A Study on Occupational Stress among Nurses in Select Hospitals, Hyderabad

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Abstract

The present article on "A Study on Occupational Stress among Nurses in Select Hospitals, Hyderabad" attempts to explores the factors of occupational stress of nurses working in hospitals. It aims to understand the factors influencing occupational stress and their effect on nurses' well-being. The study utilizes a mixed-methods approach, collecting primary data through structured questionnaires and interviews with a sample size of 100 nurses. Statistical tools such as Descriptive statistics, Oneway Anova and Correlation are employed for data analysis. The findings highlight no significant relationship between occupational stress caused by the physical work environment and the experience levels of nurses, and it does not identify any gender-related variances in the perception of stressors. Nevertheless, the strong associations between the physical work environment, high patient acuity, and work culture underscore the interdependence of these elements in impacting both job satisfaction and stress levels. The study emphasizes the importance for a holistic approach in addressing the different aspects of the work environment in order to establish a more supportive and enduring workplace for nurses. By concentrating on these interrelated factors, healthcare organizations can develop strategies that enhance overall job satisfaction and improve the quality of care provided to patients.

Keywords
Occupational stress, physical work environment, high patient acuity, work culture, stress management.

1. Introduction
Stress is the body's natural reaction to any demand or threat. It kicks in when we face situations that require us to make a physical, mental, or emotional adjustment. When we're stressed, our bodies release hormones like cortisol and adrenaline, getting us ready to take action

Definition: Stress can be defined as a state of worry or mental tension caused by a difficult situation. Stress is a natural human response that prompts us to address challenges and threats in our lives. Everyone experiences stress to some degree. The way we respond to stress, however, makes a big difference to our overall well-being.

-   **World Health Organisation**

Common Effects Of Stress
Effects of stress on body:
- Waking up with a pounding headache that persists throughout the day.
- Feeling like drained and sluggish even after a full night's sleep.
- Tossing and turning at night, unable to quiet your mind or find restful sleep.
- Catching colds or illnesses easily, feeling run-down and vulnerable to infections.

Effects of stress on behaviour:
- Using food as a coping mechanism, either eating too much to soothe emotions or forgetting to eat due to stress.
- Reacting impulsively, lashing out verbally or physically in moments of frustration or overwhelm.

- Smoking or using tobacco products to calm nerves or distract from stress, despite knowing the risks.
- Withdrawing from social interactions, preferring solitude to avoid socializing.
- Skipping workouts or physical activities that once brought joy, feeling too exhausted or overwhelmed to prioritize self-care.

Need for the Study: Understanding the occupational stress experienced by nurses in hospitals is crucial for the well-being of both patients and the nurses themselves. Burnout among nurses is caused by various factors, such as extended working hours and a heavy workload. By identifying these stressors, such as the physical work environment, patient acuity, and work culture, tailored therapies can be developed. These therapies, which may include peer support groups and stress reduction programs, can improve the mental health and job satisfaction of nurses. By reducing the stress levels of nurses, it is possible to enhance patient care, create a more positive work environment, reduce employee turnover, and provide higher-quality healthcare.

Problem statement: Nurses are frequently exposed to high-pressure environments, emotional demands, and long working hours, which contribute to significant occupational stress. This stress not only affects their physical and mental well-being but also impacts patient care quality, job satisfaction, and staff retention. Despite growing awareness, many healthcare systems lack adequate support structures and interventions to mitigate stress among nursing professionals.

1.1 Objectives-
- To identify key drivers of occupational stress of nursers.
- To study the influence of physical work environment, high patient acuity and work culture on the occupational stress experienced by nurses.

2. Review of Literature

Sweta Guha Roy, Bhanumati Dutta (2025) in their research on "A Study to Assess Occupational Stress, Factors and Coping Strategies Among Nursing Personnel in Selected Hospitals of Kolkata" adopted a descriptive research approach to collect data from 166 nurses selected by non-probability convenience sampling technique. The study revealed that majority (89.15%) of nursing personnel had moderate level of occupational stress and the major stress factors were having a social life outside work (OR=1.88; p=0.022), lack of resources in hospital (OR=2.41; p=0.002) and constant changes in policies or systems (OR=1.71; p=0.04) had higher chances of causing occupational stress.

Nirmal and Nisha (2025) in their study on "Impact of occupational stress on mental health and organizational outcomes: A study of nurses in the national capital region" conducted analysis on a sample of 100 participants. Statistical analysis included t-tests to examine differences based on demographic variable like gender and Pearson's correlation (r-ratio) to explore relationships between occupational stress, mental health, and organizational outcomes were considered. Gender-based analysis displayed significant differences in both mental health and occupational stress where males reporting higher stress levels. The study observes a significant negative correlation between occupational stress and mental health, demonstrating that higher stress levels were associated with poor mental health. A positive relationship was also observed between occupational stress and organizational outcomes like productivity, job satisfaction, and employee turnover.

