

Clinical Determinants of Burnout among Health Care Professionals Working in Emergency Department of a Tertiary Care Hospital

Anam Jamil, Khalid Hayat Khan*, Sawera Mansoor**, Usama Bin Zubair***, Zarrar Jehangir*, Sahar Riaz****

Department of Psychiatry, North Dublin Mental Health Services, HSE, Ireland, *Department of Psychiatry, Fauji Foundation Hospital, Rawalpindi Pakistan, **Department of Psychiatry, Foundation University Islamabad Pakistan, ***Department of Psychiatry, Pakistan Institute of Mental Health, Rawalpindi Pakistan, ****Department of Psychiatry, Beaumont hospital/ Royal College of Surgeons, Ireland

ABSTRACT

Objective: To look for clinical determinants of burnout among health care professionals working in emergency department of a tertiary care hospital

Study Design: Comparative Cross-sectional study.

Place and Duration of Study: Emergency and Psychiatry department, Fauji Foundation Hospital, Rawalpindi Pakistan, from Jun 2022 to May 2023.

Methodology: All the health professionals including doctors, nurses and paramedical staff members working as full time staff in emergency department of our hospital for more than 3 months were recruited in the study. Maslach burnout inventory (MBI) was administered to all the participants and they were divided into two Groups for the sake of comparison. Group-I with no significant burnout while Group-II with significant burn out. Relevant clinical determinants were compared in both he Groups.

Results: A total of 200 health care professionals with various job descriptions at emergency department were enrolled. Mean age of the professionals was 33.76 ± 7.69 years. Out of 200, 80(40.0%) health care professionals were male while 120(60.0%) professionals were female. A total of 80(40.0%) study participants showed significant burnout while 120(60.0%) did not show significant burnout. Female gender and living alone without family were the factors found significantly more in Group of individuals who had significant burn out (p -value<0.05).

Conclusion: Burnout was found in significant number of healthcare professionals working in emergency department of a teaching hospital of Rawalpindi. Individuals not living with family and females were found more in Group which were having significant burnout as compared to those who did not had significant burn out.

Keywords: Burnout, Emergency, Health care professionals, Pakistan.

How to Cite This Article: Jamil A, Khan KH, Mansoor S, Zubair UB, Jehangir Z, Riaz S. Clinical Determinants of Burnout among Health Care Professionals Working in Emergency Department of a Tertiary Care Hospital. Pak Armed Forces Med J 2026; 76(Suppl-7): S1073-S1076.

DOI: <https://doi.org/10.51253/pafmj.v76iSUPPL-7.11044>

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

Emergency department is considered as one of the busiest and toughest place to work as a health care professional in any capacity across the globe.¹ Load of patients, their triage, engaging teams of other specialties, counselling the attendants and managing whole place effectively so that patients could get maximum benefit are some of the factors which keep the emergency department staff constantly busy.² Moreover, duty hours, environment at hospital, support for staff at hospital and outside hospital may also impact the overall performance at emergency department.³

Wellbeing of physicians, nurses and other staff members is of utmost importance in order to run the department smoothly and provide effective care to the

patients.⁴ Health care providers of different specialties may be prone towards physical or mental health problems depending on number of factors including nature of specialty.⁵ It has been clearly documented in existing literature that burnout among health care professionals may lead to serious consequences both for themselves and health care system.⁶

Burnout of health care professionals has been a topic under discussion for long time and emergency medicine staff had been special focus of researchers in this regard. A study was published from France in 2019 which assessed the prevalence and associated factors of burnout among staff working at emergency department. It was revealed that burnout was a common phenomenon seen in emergency department staff and job strain was significantly associated with this burnout.⁷ The SEEK study published in 2023 is also interesting in this context. Authors in SEEK study concluded that job strain rates were extremely high in emergency health care workers and urgent policy was

Correspondence: Dr Anam Jamil, Department of Psychiatry, North Dublin Mental Health Services, HSE, Ireland

Received: 14 Oct 2023; revision received: 10 Jan 2024; accepted: 11 Jan 2024

warranted from policy makers to ensure well-being of staff working in emergency department.⁸ Durand *et al.*, published a similar study in 2019 and tried to look for presence of stress and burnout among professionals working in emergency department of a teaching hospital. It was concluded that doctors in emergency department had lower levels of burnout and stress but paramedical staff were having more burnout and stress related issues.⁹

Limited number of tertiary care hospitals and well-equipped emergency departments exist in Pakistan. This pose a huge burden on existing departments and on staff who are managing them. A local study published by Zafar *et al.*, concluded that work place violence, stress and burnout were found more in health care professionals working in emergency department of hospitals of Pakistan.¹⁰ Limited local data has been available which could help the policy makers to devise a policy regarding professionals working as frontlines in big hospitals. We therefore planned this study with the rationale to look for clinical determinants of burnout among health care professionals working in emergency department of Fauji Foundation Hospital.

