ASSESSMENT OF STRESS AMONG STAFF WORKING IN EMERGENCY DEPARTMENT OF A TERTIARY CARE HOSPITAL

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Abstract

Background And Objective: Stress is a state of emotional exhaustion that is widely experienced by health care professional. It is commonly known that hospitals and health care providing institutes absorbs stress more than any other field. The doctors, nurses and paramedics have to be on their toes to provide quality lifesaving services. Thus it turns to be hectic both physically and emotionally and instigate stress among the staff. Objective of study is to assess the prevalence of stress among emergency department staff and to determine associated factors and complexity.

Methods: This study was conducted at Emergency department of The Children's Hospital and the university of child health sciences, Lahore during January 2022 to April 2022. Total 96 participants were enrolled into the study. All professionals working in ER department including medical, paramedical (nurses, health managers and health care assistant), administration and technical staff (receptionist), hospital senior agents, social worker were interviewed. Consecutive non-probability sampling technique used. Data was collected by filling predesigned questionnaires by every individual on level of stress through behavioral, emotional, and psychological aspects. Data was analyzed by using SPSS 21 which was based on themes and codes formulated from collected data. Before conducting the study, a preliminary coding was done from previous researches, which incorporated four levels of controlling aspect namely, behavioral, psychological, emotional and cognitive.

Results: Out of 96 participants, 57 (59.38%) were doctors, 36 (37.50%) were nurses and 3 (3.13%) were paramedical staff. 63 (65.63%) participants were female. In the ER Department of Children's Hospital, the Doctors and Nurses are overburdened, 39.4% strongly agree, while in females 44.4% agree with it. Nurses were busy most in doing non-nursing task, 21.2% strongly agree, with respect to female gender 46.0% agree, which increased their stress levels. Married and Female staff had faced more stress as compared to unmarried and male staff.

Conclusion: In the ER department of children Hospital, the doctors and nurses were overburdened. Nurses were most of the time busy in doing non-nursing activities (e.g. Clerical work) which increased their stress levels. Programs for Stress management of the Nurses, working in the emergency services is utmost necessary in Pakistan. The High job-related stress levels suggest possible future research work in this significant area for the benefit of patient care in emergency unit of tertiary care hospitals of Pakistan.

Key Words: Stress in Emergency staff, Stressors of emergency, stress coping strategies, Stress management.

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Stress is defined as threat, a dare or a task that disrupts an individual's regular functioning.[1] From beginning of life to death every individual has to face stressful circumstances[2] and cannot be ignored. Medical doctors are considered members of high stress occupations because they deal with life and death situations. Study conducted by Tyrrell and his co-worker in 2011, demonstrated that among 103 participants working

in emergency department,[3] 52 (51%) experienced stress more frequently where as 37% responds that they also experience stress but less frequently.[4]

The health care professionals, especially emergency unit staffs are at risk for experiencing stressful events. Patient's suffering and death, uncooperative behavior of the patient attendants, unreasonable demands, conflict with administration and lack of emotional support from team members were seen as potential stressors.[5]

According to UNICEF, doctors in underdeveloped countries spend less than a minute with each patient at district hospital due to patient burden.[5] Patient rush, increase workload, shortage of staff, shift work, lack of proper rest difficult attendants. It leads to symptoms of burn out in emergency department. Staff suffers from occupational stress and burn out in the form of making prompt decisions and treating critical patient, exposure to violence death, lack of freedom, breaks at work media pressure and social supports are reported.[6]

In Pakistan, doctor to patient ratio is significantly below required level. The number of patients in emergency department is very high.[7] In such conditions there are chances of fatal errors by doctors[8] and dissatisfaction of patients.[9] This is documented that burn out doctors[10,11] are likely to give suboptimal care. There is no similar study highlighting this health problem either from general or teaching hospital has been reported from our area (Lahore, Pakistan). The studies conducted in foreign countries may not be relevant to our setting. Hence, it was considered important to study this problem in tertiary care hospitals of Punjab province. Objective of study was to assess the prevalence of stress among emergency department staff and to determine associated factors and complexity.

METHODS

The data collection procedure was done after approval of IRB (Institutional Board Review) and ethical committee of the Children's Hospital & University of Child Health Sciences, Lahore during January 2022 to April 2022. Total 96 participants who fulfilled the inclusions and exclusion criteria were enrolled into the study after obtaining an informed written consent from participants. Health care workers working in ER department involving medical, paramedical (nurses, health managers and health care assistant), administration and technical staff (receptionist) hospital senior agents, social worker were included in the study. Whereas students nurses, gate keepers and sweepers (janitors) were not included in study. Demographics data including age, sex, relevant history was taken. Data was collected by filling predesigned questionnaires by every individual participated and communicated through interviews. Related information on level of stress through behavioral, emotional and psychological aspects was collected using a questionnaire based on Likert scale and 15 minutes were served on each participant.