Sarita and Rozy Chandel (2024) in their article titled "Review of literature on occupational stress among staff nurses" identified that stress is a major concern for individuals and organizations. The study explains that organisational factors like unhygienic work space, heavy workload, work timings, inadequate pay, poor training support and personal factors like family structure, gender specifications are contributing to the stress in nurses. The study suggests that professional elements like rotational shifts, professional growth opportunity, better training opportunities and psychological factors like counselling techniques, stress management techniques, deep breathing exercises or mindfulness practices ill help nurses to cope with stress effectively. Thus they can deliver increased quality patient care in hospitals and prevent job burn out at work place.

Wang Q, Wang F, Zhang S, Liu C, Feng Y, Chen J (2023) in their article titled "Effects of a Mindfulness-Based Interventions on Stress, Burnout in Nurses: A Systematic Review and Meta-Analysis" aimed to assess the efficacy of mindfulness interventions on reducing stress and burnout among nurses. Through a systematic review and meta-analysis of RCTs and observational studies, they used random-effect models and subgroup analysis, finding that

mindfulness significantly decreases stress and burnout levels in nurses. This evidence supports the implementation of mindfulness programs in healthcare units to improve nurse well-being.

Zabin LM, Zaitoun RS, Sweity EM, de Tantillo L (2023) in their article titled "The relationship between job stress and patient safety culture among nurses: a systematic review" aimed to investigate the correlation between nurses' job stress levels and patient safety culture. They compiled data from various scholarly sources, employing a systematic approach to review literature on this topic. The sample size included diverse studies, offering substantial information for analysis. Statistical tools, likely meta-analytic techniques, were utilized to synthesize the data. The findings likely provided insights into how job stress influences patient safety culture within nursing environments, valuable for healthcare institutions seeking to improve patient safety.

Hussain Abid and Dr. Muhammad Bux Burdey (2023) in their article titled "Mediating Role of Emotional Intelligence Between the Relationship of Occupational Stress and Clinical Performance Among Nurses" aimed to explore how emotional intelligence mediates the connection between occupational stress and nurses' clinical performance. They gathered data through validated questionnaires from a sample of nurses, though the exact size wasn't specified. Using advanced statistical tools like mediation analysis or structural equation modeling, they likely examined the relationships between these variables. The findings indicated that emotional intelligence plays a mediating role in the link between occupational stress and nurses' clinical performance.

Hameed M, Abbasi ML, Khan Z, Islam T, Aymen M (2023) in their article titled "The Relationship of Perceived Stress, Emotional Intelligence and Resilience with Subjective Well Being among Nurses" explored connections between stress, emotional intelligence, resilience, and well-being among 300 nurses. They used surveys for data collection and statistical methods for analysis, finding links between higher emotional intelligence, resilience, lower stress, and better well-being. The study emphasized resilience's role in buffering stress effects on well-being, highlighting the importance of fostering emotional intelligence and resilience for nurses' quality of life and performance.

Shivani, Shivani Sharma, and Parul Saxena (2022) in their article titled "A Systematic Study to Investigate Stress and Stress-Coping Strategies among Nurses in India", explored stress and coping mechanisms among 500 Indian nurses. They used surveys and interviews, employing regression analysis and thematic coding to identify stressors and coping strategies. The study highlights the need for tailored interventions and organizational support to address nurse stress in India, offering insights for healthcare administrators and policymakers.

Velana, Maria, and Gerhard Rinkenauer (2021) in their article titled "Individual-level interventions for decreasing job-related stress and enhancing coping strategies among nurses: a systematic review" aimed to evaluate interventions that target stress reduction and enhance coping among nurses. Analyzing 35 studies from 2010 to 2021 using PubMed, PsycINFO, and Cochrane Library, they found that mindfulness-based and cognitive-behavioral strategies effectively reduced stress and improved coping. The review highlights the importance of tailored interventions for nurses, urging further research into optimizing these approaches.

Efendy, Ismail, Miskah Afriany, and Syarifuddin Lubis (2021) in their article titled "The Effectiveness of Stress Management and Physical Activity to Working Stress Reduction on Nurses" aimed to evaluate how stress management and physical activity can reduce work-related stress in nurses. Their study included a sample of nurses, though the exact number was unspecified. Published in the Journal La Medihealtico 2.2 (2021), their research used bivariate testing to show that these strategies significantly alleviate nurses' stress, improving well-being in demanding environments.

3. Methods
DATA COLLECTION METHOD - Primary data is collected through the administration of questionnaires aimed at gathering first-hand information directly from respondents.
SAMPLING METHOD - Simple Random Sampling- This method ensures that each member of a population has an equal opportunity to be picked, which helps make sure the sample represents the whole group without any biases.
SAMPLE SIZE - The research encompasses a sample size of 100 respondents.
RESEARCH TOOL - Research tools such as Oneway Anova and Correlation tests enabling comprehensive examination and interpretation of relationships, patterns, and associations within the data.

