

Workplace Stress and Nurses' Performance of Public Hospitals in Federal Capital Territory, Nigeria

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ABSTRACT: *This study investigates the impact of workplace stress on nurses' performance in public hospitals within Nigeria's Federal Capital Territory. It identifies key stressors such as work overload, workplace relationships, role conflict, and role ambiguity, and highlights the need for effective management of these factors to enhance nurse productivity. Using Cooper and Palmer's work stress model, the study links these stressors to employee performance and organizational consequences. A descriptive survey research design was adopted, with 311 nurses selected via proportionate stratified sampling from a population of 1071. Data was collected using a modified version of Rizzo's structured questionnaire and analyzed with SPSS version 25. The findings revealed that work overload positively affects productivity ($\beta=0.441$, $p<0.05$), while role conflicts ($\beta=-0.080$, $p<0.05$) and role ambiguity ($\beta=-0.0900$, $p<0.05$) negatively affect performance. Positive workplace relationships were also found to enhance productivity ($\beta =0.044$, $p<0.05$). The study concludes that workplace stress significantly impacts nurses' performance and recommends regular monitoring of workloads, fostering a positive work environment, and providing feedback opportunities to boost morale and motivation despite role conflicts. Leadership was examined as a moderating variable to gauge its influence on the stress-performance relationship.*

KEYWORDS: workplace stress, nurses' performance, public hospitals, Federal Capital Territory, Nigeria

INTRODUCTION

Workplace stress is a pervasive issue that has garnered significant attention for decades due to its detrimental effects on employees and organizations alike (Chufor & Obiagazie, 2021). It stems from the confluence of two key elements: the "workplace" and "stress," encompassing the stress

derived from carrying out daily activities within an organizational setting. While stress is an inherent part of our lives, capable of fostering the development of new skills and behaviors, excessive levels can lead to life-threatening diseases and adverse consequences (Chukwuemeka et al., 2019). The dynamic nature of change itself can act as a catalyst for distress, ultimately manifesting as stress (Gahlawat, 2022). The impact of workplace stress on employees' overall well-being cannot be overstated. When left unaddressed, it can precipitate a cascade of problems within an organization, leading to dire financial and administrative consequences, such as high turnover rates and burnout (Iskamto, 2021). The manifestations of job stress are unique to each individual, arising from physical, emotional, and psychological triggers triggered by emotionally demanding scenarios (Iskamto et al., 2019). Factors contributing to stress can originate from personal, organizational, job-related characteristics, and interpersonal relationships.

Human resources managers play a pivotal role in ensuring fairness, equality, and the total well-being of employees within organizations. Failure to appropriately manage workplace stress can result in a myriad of performance issues, ranging from absenteeism and declining productivity to, in extreme cases, loss of life (Guruge & Ban, 2021). Paradoxically, workplace stress can also be a driving force for improved performance when employees perceive new opportunities as challenges, such as a new appointment or promotion, leading to positive workplace stress (Saravanakumar, 2019). The healthcare sector, in particular, has been grappling with the widespread phenomenon of workplace stress among caregivers, including nurses, on a global scale (Mohammed, 2019). The stressors faced by nurses, which can lead to high rates of job dissatisfaction, burnout, absenteeism, turnover, and stress-related illnesses, have a direct impact on their job performance, potentially putting patients' lives at risk (Mohammed, 2019). Nursing is widely regarded as one of the most stressful occupations due to its demanding and complex nature, with hospitals often expecting nurses to make significant sacrifices, leading to exasperation. Nurses frequently find themselves in situations where they require more decision-making opportunities, and these stressors can ultimately contribute to underperformance (Babapour et al., 2022).

Employee performance, defined as the execution of tasks with the requisite skills and experience within a specified timeframe to achieve the desired outcome (Ahmad et al., 2018), is critical to organizational success. As such, organizations should invest in fostering employee productivity, as it is a key factor contributing to their overall success. Indeed, any extreme workplace stress will inevitably impact performance, and workers are becoming increasingly aware of this reality (Sucharitha & Basha, 2020). Despite the substantial investments made in workforce performance, the root causes of workplace stress have yet to be fully considered (Daniel, 2020). Scanty studies have been conducted to address this problem, particularly in the context of public hospitals in the Federal Capital Territory of Nigeria. No clear link has been established between workplace stress and performance in this setting. Understanding this relationship would go a long way in aiding hospital management in finding ways to ameliorate the stressors in the hospital environment and

invest in stress management strategies, enabling nurses to reach their full potential and outperform themselves at work.

This research aims to bridge this gap by employing various theories of work stress to provide a theoretical framework, including the Interactional Theories of Stress, the Transactional Theory of Stress and Coping, the Psychological Theories of Stress, the Role Theory, the Physiological Theory of Stress, and the Conservation of Resources Theory of Stress. The Nigerian healthcare workforce has been a subject of significant concern for the nation due to its lapses and weaknesses in structure (Ajibo, 2020). Over the years, numerous crises have arisen within the workforce due to unanswered appeals by employees to the federal government to alleviate their plight. The COVID-19 pandemic further exposed the ill-equipped and incapable nature of the Nigerian health system in many ways. These factors have contributed to decreased performance, with many public health workers suffering from stress attacks due to work overload, role conflicts, role ambiguities, and negative workplace relationships.

