

## **WORK LOAD RELATED STRESS AMONG NURSES IN TERTIARY CARE HOSPITAL KARACHI PAKISTAN**

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### **ABSTRACT**

#### **Background:**

Stress has become more common among healthcare workers in recent years, which greatly impacts nurses. In Pakistan, specifically in Karachi, these challenges are intensified by high patient inflow and resource constraints. Such stress can negatively impact nurses' mental and physical well-being, job satisfaction, and quality of patient care. Understanding these stressors is crucial for developing strategies to improve working conditions and healthcare outcomes.

#### **Aim:**

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

#### **Methodology**

In this cross-sectional study, 150 nurses with valid PNC cards at a tertiary care hospital in Karachi were selected through convenient sampling. Data was collected through questionnaires. The survey 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 Chi-square test was used to explore the relationship between demographic factors and nurses' attitudes towards workload-related stress.

#### **Results**

The results 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 hours.

### **Conclusion**

The research emphasizes the significance of stress management in critical care settings, where a significant number of participants' work. These findings underscore 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 behaviour and clear signs of depression among the participants.

**KEYWORDS:** Healthcare workers, Occupational stress, Patient care quality, Exhaustion, Prevalence of stress

### **INTRODUCTION**

#### **Background:**

Nurses play a critical role in healthcare, ensuring patient care and safety in demanding environments (Glarcher & Vaismoradi, 2024). Workplace stress remains a significant concern, 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 gruelling 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.

### **Rationale of the Study:**

Work-related stress is the most common problem of nurses in tertiary care hospitals, the consequences of stress on nurses change their behaviour in working sitting.

This study helped to assess the factors that contribute to work-related stress among nurses.

The study also aided in assessing the change in the behaviour of nurses due to workload.

### **Objectives of the Study:**

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

### **Operational Definitions:**

#### **Stress:**

The physiological and psychological response of an individual toward any event (*APA Dictionary of Psychology*, n.d.) OR

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 (*Stress*, 2022).

#### **Workload-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 (Murphy et al., 1999)

#### **Workload:**

The amount of work or of working time expected or assigned (“Workload,” 2025)

#### **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 (Behavior, 2025).

## **METHODOLOGY**

Descriptive Cross sectional study which was conducted at DR. Ruth KM. Pfau Civil hospital Karachi. Staff nurses working in DR. Ruth KM. Pfau civil hospital having valid PNC card were included and nurses. Nurses who were not willing to participate in the study on voluntary basis were excluded from the study. Convenient sampling method was used to access the participants. Duration of the study was three months from august 2023- to

September 23. 150 participants from DR. Ruth KM. Pfau civil hospital. Data were collected by distributing questionnaire to nurses after explaining questions to them. 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). The collected data was entered in SPSS version 22.0.

**Ethical Consideration:**

Ethical approval was taken from the Ethical Review Committee of the Advanced Health Sciences Institute of Nursing. Informed consent was taken from all nurses before data collection and their confidentiality was maintained. Additionally, there was no intervention that could harm the study participants.

**RESULTS**

**Demographic characteristics of study participant**

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, 57% of nurses, 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 14.6% of nurses were in the 36-40 years’ age group, reflecting a smaller but still noteworthy segment of more experienced healthcare professionals. A majority (92.7%) of the nurses were registered nurses while 5.3% were head nurses. Only 2% of them were other than nurses. Educationally, 25.3% held nursing diploma, 71.3% were BSN and 3.3 were MSN nurses. In addition, more than half of the nurses who participated in the study were from the critical care area.

Table 1

*Sociodemographic characteristics of the study participants (n=150)*

<b>CHARACTERISTICS</b>	<b>FREQUENCY (N)</b>	<b>PERCENT %</b>
<b>GENDER</b>		

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

### Impatient due to workload

In response to the research question number 2, as depicted in Table 2, it is noteworthy that out of the total 150 participants, 64% 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 (Figure 1).

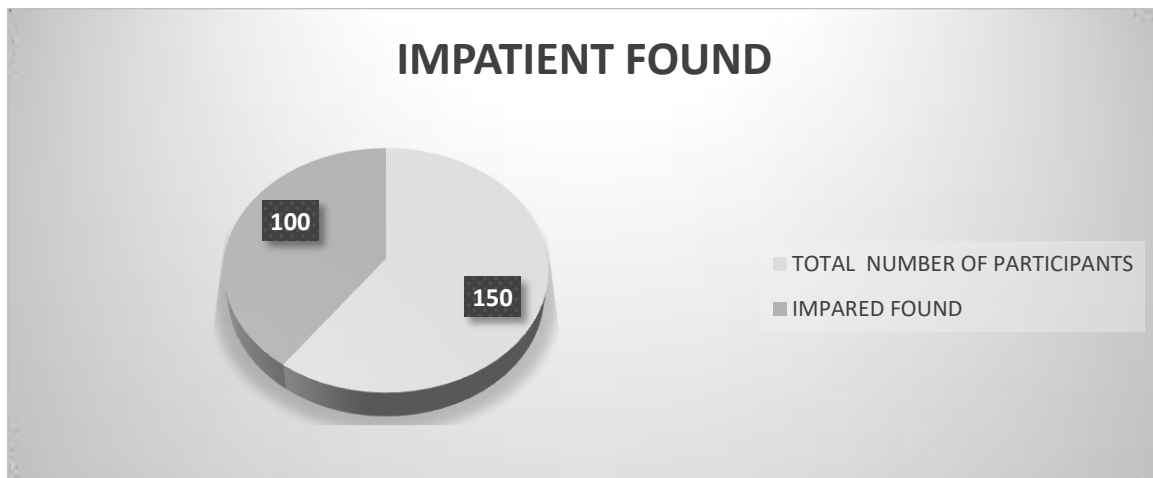
Table 2

*Impatient Due to Workload (n=150)*

		Frequency	Percent
Valid	YES	96	64.0
	NO	51	34.0
	I DONT KNOW	3	2.0
	Total	150	100.0

Figure 1.

*Prevalence of impatience among healthcare professionals*



### **Increasing the nurses' ratio inward can decrease depression in nurses**

Addressing research question number 3, as illustrated in Table 3 with a total participant, 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

### Participant dissatisfaction

For research question number 4, as presented in Table 4, it is noteworthy that 37.3% of the respondents expressed job dissatisfaction, while the remaining 62.7% reported job satisfaction. This finding highlights that almost one third of the 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

### Nurses shortage is caused stress and depression in nurses

Addressing research question number 5, as depicted in Table 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 Table 6, 69.3% of the respondents reported feeling exhausted after 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

#### Ratio of medical errors due to over workload

Turning to research question number 7, as illustrated in Table 7, 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

**Organization expectations**

Addressing research question number 8, as portrayed in Table 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

**Job stress among participant**

Addressing research question number 9, as depicted in Table 9, 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

## 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 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 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, behavioural abnormalities, and depressive symptoms. It emphasizes the necessity of support for nurses at all career levels and interventions in high-stress clinical situations.

### Strength

The study's strengths include being conducted in a tertiary care hospital, data collection in a clinical setting, and a substantial sample size, enhancing the reliability of the findings.

### Study Limitation

The study has certain limitations, including its single-centred nature, which restricts the generalizability of the results, and the recruitment of only tertiary care hospital staff.

Additionally, the snapshot nature of the study where data is collected at a single point in time, makes it impossible to determine track changes over time.

### Recommendation

Similar and more in-depth 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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