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Research Article

**THE IMPACT OF PERCEIVED STRESS ON WORKING BEHAVIOR
OF NURSES IN PAKISTAN**¹Nida Kiran, ²Sheeba Haroon, ³Tahira Shaheen¹Charge Nurse, The Childrens' Hospital and Institute of Child Health, Lahore,

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Article Received: July 2021**Accepted:** August 2021**Published:** September 2021**Abstract:**

Objective: The purpose of this study is to evaluate the impact of perceived stress in nurses working in various departments of tertiary care public sector hospitals of Pakistan. Methods: Using a non-random convenience sample, 400 nurses working in various departments in Services Hospital Lahore and Punjab Institute of Cardiology, Lahore were inducted. Nurses recorded their responses in Domestic Version of Perceived Stress Scale 10-Items Questionnaire (PSS10) with a Characteristic Checklist. Results: This study identified that nurses working in psychiatric departments perceived the highest level of stress followed by oncology ward nurses, ICU/CCU, and ER nurses respectively. However the nurses of medical and surgical ward reported the lowest level of stress. Conclusions: This study showed that psychiatric ward nurses experience the highest levels of stress among all volunteers. This might lead to discontentment with the job and high rates of exhaustion and stressing out. All these factors can result in hampering patients care and safety concerns especially those of psychiatric patients. It is strongly advocated that nursing superintendents and the hospital administration pay due attention to this occurrence and identify the potential causes of unyielding stress in hospital settings. Stress is defined as the sum of perceived demands exceeding individuals' coping abilities; stress happens as a result of interaction between the external and internal components of the environment involving the individual's perceptions and taking into account the developing relationship between the individual and its immediate environment

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INTRODUCTION:

The nursing profession is globally accepted as one of the highly stressful occupations² (Adriaenssens, De Gucht, & Maes, 2015). Worldwide, many studies have been conducted to identify the Contributing factors of stress among nurses^{2 7} (Adriaenssens et al., 2015; Cañadas-De la Fuente et al., 2015; It was observed that increasing workload, conflict with health care workers, uncertain job descriptions, leadership mindset, complicated nursing care procedure, inhumane working hours, arduous job nature and social barriers, constantly changing health care environments were the top reasons of stress among nurses. An casual observation showed that scarcity of resources, physical variables (i.e. lighting, space, temperature and disruption), psychological-environmental factors (i.e. verbal abuse and inappropriate client behaviors) and new technology were other sources of stress among nurses²² (Kushwaha, 2014). Additionally, low social support and lack of nursing autonomy in the workplace were the main culprits to produce stress. Many authors in the world have highlighted that the main stressors that nurses face in their work are related to the mortality and morbidity of the critical patients.^{21,16} (Adriaenssens et al., 2015; Hamaideh et al.,). Moreover, the perception of stress may vary depending on nurses individual characteristics, experiences and their coping ability. The level of stress among nurses generally ranges from moderate to high²⁰ (Itzhaki et al., 2015). Stress score is generally higher than mostly documented.²⁵(Subih et al.,2013) Increased prevalence of stressors in workplace settings usually cause distress, which can be measured by the presence of psychological and physiological indicators²⁹ (McVicar, 2003; Mimura &Griffiths, 2003). Psychological indicators for distress include, anorexia, low self-esteem, fatigue, sleep disturbances and nicotine abuse¹¹ (Dyrbye, Thomas, & Shanafelt, 2006). Physical impacts of stress included increased incidence of coronary heart disease, chronic fatigue syndrome, mental illness, certain types of cancer, migraine, acid peptic disease, hay fever, asthma and skin allergies.^{10,13}(Dunn, 2005; et al., 2006). Additionally, stress may stimulate and exacerbate maladaptive behaviours, such as smoking, unhealthy dietary patterns, excessive alcohol consumption, illicit substance abuse, life dissatisfaction, accident and unsafe behaviour at work, and marital problems and family conflicts¹³ (Gelsema et al., 2006). Investigating and interpreting stress levels and their responses for nurses according to their working departments is crucial, and researchers are seeking to identify stressors that cause nursing stress for future health system action to provide a safer and more suitable

