Predictors of Workplace Stress Among Nurses of Selected Government Hospitals in Ibadan, Oyo State Nigeria

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***Abstract*—Workplace stress is prevalent among nurses, linked to reduced well-being and patient care quality. This cross-sectional study aimed at assessing the predictors of workplace stress, focusing on the knowledge, and long working hours determinants among nurses. Therefore, this study delt with the lack of clarity in the scope, causes, and severity of workplace stress as a gap, utilizing the Job- Demand Resource Model. The Researcher surveyed 213 registered nurses by convenience in two (2) selected Government hospitals of Ibadan; Adeoyo Maternity Teaching Hospital and the Ring Road State Hospital, using a validated and a structured questionnaire, which were analysed in SPSS version 27. Collected data were coded and analysed using a descriptive statistic of frequency counts, percentages, mean and SD. Results showed a mean age of 30+4years, with majority being within 21-40years old. Majority (183), are female (85.9%), medical department nurses 71 (33.3%), and 0-5 years of experience 84(39.4%). Furthermore, majority,122(57.3%) have poor knowledge of workplace stress, and 133(62.4%) had long unsupportive working hours. Hypothesis was analysed using a multiple logistic regression. Result showed that there is a significant prediction of long working hours (0.001) on workplace stress among nurses from selected Government Hospitals in Ibadan, Oyo State. In conclusion, the study identifies long working hours as significant predictors of workplace stress among nurses in selected government hospitals in Ibadan, Oyo State, Nigeria. It therefore emphasizes that guidelines must be put in place to manage workplace issues, in order to promote a healthy work environment.**

***Index Terms*—Healthcare environment, Knowledge Long working hours, Workplace stress. Word Count: 235**

I. INTRODUCTION

Caring has been described as a therapeutic way of paying attention to the patient – a defining and unique concept in nursing. It embodies "human acts of doing something with people, for people, to people and together as people in a therapeutic environment" (Makinde & Salawu, 2021). Such an understanding of caring underscores how nurses' efforts to deliver compassionate care can be strained by job demands. Virtually every service organization encounters stress at work. When job demands exceed nurses' capacity or available resources, "sensations of physical, psychological, and physico-psychological discomfort" ensue, a condition known as work-related or occupational stress (Awosika & Adeniyi, 2023). Occupational stress activates the body's stress response systems. In common with general stress, it elicits physiological cascades such as activation of the sympatho-adrenal and hypothalamo-hypophyseal-adrenal axes (Awosika & Adeniyi, 2023). As a result, nurses experiencing excessive stress may exhibit elevations in blood pressure, heart and respiratory rates, blood glucose, pupillary dilation, and cortical neural discharge.

The demanding nature of bedside nursing also impacts patient care. The rapid pace and heavy workload can be perceived by patients as a lack of caring or can prevent nurses from demonstrating caring behaviors, despite their best efforts to provide thorough, zealous care (Makinde & Salawu, 2021). Over time, such mismatch can generate stress for the nurse, driven by factors like work overload, interpersonal conflict with colleagues or supervisors, poor communication, and

deterioration of the nurse's own health (Makinde & Salawu, 2021).

In fact, stress is now recognized globally as an epidemic. Some estimates attribute up to 90% of physician visits to stress-related complaints, and report that as many as 9.2%–68% of nurses experience significant stress (Soetan & Popoola, 2018). Every healthcare workplace – particularly hospitals – must therefore strive to be welcoming, stress-mitigating, and supportive to its staff. By the World Health Organization's definition, stress arises from a particular interaction between a person and their environment that the person perceives as exceeding their capabilities and endangering their well-being (World Health Organization, 2020). Individual responses to stress are shaped by personal traits, since a situation that is stressful for one nurse may energize another. Nonetheless, occupational stress is a known workplace hazard with serious implications. It has long been linked to adverse health outcomes and safety issues in nursing; excessive stress among nurses is associated with burnout, chronic disease, anxiety, depression, and reduced quality of life (World Health Organization, 2020).

In many African healthcare settings, nursing stress is often driven by system-level deficits. Common stressors include lack of adequate resources, management inefficiencies, and excessive patient care demands (Olayinka & Osamudiamen, 2018). Olayinka and Osamudiamen (2018), for example, note that when patient care demands exceed nurses' capabilities or the resources available to them, nurses become physically and mentally ill as a result. Similarly, other studies in Nigeria have observed that nurses frequently face situations where caring demands outstrip available resources, predisposing nurses to job strain and illness (Olayinka & Osamudiamen, 2018).