According to the National Association of Nigeria Nurses and Midwives (2018), the federal government's failure to adequately train and recruit nurses has placed undue stress on the nursing profession. Furthermore, the increasing number of hospital patients, coupled with an inadequate workforce, has resulted in work overload, placing an undue burden on nurses. The onset of the COVID-19 pandemic exacerbated these challenges, compounding the existing stressors of role conflict and role ambiguity that nurses have grappled with for years. It is indisputable that nurses serve as pillars in medical centers, providing immense support to their fellow medical workers, and fostering positive workplace relationships is advantageous. However, despite their abstract acknowledgment, sufficient efforts have not been made to ensure their welfare and job satisfaction (James et al., 2019). Instead, they are constantly plagued by concerns about contracting communicable diseases, dealing with unfavorable policies, and lacking involvement in the policy-making processes of the health center. These factors lead to adverse psychological and physiological effects on these workers, such as exhibiting aggressive behavior, lack of empathy for patients, emotional and mental breakdowns, and even stress-related diseases. Inevitably, these consequences translate into an inability to carry out their care functions effectively, hindering the achievement of their assigned tasks.

Research has further shown that the estimated cost of work-related stress in public hospitals ranges from \$220 to \$190 billion worldwide, with performance-related losses contributing a staggering 70% to 90% of this financial burden (Hassard et al., 2018). This highlights the substantial financial impact of workplace stress on organizations and society as a whole. Moreover, the brain drain caused by role ambiguity and work overload cannot be ignored, as hundreds of these healthcare workers seize any opportunity to flee Nigeria, increasing turnover rates and leaving society vulnerable to quackery while setting the nation up for a dire situation. It is crucial to recognize that individual differences, work overload, or role conflict can act as stressors, significantly contributing to a toxic working environment. A hostile work environment can breed conflicts,

leading to unhealthy competition, rivalry, and bitterness, ultimately exacerbating stressful working conditions (Babapour et al., 2022). While work overload, workplace relationships, role overload, and role conflicts are common issues across many regions globally, these problems are particularly glaring and unaddressed in the Federal Capital Territory of Nigeria. This is especially concerning given that nurses, who constitute a large and essential percentage of the healthcare system and are tasked with improving patients' quality of life and providing unreserved care, deserve a better life to enhance their productivity (Babapour, 2022).

Hence, there is an urgent need to study the relationships between workplace stress and nurses' performance in general hospitals in the Federal Capital Territory (FCT) and proffer solutions for effective management. By addressing these issues, organizations can foster a more supportive and conducive environment for nurses, enabling them to thrive and deliver high-quality care to patients while ensuring their overall well-being.

Objectives of the Study

The general objective of this study was to examine the effect of workplace stress on nurses' performance in public hospitals in the Federal Capital Territory, Nigeria. The specific objectives were to:

- i. determine the effect of work overload on nurses' productivity in general hospitals in the Federal Capital Territory;
- ii. analyse the effect of role conflict on nurses' productivity in general hospitals in the Federal Capital Territory;
- iii. assess the effect of role ambiguity on nurses' productivity in general hospitals in the Federal Capital Territory; and
- iv. evaluate the effect of workplace relationship on nurses' productivity in general hospitals in the Federal Capital Territory.

Similarly, the following hypotheses were used in the study:

- i. **H₀₁**: There is no significant effect between work overload and nurses' productivity;
- ii. **H₀₂**: There is no significant effect between role conflicts and nurses' productivity;
- iii. **H₀₃**: There is no significant effect between role ambiguity and nurses' productivity; and
- iv. **H₀₄**: There is no significant effect between workplace relationships and nurses' productivity.

LITERATURE REVIEW

A conceptual review of all the variables used in the study were provided as follows;

Workplace Stress

Workplace stress is a state of tension that causes changes in the body, mind, and emotions (Adiguzel & Kucukoglu, 2019), stemming from the work environment. It arises when there is a conflict between an employee's job demands and their ability to gain control over it (Gahlawat, 2022). Workplace stress stems from demands and pressures that exceed an employee's ability (Mbanefo et al., 2019), making it an ever-evolving and complex phenomenon that affects both employee productivity and organizational output. Workplace stress is one of the most serious factors that employees experience, especially in developing countries where these issues are often neglected (Yeboah-Kordie et al., 2018). It has become a challenge for employers, causing decreased productivity, high turnover, absenteeism, and health issues (Ajayi, 2018; Uchechukwu, 2020). However, some researchers argue that workplace stress can also be positive, depicting it as a motivating factor that enhances employee performance (Di Fabio et al., 2018; Brule & Morgan, 2018; Guruge & Ban, 2021).

Dimensions of Workplace Stress

Work overload is a situation where an employee's time, capabilities, and zeal for a job are lesser than its demands (Tang & Vandenberghe, 2021). It is strategically employed by managers to increase productivity and motivation but often backfires when a balance is absent, causing employees to complain seriously (Alam, 2020). Work overload is a menace that has incurred significant costs for organizations and employees (Alfes et al., 2018; Tang & Vandenberghe, 2021), leading to migraines, hypertension, diabetes, mental instability, and behavioral problems (Ukwadinamor & Oduguwa, 2020). However, some studies suggest that work overload can stimulate proactivity, initiative, and leadership qualities in employees (Kuijpers et al., 2020; Ingusci et al., 2021; Nielsen, 2019).