environment for health providers and patients³⁰ (Mealer & Jones, 2013). It was noticed that single and female nurses bear higher levels of stress than males.²⁵ (Subih et al , 2013) Other variables considered in previous literature include age, income, experience, qualification, work shift, duration and department.¹ (AbuAlRub, 2004) In previous literature, nurses who worked in medical, emergency room (ER), intensive care unit (ICU) and paediatric wards showed significantly higher perceived stress levels than in other wards²⁸ (McCarthy, Power, & Greiner, 2010). Findings revealed that ICU nurses have the highest stress levels. Few previous studies have explored stress levels among nurses according to their working department, including psychiatric nurses⁹ (Currid, 2008). To the authors' knowledge, there is no single study conducted to compare stress level between different working departments in Pakistan. For this reason, this initiative has been taken to document the above mentioned perceived stress.

METHODS:

After proper formal approval from the ethical review committee of the concerned hospitals and informed consents of the volunteers, a questionnaire was drafted for recording the responses. Privacy and confidentiality was ensured at every step of the study. A convenience sample method was used to select 400 nurses working in respective departments. Data was collected on a Modified Version of Perceived Stress Scale of 10 Items Questionnaire Draft during June 2020 and January 2021. SPSS version 21 (SPSS Inc., Chicago, IL, USA) was used for data analysis.

Inclusion criteria:

- a) Holding at least a bachelor's degree in nursing.
- b) Working in any of the following settings: psychiatric, oncology, ICU, CCU, ER, paediatrics, Surgical Floor
- c) Having direct contact with patients.
- d) Having basic english reading and writing skills.

Exclusion Criteria:

All those nurses working at administrative posts.

The PSS10 is a time tested and proven instrument.^{17,27} (Hamdan-Mansour et al., 2006; Masa'Deh et al., 2013) It consists of 10 short and general simple questions related to variable social circumstances of the participants⁸ (Cohen & Janicki-Deverts, 2012). PSS10 uses a five-point Likert-type rating scale, ranging from never (0) to very often (4); the scores of four positive items (4, 5, 7 and 8) are reversed. The total scores range

from 0-40, with higher scores indicating higher stress level.

A total of 460 nurses were invited to participate, of whom 400 consented and completed their performas. Incomplete questionnaires were excluded before the analysis.

RESULTS:

Table 1. Sociodemographic data of nurses

Variable	N=400 N(%) or Means \pm SD
Social status:	
Upper Class	108 (27.0)
Middle Class	172 (43.0)
Lower Middle Class	120 (30.0)
Number of children:	
No children	98(24.5)
One child	79(19.75)
Two children	152 (38.0)
Three children	71 (17.75)
Gender	
Male	109 (27.25)
Female	291 (72.75)
Qualification	
Bachelors	351 (87.7)
Masters	49 (12.25)
Wards	
Psychiatric	89 (22.25)
Oncology	65(16.25)
ICU/CCU	97 (24.25)
ER	71 (17.75)
Surgical Floor	78(19.5)
Age	32.64 \pm 6.74
Total stress score	24.76 \pm 7.82

Table 2. The mean stress scores for nurses across different working departments

Working departments	Nurses	Mean of nurses stress scores	SD
Psychiatric	89	34.32	6.91
Oncology	65	27.45	4.60
ICU/CCU	97	24.26	5.22
ER	71	20.63	5.73
Surgical Floor	78	18.74	4.92

Table 3. Post-Hoc tests of perceived stress scores of nurses working in different units of hospitals

Working units		Mean difference of perceived stress scores of nurses	P value
Psychiatric	Oncology	4.64	0.001
	ICU/CCU	10.57	<0.001
	ER	12.46	<0.001
	Surgical Floor	22.43	<0.001
Oncology	Psychiatric	-4.60	0.001
	ICU/CCU	6.76	<0.001
	ER	6.94	<0.001
	Surgical Floor	18.73	<0.001
ICU/CCU	Psychiatric	-11.72	<0.001
	Oncology	-7.93	<0.001
	ER	2.41	0.99
	Surgical Floor	13.54	<0.001
ER	Psychiatric	-11.72	<0.001
	Oncology	-7.55	<0.001
	ICU/CCU	-0.349	0.99
	Surgical Floor	13.57	<0.001
Surgical Floor	Psychiatric	-22.17	<0.001
	Oncology	-18.53	<0.001
	ICU/CCU	-14.95	<0.001
	ER	-14.68	<0.001

The major results of this study showed that nurses working in psychiatric ward experienced the highest level of stress followed by oncology ward, ICU/CCU, and Medical and Surgical ER nurses respectively. Similar studies showed mixed results, yet higher level of stress was documented in psychiatric nurses²³(Leka, Hassard, & Yanagida, 2012; Richards et al., 2006; Tuvesson, Eklund, & Wann-Hansson, 2012). These nurses reported high work load, lack of formal training, lack of appreciation and acknowledgement.