METHODOLOGY

This comparative cross-sectional study was conducted at Emergency and Psychiatry department Fauji Foundation Hospital Rawalpindi Pakistan between January 2022 and September 2022. Sample size was calculated by using the WHO sample size calculator by using two Groups. Group-I had emergency physicians without burn out as 25% while Group-II had with burn out as 77.6%.¹¹ Non probability consecutive sampling was used to gather the sample.

Inclusion Criteria: All the doctors, nurses and paramedics (all ages, both genders) working in emergency department for more than 3 months were recruited in the study.

Exclusion Criteria: Those staff members which were diagnosed cases of any mental health problems or using any illicit substance were not included. Those staff members which were working in emergency department for less than three months were excluded from the study. Staff members who had recent bereavement in family or had any major physical illness or trauma in last six months were excluded as well.

Ethical approval was taken from the ethical committee of Fauji foundation Hospital Rawalpindi

via letter no 561/RC/FFH/RWP. Staff members who agreed for participation in the study after written informed consent were interviewed with the help of structured questionnaire. All the information was kept confidential. Maslach burnout inventory (MBI) was administered to all the participants who agreed to participate in the study. It is a standardized tool used in clinical practice to assess the presence and extent of burnout.¹² Emotional exhaustion component score of 19 or more was considered as representative of significant burnout.¹³ Detailed medical and social history was taken from all the study participants in form of structured proforma specifically designed for this study. Statistical analysis was done by Statistical Package for the social sciences (SPSS) version 24:00. Frequency and percentage were calculated for the qualitative variables whereas mean and standard deviation was calculated for the quantitative variables. Two study Groups were made for the sake of comparison with patients having significant burnout or not. Chi-square test was used to look for the association of various factors among the two study Groups. The *p*-value less than or equal to 0.05 was considered significant.

RESULTS

A total of 200 health care professionals with various job descriptions at emergency department were enrolled. Mean age of the professionals was 33.76±7.69 years. basic demographic characteristics of study participants could be seen in Table-I. Out of 200, 80(40.0%) health care professionals were male while 120(60.0%) professionals were female. A total of 80(40.0%) study participants showed significant burnout while 120(60.0%) did not show significant burnout. Table-II showed the job description of study participants. Most of the health care professionals working in emergency department were nurses 80(40.0%). Table-II showed the specialty wise distribution of study subjects. Out of 200 subjects, 77(38.5%) were doctors, 80(40.0%) were nurses while 43(22.5%) were paramedical staff working in emergency department of hospital. Table-III summarized the results of statistical test applied on data generated during the study period. Subjects were divided into two Groups for the sake of comparison. Group-I had individuals without significant burn out while Group-II had individuals with significant burnout. It was observed that female gender (*p*-value-0.007) and living alone without family

(p -value-0.011) were the factors found significantly more in Group of individuals who had significant burn.

Table-I: Characteristics of Study Participants (n=200)

Study parameters	values
Age of health care professionals Mean±SD	33.76 ±7.69 years
Gender	
Male	80(40%)
Female	120(60%)
Comorbid medical illness	
Diabetes Mellitus	31(15.5%)
Hypertension	22(11.0%)
Asthma	08(9.0%)
Ischemic Heart disease	18(4.0%)
Others	03(1.5%)
Presence of significant burnout	
No	120(60.0%)
Yes	80(40.0%)

Table-II: Job Description wise Distribution of Health Care Professionals (n=200)

Specialty	n(%)
Doctors	77(38.5%)
Nurses	80(40.0%)
Paramedical staff	43(22.5%)

Table-III: Comparison of various factors among Health Care Professionals with and without significant burnout (n=200)

Factors Studied	No Significant Burnout	Significant Burnout	p-value
Gender			
Male	57(47.5%)	23(28.7%)	0.007
Female	63(52.5%)	57(71.3%)	
Job description			
Doctors	52(43.3%)	25(31.3%)	0.178
Nurses	46(38.3%)	34(42.5%)	
Paramedics	22(18.3%)	21(26.3%)	
Living with family			
No	87(72.5%)	44(55.0%)	0.011
Yes	33(37.5%)	36(45.0%)	
Medical illness			
No	80(66.7%)	38(47.5%)	0.527
Diabetes Mellitus	14(11.7%)	17(21.3%)	
Hypertension	12(10.0%)	10(12.5%)	
Asthma	04(3.3%)	04(5.0%)	
Ischemic Heart disease	08(6.6%)	10(12.5%)	
Others	02(1.6%)	01(1.2%)	