4. Data Collection

A structured questionnaire of 26 questions was designed for survey. First 5 questions were designed to understand demographical distribution of sample. Questions 6- 12 were designed to analyse the factor physical work environment, questions from 13-19 were designed to analyse the factor high patient acuity and work culture factors were included in the questions from 20 to 26.

5. Results And Discussion
5.1 Numerical Results
Interpretation:

The provided table offers descriptive statistical data of 100 respondents for three key variables that impact stress levels among nurses employed in hospitals: Physical Work Environment, High Patient Acuity, and Work Culture

Physical Work Environment aspects**,** such as ventilation, noise levels, workspace design & facilities etc, have a direct impact on nurses' stress levels. Physical Work Environment variable has scores ranging from 14.00 to 30.00, with an average (mean) score of 23.08 and a standard deviation of 2.99. This indicates that, the relatively low standard deviation suggests that most nurses had similar perceptions of their physical work environment.

High Patient Acuity, refers to the complexities and seriousness of patients' medical conditions, necessitating extensive care and continual supervision, thereby greatly affecting nurses' workload, stress levels, and general health. The High Patient Acuity variable also had a range of scores from 11.00 to 30.00, with a mean score of 23.13 and a standard deviation of 3.56. The average score is slightly higher than that for the Physical Work Environment, indicating a moderate perception of patient acuity among the nurses surveyed. The comparatively higher standard deviation indicates greater variability in nurses' perception towards the acuity of their patients.

Work Culture, The Work Culture variable had scores ranging from 14.00 to 30.00, with an average score of 23.60 and a standard deviation of 3.14. The mean score is the highest among the three factors, suggesting that nurses rated their work culture relatively higher. The standard deviation is also higher than that for the Physical Work Environment, indicating moderate variability in nurses' perceptions of their work culture.

The overall descriptive statistics indicate that the three factors that impact stress, namely Physical Work Environment, High Patient Acuity, and Work Culture, all had mean scores in the low to mid-23 range. This suggests that there is a moderate perception of stress in each of these areas. Variable Work Culture has highest mean score (23.60), suggesting relatively favorable views. Other variables, Physical Work Environment and High Patient Acuity are slightly lower, signifying potential areas for improvement.

Table –1: Variable Descriptives:					
	N	Minimum	Maximum	Mean	Std. Deviation
Physical Work Environment	100	14.00	30.00	23.0800	2.99049
High Patient Acuity	100	11.00	30.00	23.1300	3.55521
Work Culture	100	14.00	30.00	23.6000	3.13984
Valid N (listwise)	100				
SOURCE: SPSS OUTPUT					

Table 2: Descriptives – (Physical Work Environment, High Patient Acuity & Workculture)					
	N	Minimum	Maximum	Mean	Std. Deviation
Physical Work Environment	100	14.00	30.00	23.0800	2.99049
High Patient Acuity	100	11.00	30.00	23.1300	3.55521
Work Culture	100	14.00	30.00	23.6000	3.13984
Valid N (listwise)	100				
SOURCE: SPSS OUTPUT					

Interpretation:

The presented table provides descriptive statistics for three variables: Physical Work Environment, High Patient Acuity, and Work Culture. The mean scores are 23.0800 for Physical Work Environment, 23.1300 for High Patient Acuity, and 23.6000 for Work Culture, with standard deviations ranging from 2.99049 to 3.55521. These statistics illustrate the central tendency and variability in how nurses perceive stress related to these aspects of their work environment. Comparatively low standard deviation for physical work environment suggests more consistent responses. Thus, many respondents feel physical environment as key stressor.

Table 3: Oneway Anova – (Physical Work Environment, High Patient Acuity And Work Culture * Gender)						
		Sum of Squares	df	Mean Square	F	Sig.
Physical Work Environment	Between Groups	.360	1	.360	.040	.842
	Within Groups	885.000	98	9.031		
	Total	885.360	99			
High Patient Acuity	Between Groups	27.388	1	27.388	2.193	.142
	Within Groups	1223.922	98	12.489		
	Total	1251.310	99			
Work Culture	Between Groups	11.111	1	11.111	1.129	.291
	Within Groups	964.889	98	9.846		
	Total	976.000	99			
SOURCE: SPSS OUTPUT						

Interpretation:

The presented table displays the findings of a one-way ANOVA test that investigated the relationship between Physical work environment, High Patient Acuity & Work Culture across gender of nurses.

For the physical work environment, F-value is 0.040 with a significance level (Sig.) of 0.842. Since the significance value is much higher than 0.05, we conclude that there is no significant difference in the perception of the physical work environment between genders.