Data was analyzed by using SPSS Version 21 which was based on themes and codes formulated from collected data. Before starting this study, a preliminary coding was done from previous researches, which included four levels of controlling aspect namely: behavioral, psychological, emotional and cognitive. Coding was done manually by identifying common ideas of each members. The final transcripts made from questionnaires and interviews were reviewed by all researchers in form of group as well as individually to ensure validity of findings. Percentage and frequency of each variable of Likert scale was calculated and data interpreted accordingly.

RESULTS

In our study, 59.38% were Doctors, 37.50% were Nurses and 3.13% were paramedical staff. 65.63% participants were female and 34.38% were male. 52.08% participants were unmarried while 47.92% participants were married.

Regarding Likert scale, with respect to Dealing with risky Job, 47.9% participants agree while 45.8% participants strongly agree with it. Patients loses temper very quickly, 43.8% agreed while 25% strongly agree with it. Work shifts are changing very quickly, 41.7% participants agree with it. Limited opportunities for professional development, 41.7% agree while 20.8% strongly agree with it. No Appreciation of good work;

37.5% agree while 25.2% participants strongly agree with it. No technical at work place; 33.3% agree and same percentage disagree with it while 14.6% strongly agree with it. Other sources of job stress, 50% disagree with it while 17.7% remained neutral. Conflicts among colleagues, 35.4% remained neutral while 33.3% agree with it. Lack of financial incentives, 33.3% agree with it while 26% remained neutral. Short break facilities, 42.7% agree with it.

Limited facilities for teaching and education,

Table 1: *Factors identified as stressors among staff according to Likert Scale*

Sr		Strongly Agree Row %	Agree Row %	Neutral Row %	Disagree Row %	Strongly Disagree Row %
1.	Dealing with Risky job	45.8%	47.9%	4.2%	2.1%	0.0%
2.	Patient loses temper very quickly	25.0%	43.8%	14.6%	16.7%	0.0%
3.	Work shifts are changing very quickly	13.5%	41.7%	26.0%	17.7%	1.0%
4.	Limited opportunities for professional development	20.8%	41.7%	15.6%	19.8%	2.1%
5.	No appreciation of good work	29.2%	37.5%	8.3%	25.0%	0.0%
6.	No technical facilities at work place	14.6%	33.3%	18.8%	33.3%	0.0%
7.	Other sources of job stress	14.6%	14.6%	17.7%	50.0%	3.1%
8.	Conflicts among colleagues	7.3%	33.3%	35.4%	21.9%	2.1%
9.	Lack of financial incentives	21.9%	33.3%	26.0%	15.6%	3.1%
10.	Short break facilities	20.8%	42.7%	20.8%	14.6%	1.0%
11.	Limited facilities for teaching and education	19.8%	44.8%	11.5%	19.8%	4.2%
12.	Insufficient communication system	19.8%	42.7%	14.6%	17.7%	5.2%
13.	Salary does not match with job description	24.0%	40.6%	20.8%	14.6%	0.0%
14.	Have to attend a lot of committees	13.5%	24.0%	27.1%	32.3%	3.1%
15.	Unhealthy working environment	13.5%	40.6%	15.6%	28.1%	2.1%
16.	Security measures in Emergency	17.7%	46.9%	11.5%	14.6%	9.4%

