

Beyond the Stethoscope: Burnout Syndrome Among Interns and Postgraduates in a South Indian Tertiary Care Setting

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ABSTRACT

Background: Burnout is a troubling clinical syndrome characterized by excessive stress, dissatisfaction and a sense of being overworked. Prevalence of burnout varies from 50% to 76%, depending on the specialty across studies. The objectives of the study are to estimate the prevalence of burnout syndrome among interns and residents, and to identify the factors associated with it.

Materials and Methods: It is a facility based analytical cross-sectional study conducted among 300 interns and postgraduates of a tertiary care hospital. Data was collected using a semi-structured questionnaire. The Copenhagen burnout inventory (CBI) scale was utilized to assess the prevalence of burnout. Chi-Square test was used to test the association and p value < 0.05 was considered as statistical significance.

Results: Nearly 37.7% (113) were working for 41-60 hours in a week. 17.8% had high personal burnout, 14% had high work-related burnout and 47.8% had moderate patient related burnout. Hours of work (>60 hours in a week) were significantly associated with personal, work related and patient related burnout.

Conclusion: Addressing this issue is crucial in the Indian context since burnout has a negative impact on patient care quality in addition to having major effects on the resident's physical and mental health.

Keywords: Stress, Depression, Emotional Exhaustion, Residency

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INTRODUCTION

Practice of medical Science is associated with a high level of occupational stress and Burnout.¹ Producing informed, skilled, and professional doctors who can treat the nation's ailing population, advancing medical science education and research, and advancing public health care are the overarching objectives of medical education.^{2,3} Burnout is a troubling clinical syndrome characterized by excessive stress, dissatisfaction and a sense of being overworked. Workers in the healthcare industry deal with difficulties brought on by a shortage of staff and infrastructure.⁴ In the World Health Organization's (WHO) Tenth Revision of the International Classification of Diseases,⁵ Prevalence of burnout varies from 50% to 76%, depending on the speciality across studies.⁶

Very small pool of doctors only oversees the primary treatment of patients in hospitals throughout the nation. The majority of doctors are vulnerable to burnout due to their excessive workload. Burnout is frequently observed to be more likely to affect residents in particular.⁷⁻⁹ Residents face lot of stress because of the workload and heavy duties as well as a large volume of scientific literature and practical tasks which must be learnt in a limited time. In addition, they face financial problems and low income, being evaluated without enough training, and being under psychological and physical pressure from both their superiors and patients.^{10,11}

Few Indian research have been conducted to evaluate the prevalence of burnout among postgraduate resident doctors, despite the fact that numerous studies have confirmed burnout in various strata of health-care professionals. This gap is filled by our study, which is the first of its sort from southern India and contributes to the body of knowledge already available on the subject.

METHODOLOGY

It is a facility based analytical cross-sectional study conducted among the interns and postgraduates of a private medical college in Salem district of Tamil Nadu. Sample size included was 300, Prevalence of patient related burnout was taken from a previous study by Jyotsna et al in Nagpur during 2022, using

the formula $N = Z^2 \rho q / [L] 2$ (where $Z = 1.96$, $p=45$, $q=55$, $L = 6$) and adding 15% non-response rate. Simple Random Sampling method using computer generated random number was used to select the study samples.

Data was collected using a semi-structured questionnaire. The Copenhagen burnout inventory (CBI) scale was utilized to assess the prevalence of burnout. It is a 19-item questionnaire assessing 3 domains namely personal burnout (6), work related burnout (7) and patient related burnout (6). Each question had a response score ranging from 0 (Never/Almost never) to 100 (Always).

SPSS Version 22 was used for data analysis. Frequency, percentage, mean and standard deviation were used to represent study variables. Chi-Square test was used to test the association and p value <0.05 was considered as statistical significance. Study was carried out after approval from Institutional Ethics Committee (Ref ID: VMKVMC&H/IEC/24/013) and written informed consent was obtained from all the study participants.

Operational Definitions:

Copenhagen Burnout Inventory (CBI) Scale classification of burnout: Scoring for each question is Always (100), Often (75), Sometimes (50), Seldom (25) and Never/Almost never (0). Based on the average of scores under each of the 3 domains burnout is classified as: 0 to 50 – No burnout; 50 to 74 – Moderate burnout; 75 to 99 – High burnout; and 100 – Severe burnout.

RESULTS

In this study, majority 66% (198) were females. Nearly 41.2% (125) were interns and one fourth (25%) were 1st year postgraduates. Majority 37.7% (113) were working for 41-60 hours in a week and about 23.6% (71) which is more than the recommended duty hours. About 17.8% had high personal burnout and 60% had moderate personal burnout. 61% had moderate work-related burnout and 14% had high work-related burnout. Around 47.8% had no patient related burnout and 47.8% had moderate patient related burnout as shown in Figure 1.

