Sociodemographic correlates of Work-related stress among child health care workers in Nigeria

Abstract

Background

Work-related stress (WRS) refers to the harmful physical and emotional responses that occur when job demands exceed workers' capabilities, resources, or needs. WRS in healthcare is associated with low job satisfaction, reduced efficacy, and poor health outcomes. This study aimed to assess WRS and its sociodemographic correlates among child healthcare workers in Nigeria.

Methods

A cross-sectional descriptive study was conducted among 231 child healthcare workers attending the 51st Paediatric Association of Nigeria conference in Kano, Nigeria. Respondents were from all six geopolitical zones and included pediatric consultants, residents, and nurses. WRS was assessed using a validated Cohen's Perceived Stress Scale. Data were analyzed using SPSS version 20.

Results

Of the respondents, 138 (59.7%) were female, and 93 (40.3%) were male. Consultants made up 41.6% of the sample, while 83.1% were married. Most respondents (41.6%) were aged 30-39 years. WRS prevalence was 37.7%. It was significantly higher among females, participants aged 30-39, unmarried individuals, and those working in facilities below secondary care level.

Conclusion

Work-related stress among child healthcare workers in Nigeria is prevalent, particularly in women, younger professionals, and those in primary healthcare settings. Regular stress management programs and interventions aimed at improving work-life balance are recommended to mitigate WRS in this group.

Keywords: Work-Related Stress, Child Healthcare Workers, Sociodemographic Factors, Nigeria, Paediatricians

Introduction

Work-related stress (WRS) is an increasingly recognized challenge in the healthcare sector globally. The term refers to the harmful physical and emotional responses that arise when the demands of a job exceed the worker's capabilities, resources, or needs. [1] Healthcare workers, particularly in pediatric care, are frequently exposed to various stressors, including high workloads, emotionally demanding cases, long working hours, and under-staffing. Over time, these factors can culminate in significant mental and physical strain, which not only affects the well-being of healthcare workers but also the quality of care they provide. [2]

In recent years, the global healthcare system has faced substantial pressure, with low- and middle-income countries (LMICs) like Nigeria experiencing the brunt of these challenges. Nigeria's healthcare system is characterized by resource constraints, an insufficient healthcare workforce, and systemic inefficiencies that compound the stress experienced by healthcare professionals. [3] The demands placed on child healthcare workers, such as paediatricians and

nurses, are particularly high due to the vulnerability of their patient population and the emotional toll associated with managing critical pediatric cases. [4] These conditions contribute to high levels of burnout, decreased job satisfaction, and reduced efficacy among healthcare workers, with adverse consequences for patient safety and health outcomes. [5]

The significance of WRS in the healthcare sector cannot be overstated. Studies have shown that WRS is linked to negative physical health outcomes, including hypertension, cardiovascular diseases, and musculoskeletal disorders.[6] Psychologically, healthcare workers experiencing high stress levels are at an increased risk of anxiety, depression, and burnout, all of which contribute to reduced job performance and a higher likelihood of medical errors.[7] These effects can be exacerbated by the work environment, including poor infrastructure, insufficient administrative support, and unclear job roles, which are common in many healthcare facilities across Nigeria. [8]

Sociodemographic factors such as age, gender, marital status, and years of experience have been shown to influence the experience of work-related stress among healthcare workers. Younger healthcare workers, for instance, may face unique stressors related to their inexperience and early career challenges, while older workers may experience stress related to increased administrative duties and work-life balance challenges.[9] Gender is another critical factor, as female healthcare workers often face additional stressors related to societal expectations and family responsibilities.[10] Marital status has also been implicated in WRS, with married individuals potentially benefiting from greater emotional and social support than their unmarried counterparts. [11] Finally, healthcare workers in rural or under-resourced areas may experience higher levels of stress due to limited access to essential medical supplies and personnel, contributing to their sense of frustration and helplessness.[12]

Despite the increasing recognition of WRS as a significant issue in healthcare, there is a paucity of research on this topic among child healthcare workers in Nigeria. This study aims to assess the prevalence of work-related stress and identify its sociodemographic correlates among child health workers in Nigeria. By identifying the specific factors associated with WRS in this population, useful insights may be gained to inform targeted interventions to mitigate stress and improve both worker well-being and patient care outcomes.

