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Comparison of Perceived Stress Levels among Private and Government Hospital Nurses

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ABSTRACT

Introduction: *Nurses play a crucial role in healthcare but often encounter stressors that impact both their well-being and the quality of patient care. These stressors range from emotional strain and interpersonal conflicts to heavy workloads and extended hours. The stress range from moderate to severe level among European nurses whereas Asian nurses have higher stress level particularly about 80% nurses in Pakistan experience moderate stress level.* ***Objective:*** *This study aims to explore the stress levels among nurses working in government and private hospitals in Pakistan.* ***Methodology:*** *A cross-sectional design was used to collect data through self-administered questionnaires distributed to registered nurses at various government and private hospitals. Perceived Stress Scale (PSS-10) was utilized to identify key stressors affecting nurse's performance. Descriptive and inferential statistical methods were utilized to compare stress levels between nurses in different hospital settings.* ***Results:*** *A total of 149 nurses, 52 from government hospitals and 97 from private hospitals were recruited. Private-sector nurses reported significantly higher stress levels ($M = 22.6 \pm 3.8$) compared to government hospital nurses ($M = 19.8 \pm 4.2$, $t = 4.23$, $p < 0.001$). Key stressors included workload pressures (65% in private hospitals) and resource shortages (55% in government hospitals). Male nurses exhibited higher stress levels ($M = 21.9 \pm 4.1$) compared to females ($M = 19.6 \pm 3.7$, $t = 2.45$, $p = 0.015$). Age was positively correlated with stress ($r = 0.36$, $p < 0.01$), while years of experience showed no significant correlation ($r = 0.12$, $p = 0.14$).* ***Conclusion:*** *The study reveals significant differences in stress levels between nurses in government and private hospitals, with workload being a major factor in private hospitals and resource shortages in government hospitals. Gender differences and the impact of age on stress were also observed. The findings suggest the need for targeted interventions to improve nurse well-being and enhance patient care quality in Pakistan's healthcare sector.*

Introduction

Work related stress among nurses is a pervasive issue globally, affecting both individual well-being and patient care outcomes. Recent studies have brought attention to the frequency and effects of work-related stress on nurses across a range of global healthcare contexts. Research on nurses' perceived stress in both government and commercial hospitals has been increasingly popular over the past five years, drawing interest from all around the world, including Pakistan. Research has repeatedly shown how stress negatively affects nurses' health and job happiness, as well as its implications for patient care. Public hospital nurses in Pakistan have been reported to have significant levels of stress as a result of things like excessive workloads, low staffing, and a lack of resources (Waheed et al., 2019).

Though studies from nearby nations like India have shed light on the stress levels of nurses in various healthcare sectors, there hasn't been any comparative study between private and public hospitals in Pakistan. These investigations have demonstrated that, although the particular pressures experienced by government and commercial hospitals may differ, issues with staffing, workload, and organizational characteristics are common in both domains (Haq et al., 2019).

In order to effectively address nursing stress, comprehensive methods that take into account organizational and individual aspects are needed. Studies have demonstrated the significance of measures including stress reduction training, managing workloads, and improving support networks in healthcare organizations (McVicar et al., 2018).

Thus in the light of this background the investigator carried out this study with the objective of studying level of role stress experienced by nurses in government and private hospitals. It was hypothesized that their Role Stress in Government and Private Hospital Nurses fifteen will be a significant difference among male and female nurses working in government and private hospitals with regard to role stress. This study aimed to address the gap by comparing work related stress and identifying its determinants among nurses working in public and private hospitals.

Nursing is a cornerstone of the healthcare profession, playing a vital role in patient care and overall healthcare outcomes. However, the profession is inherently stressful, with nurses often encountering long working hours, excessive workloads, emotional strain, and challenging interpersonal dynamics. The World Health Organization (WHO) identifies stress as a growing concern in the healthcare sector, significantly impacting both the physical and mental well-being of nurses globally. Nurses on the front line face not only physical exhaustion but also significant psychological challenges. Prolonged stress, emotional strain, and exposure to trauma can lead to burnout, anxiety, and PTSD, impacting their well-being and overall job performance (Hussain et al., 2024).

International studies have consistently highlighted the prevalence of stress among nurses. In Europe, a systematic review by Adriaenssens et al. (2017) reported that 64% of emergency nurses experienced moderate to severe stress due to heavy workloads and poor workplace support. Similarly, Fang et al. (2017) found that organizational and interpersonal factors were leading contributors to stress among nurses in Asia, with inadequate staffing and lack of autonomy being prominent stressors. A study in the United States emphasized that workplace stress among nurses not only compromised their health but also adversely affected patient care quality, increasing the risk of medical errors (McVicar, 2019).

