Work Load Related Stress Among Nurses in Tertiary Care Hospital Karachi Pakistan

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Abstract

Background:

This study's main goal is to determine how common stress is among nurses, with an emphasis on stressors that are specific to the workplace. Stress has become more common among healthcare workers in recent years, which has a big impact on nurses. This study aims to identify the age groups that are most susceptible to stress by classifying stress. It also looks at how education and marital status affect nurses' stress levels. The findings of this study will provide insight into the particular elements that lead to stress in the nursing profession, such as pressures from the workplace, how patients and their families view nurses, and the dynamics between hospital administration and medical staff when interacting with nursing staff. Prior studies have repeatedly demonstrated the pervasiveness of stress in nursing, with numerous research pointing to age and gender as possible predictors of its occurrence. According to our research, female nurses are more stressed than their male counterparts.

Objective: To assess workload-related stress levels and determine its prevalence among nurses.

Methodology: In this study, a cross-sectional research design was employed at DR. Ruth KM. Pfau Civil Hospital in Karachi. The participants consisted of staff nurses holding valid PNC cards at the hospital. Those who voluntarily declined to participate were excluded. Convenient sampling was utilized to select 150 participants, and data was collected through questionnaires, with questions explained to the nurses as necessary. The questionnaire included queries related to demographic variables and factors contributing to work-related stress. The data was then analyzed, with results presented in terms of percentages, frequencies for qualitative variables, and mean values with standard deviations for quantitative variables. The study aimed to explore the relationship between demographic factors and nurses' attitudes towards workload-related stress through the use of the Chi-square test.

Result: Were showed that 50.0 % of the participants were found in highly stressed due to workload & 69.3 % were found exhausted at the end of duty.

Conclusion: In conclusion, the research emphasizes the significance of stress management in critical care settings, where a significant number of participant's work. These findings emphasize the urgent need for effective interventions and strong support systems to lessen the stress burden and its wide-ranging impact within the healthcare sector, ultimately improving the well-being of healthcare professionals. This study spotlights the alarming frequency of work-related stress in healthcare professionals and its associated consequences. It has specifically identified noticeable shifts in behavior and clear signs of depression among the participants.

Introduction

1.1 Background

The specter of workplace stress looms large, casting a pervasive shadow across professional sectors and exacting a profound toll on individuals' physical, emotional, and psychological health (Goh, Pfeffer, & Zenios, 2015). In recent years, it has gained escalating recognition for its far-reaching impact, particularly among healthcare professionals in the United States, encompassing physicians, advanced practice providers, and nurses. Here, alarming rates of burnout have been unveiled, with over half of doctors and a substantial proportion of nurses exhibiting signs of burnout, underlining the urgency of addressing this pressing concern (Lyndon, 2016). Within the intricate tapestry of nursing, work-related stress has ascended to a position of critical concern. It casts a long shadow, significantly influencing the health-related quality of life of nurses and potentially jeopardizing their ability to deliver optimal patient care (Odonkor & Adams, 2021). The labyrinth of factors contributing to workplace stress among healthcare workers is multifaceted, encompassing the toll exacted by extended working hours and night shifts. Within this landscape, workload-related stress stands as a consistent and formidable adversary, especially for nurses operating in the high-intensity crucible of critical care units (Birhanu & Shabbir, 2022). Remarkably, the role of colleagues as pillars of support has been empirically established as a mitigating force against the pernicious effects of heightened workloads on job stress, underscoring the pivotal importance of nurturing supportive work environments (Kaburi, 2016). The repercussions of workplace stress among nurses are profound and resonate far beyond individual well-being. Stress's tendrils extend to higher rates of diminished patient care quality and quantity, casting a pall on patient safety (Bagheri Hosseinabadi, 2022). Furthermore, the quality of the nursing work environment is intricately entwined with the presence of workplace bullying, emphasizing the dire need for nurturing supportive atmospheres that bolster nurses' overall well-being and serve as bulwarks against the corrosive effects of workplace bullying (Yun et al., 2014). It is paramount to recognize that stress can yield both advantageous and detrimental consequences in an individual's life. While positive stress may catalyze personal growth and innovation, negative stress is a harbinger of despair, rejection, and sorrow, ultimately sowing the seeds of physical and mental health issues (Johan, Sarwar, & Majeed, 2017). Furthermore, studies have unveiled the profound impact of stress and shift rotations on nurses' dietary choices, fostering an increase in fast-food consumption and unhealthy snacking while diminishing the intake of fruits and vegetables (Shabbir, 2022). Even nursing interns, ensnared in the crucible of their training, report heightened stress levels linked to potential infection exposure, insufficient personal protective equipment, guilt stemming from their responsibilities, and the grueling demands of long work hours (Pasha, 2020). In the unique context of Pakistani nurses, the intricate interplay of work-related stress and familial social undermining has been explored, with negative emotions acting as conduits between these intertwined factors. Furthermore, higher levels of neuroticism have been revealed as amplifiers, intensifying the connection between family undermining and the experience of negative emotions (Wahid, 2022). This research is embarked upon with the noble aspiration of enhancing the understanding of workplace stress among nurses, its multifaceted determinants, and the profound consequences it unfurls on nurses' well-being and the quality of patient care. In so doing, it is our fervent hope that this exploration will illuminate the path to strategies and interventions that can alleviate the burden of workplace stress in the nursing realm, fostering healthier and more supportive work environments for the valiant healthcare providers who serve on its front lines.