Methods

Study Design and Setting

This cross-sectional descriptive study was conducted during the 51st Annual Conference of the Pediatric Association of Nigeria (PANConf) held in Kano, Nigeria in 2020. The conference provided an opportunity to survey a broad sample of child health care workers from across Nigeria, representing various geographic and professional backgrounds.

Participants

The study included child health care workers who attended the PANConf. Participants comprised pediatric consultants, residents, and nurses. A total of 231 individuals were surveyed, covering a wide demographic spectrum from the six geopolitical zones of Nigeria.

Data Collection

Data were collected using self-administered questionnaires distributed during the conference. The questionnaire was designed to capture demographic information, including age, gender, marital status, professional role, years of experience, and practice setting.

Work-Related Stress Assessment

Work-related stress was assessed using the validated Cohen's Perceived Stress Scale (PSS), which is widely used to measure the degree of stress perceived by individuals. The PSS is a reliable tool with a high level of internal consistency and validity, making it suitable for capturing the stress levels experienced by healthcare workers. [13]

The questionnaire included questions on perceived stress over the past month, feelings of being overwhelmed, and the impact of work demands on personal well-being. The PSS scores were categorized into low, moderate, and high levels of stress based on established cut-off points.

Statistical Analysis

Data were analyzed using SPSS version 20. Descriptive statistics, including mean and standard deviation, were used to summarize the demographic characteristics and stress levels of participants. Chi-square tests were employed to examine associations between sociodemographic variables and levels of work-related stress. A p-value of less than 0.05 was considered statistically significant.

Results

Demographic Characteristics

Out of the 231 respondents, 138 (59.7%) were female and 93 (40.3%) were male. The majority of respondents (96 or 41.6%) were pediatric consultants. The age distribution was as follows: 96 (41.6%) were in the 30-39 years age bracket, 84 (36.4%) were aged 40-49 years, and 51 (22.0%) were either under 30 years or over 50 years. In terms of marital status, 192 (83.1%) respondents were married, while 39 (16.9%) were unmarried. (Table I)

The practice settings were distributed as follows: 60 (26%) worked in the North-Central region, 78 (33.8%) had been in medical practice for 10-14 years, and the remaining worked in various regions and had varying years of experience.(Table II)

Table I- Socio demographic characteristics of respondents

Variable	**Frequency**	**Percentage**	**Cumulative Percent**
Age			
20-29	6	2.6	2.6
30-39	96	41.6	44.2
40-49	84	36.4	80.5
50-59	36	15.6	96.1
60-69	9	3.9	**100.0**
Gender			
Male	93	40.3	40.3
Female	138	59.7	**100.0**
Marital Status			
Single	24	10.4	10.4
Married	192	83.1	93.5
Separated/divorced	15	6.5	**100.0**

Table II- Description of medical practise

Variable	Frequency	Percentage	Cumulative percent
Designation			
Consultant	96	41.6	41.6
Senior Registrar	57	24.7	66.2
Registrar	15	6.5	72.7
Medical Officer	9	3.9	76.6
Nurses	51	22.1	98.7
Others	3	1.3	**100.0**
Years of Practice			
1-4	12	5.2	5.2
5-9	39	16.9	22.1
10-14	78	33.8	55.8
15-19	48	20.8	76.6
20 and above	54	23.4	**100.0**
Region of practise			
South-South	39	16.9	16.9
South-East	33	14.3	31.2
South-West	39	16.9	48.1
North-Central	60	26.0	74.0
North-East	15	6.5	80.5
North-West	45	19.5	**100.0**
Place of Work			
Tertiary	204	88.3	88.3
Secondary	21	9.1	97.4
Primary/ Others	6	2.6	**100.0**

Prevalence of Work-Related Stress

The prevalence of work-related stress among the participants was found to be 37.7%. This indicates that more than a third of the surveyed child health care workers experienced significant stress levels in their professional roles. (Figure 1)