Role conflict is a disagreement or clash between two or more people working together due to differences (Erliana & Hadi, 2020). It arises from disputes between demands of statuses and social roles, causing discomfort to an employee (Anand & Vohra, 2020). Role conflict refers to the inability to meet the demands of various life roles, making it difficult to fulfill them equally (Asfahani, 2021; Gul et al., 2021). There are two types of role conflicts: inter-role and intra-role. Inter-role conflict occurs when an employee faces conflicting demands from different aspects of life, while intra-role conflict arises from one particular aspect, such as diverse work responsibilities (Awan et al., 2021; Dai et al., 2019).

Role ambiguity is a major cause of role conflicts in the healthcare system, particularly due to the blurred roles between nurses and doctors, where doctors claim superiority (Germov, 2019). However, the nursing profession has become involved in prescription roles, with studies showing that nurses have the same proficiency as doctors in prescribing using supplementary models (Boonen et al., 2020; Naseer et al., 2021). This has led to changes in the healthcare system, such as increased collaborative work, nurse education, policy restructuring, and workplace environmental changes (Everett & Davidson, 2020; Ruiz-Fernández et al., 2020).

The workplace relationship denotes the connections between workers in a workplace (Anjum & Ming, 2018). A positive workplace relationship is vital for organizational survival and growth, affecting employee mood and motivation (Schreiner, 2018; Abun et al., 2019). Collaborative environments enhance performance, while toxic environments breed incivility, bullying, and mental instability (Günüşen et al., 2018; Jay & Andersen, 2018; Rasool et al., 2019). Healthy workplace relationships are crucial for employee mental health and wellness (Tran et al., 2018), and uncivilized behavior can be controlled through better leadership skills (Naseer et al., 2021). Ramjee (2018) classifies workplace relationships into social, employee and colleague, and management flexibility relationships, all of which contribute to fostering unity, reducing stress, and balancing job demands with societal obligations.

Leadership is the art of motivating others to accomplish goals, and leaders guide followers in taking action toward a predetermined objective (Matira & Awolusi, 2020). The essential leadership philosophies include servant, transactional, laissez-faire, and transformational leadership (Kelly & Hearld, 2020). Transformational and servant leadership emphasize honesty, empathy, and moral behavior, while laissez-faire leadership is the absence of leadership responsibilities (Kelly & Hearld, 2020). Leadership style and practice influence employee performance, motivation, and behavior, impacting organizational success (Aunga & Masare, 2017; Olayisade & Awolusi, 2021). Research suggests that charismatic and democratic leadership styles positively impact employee productivity, while autocratic and transactional styles have a negative impact (Olayisade & Awolusi, 2021). Good leaders inspire team members, improving their commitment, performance, and organizational effectiveness (Udovita, 2020; Govindasamy et al., 2021). However, few studies have investigated the moderating effects of leadership styles on workplace stress, health, and employee performance (Govindasamy et al., 2021; Jyoti & Bhau, 2016).

Employee Performance

Employee performance is the result of work done by an individual, achieving organizational goals through assigned tasks (Zangmo & Chhetri, 2022). It involves putting in work and demonstrating quantifiable proof based on the quantity, quality, and time spent on tasks (Samudri et al., 2020; Yuliantini & Suryatiningsih, 2021; Paramita & Suwandana, 2022). Employee performance comprises task, adaptive, and contextual performance (Saleem et al., 2021), and can be measured by quality, quantity, punctuality, effectiveness, and independence (Saramita & Suwandana, 2022).

Employee performance is crucial for organizational success, making employees valuable assets (Stanca & Tarbujaru, 2022; Budur & Puturak, 2021; Guruge & Ban, 2021). It contributes to improved productivity, efficiency, and organizational growth (Abualoush et al., 2018). However, stressed employees perform poorly, yield low productivity, and are of little value to the organization (Bartels, 2020). Factors affecting employee performance include decision-making, workplace environment, and active participation in implementing ideas (Bartels, 2020; Fonkeng, 2018). Managers must be aware of and improve these factors while providing the necessary resources for employee success (Al-nadesh et al., 2022).

Employee productivity is the link between output and input, measured by the net value added per employee or the ratio of output to input resources (Oppong & Pattanayak, 2019; Ezeamama, 2019; Olanmi et al., 2021). It is an organizational asset gained through expertise and essential resource provision (Ezeamama, 2019). Employee productivity measures employee efficiency when adequate and appropriate resources are provided (Abane et al., 2022). Productivity and output are crucial for organizational performance and competitiveness (Kobani et al., 2022). However, assessing productivity is challenging due to the difficulty in defining all factors that contribute to converting input into desirable output (Kobani et al., 2022). The ability of an employee to maximize resources cost-effectively through timeliness, discipline, coordination, analysis, and skilled manpower is advantageous to the organization (Leonard, 2018).

Conceptual Framework

The conceptual framework presented in Figure 1 illustrates the potential relationships between various factors related to workplace stress and nurses' performance in a study focused on public hospitals in the Federal Capital Territory, Nigeria. The independent variables, represented by the green boxes, include role conflict, role ambiguity, workplace relationships, and work overload, which are aspects of workplace stress that may influence nurses' performance. The dependent variable, nurses' performance, is depicted as "Nurses' Productivity." Additionally, the framework identifies leadership style as a moderating variable, suggesting that the leadership approach within the healthcare setting could potentially influence or modify the impact of workplace stress on nurses' performance. The interconnected lines in the diagram indicate the potential interactions and relationships among these variables, emphasizing the complexity of the study and the need to examine the interplay between workplace stress factors, leadership styles, and their collective effect on nurses' productivity and overall performance in public hospitals.