For high patient acuity, F-value is 2.193 with a significance level of 0.142. Again, since the significance value is higher than 0.05, we conclude that there is no significant difference in the perception of high patient acuity between genders.

For work culture, F-value is 1.129 with a significance level of 0.291. As this significance value is also higher than 0.05, we find no significant difference in the perception of work culture between genders.
P-value of Physical work environment, High Patient Acuity & Work Culture across gender of nurses is greater than significance level 0.05 and there is insufficient evidence to support a significant relationship between Physical work environment, High Patient Acuity & Work Culture across gender of nurses.

Table 4: Correlation – (Physical Work Environment, High Patient Acuity And Work Culture)				
		Physical Work Environment	High Patient Acuity	Work Culture
Physical Work Environment	Pearson Correlation	1	.663**	.631**
High Patient Acuity	Pearson Correlation	.663**	1	.620**
Work Culture	Pearson Correlation	.631**	.620**	1
Correlation is significant at the 0.01 level (2-tailed).				
SOURCE: SPSS OUTPUT				

Interpretation:
The correlation table shows strong positive relationships between Physical Work Environment, High Patient Acuity, and Work Culture among a sample of 100 participants. Specifically, Physical Work Environment is significantly correlated with both High Patient Acuity ($r = 0.663$, $p < 0.01$) and Work Culture ($r = 0.631$, $p < 0.01$), indicating that as perceptions of the physical work environment improve, so do perceptions of handling high patient acuity and the overall work culture. Similarly, High Patient Acuity and Work Culture are also strongly correlated ($r = 0.620$, $p < 0.01$), suggesting that participants who perceive their ability to manage high patient acuity positively also tend to rate their work culture positively. These findings highlight the interconnectedness of these variables in shaping overall workplace satisfaction and operational dynamics in healthcare settings.

Findings:
1. The findings indicate a significant gender imbalance, with 80% of participants being female and only 20% male, reflecting the female-dominated nature of the nursing profession.
2. The Physical Work Environment scores range from 14.00 to 30.00, with a mean of 23.08 and a standard deviation of 2.99, suggesting that nurses generally rated their work environment moderately with little variability in their responses.
3. Gender does not significantly influence perceptions of Physical Work Environment, High Patient Acuity, or Work Culture, with all p-values being greater than 0.05.
4. There is a strong positive correlation between Physical Work Environment and High Patient Acuity ($r = 0.663$, $p < 0.01$), indicating that better physical environments are associated with better handling of high patient acuity.
5. Physical Work Environment and Work Culture are also strongly correlated ($r = 0.631$, $p < 0.01$), showing that improvements in the physical work environment relate to better work culture perceptions.
6. High Patient Acuity and Work Culture have a strong positive correlation ($r = 0.620$, $p < 0.01$), suggesting that better management of patient acuity is linked to a more positive work culture.

5.2 Suggestions:

1. Improve the physical work environment by addressing factors such as ventilation, noise levels, and workspace design to enhance comfort and reduce stress.
2. Develop strategies to manage high patient acuity, such as optimizing nurse-patient ratios, providing adequate support, and implementing efficient workflows.
3. Cultivate a positive work culture by encouraging teamwork, recognition, and a supportive environment, focusing on aspects that nurse rate highly.
4. Promote initiatives that maintain and enhance the positive aspects of work culture for which relatively higher rating is observed among nurses.

6. Conclusion:

The study reveals that the occupational stress experienced due to physical work environment, high patient acuity, and work culture are moderately rated by nurses, with work culture receiving relatively higher scores. Interestingly, the study finds no gender-based differences in the perception of stress factors. However, strong correlations between physical work environment, high patient acuity, and work culture highlight the interconnectedness of these factors in influencing overall job satisfaction and stress levels.

These findings point to the need for a holistic approach in addressing the various dimensions of the work environment to create a more supportive and sustainable workplace for nurses. By focusing on these interconnected factors, healthcare institutions can develop strategies that enhance overall job satisfaction and improve the quality of care provided to patients.

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Biography:

Dr.Ch.Kameswari is currently working as Assistant professor in school of management studies, Sreenidhi Institute of Science Technology a renowned institute affiliated to Jawaharlal Nehru Technological University, Hyderabad. She had 15 years of rich teaching experience in the areas of Human Resource Management, Business Ethics, Marketing Management, Strategic Management, Organisational Behaviour and Entrepreneurship. Had an exemplary experience in research work. Published 10 articles in various international journals and book chapters. She was

awarded Ph.D. from Bharathiar University for the research work done in the area of HRM practices with reference to Pharmaceutical Industry. Currently her area of interest is to intensively work and research on HR functions in various industries Her research works under process also include multidisciplinary areas like finance, entrepreneurship and marketing