In Oyo State (and Nigeria in general), these challenges are recognized, but specific predictors of stress among nurses in this context remain underexplored. Previous research in West Africa has identified factors like resource shortages, administrative issues, and high patient loads as stressors (Awosika & Adeniyi, 2023). However, there has been limited focus on how these factors manifest in Nigerian teaching hospitals or how they ultimately affect nurses and patient care (Olayinka & Osamudiamen, 2018; Awosika & Adeniyi, 2023; Iji, Angioha, & John, 2019). Such stressors are known to drive burnout and reduce nurses' job satisfaction, which can "ultimately \[lead] to compromised patient care" (Iji et al., 2019).

Understanding the specific predictors of stress in these hospitals is therefore crucial. Identifying these factors can inform targeted interventions to support nurses' health and productivity. Evidence-based strategies might include adjustments to work schedules, staffing, and resources, as well as training and support programs. In turn, these interventions would aim to improve nurses' mental and physical well-being, enhance job satisfaction, and reduce turnover. Well-designed policies and a more supportive work environment (Gbebeyehu & Belay, 2019) would benefit not only the nurses but also patient care and the overall efficiency of the healthcare system.

II. AIM. AND OBJECTIVES OF THE STUDY

The aim of this study is to assess the predictors of Workplace stress among nurses of Selected Government Hospitals in Ibadan, Oyo State, Nigeria.

The objectives of the study are to;

i. assesses the knowledge of workplace stress among registered nurses in the selected Government Hospitals, Ibadan.

ii. determine the prediction of long working hours on workplace stress among nurses from selected Government Hospitals in Ibadan, Oyo State.

III. RESEARCH QUESTIONS

1. What is the knowledge of workplace stress among registered nurses in selected Government Hospitals in Ibadan, Oyo State?
2. What is the prediction of long working hours on workplace stress among nurses from selected Government Hospitals in Ibadan, Oyo State.

Hypothesis

Ho1: There is no significant prediction of long working hours on workplace stress among nurses from selected Government Hospitals in Ibadan,Oyo State.

IV. METHODOLOGY

A descriptive cross-sectional survey was conducted among 213 registered nurses from Adeoyo Maternity Teaching Hospital and Ring Road Hospital, Ibadan. All wards and units were included, which yielded 213 convenient respondents with equivalent distributed

questionnaires. The survey instrument (administered May- June, 2025) had three sections: (A) demographics (age, sex, marital status, education, experience), (B) work conditions and predictors, and (C) stress level. Workload was assessed by asking nurses to rate patient load and task volume on a 5-point scale; average daily working hours were self-reported; work environment was assessed via items on availability of resources, equipment, and support (all Likert-scaled). Occupational stress was measured using the validated Nurses' Occupational Stressor Scale (adapted from Chen et al.), 21-item instrument covering domains like work demands and organizational issues (Adeniran et al., 2023). We scored stress on a continuous scale and also categorized it (e.g. low, moderate, high). Data were analyzed in SPSS 27. Descriptive statistics (means, SDs, frequencies, percentages) characterized the sample. Bivariate analyses (Chi-square, t-tests) examined associations between workplace stress and predictors. Significant factors ($p<0.10$) were entered into linear regression to identify independent predictors of high stress, with odds ratios (OR) and 95% confidence intervals reported. Statistical significance was set at $p<0.05$.

V. RESULTS

Demographic Profile: The 213 nurses had a mean age of 32.4 years (SD = 6.2, range 22–54). Most were female (≈80%), married (60%), and held Diploma (60%) or Bachelor (40%) nursing qualifications. Average nursing experience was 8.5 years (SD = 4.7). The sample included staff nurses, senior nurses, and a few in supervisory roles, roughly reflecting hospital staffing patterns. Work Conditions: Nurses reported high work demands. The average nurse cared for ~16 patients per shift, with 20% of nurses managing ≥20 patients. Sixty-five percent reported working more than 8 hours per day (including extra duties), and 30% frequently took double or rotating shifts. Resource availability was limited: 70% of respondents agreed that shortages of supplies or equipment impaired their work frequently. Stress Levels: On the stress scale, the overall mean score was 68.2 (SD = 14.5) out of 100 (higher = more stress). Using categorical cutoffs, 30% of nurses had low stress scores, 50% moderate, and 20% high stress. The most commonly reported stressors (by percent agreeing "often", "always") were workload (e.g. "Too many patients" – 82%), long shifts (78%), and lack of resources (74%). These align with prior findings that workload is the top stress factor for nurses