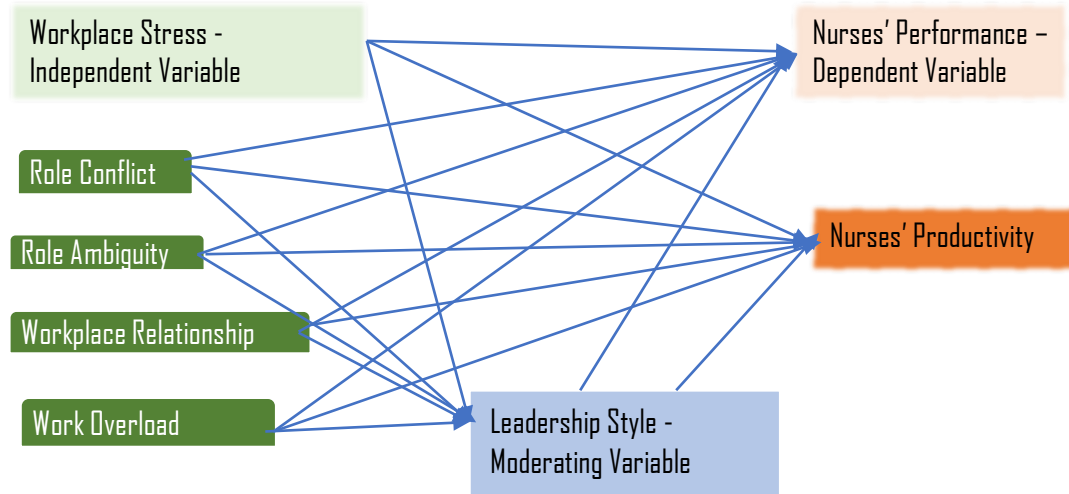


Figure 1. Conceptual Model (Researcher, 2022)

Theoretical Framework of the study

The theoretical framework for this study is underpinned by Cooper and Palmer's Model of Work Stress. This model emphasizes the importance of individual perceptions of environmental factors and takes into account the potential effects of various stressors. The model recognizes the distinct symptoms of excessive workplace stress, such as increased sick leave, deterioration of staff morale and performance, and the creation of a toxic work environment that exacerbates existing stressors (Goodspeed & Delucia, 2014). If left unaddressed, workplace stress can lead to higher turnover rates and decreased productivity (Quick, 2016; ILO, 2016). This model differs from other stress theories in its unique approach to examining the long-term consequences of these symptoms. The manifestations of stress have varying outcomes, but they all impact health and productivity (Goodspeed & Delucia, 2014).

At the individual level, the effects of stress are comparable to those of tertiary allostasis, such as cardiovascular disease and mental health issues. At the organizational level, stress-related effects include increased overhead costs associated with hiring and training new staff, lower profitability, a rise in workplace accidents, and a greater risk of litigation (Goodspeed & Delucia, 2014). The model's strength lies in its recognition of the distinct workplace symptoms of excessive stress and its emphasis on the importance of individual perceptions of environmental factors. By acknowledging the potential effects of various stressors, the model provides a comprehensive framework for understanding the complex interplay between workplace stress, individual well-being, and organizational performance.

Previous research has extensively explored the relationship between workplace stress and organizational performance. Quick (2016) found that workplace stress affected employee productivity and organizational effectiveness, aligning with the findings of the International Labour Organization (ILO, 2016). The ILO's study revealed that work-related stress was associated with subpar work performance among over 680,000 workers across 250 firms worldwide. Furthermore, Goodspeed and Delucia (2014) examined the workplace stress model as a work-related stress that can influence individuals physiologically, mentally, and behaviorally. These influences may result in poor levels of motivation, self-worth, and job satisfaction, further impacting organizational performance.

By adopting Cooper and Palmer's Model of Work Stress as the theoretical framework, this study acknowledges the multidimensional nature of workplace stress and its far-reaching consequences for both individuals and organizations. The model's emphasis on individual perceptions and the potential effects of various stressors provides a solid foundation for investigating the relationship between workplace stress and nurses' performance in public hospitals in the Federal Capital Territory, Nigeria.

Empirical Review

Naru and Rehman (2020) investigated the factors inducing stress among employees in the fast-food industry in Pakistan and its impact on their performance. Employee stress served as a mediating variable, while employee performance was the dependent variable. A total of 350 surveys were distributed across various locations, and data analysis was performed using SPSS and SmartPLS. The findings revealed that work overload, job insecurity (independent variables), and employee stress (mediating variable) significantly impacted employee performance (dependent variable). Equally, Daniel (2020) examined how work-related stress affects employee performance, including the nature of stress, different types of stress, and how work stress ultimately impacts employee effectiveness. The study emphasized that poorly managed workplace stress can impair employee performance by increasing absenteeism, turnover, and medical costs while decreasing productivity. The findings showed that unfavorable factors that upset workers harmed their performance, and employees experienced various stressors that negatively impacted their productivity.