1.2 Rationale of the Study

Work related stress is the most common problem of nurses in tertiary care hospital, the consequences of stress on nurses change the behavior in working sitting. This study helped to assess the factors which contributes to work related stress among nurses. The study helped to assess the change in behavior of nurses due to work load.

1.3 Objectives of the Study:

1) To determine level of worked load related stress among nurses.
2) To determine the prevalence of work-related stress among nurses.

1.4 Operational Definitions:

Stress:

The physiological and psychological response of individual to toward any events. (American psychological association)   OR

1.   The 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. **(WHO)**

Work load related stress:

The response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which cope. **(WHO)**

Work load: The amount of work or of working time expected or assigned **(M-W-D)** **(Merriam-Webster-dictionary)**

Behavior: Behavior is how someone acts. It is what a person does to make something happen, to make something change or to keep things the same. Behavior is a response to things that are happening: internally - thoughts and feelings. externally - the environment, including other people. **(NSW HEALTH)**

2.1 Literature review

In a 2016 investigation at Vasei Hospital, Sabzevar City, Iran, the central role of nurses in patient care was examined, particularly focusing on the inherent stress factors associated with nursing, including job stress and workload. The finding highlights the multifaceted nature of stressors in nursing, suggesting a more intricate relationship between workload and stress, which implies the potential effectiveness of targeted training programs to enhance nurses' skills and resilience in handling demanding workloads (Madadzadeh, M., Barati, H., & Ahmadi Asour, A. (2018). An investigation published in the International Journal of Community Medicine and Public Health in 2018 acknowledged that nursing inherently involves increased stress levels as a result of the balancing act nurses must perform between competing demands from various stakeholders. This study sought to evaluate workplace stress among registered nurses in Goa, revealing that a significant proportion experienced severe to moderate stress. Workload and coping with patient fatalities emerged as top stressors, especially among younger nurses and those working in casualty and general wards. The study emphasizes the need for interventions, such as workload reduction, to mitigate nurse stress.

Stress at work is a global health concern affecting nurses' well-being and quality of life. A study conducted at Liaquat University Hospital in Jamshoro aimed to assess stress in nursing related to work. The majority of nurses reported experiencing moderate stress, with some reporting severe stress. The study underscores the prevalence of stress in nursing and the importance of addressing its various causes. In 2015, a study conducted in two tertiary care teaching hospitals in Karachi, Pakistan, aimed to evaluate the frequency, severity, and significant stressors in nurses' daily lives. The study included 265 registered nurses and identified several stressors impacting nurses' lives. These findings further underscore the need to address

occupational stress among nurses. A study conducted in private tertiary hospitals in Karachi from 2017 to 2018 investigated the levels of Nurses' stress during work in critical care units (ICUs), general wards, and emergency rooms. The study revealed variations in stress levels among different hospital departments, with the emergency department nurses experiencing higher stress levels attributed to management-related issues, inadequate support, and patient-related stressors. The study highlights the importance of recognizing the department-specific nature of workplace stress. This literature review provides a comprehensive overview of research conducted in various healthcare settings, emphasizing the prevalence of workplace stress among nurses and the need for targeted interventions to mitigate its effects and enhance nurses' overall well-being.