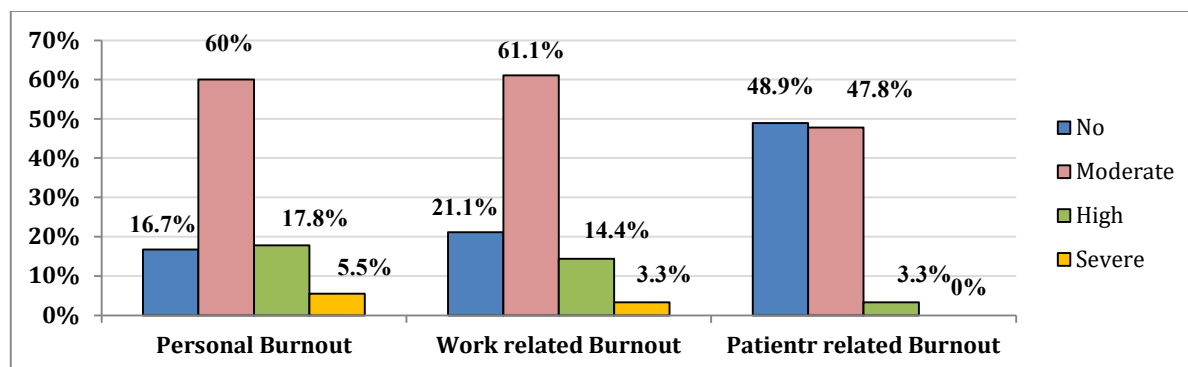


Figure 1: Prevalence of burnout syndrome among the study participants

Table 1: Factors associated with burnout syndrome

Variable	Personal burnout				Work related burnout				Patient related burnout			
	Yes (250)	No (50)	P value	OR (CI)	Yes (237)	No (63)	P value	OR (CI)	Yes (153)	No (147)	P value	OR (CI)
Gender												
Female	177	21	0.001*	3.34(1.79–6.26)	155	43	0.671	0.87(0.48–1.58)	97	101	0.332	0.78(0.48–1.27)
Male	73	29			82	20			56	46		
Hours of work in a week												
>60 Hours	115	12	0.005*	2.69(1.34–5.30)	109	18	0.014*	2.12(1.16–3.89)	93	37	<0.01*	4.60(2.81–7.55)
≤60 hours	135	38			128	45			60	110		
Designation												
PG	156	19	0.001*	2.70(1.44–5.06)	134	43	0.164	0.66(0.37–1.18)	88	87	0.769	0.93(0.58–1.47)
Intern	94	31			103	22			65	60		
Relationship Status												
Committed /Married	95	20	0.79	0.91(0.49–1.71)	108	7	<0.01*	6.91(3.02–15.8)	58	57	0.877	0.96(0.60–1.53)
Single	155	30			125	56			95	90		

OR – Odds Ratio; CI – 95% Confidence Interval

*p value < 0.05 is statistically significant

In this study, hours of work (>60 hours in a week) were significantly associated with personal burnout (p value = 0.005, OR = 2.69), work related burnout (p value = 0.014, OR = 2.12) and patient related burnout (p value = <0.0001, OR = 4.60). Whereas female gender (p value = 0.0001, OR = 3.34) and PG designation (p value = 0.001, OR = 2.70) was significantly associated with personal burnout only Being in a committed relationship or married was significantly associated with work related burnout (p value = <0.0001, OR = 6.91) (Table 2).

On enquiring about the workplace safety and security in the college, 73% reported that the duty rooms are inadequate, 36.2% were verbally abused either by the patient or their attenders and 22.4% told that they were threatened when on duty.

DISCUSSION

In this study, mean age was 29±4.3 Years and majority 66% (198) were females. Similar female preponderance was seen in study by Prabath IH et al.¹² Male preponderance was seen in studies by Naeem A et al¹³, Ashkar K et al¹⁴ and Grover S et al¹⁵. Nearly 41.2% (125) were interns and one fourth (25%) were 1st year postgraduates and 37.7% (113) were working for 41-60 hours in a week in the current study. Whereas in study by Deshmukh JS et al, 37.45% were 1st Year PGs and 48.8% were working for 41-60 hours a week.⁷ In Ashkar K et al study, 35.5% were 2nd Year PGs and 79.4% were working for more than 30 hours a week.¹⁴

Similar to our study, 61.39% had personal burnout, 44.94% had work related burnout and 39.24% had patient related burnout in Deshmukh JS et al study.⁷ Almost 94% had any form of burnout in Grover S et al study in which, 14.9% had severe burnout and 16.6% had very severe form of burnout.¹⁵ Nearly 75% had any form of burnout syndrome in Priyam P et al study.⁸ In Vidhukumar K et al study burnout prevalence was 48.5%, among which 44.4% had moderate burnout and 3.2% had high burnout.¹⁶ This

agreement between studies might be due to similar type of study setting, composition of the study participant and distribution of factors influencing burnout syndrome alike across studies Whereas in Naeem A et al study, 79.7% had professional burnout or stress.¹³ Also in Roy S et al study, 31.7% had high emotional exhaustion, 24.9% had high depersonalization and 30.2% had high burnout.¹⁷

In this study, hours of work) was significantly associated with all the forms of burnout. Whereas female gender and being a postgraduate resident was significantly associated with personal burnout only. Being in a committed relationship or married was significantly associated with work related burnout. Similarly female gender was significantly associated with burnout in studies by Abdulghani HM et al¹, Priyam P et al⁸, Ashkar K et al¹⁴ and Vidhukumar K et al¹⁶. Marital status was significantly associated with Burnout syndrome in studies by Priyam P et al⁸, Naeem A et al¹³ and Roy S et al¹⁷. Early part of residency was significantly associated with burnout in studies by Deshmukh JS et al⁷, Priyam P et al⁸, Prabath et al¹², Naeem A et al¹³ and Roy S et al¹⁷.

CONCLUSION

The significant prevalence of burnout among resident physicians is reinforced and contributed to by this study. Addressing this issue is crucial in the Indian context since burnout has a negative impact on patient care quality in addition to having major effects on the resident's physical and mental health. The focus should be on recognizing the signs of burnout syndrome and using different degrees of solutions to alleviate them. Reforming the present residency. The junior doctors' general mental health and work performance will be significantly enhanced by a training program that includes brief workshops focused on raising awareness and managing stress.

Author Contribution: VM contributed in every phase of the research process. Others contributed se-

lectively: MSM and RKS in study conception, data collection and Manuscript preparation; SS in study conception, data analysis and writing.

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