Similarly, Ampofo et al. (2020) studied the impact of stress on employee productivity at the Ghana Health Service in Wa Municipality. Using a descriptive survey design and a sample size of 50 from a population of 100, data were collected through questionnaires. The study found that stress was a problem for Ghana Health Service employees, with age being a potential factor contributing to a negative perception of the organization. Inability to participate in decision-making and poor job fit were sources of stress, and stress was found to impact performance, as evidenced by employees' feelings of helplessness, stress-related illnesses, negative performance reviews, and intentions to quit. Also, Guruge and Ban (2021) investigated the effect of job stress on employee

performance in Sri Lanka's plantation sector. Using a quantitative survey design and a sample size of 82 from a target population of 110 employees, data were collected from 81 employees. The findings indicated a substantial positive association between occupational stress and employee performance ($r = .978$, $p < .01$), suggesting that while employees experienced stress due to heavy workloads, it did not negatively impact their performance.

In the same vein, Puteh et al. (2021) established a relationship between workplace conditions and employee performance at the PT. Plantation Nusantara IV Unit Kebun Balimbingan Plantation using non-parametric analysis with the Kendall Tau test. The results demonstrated a negative correlation between job stress factors and employee performance, with a correlation coefficient value of -0.550 . Felmban and Khan (2021) examined the relationship between stress and satisfaction, as well as the broad effects of stress on performance and contentment, using a quantitative approach. The study involved 116 participants from various private companies in Jeddah, Saudi Arabia. The findings demonstrated the significance of stress's impact on employee productivity and job satisfaction, indicating that stress can either increase or decrease job satisfaction. Sari et al. (2021) investigated the relationship between job stress and productivity in Indonesia's manufacturing sector, with sample data gathered from 93 employees. Using multivariate regression analysis, they found a statistically significant association between the work environment and stress on employees' performance, with a correlation coefficient of 0.972 .

Okechukwu (2021) examined how job stability, role conflict, and workload pressure affected employee productivity, using the person-environment (PE) fit theory as the theoretical underpinning. With a sample size of 386 from a population of 1967 employees, data were analyzed using descriptive statistics, Pearson correlation analysis, and multiple regression analysis. The results revealed a negative link between employee productivity and workload stress and role conflict, with workload stress and role conflict significantly impacting employee productivity negatively, while job security had little to no impact. In the same vein, Dim et al. (2021) investigated the relationship between staff performance and stress in a few South East Nigerian tertiary institutions, focusing on the effects of workload strain and role ambiguity on employee performance. With a sample size of 351 and utilizing descriptive statistics, Pearson correlation analysis, and multiple regression analysis, the study found that workload pressure and role ambiguity significantly influenced employee performance negatively.

Biodun et al. (2021) examined how stress affected employee productivity, finding that organizational stress caused by poor time management and task overload impacted the quality of employee productivity. Sucharitha and Basha (2020) investigated how job stress affected employee performance, using leadership as an independent variable. With a sample size of 200 and data gathered through surveys and focus groups, the results showed that participants experienced excessive stress that negatively impacted their performance due to pressure from leadership to perform better. Furthermore, Zangmo and Chhetri (2022) investigated the primary causes of workplace stress and its impact on the productivity of the staff of the Bhutanese Ministry

of Health (MoH). Using a self-administered survey questionnaire and census sampling, the results demonstrated that civil servants experienced stress, although not to a severe degree. The workload factor was cited as the main source of stress, followed by deadlines, a bad work environment, role uncertainty, and unfair compensation and incentives. The findings indicated a negative correlation between occupational stress and performance.

Oseremen et al. (2022) examined how workplace stress affected bankers' productivity in the service sector, using a sample size of 400 working staff from banks in Benin City, Edo State. Regression analysis showed that employee workload, role ambiguity, and role conflict were statistically significant, with the regression model explaining 64% of the observed variability in the target variable. Employee productivity in the banking industry was significantly influenced by workload, positively associated with role conflict, and negatively impacted by role ambiguity. Pandey (2020) investigated the strain-related issues facing bankers and the elements causing stress among bank employees to understand how stress affected worker performance. With data from 200 questionnaires completed by bankers in the Kathmandu valley, the findings demonstrated that the effects of stress had a considerable negative impact on their performance, with a correlation coefficient of 0.926 and a p-value of .000, indicating a higher stress level increased the likelihood of reduced employee output.

Paramita and Suwandana (2022) discussed how workload, conflict at work, and job stress affected employees' performance at the PT. Family Circus facility in Badung. With a sample of 50 employees and using multiple linear regression analysis, the findings showed that workload, work conflict, and job stress all significantly improved employees' performance. Elsafty and Shafik (2022) investigated how employees of an Egyptian private bank perceived and performed while dealing with job stress during the COVID-19 pandemic. Using a descriptive study approach and a sample of 51 respondents from a population of 1,100 employees, the study employed descriptive statistics and found that while role ambiguity and underutilization of skills did not affect employee performance, job overload had a negative effect on performance, especially during the COVID-19 era.