Methodology

3.1. Research Design and Settings:

Descriptive Cross sectional study which was conducted at DR. Ruth KM. Pfau civil hospital Karachi

3.2. Inclusion Criteria:

Staff nurses working in DR. Ruth KM. Pfau civil hospital having valid PNC card

3.3. Exclusion Criteria:

Nurses who were not willing to participate in the study on voluntary basis were excluded from the study.

3.4. Sampling Technique

Convenient sampling method was used to access the participants.

3.5. Study Duration:

Duration of the study was three months from august 2023- to September 23.

3.6. Sample Size:

150 participants from DR. Ruth KM. Pfau civil hospital

3.7. Data Collection Procedure:

Data were collected by distributing questionnaire to nurses after explaining questions to them.

3.8. Data Collection Tool:

Adopted/modified structured questionnaire was used to collect data consisting of demographic variables, and contributing factors related to stress. Questionnaire has around 10 to 15 questions that consist on only short sentences**. (The Work Stress Questionnaire © Kristina Holmgren, 2008)**

3.9. Statistical Analysis:

The collected data was entered in SPSS version 22.0. frequency and percentage were calculated for variables

Ethical Consideration:

Research topic was approved by ethical review committee of advanced health sciences institute of nursing; consent was taken from all nurses before data collection.

4.1. Demographic Characteristics of Study Participant (n=150)

This cross-sectional study involved a participant distribution of 47.3% male nurses and 52.7% female nurses, indicating a fairly balanced gender representation within the sample. In terms of age groups, the majority of nurses, constituting 57%, fell within the 25-30 years' bracket, signifying a predominant presence of younger professionals. A smaller yet significant proportion, 28%, belonged to the 31-35 years' age group, demonstrating a notable mid-career representation. The remaining 8.7% of nurses were in the

36-40 years' age group, reflecting a smaller but still noteworthy segment of more experienced healthcare professionals.

TABLE: 1

CHARACTERISTICS	FREQUENCY (N)	PERCENT %
GENDER		
Male	71	47.3%
Female	79	52.7%
AGE GROUP		
25-30	86	57%
31-35	42	28%
36-40	22	14.6%
DESIGNATION		
Nurse	139	92.7%
Head Nurse	8	5.3%
Others	3	2.0%
MARITAL STATUS		
Married	67	44.7%
Single	83	55.3%
EDUCATION		
Diploma	38	25.3%
BSN	107	71.3%
MSN	5	3.3%
DUTY SHIFT		
Morning	46	30.7
Evening	77	51.3
Night	27	18.0
WORKING AREA		
Critical	95	63.3
Non-critical	55	36.7

4.2. Impatient Due to Workload

In response to research question number (2), as depicted in Figure (2), it is noteworthy that out of the total 150 participants, a significant 64% of them reported feelings of impatience attributed to the burden of excessive workload. This finding underscores the prevalence of impatience among healthcare professionals in the context of their work-related stress.

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TABLE: 2

		Frequency	Percent
Valid	YES	96	64.0
	NO	51	34.0
	I DON'T KNOW	3	2.0
	Total	150	100.0

IMPATIENT FOUND
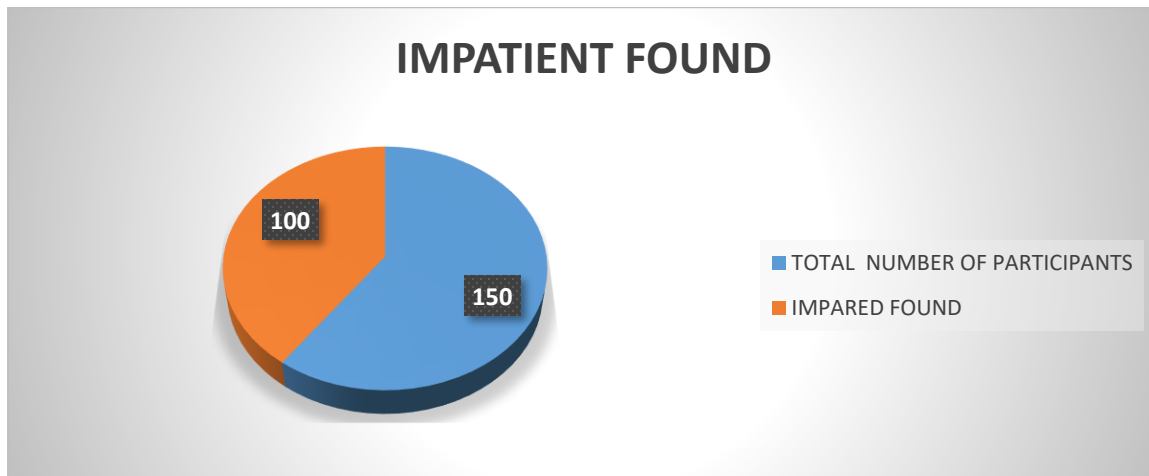
4.3. Increase Nurse's Ratio in Ward Can Decreased the Depression in Nurses