In the South Asian context, studies further underscore these challenges. Research conducted in India revealed that 68% of nurses reported high stress levels, primarily due to resource constraints, understaffing, and extended work hours (Haq et al., 2019). In Bangladesh, Sultana et al. (2022) highlighted how socio-economic pressures exacerbated stress among population, which largely can affect people specially nurses, particularly in public hospitals.

Within Pakistan, the situation mirrors these global and regional findings. Waheed et al. (2019) observed that 80% of nurses working in public hospitals exhibited moderate stress levels, driven by excessive workloads, low staffing, and resource shortages. Conversely, private-sector nurses reported higher stress due to administrative pressures, performance metrics, and patient volume demands. These findings highlight the dual burden faced by nurses in Pakistan's healthcare system, where stressors differ significantly between government and private institutions. Chronic stress can act as a risk factor for comorbidities, including cardiovascular disease (CVD). However, preventive strategies like stress management, regular exercise, a balanced diet, and healthy lifestyle modifications can significantly reduce these risks (Ashiq, Emmanuel, Nadeem, Zahid & Nisa, 2024).

Despite the critical role of nurses in healthcare delivery, the psychological impact of their work often goes unaddressed. Stress not only affects their job satisfaction but also increases the likelihood of burnout, absenteeism, and compromised patient care. Existing research has largely focused on either government or private healthcare institutions, with few comparative studies examining the differences in stressors between these sectors. One study from Karachi Pakistan states that Nurses suffer from the job related stress and it affects their social accountability as well as interpersonal skills while performing the day to day tasks (Sarwar et al., 2019)

This study aims to fill this gap by comparing perceived stress levels among nurses working in government and private hospitals in Lahore, Pakistan. It seeks to identify key stressors and demographic factors influencing stress, thereby providing actionable insights for healthcare policymakers and administrators to create supportive work environments. By addressing stressors specific to each sector, this research aspires to enhance nurse well-being and, ultimately, patient care outcomes.

Problem Statement

Worldwide about 64% of nurses report emotional distress, and half of all nurse’s report moderate to severe stress. Overall stress among nurses was 48.4% among public hospitals and 46% for private hospitals (Heaton et.al 2019). Approximately 80% of Pakistani nurses showed signs of moderate stress. It has been observed that stress level among nurses working in a tertiary care hospital has been raised up that causes compromised patient care and affecting quality of nursing care.

Significance

The results of studying the perceived level of stress among nurses working in government and private hospitals is essential for promoting nurse well-being, enhancing patient care quality, optimizing resource allocation, and informing policy development in healthcare sector. The findings of this research may fill the gaps in knowledge, provide policy implications, and offer suggestions for future research, among other factors.

Objectives

- To assess the perceived stress level among nurses working in government and private hospitals Lahore.
- To identify the specific stressors and evaluating the prevalence of stress among nurses
- To determining patient stress level percentage among nurses working in government and private hospitals Lahore.

Methodology

Study Design

This study employed a comparative cross-sectional design to evaluate the perceived stress levels among nurses working in government and private hospitals in Lahore, Pakistan. The methodology was carefully structured to ensure reliability and validity in capturing and comparing stress levels across diverse workplace settings.

Study Setting

The study was conducted in Lahore, a metropolitan hub of healthcare services in Pakistan. Participants were recruited from both government and private hospitals to capture sectoral differences in workplace stressors.

Study Population and Sampling Technique

The study population consisted of registered nurses with a minimum of one year of professional experience. A convenient sampling method was used to recruit participants from each sector.

Sample Size

Nurses working in government and private hospital with minimal one year experience were recruited in this study and total of 149 nurses were chosen using convenient sampling.

$$\text{n} = \frac{Z^2 1-\partial \div 2\ P(1-P)}{d^2}$$

Using the above estimation of single proportion formula the investigator calculated the sample size. Whereas, ∂ Indicate the level of significance , d is precision, 0.1 P indicate anticipated proportion. According to the formula estimated sample size was 149 from which data was collected using perceived stress scale questionnaire.

Inclusion Criteria

- Registered nurses working in government and private hospitals.
- At least one year of clinical experience.
- Willingness to participate in the study.

Exclusion Criteria

- Nurses on leave during the data collection period.

- Nurses with health conditions affecting their stress levels.