Literature Gap

The literature review has revealed several gaps that this study aims to address, encompassing methodological, scope, conceptual, theoretical, and empirical aspects. In the first instance, most previous studies examining workplace stress and associated variables relied on self-created structured questionnaires for data collection, employing descriptive statistics (frequency, percentage, mean, and standard deviation) and SPSS software analysis (Mbinya & Mose, 2022; Naru & Rehman, 2020; Siregar, 2018; Iskamto, 2021). This study will employ inferential statistics, specifically ordinary least square multiple regression, to analyze the relationship between workplace stress and nurses' performance, with leadership style as a moderating variable.

While some reviewed studies focused on countries outside Africa or other regions of Nigeria, this study will specifically concentrate on the Federal Capital Territory (FCT) in northern Nigeria, addressing a geographical gap. Also, several studies have focused on the relationship between role ambiguity and role conflict (Macleod et al., 2019; Purnomo et al., 2021; Kurnia et al., 2020; Elsafty & Shafik, 2022; Gahlawat, 2022; Paramita & Suwandana, 2022), while few have addressed workplace relationships (Tycholiz, 2021). Some have explored work overload (Oseremen et al., 2022; Vijayan, 2017), but few have combined all four variables. This study will concentrate on the relationship between work overload, workplace relationships, role conflict, role ambiguity, and nurses' performance, with leadership as a moderating variable (Limoges, 2019).

Equally, most studies have relied on Cooper and Palmer's work stress model (2001). This study will employ a model that directly explains the relationships between stressors and their effect on employee performance and organizational productivity. Therefore, the reviewed literature has revealed empirical gaps, with some data being outdated (Addai et al., 2017) or older than five years (Siregar, 2018; Jossy & Kumar, 2018; Ajayi, 2018). Additionally, studies have been limited to developed nations, parts of Africa and Asia (Paramita & Suwandana, 2022; Elsafty & Shafik, 2022; Devi & Lahkar, 2021; Oseremen et al., 2022; Dyrbye et al., 2019), and specific to nurses (Komalasari et al., 2020; Dyrbye et al., 2019; Tran et al., 2018). This study will address these gaps by analyzing recent data up to 2023 and conducting relevant investigations in the FCT, Nigeria, focusing on workplace stress and nurses' performance.

METHODOLOGY

The study adopted a descriptive survey research design, and the study population consisted of all registered nurses who have worked in the hospitals for at least three years, totaling 1071 nurses across 14 general hospitals in the FCT. A sample size of 311 nurses was determined using a finite population sample determination formula. Proportionate stratified sampling was used to select the sample, and convenience sampling was employed for data collection. Primary data was collected through questionnaires distributed physically and online. The questionnaire consisted of four sections: demographic information, perceived job stress level, health information, and workplace stress factors (work overload, role conflict, role ambiguity, and work relationships).

Multiple regression analysis was employed to analyze the data using SPSS 25. The study tested the significance of the relationships between the independent variables (work overload, role conflict, role ambiguity, work relationships) and the dependent variable (nurses' productivity) at a 95% confidence level. The validity and reliability of the instrument were established through pilot testing and the application of adjustments suggested by the supervisor.

Model specification

Accordingly, the study defined and estimated the following regression model as;

$$NP_{jt} = \beta_0 + \beta_1 WO_{j,t} + \beta_2 RC_{j,t} + \beta_3 RA_{j,t} + \beta_4 WR_{j,t} + \beta_5 LS_{j,t} + \mu_0 \dots \dots \dots (1)$$

Where;

- Y = Nurses' Performance
- X₁ = Work Overload (WO)
- X₂ = Role Conflict (RC)
- X₃ = Role Ambiguity (RA)
- X₄ = Workplace Relationship (WR)
- X₅ = Leadership Style (LS)

β_1 - β_5 = Beta coefficient that measures the sensitivity of variable X to change in variable Y

β_0 = constant

μ_0 = error term

Analysis

Table 1 presents the respondents demographic characteristics. In terms of the respondents' ages ranged from 26 to over 56 years, with the majority (37.9%) between 26-35 years old. Most respondents were female (80.4%), reflecting the female-dominated nature of nursing. Their ranks spanned various nursing levels, with the largest groups being Senior Nursing Sisters (14.6%), Nursing Sisters (14.3%), and Assistant Chief Nursing Officers (12.5%). Work areas included female wards (29.3%), male wards (19.6%), and children's wards (17.5%). Education levels were diverse, with 48.9% holding bachelor's degrees, 31.1% diplomas, and 20% postgraduate certificates. In terms of experience, 35% had 3-8 years, 26.8% had 9-14 years, and over 65% had worked for over 10 years. This extensive experience suggests the respondents could well understand organizational changes and their performance impacts over time.