Addressing research question number (3), as illustrated in Figure (3) with a total participant count of 150, a substantial majority, specifically 75.3% of the respondents, expressed a belief that an increase in the ratio of staff nurses within the ward can effectively alleviate the workload. This finding underscores the prevalent sentiment among the participants that optimizing the staffing levels in healthcare settings could contribute to a reduction in their work-related stress.

TABLE 3:

		Frequency	Percent
Valid	YES	113	75.3
	NO	27	18.0
	I DON'T KNOW	10	6.7
	Total	150	100.0

4.4. Participant Dissatisfaction

With respect to research question number (4), as visually presented in Figure (4) and involving a total of 150 participants, it is noteworthy that 37.3% of the respondents expressed job dissatisfaction, while the remaining 62.7% reported job satisfaction. This finding highlights a significant proportion of participants who harbor dissatisfaction with their current employment conditions, underscoring the need for further exploration of factors contributing to workplace dissatisfaction within the healthcare profession.

TABLE 4:

		Frequency	Percent
Valid	YES	56	37.3
	NO	85	56.7
	I DON'T KNOW	9	6.0
	Total	150	100.0

4.5. Nurses Shortage Is Caused Stress and Depression in Nurses

Addressing research question number (5), as depicted in Figure (5) with a total of 150 participants, a substantial majority of 85.3% of the respondents identified the shortage of staff nurses as the primary cause of work-related stress. This finding underscores the critical role that staffing levels play in contributing to stress among healthcare professionals, emphasizing the urgent need for addressing staffing shortages to mitigate work-related stress.

TABLE 5:

		Frequency	Percent
Valid	YES	128	85.3
	NO	18	12.0
	I DON'T KNOW	4	2.7
	Total	150	100.0

4.6. Work Related Stress

In response to research question number (6), as depicted in Figure (6) with a total of 150 participants, a significant 69.3% of the respondents reported feeling exhausted at the conclusion of their duty shift. This finding highlights the prevailing issue of fatigue among healthcare professionals, underscoring the physical and mental toll that their work can exact, further emphasizing the importance of addressing and mitigating work-related stress in this profession.

TABLE 6:

		Frequency	Percent
Valid	YES	104	69.3
	NO	41	27.3
	I DON'T KNOW	5	3.3
	Total	150	100.0

4.7. Ratio of Medical Errors Due to Over Work Load

Turning to research question number (7), as illustrated in Figure (7) involving a total of 150 participants, a significant 90.7% of the respondents held the belief that medical errors were rationalized, at least in part, by the excessive workload they faced. This finding underscores the participants' perception of a direct link between high work-related stress and the occurrence of medical errors, highlighting the importance of addressing workload-related stress to enhance patient safety and healthcare quality.

TABLE 7:

	Frequency	Percent
Valid YES	136	90.7
NO	5	3.3
I DON'T KNOW	9	6.0
Total		
	150	100.0

4.8. Organization Expectations

Addressing research question number (8), as portrayed in Figure (8) with a total of 150 participants, it is noteworthy that a substantial majority of respondents expressed the perception that healthcare organizations have exceedingly high expectations from nurses in clinical settings. This finding highlights a prevailing sentiment among participants that underscores the need for organizations to consider the demands placed on nurses and potentially reassess expectations to promote a healthier work environment and ensure the well-being of healthcare professionals.