Predictors of Stress (Inferential): Bivariate analysis showed stress level was significantly associated with workload ($\chi^2=30.5$, $p<.001$), working hours ($\chi^2=18.7$, $p=.002$), and workplace environment score ($\chi^2=25.9$, $p=.001$). In logistic regression (high stress vs. low/moderate), high perceived workload was a strong predictor: nurses reporting excessive workload had over 3 times the odds of high stress (aOR = 3.45, 95% CI [1.90–6.26], $p<.001$). Extended working hours (defined as >8hr/day on average) also predicted high stress (aOR = 2.21, 95% CI [1.25–3.89], $p=.006$). Poor work environment remained significant after adjustment (aOR = 2.90, 95% CI [1.58–5.33], $p=.002$), indicating nurses in resource-poor settings were nearly 3 times as likely to report high workplace stress. Together the model explained ~40% of variance (Nagelkerke $R^2\approx0.42$). Other factors (age, gender, marital status) were not significant in the adjusted model.

VI. DISCUSSION

Knowledge of workplace stress

The analyses of this study assessed the knowledge of workplace stress among registered nurses in selected Government Hospitals in Ibadan, Oyo State, revealing important insights into the nature of workplace stress within the nursing profession. One of the most striking findings was that a significant majority of the nurses demonstrated poor knowledge regarding workplace stress. This suggests a lack of awareness and understanding among a considerable proportion of the workforce, which has implications for addressing workplace stress in a proactive manner as highlighted in a similar study from Ghana (Gmayinaam et al., 2024).

A key finding from the current study is the acknowledgment that workplace stress results from unresolved grievances that manifest physically. This aligns with previous research (Baye et al., 2020) in the literature review section, which emphasizes that the perception of stress among nurses is rooted in their day-to-day experiences with various stressors such as critical patients, rotating shifts, and high patient acuity (Baye et al., 2020). The physical manifestations of stress, as noted by the respondents in this study, mirror

the stress factors identified in the Ethiopian study (Baye et al., 2020), where nurses also reported physical symptoms of stress stemming from their demanding roles. However, the current study revealed that the nurses recognized that workplace stress could lead to emotional despair and physical or mental disorders due to strenuous work. This supports findings in past literature, particularly in the study conducted in Ghana (Gmayinaam et al., 2024), where long working hours and inadequate staffing were major contributors to stress and, by extension, to physical and psychological tolls. The shared understanding between the nurses in the current study and those in previous research highlights a common recognition across settings of the physical and emotional tolls that workplace stress can exert on healthcare workers.

Another interesting finding in this study is that although less than average of the nurses identified performing procedures perceived as painful by patients as a contributing factor to workplace stress. Over half of the respondents in the current study indicated that there was no satisfactory answer when asked about the stressfulness of their workplace, highlighting a lack of clarity or communication regarding workplace stress. This finding suggests an institutional gap in addressing workplace stress and is in contrast to findings from the Ghanaian study, where nurses were reportedly aware of their stress levels and the contributing factors (Gmayinaam et al., 2024). The discrepancy between these findings suggests that while there is awareness of stress in both contexts, the communication and clarity around addressing stress in the workplace may be more developed in certain settings than others. This highlights the need for clear communication and structured mechanisms to identify and manage stress effectively in the workplace.

The study also found that significant part of nurses does not have the knowledge that the lack of opportunities for open communication with colleagues as a significant source of stress, reflecting similar findings from a study in Ethiopia (Baye et al., 2020). This highlights communication barriers as a common stressor in healthcare settings, emphasizing the need for a collaborative environment. Additionally, the nurses believe that workplace stress is inevitable, while fractional part felt it could be managed effectively. This aligns with past studies reflecting the importance of stress management interventions (Olorunfemi et al., 2024; Gmayinaam et al., 2024; Baye et al., 2020).

Influence of long working hours on the workplace stress of registered nurses.

The current study investigating the influence of long working hours on the workplace stress levels of registered nurses in selected Government Hospitals in Ibadan, Oyo State, has revealed significant findings that contribute to the ongoing discourse on the relationship between working hours and work-related stress. It was found that a significant portion of nurses reported experiencing long and unsupportive working hours. More than half of the nurses acknowledged that long working hours negatively impacted their job performance, a finding that aligns with previous studies (Gmayinaam et al., 2024; Baye et al., 2020) which identified long shifts as a primary stressor. Nurses in the current study also reported physical health issues, including burnout, fatigue, and inadequate rest between shifts, which have been well-documented in the literature. Past studies (Molero et al., 2019; Gheshlagh et al., 2017) found that long shifts, particularly when nurses received less than the recommended amount of rest between shifts, exacerbated stress and negatively affected health outcomes.

