authors have no conflicts of interest whatsoever.

Funding

Self-sponsorship

Ethical Considerations

This article is based on a research project conducted as part of a master's dissertation in mental health nursing. Participation was voluntary, and respondents were guaranteed of the privacy of their responses. Furthermore, informed written consent was gotten from all participants prior to completing the questionnaires.

Code of Ethics

Ethical authorization for the research was gained from the relevant recognized review boards, including Babcock University Health Research Ethics Committee. (No: 022/24) and Health Research Ethics Committee of Federal Medical Center, Abeokuta (NHREC Assigned No: NHREC/08/10-2015)

Authors' Contributions

Study concept and design: Ogooluwasanya Oluwaseyi; Interpretation of data: Ogooluwasanya Oluwaseyi;

Drafting of the manuscript and final approval of the article: Dr Anokwuru Rafiat; Statistical Analysis: Dr Olusanya Temitope

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