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ASSESSMENT OF PROFESSIONAL STRESS AMONG CHARGE NURSES WORKING AT THE CHILDREN'S HOSPITAL AND INSTITUTE OF CHILD HEALTH, LAHORE

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Abstract:

Background: *Stress is a feeling of unease due to the perceived danger from a constantly changing environment around a person. Nursing is one of the most stressful professions known with a diverse range of responses. Professional stress can inflict deleterious consequences to a person's body, mind and social life which directly and indirectly influence their productivity and efficiency. Hence, this study has been undertaken to evaluate the professional stress among charge nurses working at The Children's Hospital and Institute of Child Health, Lahore.*

Methodology: *The descriptive cross-sectional study was conducted among 200 charge nurses selected from The Children's Hospital and Institute of Child Health, Lahore, using multistage sampling technique. Study duration was 6-months period with a esponse rate of 100%. A self-structured questionnaire was drafted to assess professional stress using Perceived Level of Stress (PLOS) and Expanded Nursing Stress Scale (ENSS).*

Results: *A cross-sectional study consisted of 200 staff nurses. Majority of the participants (93 [93.0%]) had diploma and 90 (90.0%) nurses worked on day shift. More than 50% charge nurses experienced moderate level of professional stress. Significant positive correlation ($r = 0.154$, $P < 0.001$) between ENSS and PSS.*

Conclusion: *A positive correlation was found between perceived stress and professional stress among charge nurses at The Children's Hospital and Institute of Child Health, Lahore. This shows that those with general stress also have occupational stress.*

Keywords: *Charge Nurses, professional stress, perceived stress*

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INTRODUCTION:

Stress is a feeling of unease due to the perceived danger from a constantly changing environment around a person. Stress leads to the activation of sympathetic part of the autonomic nervous system and causes surge of adrenaline and noradrenaline for the fight and flight response. Constant elevation of these stress hormones leads to impaired immunity, systemic flare of inflammation, increased heart rate and blood pressure thereby paving the way for the cardiovascular risk. Selye has defined stress as "response state of organism to energies acting collectively on body which, if excessive, i.e., straining the capacity of yielding processes beyond their limits, succumb to exhaustion and death."[1] Socioeconomic factor, job description, tight working hours, competition at workplace and emotional breakdown, etc., has trigerred stress producition in modern day living. [2] Stress may act eithet alone or in combination with othet factors and may influence life at different stages. Many pathophysiological pathways have been proposed to associate stress to the disease production:[3]

- A direct activation of psychosocial stress involving the central and autonomic nervous system
- An indirect role of psychosocial stress through behavioral adaptations

Stress may produce unhealthy habits as defense mechansim such as smoking,[4] alcohol intake, poor compliance with the orodental care.[3,5,6] or bouts of eating, especially a high-fat high carb diet which then can lead to immune suppression through increased cortisol production,[3] leading to a malicious health. Stress, depression, and anxiety have been identified as root cause of many diseases in some observational studies[7-11] . The potential negative influence of stress on individual health is a not a new debate. The stresses evaluated in this study were perceived stress and professional stress measured by Perceived Level of Stress (PLOS) and Expanded Nursing Stress Scale (ENSS), respectively.

Professional stress was assessed because according to the WHO report, "Raising Awareness of Stress at Work in Developing Countries" in 2007,[12] is one of the most common forms of stress in developing countries as the financial factors, social disparity, and overpopulation force candidates to opt for jobs without a preference. People with different niches encountere different types and magnitude of stress. Selye indicated that nursing is one of the most stressful professions.[6] Nursing is an occupation with complex associations leading to stress.[13] Therefore nurses were selected for this study . Stress affecting nurses across the globe has been plausibly summed up in many literatures.[14-17] Nurses in India are overburdened as the nurse-to-patient ratio is low (1:2250).[18] They perform their duties at the front line of the healthcare system for carrying out the treatment orders, observing recovery of acutely or chronically ill, injured, health maintenance, reporting and managing life-threatening emergencies and contributing to the medical and nursing research. Nurses not only work as caregivers but also as auditors and administrators in their domains. These multiple roleplays contribute to the significant amount of professional stress among nurses, particularly those working at the bottom of the hierarchy as subordinates such as staff nurses and charge nurses the one who are at the receiving end. Marathon shifts, time constraints, scoffles with the patients and the attendants, doctors as well as hospital administrators, inadequate human resourses, poor interpersonal relationships, death of a terminally ill patient, and a scanty salaries add to their stress levels.[19] These factors are the part and parcel of their arduos job description but are further aggravated by environmental variable such as noncooperative patients and their hostile families, cold relationships with physicians, lack of commitment on the part of administration towards nursing, and the delivery of substandard care.[13] Research has shown that nursing is a high-risk occupation with respect to its conversion into a stress syndrome. [20] Hence study had assessed the stress among nurses by using Expanded Nursing Stress Scale [ENSS][21] and Perceived Level of Stress scale [PLOS].[22]