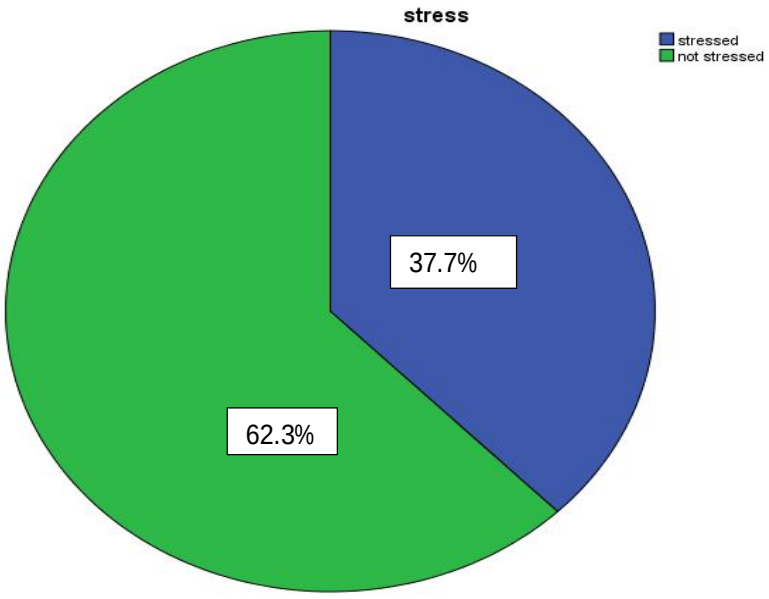

Figure 1. Prevalence of Work related Stress

Associations Between Sociodemographic Variables and Stress Levels

The bivariate analysis revealed that work-related stress was significantly higher among female respondents ($p<0.01$). Stress levels were also notably higher among individuals aged 30-39 years ($p<0.05$), and unmarried participants ($p<0.01$). Furthermore, healthcare workers practicing in facilities below the secondary level reported higher stress levels compared to those in more advanced facilities ($p<0.01$).

The findings also indicated that stress levels were influenced by years of experience. Participants with 10-14 years of practice experience reported higher stress levels compared to those with fewer or more years of experience, though this association was less pronounced.

Table 3. Bivariate analysis showing the association between Work-related stress and Sociodemographic characteristics of study participants

Variables	**Stress**	**No Stress**	**Total**	**Chi-square significance** **P-value**
Age				
20-29	3	3	6	
30-39	45	51	96	
40-49	27	57	84	
50-59	12	24	36	
60-69	0	9	9	
Total	87	144	**231**	**0.004**
Gender				
Male	27	66	93	
Female	60	78	138	
Total	87	144	**231**	**0.018***
Marital Status				
Single	21	3	24	
Married	52	140	192	
Seperated/ Divorced	14	1	15	
Total	87	144	**231**	**0.022***
Place of Work				
Tertiary	75	129	204	

Secondary	6	15	21	
Primary/ Other	6	0	6	
Total	87	144	**231**	**0.005**

** Fishers exact test. P-value significant < 0.05*

Summary of Key Results

- Gender: Female healthcare workers experienced higher levels of stress compared to their male counterparts.

- Age: Individuals aged 30-39 years were more likely to report higher stress levels.

- Marital Status: Unmarried healthcare workers reported higher stress levels than their married peers.

- Practice Setting: Workers in facilities below the secondary level experienced significantly higher stress.

-Years of Experience: Those with 10-14 years of experience had higher stress levels, although the association was less clear than other factors.

Discussion

This study sought to assess the prevalence of work-related stress (WRS) among child healthcare workers in Nigeria and its association with various sociodemographic factors. The findings revealed that a significant proportion of child healthcare workers experience high levels of work-related stress, with females, younger professionals, unmarried individuals, and those working in lower-level healthcare facilities being particularly affected.

The findings of this study highlight the substantial prevalence of work-related stress among child health care workers in Nigeria, with a notable impact on their well-being and job satisfaction. Nearly four out of ten respondents reported high levels of stress.The observed 37.7% prevalence rate of work-related stress is consistent with findings from other studies conducted in similar settings. For instance, a study in India reported comparable levels of stress among healthcare workers in pediatric settings. [14] This high prevalence underscores the urgent need for targeted interventions to address the unique stressors faced by this group.