Data Collection Tool

An adopted questionnaire was used to gather demographic information and assess perceived stress levels among nurses. It consists of two main sections: Demographic Information and the Perceived Stress Scale (PSS).

In the Demographic Information section, participants provide essential background data, including their age, gender and the number of years they have worked as nurses. They also describe their current nursing position, indicate their highest nursing qualification in terms of educational background, and specify the department or unit they currently work in (e.g., Medical-Surgical, Intensive Care Unit, and Emergency). Furthermore, participants are required to report their average weekly work hours, marital status, and the number of dependents.

The second section, the Perceived Stress Scale (PSS), assesses participants' perceived stress levels over the past month. Individual scores on the PSS range from 0 to 40, with higher scores indicating higher perceived stress. The scoring categories are as follows: scores from 0-13 indicate low stress, scores from 14-26 indicate moderate stress and scores from 27-40 indicate high perceived stress. Participants respond to a series of questions using a scale that includes options for never (0), rarely (1), sometimes (2), often (3), and very often (4). Sample questions include inquiries about feelings of being upset due to unexpected events, the ability to control important aspects of life, and general feelings of stress and confidence.

Inclusion Criteria: The participants included in this study were:

- Registered nurses with at least one year of experience
- Currently employed in both public and private institutions
- Willing to participate in the research

Exclusion Criteria: The researcher excluded the:

- Nurses who are unwilling to participate in the research
- Nurses on leave during the data collection period
- Nurses who are unwell at the time of data collection

Validity and Reliability

To ensure the validity of the data collection tool, it was disseminated to experts for assessment of content validity, and modifications were made based on their suggestions to enhance sentence clarity and appropriateness. Regarding reliability, a study conducted by Lee (2012) evaluated the modified questionnaire. In studies utilizing the PSS-10 scale, Cronbach's alpha was consistently found to be above 0.70, indicating adequate internal consistency. Furthermore, four studies assessed the test-retest reliability of the PSS-10, all meeting the threshold of greater than 0.70, reinforcing the reliability of the instrument (Chaaya et al., 2010).

Data Collection Procedure

The data collection procedure for the work stress questionnaire commenced with a preparatory phase, during which a data collection letter had been obtained in advance. The researchers

finalized the work stress questionnaire, ensuring it included validated items that addressed various work-related stressors, such as workload, interpersonal relationships, and job demands. During the recruitment phase, the target population, comprising eligible nurses and patients, was identified. The researchers communicated with these individuals to explain the study's goals, methods, potential benefits, and participants' rights. Informed consent was obtained, highlighting their right to withdraw at any time and assuring them of the confidentiality of their responses. The survey was then administered, utilizing online tools for those with access, while also preparing paper surveys for in-person administration. Clear instructions were provided on survey completion, and support was readily available to address questions or concerns throughout the process. Following data collection, participants were thanked for their contributions, and a debriefing session was offered to share insights while maintaining confidentiality. Finally, the collected data were entered into a secure database, ensuring accuracy and confidentiality, and organized for subsequent data analysis.

Data Analysis Plan

The data analysis plan for the work stress questionnaire involved several key steps. First, the collected data underwent a cleaning process to ensure completeness and accuracy, addressing any incomplete responses or outliers as necessary. Responses were then coded for quantitative analysis, with categorical variables assigned numerical values to facilitate this process. Descriptive statistics were calculated to summarize the demographic characteristics of participants, including age, sex, work history, and education level, providing measures such as means, medians, frequencies, and percentages. Additionally, descriptive statistics were conducted on the stress-related responses collected from the questionnaire, focusing on calculating means and standard deviations for continuous variables and frequencies for categorical stressors. To explore relationships between variables, inferential statistics were applied, particularly using comparison of means to investigate differences in stress levels across demographic groups. Statistical tests such as t-tests or ANOVA were planned to determine the significance of these differences, while regression analysis might be employed to assess the impact of various stressors on overall stress levels among nurses. Overall, this comprehensive plan aimed to provide meaningful insights into the factors contributing to job stress in the nursing population.

Ethical Considerations

All participants were required to provide informed consent, and the research complied with all relevant ethical standards to maintain the confidentiality and anonymity.

- All information and data collected were kept confidential, with signed informed consent obtained from each participant.
- Participants remained anonymous throughout the study.
- Participants were informed that they could withdraw from the study at any time without facing any risks or disadvantages related to the research methodology.
- This study aims to assist in managing children's aggressive behavior in the future. Participants' confidentiality will be maintained, and no publications resulting from this research will disclose their identities.