METHODOLOGY:

After formal approval from the ethical review committe of the hospital a descriptive, cross-sectional study was undertaken to ascertain the professional stress among charge nurses at The Children's Hospital and Institute of Child Health, Lahore during April 2019 October 2019. 200 charge nurses were enrolled on the basis of multistage sampling technique after the informed consent. Moreover, for the selection of nurses from the hospital, the attendance register was used. Confidentiality and privacy of all the volunteers was ensured.

n = Total Sample size required

The range of PSS and ENSS scores was divided into stratified quartiles to develop an ordinal scale.[24-26] The stress score was stratified into low stress (first quartile), moderate stress (second and third quartiles), and high stress (fourth quartile). Probability levels at $P < 0.05$ were considered statistically significant.

RESULTS:

The study was conducted to ascertain the perceived level of stress among the charge nurses at The Children's Hospital and Institute of Child Health, Lahore. A total of 200 nurses were included in the study among that 83% were females and 17% were male. Regarding marital status, 77% (n = 154) were married and 23% (46) were single. Table 1 shows demographic details of the study population.

Table 1: **Distribution of study subjects according to their qualifications, working shifts and length of shift, patient assignment, and years of experience**

	***n*(%)**
Qualification	
Diploma	146(73)
Degree.	30(15)
Post Graduate.	24(12)
Shift	
Morning.	122(61)
Evening.	52(26)
Night.	26(13)
Length of Shift (h)	
6	100(50)
8	56(28)
12	44(22)
Patient Assignment	
1-3	14(7)
4-6	32(16)
>6	154(77)
Work Experience	
<1	20(10)
1-10	106(53)
11-20	46(23)
21-30	22(11)
>30	6(3)
Gender	
Male	34(17)
Female	166(83)
Marital Status	
Single	46 (23)
Married	154(77)

Table 2: Mean Perceived Stress Scale scores and standard deviations according to the nursing workplace parameters

Qualification	**PSS score, mean±SD**	***P-value***	***Significance***
Diploma	19.76±4.4	0.762	Not Significant
Degree	19.72±5.8		
Post Graduation	22.04±1.6		
Shift			

Morning Evening Night	19.70±4.3 19.50±2.5 21.80±4.2	0.034	Significant
Length of Shif 6 hours 8 hours 12 hours	 20.80±4.2 18.71±2.9 18.61±4.4	0.012	Highly Significant
Patient Assignment 1-3 3-6 >6	 20.00±3.9 20.84±2.2 21.38±4.3	 0.022	 Significant
Experience 1-10 11-20 21-30 31-40	 19.90±3.9 19.89±3.8 18.68±6.4 20.33±1.82	0.4350	Not Significant

Majority of the participants 146 (73.0%) had diploma, 122 (61.0%) nurses worked on day shift, only 100 (50.0%) had duty shift of 6 h, 154 (77.0%) had patient assignment of more than six patients, and 106 (53.0%) had work experience of 1–10 years [Table 3].Graph 1 shows that more than half of the participants suffered from professional stress.

Table 2 shows that mean PSS scores of participants with average patient assignment of greater than 6 was (21.38 ± 4.3) were statistically significant, and significant for participants working in night shifts where as no statistically significant difference was observed between PSS score and nursing qualification and their years of experience.

DISCUSSION:

PLOS scale was used to assess the professional stress because of its universality. Cohen et al., designed to measure the degree to which individuals found their lives to be unpredictable, uncontrollable, and overloading. A significant positive correlation ($r = 0.091$, $P < 0.05$) was found between the total scores of ENSS scores and the PSS scores. It indicates that the increase in the score of one scale also results in the increase in the other. Similar findings were found in a study conducted by Purcell et al.[27]In our study, the mean score on the occupational stress was lower in the older age group of more than 56 years of age. This indicates that older nurses had significantly lesser occupational stress and better coping mechanisms. finding is in line with the study conducted by Purcell et al.[27] and Shen et al.[28]

The mean stress score on the nursing stress scale was not significantly different between the males and the female. This finding is consistent with a study conducted by Watson et al.[17] and Alnems.[29]No differences were observed on occupational stress and perceived stress by marital status. This finding of our study is consistent with the studies conducted by Sveinsdóttir et al.,[30] Bhatia et al.,[14] and Sharifah et al.[31]

However, contrary results were found in a study conducted by Shen et al. [28] were the separated/divorced nurses had higher stress compared to those who were married or single. Perceived stress was not significantly associated with socioeconomic status which was found in other study.[31]. Occupational stress showed no significant difference with the level of education. However a significant difference between the scores of the occupational stress and the years of experience was observed with lesser stress scores among the nurses who had experienced more than 30 years.

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