DISCUSSION

Emergency medicine is evolving as a specialty in Pakistan and emergency physicians are getting training in already established emergency departments but run by doctors of other specialties mostly.¹⁴ Working in emergency department has its own merits and demerits like working in any department of hospital. Still there are few features peculiar to emergency department which makes it a difficult job for many if not all. There is a full set of

different health care professionals which work round the clock to make an emergency department efficient for 24 hours. Job become more difficult in tertiary care hospitals of big cities which cater for a huge population. We conducted this study at emergency department of Fauji Foundation Hospital Rawalpindi with an aim to look for clinical determinants of burnout among health care professionals working in emergency department of a tertiary care hospital.

Military and civil prehospita settings were targeted to take perspective of emergency medicine teams regarding burnout and its impact on patient care in a study published in 2023. Emotional disconnection from patients and decrease in empathetic behaviors were common themes generated from their data set.¹⁵ We did a quantitative study and found out that burn out was a common phenomenon in emergency medicine staff recruited in our study. Further studies could be done to look for impact of this burnout of staff on patient care. Baruah et al. in 2019 published data from India regarding burn out and factors affecting burn out among health care workers working in emergency department. They revealed that long working hours and contractual job were associated with burnout in these individuals while having children and partner support were protective factors.¹⁶ Our results demonstrated that being female health professional and living alone without family were the factors associated with more burnout.

Emergency physicians were targeted during COVID 19 pandemic to look for burn out by Yuguero *et al.* They concluded that burnout among emergency physicians in COVID pandemic was far more that that was before that pandemic.¹⁷ Our data was gathered during the end of COVID pandemic when normal functionality of health facilities was in restoration phase and we found out that burnout was found in significant number of healthcare professionals working in emergency department of a teaching hospital of Rawalpindi. Not living with family and females were found more in Group which were having significant burnout as compared to those who did not had significant burn out. A systematic review and meta-analysis was published in 2023 in which authors tried to look for global prevalence of burnout in emergency health care and factors associated with burn out. They found out that burn out rate was around 39% and job description of the health care worker was associated with burn out.¹⁸ We found out that female gender and lack of family support were

associated with burn out in emergency department health care workers interviewed in our study.

LIMITATION OF STUDY

Multiple factors could lead to burnout among health care professionals and with this study design we cannot conclude that burnout is solely due to working at emergency department. Moreover, with this design we may have missed those professionals who may be on leave or sick or have left the job therefore our data set may not be actual representative of burnout among emergency department health care professionals.

CONCLUSION

Burnout was found in significant number of healthcare professionals working in emergency department of a teaching hospital of Rawalpindi. Not living with family and females were found more in Group which were having significant burnout as compared to those who did not had significant burn out.

Conflict of Interest: None.

Funding Source: None.

Authors' Contribution

Following authors have made substantial contributions to the manuscript as under:

AJ & KHK: Data acquisition, data analysis, critical review, approval of the final version to be published.

SM & UBZ: Study design, data interpretation, drafting the manuscript, critical review, approval of the final version to be published.

ZJ & SR: Conception, data acquisition, drafting the manuscript, approval of the final version to be published.

Authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

REFERENCES

1. Driesen BEJM, van Riet BHC, Verkerk L, Bonjer HJ, Merten H, Nanayakkara PWB. Long length of stay at the emergency department is mostly caused by organisational factors outside the influence of the emergency department: A root cause analysis. *PLoS One* 2018; 13(9): e0202751. <http://doi.org/10.1371/journal.pone.0202751>
2. Al-Ghabeesh SH, Thabet A, Rayan A, Abu-Snieneh HM. Qualitative study of challenges facing emergency departments nurses in Jordan. *Heliyon* 2023; 9(3): e14141. <http://doi.org/10.1016/j.heliyon.2023.e14141>
3. Hansen KL, Bratholm Å, Pradhan M, Mikkelsen S, Milling L. Physicians' experiences and perceived challenges working in an emergency setting in Bharatpur, Nepal: a qualitative study. *Int J Emerg Med* 2022; 15(1): 61. <http://doi.org/10.1186/s12245-022-00466-w>
4. Sigurdsson EL. The wellbeing of health care workers. *Scand J Prim Health Care* 2021; 39(4): 389-390. <http://doi.org/10.1080/02813432.2021.2012352>
5. Okazaki E, Nishi D, Susukida R, Inoue A, Shimazu A, Tsutsumi A. Association between working hours, work engagement, and work productivity in employees: A cross-sectional study of the Japanese Study of Health, Occupation, and Psychosocial Factors Relates Equity. *J Occup Health* 2019; 61(2): 182-188. <http://doi.org/10.1002/1348-9585.12023>
6. Loreto BBL, de Azevedo SC, da Silva AG, Malloy-Diniz LF, Ornel F, Trés LMAM, et al. Well-being at work, productivity, and coping with stress during the COVID-19 pandemic. *Trends Psychiatry Psychother* 2022; 44(3): e20210250. <http://doi.org/10.47626/2237-6089-2021-0250>
7. Moukarzel A, Michelet P, Durand AC. Burnout Syndrome among Emergency Department Staff: Prevalence and Associated Factors. *Biomed Res Int* 2019; 2019(1): 6462472. <http://doi.org/10.1155/2019/6462472>
8. Bouillon-Minois JB, Troussellard M, Mulliez A, Adeyemi OJ, Schmidet J, Thivel D, et al. A cross-sectional study to assess job strain of emergency healthcare workers by Karasek questionnaire: The SEEK study. *Front Psychiatry* 2023; 13(3): 1043110. <http://doi.org/10.3389/fpsy.2022.1043110>
9. Durand AC, Bompard C, Sportiello J, Michelet P, Gentile S. Stress and burnout among professionals working in the emergency department in a French university hospital: Prevalence and associated factors. *Work* 2019; 63(1): 57-67. <http://doi.org/10.3233/WOR-192908>
10. Zafar W, Khan UR, Siddiqui SA, Jamali S, Razzak JA. Workplace Violence and Self-reported Psychological Health: Coping with Post-traumatic Stress, Mental Distress, and Burnout among Physicians Working in the Emergency Departments Compared to Other Specialties in Pakistan. *J Emerg Med* 2016; 50(1): 167-77. <http://doi.org/10.1016/j.jemermed.2015.02.049>
11. Boutou A, Pitsiou G, Sourla E, Kioumis I. Burnout syndrome among emergency medicine physicians: an update on its prevalence and risk factors. *Eur Rev Med Pharmacol Sci* 2019; 23(20): 9058-9065. <http://doi.org/10.26355/eurev.201910.19308>
12. Soares JP, Lopes RH, Mendonça PBS, Silva CRDV, Rodrigues CCFM, Castro JL. Use of the Maslach Burnout Inventory Among Public Health Care Professionals: Scoping Review. *JMIR Ment Health* 2023; 10(3): e44195. <http://doi.org/10.2196/44195>
13. Okwaraji FE, Aguwa EN. Burnout and psychological distress among nurses in a Nigerian tertiary health institution. *Afr Health Sci* 2014; 14(1): 237-245. <http://doi.org/10.4314/ahs.v14i1.37>
14. Saleem SG, Haider KF, Yasin Z, Rybarczyk M. Bridging the Gap in Emergency Medicine in Pakistan. *Pak J Med Sci* 2020; 36(1): S101. <http://doi.org/10.12669/pjms.36.1.ICON-Suppl.1726>
15. Van Puyvelde M, Van Herck J, Van den Bossche J, Goethals F, Gijbels D, Dettaille F, et al. Walk the line: a systemic perspective on stress experienced by emergency medical personnel by comparing military and civilian prehospital settings. *Front Public Health* 2023; 11(3): 1136090. <http://doi.org/10.3389/fpubh.2023.1136090>
16. Baruah A, Das S, Dutta A, Das B, Sharma T, Hazarika M. Degree and factors of burnout among emergency healthcare workers in India. *Int J Sci Res* 2019; 8(4): 41-45. <http://doi.org/10.15373/22778179>
17. Yuguero O, Rius N, Soler-González J, Esquerda M. Increase of burnout among emergency department professionals due to emotional exhaustion during the SARS-Cov2 pandemic: Evolution from 2016 to 2021. *Medicine* 2022; 101(47): e31887. <http://doi.org/10.1097/MD.00000000000031887>
18. Alanazy ARM, Alruwaili A. The Global Prevalence and Associated Factors of Burnout among Emergency Department Healthcare Workers and the Impact of the COVID-19 Pandemic: A Systematic Review and Meta-Analysis. *Healthcare* 2023; 11(15): 2220. <http://doi.org/10.3390/healthcare11152220>