Results

This section presents the findings from the analysis of perceived stress levels among 149 nurses (52 from government hospitals and 97 from private hospitals) using the Perceived Stress Scale (PSS-10). The results are organized into demographic characteristics, stress level comparisons, and key statistical analyses.

Table 1: Demographic Characteristics of Nurses

Demographic Variable	Categories	Frequency (n)	Percentage (%)
Gender	Male	117	78.5%
	Female	32	21.5%
Age	24–35 years	112	75.2%
	36–45 years	37	24.8%
Work Sector	Government Hospitals	52	34.9%
	Private Hospitals	97	65.1%
Years of Experience	1–5 years	85	57%
	6–10 years	45	30.2%
	11+ years	19	12.8%

Table 1 provides a summary of the demographic characteristics of the study participants which revealed that the majority of participants were male (78.5%) and mostly nurses were aged between 24 and 35 years (75.2%). About 65.1% of nurses worked in private hospitals, and 34.9% worked in government hospitals. Likewise most nurses had 1–5 years of nursing experience (57%), followed by 6–10 years (30.2%).

Table 2: Sector-vise Stress Levels

Sector	Mean Stress Score (M)	Standard Deviation (SD)	Low Stress (0–13)	Moderate Stress (14–26)	High Stress (27–40)
Government Hospitals	19.8	4.2	15%	58%	27%
Private Hospitals	22.6	3.8	8%	50%	42%

Table 2 presents the sector-wise comparison of stress levels among nurses. Nurses in private hospitals reported higher mean stress scores (M = 22.6, SD = 3.8) compared to those in government hospitals (M = 19.8, SD = 4.2). A greater proportion of private-sector nurses' experienced high stress (42%) compared to government hospital nurses (27%).

Table 3: Gender-Based Stress Levels

Gender	Mean Stress Score (M)	Standard Deviation (SD)	Percentage (%)
Male	21.9	4.1	105.61
Female	19.6	3.7	94.44

Table 3 highlights the gender-based differences in stress levels. Male nurses reported higher stress scores (M = 21.9, SD = 4.1) compared to female nurses (M = 19.6, SD = 3.7), and this difference was statistically significant (p = 0.015).

Table 4: Key Stressors by Sector

Stressors	Private Hospitals (%)	Government Hospitals (%)
Workload Pressures	65%	45%
Resource Shortages	32%	55%

Table 4 summarizes the primary stressors reported by nurses in each sector. Workload pressures were more prevalent in private hospitals (65%), while resource shortages were more commonly cited in government hospitals (55%). These differences were statistically significant ($p < 0.01$).

Discussion

The findings of this study reveal significant differences in perceived stress levels among nurses working in government and private hospitals in Lahore, Pakistan. These differences highlight the varying nature of workplace stressors in the two healthcare sectors and underscore the need for targeted interventions.

The demographic characteristics of the participants provide valuable insights into the stress dynamics among nurses in government and private hospitals. A significant majority of the participants were male (78.5%), which is an interesting deviation from the global norm where nursing is predominantly a female-dominated profession. This male-majority sample reflects the unique cultural and societal context of Pakistan, where men are increasingly entering nursing but may face societal stigma, professional challenges, and heightened expectations. These factors likely contribute to the higher stress levels observed among male nurses ($M = 21.9 \pm 4.1$) compared to female nurses ($M = 19.6 \pm 3.7$). Stress among nurses is majorly affected by the stressors of workplace environment as well as any disease which healthcare worker is suffering from (Abdoh at al., 2021).

The age distribution of participants, with the majority (75.2%) falling between 24 and 35 years, suggests that younger nurses dominate the workforce. This aligns with the global trend of younger professionals entering healthcare fields. However, the moderate positive correlation between age and stress levels ($r = 0.36$, $p < 0.01$) indicates that as nurses age, they may face additional responsibilities, declining adaptability, or cumulative stress from prolonged exposure to workplace challenges. Interestingly, no significant correlation was observed between years of experience and stress levels ($r = 0.12$, $p = 0.14$), implying that experience alone may not mitigate stress without institutional support mechanisms.

Sectoral representation highlights that 65.1% of participants were employed in private hospitals, reflecting the sector's larger presence in urban areas like Lahore. Nurses in private hospitals reported higher stress levels, which could be attributed to the competitive environment, performance-based demands, and heavier workloads prevalent in private healthcare systems. Conversely, government hospital nurses, who made up 34.9% of the sample, reported stress predominantly due to resource shortages and systemic inefficiencies. These demographic insights

emphasize the need for targeted, context-specific strategies to address stressors across different sectors, genders, and age groups in Pakistan's healthcare system. Not only nurses but also other healthcare workers suffer from high to moderate level of perceived stress (Ruiz et al., 2020).