Table 2: *Cross Tabulation Of Gender Of Participants With Variables*

	Gender of participants									
	Male					Female				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
Dealing with Risky Job	30.3%	57.6%	6.1%	6.1%	0.0%	54.0%	42.9%	3.2%	0.0%	0.0%
Patient loses temper very quickly	21.2%	36.4%	12.1%	30.3%	0.0%	27.0%	47.6%	15.9%	9.5%	0.0%
Work shifts are changing very quickly	15.2%	39.4%	21.2%	21.2%	3.0%	12.7%	42.9%	28.6%	15.9%	0.0%
Limited opportunities for professional development	24.2%	30.3%	15.2%	24.2%	6.1%	19.0%	47.6%	15.9%	17.5%	0.0%
No Appreciation of good work	21.2%	42.4%	9.1%	27.3%	0.0%	33.3%	34.9%	7.9%	23.8%	0.0%
No technical facilities at work place	21.2%	9.1%	33.3%	36.4%	0.0%	11.1%	46.0%	11.1%	31.7%	0.0%
Other sources of job stress	21.2%	21.2%	30.3%	27.3%	0.0%	11.1%	11.1%	11.1%	61.9%	4.8%
Conflicts among colleagues	0.0%	30.3%	33.3%	30.3%	6.1%	11.1%	34.9%	36.5%	17.5%	0.0%
Lack of financial incentives	39.4%	12.1%	27.3%	15.2%	6.1%	12.7%	44.4%	25.4%	15.9%	1.6%
Short break facilities	36.4%	18.2%	18.2%	24.2%	3.0%	12.7%	55.6%	22.2%	9.5%	0.0%
Limited facilities for teaching and education	18.2%	42.4%	12.1%	24.2%	3.0%	20.6%	46.0%	11.1%	17.5%	4.8%
Insufficient communication system	27.3%	39.4%	9.1%	18.2%	6.1%	15.9%	44.4%	17.5%	17.5%	4.8%
Salary does not match with job description	36.4%	24.2%	15.2%	24.2%	0.0%	17.5%	49.2%	23.8%	9.5%	0.0%
Have to attend a lot of committees	21.2%	9.1%	39.4%	27.3%	3.0%	9.5%	31.7%	20.6%	34.9%	3.2%
Unhealthy Working Environment	18.2%	36.4%	9.1%	36.4%	0.0%	11.1%	42.9%	19.0%	23.8%	3.2%
Security measures in Emergency	18.2%	48.5%	6.1%	6.1%	21.2%	17.5%	46.0%	14.3%	19.0%	3.2%

44.8% agree with it. Insufficient communication system, 42.7% agree while 19.8% strongly agree with it. Salary does not match with job description, 40.6% agree while 20.8% remained neutral. Unhealthy working environment, 40.6% agree while 28.1% disagree with it. Security measures in Emergency, 46.95% agree while 17.75% strongly agreed with it.

Regarding work setting intervention, 36.46% of participants required choice of work assignment, 27.08% participants need formal support from colleagues, 14.5% participants required work mastery and 21.88% participants needed other work setting interventions.

Regarding Coping with Stress, Out of 96 participants 51.04% try and forget it, 32.29% took help from others while 16.67% used other means to cope with stress.

Regarding stress management technique used by participants, 27.08% participants required stress management exercises, 25% participants need counselor, 23.96% needed relaxation therapy, 19.79% subject required Health Education while 4.17% participants required other means of stress management.

Table 2 and 3 show cross tabulation of participants with respect to their gender and marital status.

DISCUSSION

The effects of stressful incidents in emergency department (ED) staff can be profound. Witnessing aggression, violence or loss of human lives or participation in resuscitation, can be emotionally and physically demanding. Despite the frequency of these events, ED Staff do not become immune to the stress they cause, and are often ill prepared and under supported to cope with them. Emergency Departments are particularly stressful work environments, and emergency department (ED) staff must cope with acute or chronic stressors, often on a daily basis. If ED staff are unsupported in this, workplace stress can devastate their

Table 3: *Cross Tabulation Of Marital Status Of Participants With Variables*

	Marital status									
	Married					Unmarried				
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
Dealing with Risky Job	39.1%	54.3%	2.2%	4.3%	0.0%	52.0%	42.0%	6.0%	0.0%	0.0%
Patient loses temper very quickly	23.9%	50.0%	13.0%	13.0%	0.0%	26.0%	38.0%	16.0%	20.0%	0.0%
Work shifts are changing very quickly	17.4%	28.3%	26.1%	26.1%	2.2%	10.0%	54.0%	26.0%	10.0%	0.0%
Limited opportunities for professional development	19.6%	45.7%	10.9%	19.6%	4.3%	20.0%	38.0%	20.0%	20.0%	0.0%
No Appreciation of good work	26.1%	37.0%	8.7%	28.3%	0.0%	32.0%	38.0%	8.0%	22.0%	0.0%
No technical facilities at work place	17.4%	28.3%	23.9%	30.4%	0.0%	12.0%	38.0%	14.0%	36.0%	0.0%
Other sources of job stress	17.4%	15.2%	17.4%	50.0%	0.0%	12.0%	14.0%	18.0%	50.0%	6.0%
Conflicts among colleagues	8.7%	30.4%	30.4%	26.1%	4.3%	6.0%	36.0%	40.0%	18.0%	0.0%
Lack of financial incentives	32.6%	10.9%	45.7%	6.5%	4.3%	12.0%	54.0%	8.0%	24.0%	2.2%
Short break facilities	21.7%	34.8%	23.9%	17.4%	2.2%	20.0%	50.0%	18.0%	12.0%	0.0%
Limited facilities for teaching and education	19.6%	39.1%	17.4%	21.7%	2.2%	20.0%	50.0%	6.0%	18.0%	6.0%
Insufficient communication system	21.7%	34.8%	15.2%	21.7%	6.5%	18.0%	50.0%	14.0%	14.0%	4.0%
Salary does not match with job description	21.7%	37.0%	28.3%	13.0%	0.0%	26.0%	44.0%	14.0%	16.0%	0.0%
Have to attend a lot of committees	10.9%	28.3%	32.6%	26.1%	2.2%	16.0%	20.0%	22.0%	38.0%	4.0%
Unhealthy Working Environment	19.6%	32.6%	10.9%	37.0%	0.0%	8.0%	48.0%	20.0%	20.0%	4.0%
Security measures in Emergency	19.6%	47.8%	8.7%	13.0%	10.9%	16.0%	46.0%	14.0%	16.0%	8.0%