TABLE 8:

	Frequency	Percent
Valid YES	125	83.3
NO	10	6.7
I DON'T KNOW	15	10.0
Total		
	150	100.0

4.9. Job Stress Among Participant

Addressing research question number (9), as depicted in Figure (9) with a total of 150 participants, it is evident that nearly half of the respondents, representing approximately 50% of the participants, reported experiencing stress attributed to their job environment. This finding underscores the significant impact of the work environment on the well-being of healthcare professionals and emphasizes the need for interventions aimed at reducing workplace stress and fostering a more supportive and conducive atmosphere for healthcare workers.

TABLE 9:

		Frequency	Percent
Valid	YES	75	50.0
	NO	68	45.3
	I DON'T KNOW	7	4.7
	Total	150	100.0

5.1. Discussion:

The findings of this study shed light on the prevalence of workload-related stress among nurses in the context of tertiary care hospitals. Nearly 55% of the study participants reported experiencing stress, signifying a significant burden on the nursing workforce. These results align with a study conducted in Eastern Ethiopia, where the prevalence of stress due to workload was reported to be about 66.2%, reflecting the global nature of this issue (Baye et al., 2020). Both studies identified a concentration of work-related stress among nurses in critical areas, with ICU nurses, in particular, experiencing a heightened burden. This emphasizes the critical role of the work environment in contributing to stress levels among healthcare professionals. The age distribution of nurses experiencing high levels of stress in the current study reveals that approximately 50% of them were aged above 40 years. This observation is consistent with the findings of Baye et al. (2020), suggesting that age may be a significant factor influencing the prevalence of work-related stress among nurses. Similarly, a study conducted by Shefalee Pai Vernekar et al. in 2018 also noted the prevalence of stress in nurses aged above 40 years (Vernekar & Shah, 2018). These findings underscore the need to consider age as a potential risk factor for stress in nursing, which could inform targeted interventions for different age groups within the nursing workforce. The study also revealed that a considerable proportion of participants, 65.3%, exhibited behavior changes, and 85.3% reported symptoms of depression, which could be attributed to work-related stress. This aligns with research conducted in Brazil, which highlights the adverse effects of work-related stressors on nurses' work ability (Vernekar & Shah, 2018). It is crucial to recognize the profound impact of work-related stress on the mental and emotional well-being of healthcare professionals, as it not only affects individual nurses but also has implications for patient care quality and safety. In the context of Oman, the increasing demand for nursing services due to an aging population and the shortage of nurses is contributing to elevated workloads and stress levels among nurses. These challenges are further exacerbated by resource constraints in healthcare services, which have led to reduced staffing and increased nursing workloads. The need for strategies to mitigate the workload of nurses is evident, as prolonged exposure to high workloads can have detrimental consequences on both the well-being of nurses and the quality of patient care (Sanda, 2019). The study also explored the relationship between workload and job stress in the Outpatient Department (OPD), revealing a direct association between increasing workload and elevated job-related stress among OPD nurses. This outcome aligns with existing research, indicating that high workloads can contribute to heightened job stress among employees. However, it contradicts the primary effect model of social support, suggesting that social support networks may not always serve as a buffer against the adverse effects of high workloads (Arulappan, 2023). In conclusion, this study underscores the global issue of work-related stress among nurses, which is influenced by factors such as age, work environment, and workload. The implications of this stress extend beyond individual nurses to impact patient care quality and the overall healthcare system. To address this challenge, interventions aimed at reducing workloads and fostering supportive work environments are essential. Additionally, strategies

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should consider the specific needs of different age groups within the nursing workforce. Ultimately, the well-being of nurses and the quality of patient care depend on effectively addressing and managing work-related stress in healthcare settings.

Conclusion

The study, which employed qualified nurses in a tertiary care hospital, revealed a notable prevalence of work-related stress, weariness, behavioral abnormalities, and depressive symptoms. It emphasizes the necessity of supports for nurses at all career levels and interventions in high-stress clinical situations.

Study Limitation:

Single-centered study, therefor the result can't be generalized.

Recruited only tertiary care hospital staff.

Strength:

Study was conducted in tertiary care hospital.

Data were gathered at clinical setting

Sample size was substantial.

Recommendation: The study should involve a larger sample size and employ analytical methods. Similar research in different healthcare settings is needed. A multifaceted approach should explore additional stress factors. Longitudinal studies can track stress changes over time. Collaborate with healthcare institutions for targeted interventions and mental health support. Education and training on stress management are essential. Regular assessments of workload and stress are necessary. Collaboration among healthcare stakeholders is crucial for a supportive work environment.

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