

Comparison of perceived stress between nurses working in medical and psychiatric wards

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Abstract

Objective: To examine and contrast the levels of perceived non-specific and work-related stress and sources of work-related stress between medical and psychiatric nurses.

Method: The comparative cross-sectional study was conducted at one psychiatric and three general hospitals in Lahore, Pakistan, from November 2014 to February 2015. Data was collected using a self-report survey administered to psychiatric and medical nurses. Instruments used to collect data comprised a demographic sheet, the perceived stress scale and the Devilliers, Carson and Leary stress scale. Data was analysed using SPSS 17.

Results: Of the 134 subjects, 49(44%) were psychiatric nurses and 85(63.43%) were medical nurses. The two groups were significantly different in terms of age, marital status and years of experience ($p < 0.05$). Medical nurses reported higher perceived stress than psychiatric nurses ($p = 0.001$). Age was positively associated with non-specific perceived stress ($p = 0.006$). Nurses with more work experience reported lower scores ($p = 0.002$). Single nurses had higher perceived stress ($p = 0.014$) and non-mothers reported higher stress levels ($p = 0.036$). With regard to work-related stress, medical nurses reported significantly higher scores in the domains of staff-related issues ($p = 0.009$), future prospects ($p = 0.026$) and job satisfaction ($p = 0.029$).

Conclusion: Medical nurses experienced higher non-specific and work-related stress than nurses working in mental health facilities.

Keywords: Cross-sectional research, Medical nurses, Nursing stress, Psychiatric nurses, Perceived stress.

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Introduction

The nature of work and the dynamics at workplace are changing rapidly in almost every profession. Nursing is undeniably accepted as one of the most stressful professions in the world. Most of the psychologists have taken into account the demand-perception response to define stress.^{1,2} Stress has been defined as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being".³ Stress represents a mental state that is one important outcome of exposure or risk of exposure to unmistakable workplace hazards or less obvious psycho-social hazards at workplace, and these risks at workplace which are connected with the experience of stress are generally referred to as "stressors".⁴ Stress has been documented to have deteriorating effects on physical and psychological health of nurses.⁵ Stress experiences among nurses caused by tangible hazards of nursing and psycho-social hazards associated with their work can adversely influence job satisfaction, psychological well-being and physical health.⁴ Negative consequences of stress are not limited to nurses alone, but have also been proved to influence healthcare organisation itself. The far-reaching consequences of stress on nurses' health and

safety and the economic impact on healthcare industry necessitate a more rigorous knowledge of this phenomenon and development of stress management and stress reduction programmes.⁶ Perceptions of stress is highly subjective, hence, the intricacy embedded in the nature of nursing practice may bring about differences in nurses' identification of sources of stress, more so in the face of exceedingly dynamic work environment and roles that nurses are taking on.⁷ The question whether nurses working in varying specialities differ in their experience of stress has been the subject of interest for many researchers and different studies have yielded different results. Some studies suggest that psychiatric nurses confront unique stressors at their workplace and are likely to experience higher stress or burnout levels compared to non-psychiatric nurses^{8,9} and still others report either lower levels of stress in mental health nurses than other nursing groups¹⁰⁻¹² or similar levels of stress across different nursing specialities.¹³ These studies lack in generalisability to Pakistani healthcare settings due to cultural and organisational differences. A study noted that "although psychosocial health issues of nurses and its intervention have been studied extensively in the United States and Europe, there is a need to explore these factors from Pakistani perspective".¹⁴ A handful of studies on nursing stress have been carried out in Pakistan, but these studies were predominantly focussed on nursing stress in general

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and lacked comparative analysis.¹⁵⁻¹⁷ The current study was planned to see whether psychiatric and medical nurses significantly differed in their experience of non-specific perceived stress and work-related stress.

Subjects and Methods

The comparative cross-sectional study was conducted at one psychiatric and three general hospitals in Lahore, Pakistan, from November 2014 to February 2015. After approval from the institutional review board of the Faculty of Behavioural and Social Sciences, University of the Punjab, Lahore, the sample was raised using convenience sampling involving all the registered staff nurses working at the four hospitals. In order to make the two groups comparable and homogeneous, wards/units in general hospitals assumed to have extremely low or extremely high stress levels such as out-patient department (OPD), intensive care unit (ICU) were excluded. Data was collected after getting informed consent from all the participants. To ensure anonymity, no personal information, like name, employee identification number etc., were collected.