They demanded the need of comprehensive supervision and counseling. 47% of the sample size was stressed according to General Health Questionnaire. The researchers reached a conclusion that working with the patients of serious mental illnesses is extremely stressful and exhausting. The authors recommended that there should be stress reduction measures at working places so that the overall mechanism of health care delivery system can be uplifted⁶ (Bogaert, Clarke, Willems, & Mondelaers,

2013). Perceived work stress was associated with high psychological demand, below average work-place support and imminent danger of being inflicted by the patient or attendant. Overall the nurses apparently preferred performing duties in psychiatric wards in the start of their career the justification for such might be that psychiatric patients are vitally stable and have a better general physical conditions than others, thus they require less nursing care, which warrants decreased workload but an uninvited mental stress.

DISCUSSION:

Multiple reasonings of why psychiatric nurses have high levels of stress were highlighted in the literature. For example, abusive behavior of patients and work place physical injuries are considered as main source of stress as compared to other wards¹⁸ (Hanrahan, Aiken, McClaine, & Hanlon, 2010). Moreover, the epitome of stress in psychiatric nurses lies on their job nature maintaining proximity and attending patients with delusions, suicidal and violent behavior. Moreover, the lack of social support and trained staff might explain the high stress levels of psychiatric nurses²¹ (Jenkins & Elliott, 2004). Similarly the stigma associated with psychiatric care and mental illness in some societies contributes to insufficient provision of health care resources¹⁵ (Halter, 2002). A literature review focused on stress in mental health nursing reported that increasing workload, lack of resource management, lack of motivations and privileges for nurses working in psychiatric health settings may be a linked to higher stress levels in such settings¹² (Edwards, Burnard, Coyle, Fothergill, & Hannigan, 2000). This was analogous to previous studies¹⁴ (Gomes Sda F, 2013;) that attributed stress to several patient-related factors, such as the complex regime of cancer treatment, the prognosis and outcome of the illness and course of treatment, and other work-related factors such as patients suffering, mental status, morbidity and mortality⁶ (Borteyrou, Truchot, & Rasclé, 2014;). Past studies showed that critical areas (e.g. ICUs and CCUs) are potentially the most stressful places encountered in nursing.²⁴ (Lexshimi RG, 2007), including fear of erroneous interventions, inadequate training and scanty reward in addition to the general stress embedded in intensive and critical care, the complex nature of patient's conditions, novel technology, ethical dilemmas related to terminally ill patient care and end of life issues, transitional nursing roles and responsibilities and modifications in health care delivery systems were considered major factors of stress in ICU. Shortage of nursing staff, lack of support, and higher expectations from administration are also proven systemic sources of stress for ICU nurses.^{5,26} (Borhani et al., 2014; Manal.,2012) In this study, critical care nurses

reported lower level of stress compared to psychiatric nurses. The physical environment of ICU/CCU is also gaining attention to be able to solve these problems so that a role model may be developed and a preventive strategy may be applied in other wards too. Additional studies are prerequisites to probe this phenomenon. One of the findings of this study is that there was no difference between the levels of stress between ICU and ER. All these areas operate under same policy and receive and deal with identical cases. For this reason, the sample did not show any significant difference in context of their stress levels. But psychiatry ward nurses have different portfolios and SOPs which make them prone to higher levels of stress.

CONCLUSION AND RECOMMENDATIONS

This study showed that psychiatric ward nurses experience the highest levels of stress among all other nurses working in different departments of a hospital which might lead to discontentment with their job and higher frequency of burning out, causing sub optimal performance due to illnesses and accelerated drop outs. All these factors can mask patient care, and safety concerns, especially for psychiatric patients who require full time supervision. It is highly recommended that nursing superintendents and hospital administration pay due attention to this occurrence. Future research is needed to identify the possible factors associated with the markedly high level of stress among psychiatric nurses.

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