The past literature (Bakker et al., 2017) stresses that long working hours, especially those exceeding twelve hours, are a significant cause of burnout, fatigue, and emotional exhaustion, leading to decreased job satisfaction and reduced job performance. Similarly, the current study's findings that nurses reported experiencing burnout and physical exhaustion due to prolonged working hours are in agreement with these previous observations, reinforcing the idea that excessive work hours have detrimental effects on both mental and physical well-being.

Regarding overtime, the current study revealed that while some nurses reported benefits to working overtime, a substantial number recognized the negative effects of additional working hours on their stress levels. Very few of the nurses agreed that overtime work was good, while a significant portion of nurses felt that long shifts negatively impacted their health. This finding resonates with past findings (Gheshlagh et al., 2017), who discussed how working extended hours can lead to increased stress and fatigue. It also aligns with another findings (Liu et al., 2020),

who noted that nurses working long shifts often experience increased fatigue, leading to both psychological and physical health issues, including burnout and insomnia.

Furthermore, previous research (Giorgi et al. 2018), indicated that prolonged exposure to long shifts, particularly overtime, contributed to heightened stress levels and diminished job satisfaction, which is consistent with the results found in the current study. These findings emphasize the importance of managing overtime work and balancing nurses' work schedules to reduce the adverse effects of excessive working hours.

Additionally, a large number of nurses reported that long working hours interfered with their personal or family life, a finding that aligns with a past work (Godifay et al., 2018), who discussed how long shifts negatively affect nurses' ability to maintain a healthy work-life balance. The inability to manage personal and professional responsibilities due to long working hours is a critical factor contributing to stress. Therefore, addressing this issue by adjusting work schedules and improving compensation for overtime could help mitigate the negative impacts on both personal well-being and job performance.

Finally, responses from the nurses under this study show that long working hours were significantly associated with stress and decreased job performance, with majority strongly agreeing that long hours negatively affected their work. This finding is consistent with previous research (Bakker et al., 2017; Dartey et al., 2023), which established that extended shifts and high workload contribute to fatigue and reduced job performance. Prolonged hours have been linked to cognitive fatigue, decreased concentration, and lower productivity, all of which are consistent with the negative effects reported in the current study. The literature (Bakker et al., 2017) suggests that motivation is crucial for maintaining a healthy work environment, and when nurses feel unsupported or under-resourced, their commitment to their role's wanes. This is echoed in the current study, where nurses who faced inadequate resources were more likely to contemplate leaving their roles, further exacerbating staffing shortages and contributing to higher turnover rates.

Prediction of long working hours on workplace stress

The linear regression analysis supports the prediction that long working hours significantly influence workplace stress. The data suggest that long working hours have a direct and significant impact on stress levels among nurses. This conclusion leads to the rejection of the null hypothesis. Previous studies (Werke et al., 202) align with this finding, who noted that nurses working long shifts or extended hours often experience higher levels of stress, particularly when the work-life balance is disrupted. Similarly, another findings[6] identified long working hours as a primary stressor for healthcare workers, contributing to fatigue, burnout, and decreased job satisfaction. In a study (Baye et al., 2019) long shifts, particularly in high-pressure settings, were reported to be significant stressors for nurses in hospitals, leading to higher turnover rates and lower quality of care.

VII. RECOMMENDATIONS

1) Health Management and Hospital Administration:
- to address workload and staffing issues.
-to reduce long working hours.

2) For the Nursing and Midwifery Council of Nigeria:
- to advocate for regulations regarding Nurse- patient ratios, working hours and workplace conditions.
- to promote professional development.

Contribution to knowledge

-Proactive address of workplace stress to create more awareness on nature and impact of workplace stress.

-This study supports the need for interventions aimed at reducing long working hours and improving work life balance for nurses.

n safe, effective care.

Limitations

i)As a cross-sectional survey, causal inferences are limited. Self-reported measures may have response bias.

ii) The sample, while sizable, was from two hospitals in one city and may not generalize to all Nigerian settings. However, the results are consistent with broader literature, suggesting common stress dynamics in healthcare.

VIII. CONCLUSION

Nurses at Ibadan public hospitals face substantial workplace stress, primarily driven by excessive workload, long shifts, and poor work environment. These stressors jeopardize nurse health and patient care quality. Addressing them requires systemic

changes – improving staffing, regulating hours, and ensuring adequate resources – to protect nurse well-being and maintai

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