Data was collected through a structured self-report survey consisting of a basic demographic information sheet, followed by the Perceived Stress Scale (PSS)¹⁸ and the Devilliers, Carson and Leary (DCL) Stress Scale.¹⁹ The questionnaire was translated from English into Urdu by a professional translator. The researcher developed demographic data sheet which was used to collect information on personal and job-related characteristics, like age, marital status, child-bearing status, qualification, nursing speciality, years of experience and the current shift of duty. The second part of the questionnaire comprised 14-item PSS which is the most widely used psychological instrument to measure non-specific stress.²⁰ A Cronbach alpha value ranging from 0.75 to 0.89 has been reported for PSS in various studies.²¹ For PSS purposes, the two groups of nurses were treated as one sample to explore the association of respondents' personal characteristics with non-specific perceived stress.

The DCL scale was used to collect information on different work-related stressors. A total of 30 items are included in the scale, making up five subscales: patient demands (8 items), organisational and managerial issues (8 items), staffing (7 items), future concerns (4 items), and job satisfaction (3 items). The Cronbach alpha for the scale is 0.96 and questions are scored on a five-point Likert type scale.²⁰ The DCL scale was originally developed for use with ward-based psychiatric nurses to measure occupational stress. The questionnaire, however, contained only two items (No. 11 and 20) specific to psychiatric nurses. These two items were modified to represent the nature of

stressors experienced by medical nurses. Permission to use the scale was granted by one of the authors of the DCL Scale, Mr Jerome Carson.

Data was analysed using SPSS 17. Differences between groups based on demographics and stress scores were evaluated using chi-square, independent sample t-test, and one-way analysis of variance (ANOVA), as appropriate. Descriptive statistics, means and standard deviations (SDs), were reported for quantitative demographic variables and stress scores of the respondents. Correlations between quantitative variables were tested using Pearson correlation test. Two-tailed tests were used in all the analyses with the significance level was set at $p < 0.05$.

Results

Of the 134 subjects contacted, all (100%) responded positively. Of them, 49(44%) were psychiatric nurses and 85(63.43%) were medical nurses. The two groups were significantly different in terms of age, marital status and years of experience ($p < 0.05$). Compared to psychiatric nurses, medical nurses were more likely to be single ($p < 0.01$), younger ($p = 0.001$) and had fewer years of experience ($p = 0.001$) (Table 1).

Mean PSS scores for medical nurses were significantly higher than those for psychiatric nurses ($p = 0.001$).

Both age ($r = -0.237$, $p = 0.006$) and years of experience ($r = -0.271$, $p = 0.002$) significantly correlated negatively with PSS, score but the associations were weak. Single nurses experienced greater stress compared to those who were married, widowed or divorced ($p = 0.014$), and non-mothers perceived significantly higher stress than mothers ($p = 0.036$).

Compared to psychiatric nurses, medical nurses perceived higher stress owing to staff-related issues ($p = 0.009$) and medical nurses were more concerned with future prospects

Table-1: Association of demographic and work-related characteristics with Perceived Stress Scale (PSS) scores.

Demographic variable		Perceived stress scale score Mean $\pm$ SD	p-value
Marital status of respondents	Unmarried	23.09 $\pm$ 7.75	0.014
	Married/Widowed/Divorced	19.64 $\pm$ 8.20	
Qualification	Nursing diploma	21.31 $\pm$ 8.97	0.994
	Graduation and above	21.32 $\pm$ 7.34	
Current shift of duty	Morning	20.79 $\pm$ 7.78	0.426
	Evening	21.92 $\pm$ 8.57	
Child bearing status	Yes	18.43 $\pm$ 8.30	0.036
	No	23.00 $\pm$ 6.83	
Nursing Speciality	Medical	23.45 $\pm$ 7.71	0.000
	Psychiatric	17.61 $\pm$ 7.59	

SD: Standard deviation

Table-2: Mean scores of medical and psychiatric nurses for five dimensions of Devilliers, Carson and Leary (DCL) Scale.

DCL Stress Scale dimension	Psychiatric nurses Mean±SD	Medical nurses Mean±SD	p-value
Patient care	13.35±7.38	12.69±5.94	0.599
Organizational and managerial issues	14.35±7.92	16.11±6.55	0.168
Staff related issues	10.61±6.30	13.44±5.77	0.009
Future prospects	4.29±4.38	6.02±4.27	0.026
Job satisfaction	4.22±3.39	5.52±3.20	0.029
Overall DCL score	46.82±26.23	53.78±21.72	0.101

SD: Standard deviation

Table-3: Equivilised mean scores of psychiatric and medical nurses on five dimensions of Devilliers, Carson and Leary (DCL) Scale Stress Scale.