Table 1: Distribution of the Demographic Characteristics of the Respondents

Variables	Frequency	Percentage (%)
Age		
26-35	106	37.9
36-45	90	32.1
46-55	63	22.5
56 & Above	21	7.5
Total	280	100.0
Sex		
Female	225	80.4
Male	55	19.6
Total	280	100.0
Rank		
Director Nursing (DN)	0	0.0
Deputy Director of Nursing (DDN)	15	5.4
Assistant Director of Nursing (ADN)	20	7.1

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Chief Nursing Officer (CNO)	32	11.4
Assistant Chief Nursing Officer (ACNO)	35	12.5
Principal Nursing Superintendent (PNS)	33	11.8
Senior Nursing Sister (SNS)	41	14.6
Nursing Sister (NS)	40	14.3
Staff Nurse I/Midwife I (SN I)	34	12.1
Staff Nurse II/Midwife II (SN II)	31	11.1
Total	280	100.0
Areas of Work		
Female Ward	82	29.3
Male Ward	55	19.6
Children Ward	49	17.5
Theatre	31	11.1
Intensive Care Unit (ICU)	31	11.1
Emergency Department	32	11.4
Total	280	100.0
Educational Status		
Diploma	87	31.1
Bachelors	137	48.9
Post-Graduate	56	20.0
Total	280	100.0
Years of Experience		
3-8	98	35.0
9-14	75	26.8
15-20	42	15.0
21-26	37	13.2
27-32	28	10.0
Total	280	100.0

Source; Field Survey, 2023

Table 2 presents the descriptive statistics of the variables. For nurses' performance, the mean score was 4.78 with a standard deviation of 0.965, indicating a high level of performance among the respondents. The mean scores for the independent variables were 4.12 (std. dev. = 0.895) for work overload, 4.16 (std. dev. = 0.854) for role conflict, 3.98 (std. dev. = 0.755) for role ambiguity, and 3.87 (std. dev. = 0.774) for workplace relationship. The control variable, leadership style, had a mean score of 4.15 with a standard deviation of 0.817. The minimum and maximum values for all variables ranged from 1 to 5, except for leadership style, which had a minimum value of 3. These statistics suggest that the respondents generally experienced high levels of work overload, role conflict, and leadership style, while experiencing relatively lower levels of role ambiguity and workplace relationship issues.

Table 2: Descriptive Statistics of the Variables

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Nurses' Performance	280	2	5	4.78	.965
Work Overload	280	1	5	4.12	.895
Role Conflict	280	1	5	4.16	.854
Role Ambiguity	280	1	5	3.98	.755
Workplace Relationship	280	1	5	3.87	.774
Leadership Style	280	3	5	4.15	.817

Source: Author's computation, 2023

The regression analysis examined the effects of work overload, role conflict, role ambiguity, workplace relationship, and leadership style (control variable) on nurses' performance (Table 3). The model was statistically significant, with an F-value of 182.564 ($p < 0.01$). The constant term (0.441) was also significant at the 1% level, indicating a positive base level of nurses' performance when all the independent variables are zero. Equally, work overload had a significant positive effect on nurses' performance ($\beta = 0.771$, $p < 0.01$). However, role conflict ($\beta = -0.080$, $p < 0.01$) and role ambiguity ($\beta = -0.090$, $p < 0.01$) had significant negative effects on nurses' performance. Workplace relationship showed a positive but marginally significant effect on nurses' performance ($\beta = 0.044$, $p < 0.10$). The control variable, leadership style, had a significant positive effect on nurses' performance ($\beta = 0.139$, $p < 0.01$). This suggests that effective leadership can enhance nurses' performance in the surveyed hospitals. The standardized coefficients indicate that work overload had the largest impact on nurses' performance, followed by leadership style, role ambiguity, role conflict, and workplace relationship, in that order.

Table 3: Regression Result

Model	Unstandardized Coefficients			Standardized Coefficients	T	Sig.	Remark
	B	Std. Error	Beta				
1	(Constant)	.441	.162		2.717	.007	Significant
	Work overload	.771	.037	.778	20.966	.000	Significant
	Role conflict	-.080	.026	.102	-3.031	.003	Significant
	Role ambiguity	-.090	.025	.127	-3.668	.000	Significant
	Workplace relationship	.044	.025	.061	1.766	.078	Significant
	Leadership Style	.139	.034	.155	4.048	.000	Significant

Dependent Variable: Nurses' Performance

Source: SPSS Output from Author's Computation using the original Data, 2023

DISCUSSIONS OF FINDINGS

The regression result presented in this study aligns with several findings from the empirical literature on the relationship between workplace stress factors and employee performance. The study found that work overload had a significant positive effect on nurses' performance, which contrasts with the findings of some previous studies. However, the results related to the negative effects of role conflict, role ambiguity, and leadership style on nurses' performance are consistent with the existing body of research. Regarding work overload, the positive effect observed in this study contradicts the findings of Naru and Rehman (2020), Daniel (2020), Puteh et al. (2021), and Okechukwu (2021), who reported a negative impact of work overload on employee performance. However, this result is consistent with the findings of Guruge and Ban (2021), who observed a substantial positive association between occupational stress, including heavy workloads, and employee performance in Sri Lanka's plantation sector. The positive relationship between work overload and nurses' performance in this study could be attributed to the nature of the nursing profession, where a certain level of workload may be perceived as a challenge and motivate nurses to perform better. Additionally, the perception of work overload may vary across different organizational contexts and cultural settings.

Equally, the negative effect of role conflict on nurses' performance aligns with the findings of Okechukwu (2021), Dim et al. (2021), and Oseremen et al. (2022), who found that role conflict significantly impacted employee productivity negatively. Role conflict arises when employees face conflicting demands or expectations from different sources (Rizzo et al., 1970, cited in the methodology section), which can lead to stress, frustration, and reduced productivity (Daniel, 2020). The study's finding regarding the negative impact of role ambiguity on nurses' performance is consistent with the results reported by Dim et al. (2021) and Zangmo and Chhetri (2022). Role ambiguity occurs when employees lack clarity about their roles and responsibilities, leading to confusion, stress, and decreased motivation (Kahn et al., 1964, cited in Rizzo et al., 1970). This finding highlights the importance of clear job descriptions, effective communication, and regular feedback from supervisors to reduce role ambiguity and enhance employee performance.