Sectoral Differences in Stress Levels

Nurses in private hospitals reported significantly higher stress scores ($M = 22.6 \pm 3.8$) compared to those in government hospitals ($M = 19.8 \pm 4.2$). This aligns with global findings where private-sector nurses face greater administrative pressures, patient loads, and performance-based expectations (Fang et al., 2017; Adriaenssens et al., 2017). In contrast, public-sector nurses in this study reported stress primarily due to resource shortages and bureaucratic inefficiencies, consistent with studies from developing nations like India and Bangladesh (Haq et al., 2019; Sultana et al., 2022). One study from Peshawar Pakistan has concluded that nurses in private sector have moderate risk of emotional and psychological challenges which affects patient care (Nisa et al., 2022; Rasheed et al., 2022).

Gender and Stress Levels

Male nurses exhibited higher stress levels ($M = 21.9 \pm 4.1$) compared to female nurses ($M = 19.6 \pm 3.7$). This finding diverges from conventional literature that often associates higher stress with female nurses due to societal and familial expectations (McVicar, 2019). In Pakistan’s cultural context, male nurses may face unique challenges, including societal stigma and increased professional demands, contributing to their elevated stress levels.

Stressors across Sectors

Workload pressures were predominant in private hospitals (65%), while resource shortages were the primary challenge in government hospitals (55%). These findings mirror those from other studies in South Asia, where private hospitals prioritize patient turnover and revenue, while government facilities grapple with understaffing and outdated infrastructure (Waheed et al., 2019).

Correlation with Age and Experience

The positive correlation between age and stress levels ($r = 0.36$, $p < 0.01$) suggests that older nurses perceive higher stress, potentially due to greater responsibilities or declining adaptability to workplace challenges. However, no significant correlation with years of experience ($r = 0.12$, $p = 0.14$) indicates that experience alone does not mitigate stress, emphasizing the need for institutional support regardless of tenure.

Implications

These results imply that private hospitals should implement strategies to optimize workload distribution, such as automated scheduling systems and additional staffing. Government hospitals must address resource shortages through increased funding, efficient procurement systems, and policy reforms. Gender-specific and sector-specific stress management programs, including counseling, resilience training, and peer support systems, should be developed. Institutions should establish regular stress assessments and continuous professional development programs to foster well-being.

This study corroborates findings from international research highlighting the prevalence of workplace stress in healthcare (Adriaenssens et al., 2017). However, the unique stressors identified in Pakistan's dual healthcare system workload pressures in private hospitals and resource shortages in government facilities underscore the need for localized interventions.

Limitations and Future Research

While the study provides valuable insights, certain limitations must be acknowledged. The sample was skewed towards private hospitals, which may limit generalizability. The study captured stress levels at a single time point, not accounting for temporal variations. The influence of cultural and societal expectations on stress was not deeply explored.

Future studies should adopt longitudinal designs, include qualitative methods to capture nuanced experiences, and examine the impact of cultural factors on nursing stress.

Recommendations

To address the significant stress levels observed among nurses, it is essential to implement targeted interventions that cater to the unique challenges of each sector. Stress management programs, including workshops and counseling sessions, should be tailored to address workload pressures in private hospitals and resource shortages in government hospitals. Optimizing workload distribution through automated scheduling systems and increasing staffing can reduce the burden on private-sector nurses, while prioritizing investment in infrastructure and medical supplies can alleviate stressors in public hospitals. Establishing peer support networks and mentorship programs will foster a culture of collaboration and provide emotional and professional guidance, particularly for early-career nurses.

Gender-sensitive policies should also be introduced to address the distinct stressors faced by male and female nurses, promoting work-life balance and societal acceptance of their roles. Regular stress assessments using validated tools like the Perceived Stress Scale (PSS-10) can help monitor evolving trends and provide actionable insights for healthcare administrators. Furthermore, resilience training should be integrated into nursing education to equip future professionals with skills to manage workplace challenges effectively. Engaging policymakers to reform systemic issues, such as equitable pay scales and standardized work conditions, is crucial to ensure long-term improvements. Professional accountability is also one of the factor which directly affects the job related stress among healthcare workers. (Parizad et al., 2021) Lastly, leveraging technology to provide nurses with access to mental health resources and stress management techniques can further enhance their ability to cope with workplace demands. These recommendations aim to create a supportive and sustainable work environment that promotes nurse well-being and improves the quality of patient care.

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