Equivilised means for five DCL Stress Scale dimensions	Possible score range for each dimension	Psychiatric nurses	Medical nurses
Patient care	0-4	1.67	1.59
Organizational and managerial issues	0-4	1.79	2.01
Staff related issues	0-4	1.52	1.92
Future prospects	0-4	1.07	1.51
Job satisfaction	0-4	1.41	1.84

than their counterparts ($p=0.026$). Medical nurses reported higher scores in the dimension of job satisfaction than psychiatric nurses ($p=0.029$). Higher scores indicated lower job satisfaction, thus medical nurses were significantly less satisfied with their job than psychiatric nurses ($p<0.05$) (Table 2). Both medical and psychiatric nurses experienced greatest stress in the domain of 'organisational and managerial issues' which was followed by 'staff-related issues' (Table 3).

Discussion

To the best of our knowledge, this is the first study conducted in Pakistan to identify and compare stress levels and sources of stress between psychiatric and medical nurses. The literature available on nursing stress in Pakistan is limited. This limitation restricted the researchers' ability to compare the findings of the study and draw relative conclusions. The findings of the current study, nevertheless, provided some important insights when compared with available literature on nursing stress. In the present study, non-specific perceived stress varied among staff nurses on the basis of their nursing speciality, age, years of experience, marital status and child-bearing status. Consistent with the results of a previous study, older nurses reported lower levels of perceived stress.²² These results, however, contradicted the findings of a study in Hungary that found older nurses (aged 51-60) more frequently prone to stress.²³

In accordance with a previous study, findings suggested that with increasing professional experience, stress levels decreased in nursing staff.²⁴ A possible justification for this association is that older and more experienced nurses are

more familiar with recurring work-related problems and ways to cope with the complex situations, more confident about their nursing roles and less uncertain about their job prospects.

Findings of the present study demonstrated that single nurses were more stressed than their married, widowed or divorced counterparts. Similarly, non-mother nurses were surprisingly more stressed than child-bearing nurses. These results, understandably, contradict the results of many previous studies.¹⁵ This unusual finding may be explained by the fact that single and non-mother nurses in this study were likely to be younger with lesser years of experience and thus likely to undergo greater stress than their counterparts. Another possible explanation is that non-mothers with smaller in age are likely to have spent fewer years of married life and may find it difficult to cope up with home-work conflict. It is suggested that these variables should be explored further while controlled for potential confounders, like age and years of experience.

The results of the current study imply that medical and psychiatric nurses experienced similar aggregate levels of work-related stress. Medical nurses, however, perceived significantly higher stress compared to psychiatric nurses in the domains of 'staff-related issues', 'future prospects' and 'job satisfaction' of work-related stress. These findings are supported by a previous study conducted in Hong Kong wherein acute-care nurses and psychiatric nurses experienced similar aggregate levels of work-related stress, but acute care hospital nurses had higher stress from two sources, namely 'dealing with patients and relatives' and 'confidence and competence in role'.²⁵ Findings of another study suggested that general nurses reported stress levels that were significantly higher than those of psychiatric nurses and that they would be more likely to use workplace counselling services.¹² A study conducted in India, however, did not find any significant differences between the stress levels of psychiatric and general nurses.¹³

In this study, psychiatric nurses reported higher stress from 'patient care' than their counterparts working in general hospitals. The difference of means, however, between the two groups was not statistically significant. These results are somewhat supported by the results of another study conducted in China in which psychiatric nurses reported higher stress in 'patient care' and 'working environment and resources' than medical nurses, and the medical nurses reported higher stress associated with 'workload and time'.²⁶ The instrument used to measure work-related stress was the Nursing Stress Inventory (NSI).²⁷

The higher levels of work-related stress reported by medical nurses in the current study can be attributed to

various underlying factors. The numbers of patients attended by nurses in Pakistan are much higher than the internationally followed ratio.¹⁷ Relative to psychiatric care settings, general hospitals are characterised by a wide range of clinical services, higher patient turnover, and providing treatment for complex clinical conditions, making 'staff shortage' a more intense source of stress for medical nurses. Moreover, medical nurses, while exposed to a relatively more hostile, unsafe physical workplace environment and overburdened with workloads while faced with constraints of staff shortage, may find themselves unjustifiably compensated for their work. These factors may contribute towards greater concerns for future prospects, and lower job satisfaction levels.

While interpreting the results of the current study, four major limitations should be kept in mind. First, due to the cross-sectional nature of the study, causality of the relationships could not be established. Second, small sample of nurses recruited from only four hospitals limits the generalisability of the findings to all public clinical settings in Lahore. Third, since people tend to perceive stress and stressors differently, the use of a self-report survey might have introduced bias in the responses reported by the subjects. Fourth, this study did not take into account all the potential indicators of nursing stress, like management style of the organisation, absenteeism, and turnover rate of hospital and wards. Future researchers should focus on exploring these variables while using a more representative and larger sample of nurses.

Conclusion

Medical nurses were found to be experiencing greater stress levels than psychiatric nurses. Organisational and managerial issues were common sources of the greatest stress for the two nursing specialities.

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