The positive effect of workplace relationships on nurses' performance aligns with the theoretical underpinnings of the study, which emphasize the importance of positive interpersonal relationships in the workplace. Positive workplace relationships can foster better communication, collaboration, and innovative problem-solving (Ella et al., 2021; Kurnia et al., 2020), ultimately contributing to improved employee productivity and patient outcomes.

The study's finding that leadership style had a significant positive effect on nurses' performance is supported by the work of Sucharitha and Basha (2020), who found that leadership pressure to perform better negatively impacted employee performance. Effective leadership can create an

environment that motivates employees, provides clear direction, and supports their professional development, leading to improved performance (Avolio et al., 2009). It is noteworthy that the standardized coefficients indicate that work overload had the largest impact on nurses' performance, followed by leadership style, role ambiguity, role conflict, and workplace relationships. This finding underscores the importance of managing workload effectively, providing clear role expectations, and fostering positive workplace relationships to enhance nurses' performance. Additionally, the significant impact of leadership style highlights the crucial role that hospital administrators and nurse managers play in creating a supportive and productive work environment.

The study's findings align with several theoretical frameworks and models in the literature, such as the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007), which suggests that job demands (e.g., work overload, role conflict, role ambiguity) can lead to strain and impaired performance, while job resources (e.g., workplace relationships, leadership support) can buffer the negative effects of job demands and promote employee well-being and performance. Therefore, the regression results of this study contribute to the existing body of knowledge by providing empirical evidence on the impact of various workplace stress factors on nurses' performance in the context of public hospitals in Nigeria's Federal Capital Territory. The findings emphasize the importance of addressing work overload, role conflict, role ambiguity, and fostering positive workplace relationships and effective leadership to enhance nurses' productivity and, ultimately, the quality of patient care.

CONCLUSION AND POLICY RECOMMENDATIONS

This study aimed to examine the impact of workplace stress factors on nurses' performance in public hospitals in Nigeria's Federal Capital Territory. The findings revealed that work overload had a significant positive effect on nurses' performance, while role conflict, role ambiguity, and leadership style had significant negative effects. Workplace relationships positively impacted nurses' performance, albeit with marginal significance. These results underscore the complex nature of workplace stress and its varying effects on employee performance. While a certain level of workload may motivate nurses to perform better, excessive work overload can lead to burnout and decreased productivity. Similarly, role conflicts and ambiguity create confusion, frustration, and stress, ultimately hampering nurses' ability to perform their duties effectively.

The study also highlighted the crucial role of positive workplace relationships and effective leadership in enhancing nurses' performance. Supportive relationships with colleagues and supervisors can foster better communication, collaboration, and problem-solving, leading to

improved productivity and patient outcomes. Effective leadership can provide clear direction, support professional development, and create a motivating work environment.

Policy Recommendations

Based on the findings of this study, the following policy recommendations are proposed:

- i. **Workload Management:** Public hospitals should implement strategies to manage nurses' workloads effectively. This could include hiring additional nursing staff, implementing efficient task allocation systems, and providing adequate resources and support to alleviate excessive workloads.
- ii. **Role Clarification:** Hospital administrators should ensure that job descriptions and role expectations are clearly defined and communicated to nurses. Regular feedback sessions and performance evaluations can help identify and address any role conflicts or ambiguities, promoting better role understanding and alignment.
- iii. **Interpersonal Skills Training:** Hospitals should invest in training programs that enhance nurses' interpersonal and communication skills. Effective communication can improve workplace relationships, reduce conflicts, and foster a collaborative work environment.
- iv. **Leadership Development:** Nurse managers and hospital administrators should undergo leadership training to develop skills in creating a supportive work environment, providing clear direction, and motivating staff. Transformational leadership approaches that emphasize empowerment, innovation, and professional development can positively impact nurses' performance.
- v. **Stress Management Programs:** Public hospitals should implement comprehensive stress management programs that provide nurses with resources and strategies to cope with workplace stress effectively. These programs could include counseling services, stress management workshops, and wellness initiatives focused on promoting work-life balance.

Contributions to knowledge and Suggestions for Further Studies

This study contributes to the existing body of knowledge by providing empirical evidence on the impact of workplace stress factors on nurses' performance in public hospitals in Nigeria's Federal Capital Territory. The findings highlight the complex interplay between work overload, role conflict, role ambiguity, workplace relationships, and leadership style in influencing nurses' productivity. The positive effect of work overload contradicts some previous studies, offering new insights into the context-specific nature of this relationship. The study also underscores the importance of effective leadership in creating a supportive work environment that enhances employee performance.

Future research could explore the potential moderating or mediating effects of individual and organizational factors on the relationship between workplace stress and employee performance.

Qualitative studies could provide deeper insights into nurses' perceptions and experiences of workplace stress, informing more targeted interventions. Longitudinal studies tracking changes in stress levels and performance over time could offer a more comprehensive understanding of this dynamic relationship. Additionally, cross-cultural comparisons could shed light on the influence of cultural factors on the manifestation and impact of workplace stress on employee performance.

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