Our results indicate that work-related stress is significantly higher among females, which aligns with existing literature that highlights gender as a significant factor influencing stress levels. Female healthcare workers often juggle multiple roles and responsibilities, both in their professional and personal lives, contributing to higher stress levels. [15]Female workers may also experience workplace discrimination or bias, further contributing to their stress levels.[16]Moreover, cultural expectations around caregiving and household roles in many African settings may exacerbate the stress experienced by women. [17] Efforts to reduce stress in female healthcare workers should include policies that support work-life balance, such as flexible working hours, adequate maternity leave, and access to childcare services. Workplace interventions that address gender-specific stressors may also prove beneficial.

Healthcare workers aged 30-39 years reported higher levels of stress compared to their younger or older colleagues. This age group likely represents individuals in the early to middle stages of their careers, when professional demands are particularly high. Many individuals in this age bracket are also managing increased family responsibilities, which could compound stress levels.[12]Similar findings have been reported in previous studies where younger professionals, particularly those at earlier stages of their careers, face more stress compared to their senior counterparts.[10, 18] Targeted support for early-career healthcare

workers could mitigate stress in this group. This may include mentorship programs, access to career development resources, and training on stress management techniques.

The study also found that unmarried healthcare workers reported higher levels of stress than their married counterparts. While marriage is often associated with additional responsibilities, it can also serve as a source of emotional support and stability, which may help buffer against work-related stress. [19,20] On the other hand, unmarried individuals may lack the same level of support, leaving them more vulnerable to the emotional demands of their profession.[21]

The association between work-related stress and the type of healthcare facility is particularly noteworthy. Participants working in healthcare facilities below the secondary level reported significantly higher stress levels. Lower-level facilities are often understaffed and under-resourced, which places additional pressure on healthcare workers. [22] In Nigeria, many primary care facilities face chronic shortages of medical supplies, inadequate staffing, and poor infrastructure.[21] These challenges contribute to increased stress among workers, as they are expected to deliver care under suboptimal conditions. This finding is consistent with research showing that inadequate infrastructure and resources contribute significantly to stress among healthcare workers. [23] Efforts to reduce work-related stress in these settings should focus on improving resources and working conditions. This could include investment in healthcare infrastructure, ensuring the availability of essential medical supplies, and employing sufficient staff to meet patient demand.

Implications for Policy and Practice

The high prevalence of work-related stress among child healthcare workers underscores the need for urgent interventions. Addressing WRS requires a multifaceted approach that

includes policy reforms, workplace interventions, and individual stress management strategies. At the policy level, healthcare workers need better working conditions, access to mental health support, and opportunities for professional development. Moreover, the Paediatric Association of Nigeria and other relevant bodies should organize regular practical sessions focused on stress mitigation strategies, particularly tailored for vulnerable groups such as women, younger workers, and those in lower-level facilities. [13,24]

The adoption of stress reduction interventions, such as mindfulness training, stress management workshops, and wellness programs, could help healthcare workers build resilience and manage stress effectively. Institutions should also create a culture that promotes work-life balance and provides access to mental health services. Additionally, creating supportive work environments and addressing the specific needs of different demographic groups can help reduce stress levels and improve job satisfaction. [25]

Limitations and Future Research

This study was limited by its cross-sectional design, which makes it difficult to establish causality between sociodemographic factors and work-related stress. Furthermore, the sample was drawn from a conference, which may not represent the wider population of child healthcare workers in Nigeria. Future studies should aim for larger and more representative samples, and longitudinal research could provide insights into how stress evolves over time in this population.

In addition, future research could explore the role of institutional support in mitigating work-related stress. Investigating the specific workplace interventions that are most effective in reducing stress among child healthcare workers would be valuable in developing targeted policies and interventions.

Conclusion

The prevalence of WRS among child healthcare workers in Nigeria is high, particularly among females, those aged 30-39 years, the unmarried, and those working in lower-level facilities. To address this issue, the Paediatric Association of Nigeria may consider organizing regular practical sessions on stress management and mitigation strategies. Such interventions are essential to improve the well-being of healthcare workers and ensure the delivery of high-quality child healthcare services.

Ethical approval: The study was approved by the Institutional Ethics Committee

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