physical, psychological and emotional well-being.

A study conducted by Gurvinder Pal Singh (India 2013) showed that on self-estimation scale 65.11% (n=28) of staff nurses had moderate levels of stress. 20.93% (n=9) of staff nurses has severe level of stress. On perceived stress scale, 68.2% (n=29) staff nurses has a moderate level of stress and 12.8% (n=8) has a severe level of stress in staff nurses while 62.83% (n=27) of the staff nurses reported that their occupational functioning was moderately affected due to stress levels.[13] While in our study, regarding Likert scale, patient loses temper very quickly, 43.8% agreed while 25% strongly agree with it. Other sources of job stress, 50% disagree with it while 17.7% remained neutral. Conflicts among colleagues, 35.4% remained neutral while 33.3% agree with it. Lack of financial incentives, 33.3% agree with it while 26% remained neutral. Unhealthy Working Environment, 40.6% agree while 28.1% disagree with it. Security measures in Emergency, 46.95% agree while 17.75 strongly agreed with it. In our study, Likert scale was used.

It was also reported in the study by Gurvinder Pal Singh (India 2013) that 58.13% (n=25) of the study population showed that they would take help and support from other in coping with stressful situations, 13.95% (n=6) of total sample expressed that they will try to forget the stressful events. Need of health education (n=20,46.9%) exercises (n=9, 20.9) and relaxation therapy (n=7, 16.2%) were reported, 72.09% (n=31) of the staff nurses told that they would prefer demarcation of personal and professional life; 23.25% (n=10) reported that they will try to reduce stress by participating in extracurricular activities; 60.47% (n=26) of the staff nurses revealed a need for nursing counselor[13] while in our study Regarding Coping with Stress, Out of 96 participants 51.04% (49) try to forget it, 32.29% (31) took help from others while 16.67% (16) used other means to cope with stress. Regarding stress management technique used by participants, 27.08% (26) participants required stress management exercise, 25% (24) participants need counselor, 23.96% (23) needed relaxation therapy, 19.79% (19) participants required Health education while 4.17%(4) participants required other means of stress managements. So our study seems be more comprehensive as compared to reference study.

In study conducted by Dellinger RP et. al. 2013, only Nurses (12.9%) were included in study while in our study, out of total 96,59.38% (57) were Doctors 37.50% (36) were Nurses and 3.13% (3) were paramedical staff. 65.63% (63) participants were female and 34.38% (33) were male. 52.08% (50) participants were unmarried while 47.92% (46) participants were married. So out study had diversity of participants.

A study conducted by Subha Imtiaz et.al. in Pakistan revealed that with every unit increase in personal dilemmas, decrease in financial reward, decrease in influence over work environment, decrease in supervisor support there would be 0.513, 0.079, 0.266, 0.117 decreases in job performance respectively[14]. these findings are in accordance with the results of our study.

It is among the few studies in our setup about assessment of level of stress in Emergency department. Limitation of study is that its results cannot be generalized over large geographic area because its data is collected from one Tertiary care hospital.

CONCLUSION

The result of our study showed that job-related stress is common among emergency nursing staff. In the ER Department of a hospital, the Doctors and nurses are overburdened. Staff nurses were most of the time busy in doing non clinical/clerical activities, which increased their stress levels. Stress management program (in the form of rotations to other departments, recreational activities etc.) for the staff nurses working in the ER services is utmost requirement in Pakistan. The high job-related stress levels suggest possible future research work in this significant area for the benefit of patient care in emergency unit of tertiary care hospitals of Punjab, Pakistan.

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