Research Article

Medical Residency and Burnout Frequency: Relationship with Income and Family Type

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Abstract |

Background: Burnout may be defined as physical and emotional exhaustion due to stress from work under demanding conditions. It is a grave problem in physicians; its significance can be estimated by the fact that around 25% to 60% practicing physicians are a ected by burnout worldwide.

Objective: The objective of this study is to determine the frequency of burnout in medical residents of a tertiary care hospital in Karachi and its relationship with income and family type.

Methodology: This was a descriptive, cross-sectional study in which questionnaires were distributed to 425residents in Medicine and Surgery wards of tertiary care hospitals of Karachi. The Maslach Burnout Inventory (MBI), a series of demographic questions, salary and family type were asked in the questionnaire.

Results: Total 77.6 % residents were found to be burnout. High and moderate level burnout was more common in female residents (33.4% and 18.5%) than males (28.7% and 15.6%) with odd ratio 0.7 in both groups. The majority of residents with monthly income less than fifty-five thousand reported of high burnout levels. Burnout in residents living alone (86.3%) was more frequent than residents living with joint family (67.2%).

Conclusion: There was an inverse relationship between amount of monthly income and degree of burnout. Residents living with nuclear background were found to be more depressed than residents living in joint families.

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Introduction

Chronic emotional and interpersonal stressors at the job may have a prolonged e ect on an individual. Burnout is represented by three dimensions; exhaustion, cynicism, and ine cacy.[1] It may occur in any profession. Burnout should not be confused with depression. It is only related to stressors and behavior in the occupation, whereas, depression a ects all the areas of life.[2]

High levels of burnout are significantly found in human service professions which include nurses, medical practitioners, social workers, teachers, lawyers and police o cers.[3] According to several pieces research, the prevalence of burnout among health care workers is approximately 25%.[4] The Reason behind this high prevalence of burnout can be organizational factors, low social support at work and lack of skills which may result in distress, deterioration in the quality of life and job ine cacy.[5]

Nowadays, burnout is an important problem in physicians, specifically those working specialties like obstetrics and gynecology[6,7] surgery,[8] emergency medicine[9] and infectious diseases.[10] It is estimated that around 25% to 60% practicing physicians are a ected by burnout globally. The prevalence of burnout syndrome in residents has been discussed by several studies, with burnout level ranging from moderate to very high.[11]

In a Chinese study, 76.9% physicians reported burnout symptoms[12]. In Germany, high level of burnout was reported by 11% physicians.[13]

Considering Pakistan, around half of surgery residents and medical students experienced moderate to high levels of burnout on the exhaustion category as well as depersonalization category in a study in Lahore.[14,15]

Hospitals in Karachi receive patients not only from the city, the majority of the patient population in these hospitals come from all over the province. This huge proportion of patients put a proportional increase in workload on the doctors, especially residents. According to a recent study, the majority of doctors working at hospitals of Karachi had a poor level of satisfaction for workplace environment and higher levels of job stress.[16] Considering the stress level and low financial income, these doctors are very likely to experience burnout. Very few studies with low sample size have been conducted in Karachi that shows the e ect of workplace pressure as burnout among medical residents. Therefore, the objective of this study was to look at the frequency of burnout in medical residents of a tertiary care hospital in Karachi. Relationship of burnout with income and family support is also evaluated in this study as a secondary objective.

Methods

This was a descriptive, cross-sectional study conducted between May 2016 and August 2016 at tertiary care hospitals of Karachi. Questionnaires were distributed to 435 residents of medicine and surgery wards utilizing convenience sampling and out of which, 425 residents responded. They were given the necessary details about nature and objective of the study, and informed consent was taken. The Maslach Burnout Inventory (MBI), a series of demographic questions, salary and family details were asked in the questionnaire.

MBI is the most commonly used tool to assess risk and degree of burnout. It explores three components; (a) exhaustion, (b) depersonalization, and (c) personal achievement. The 22-item MBI ranges the frequency of specific symptoms between a seven-point Likert scales and calculates all three burnout dimensions. A sub-score is provided by each dimension, which is leveled as low, moderate or high according to standard scores. On the seven point scale, 0 was calculated as no burnout, 1-2 was mild burnout, 3-4 was moderate and 5-6 as severe burnout. Due to its extensive validity, MBI is used as a gold standard for inquiring burnout in the medical research literature.[17,18]

Results

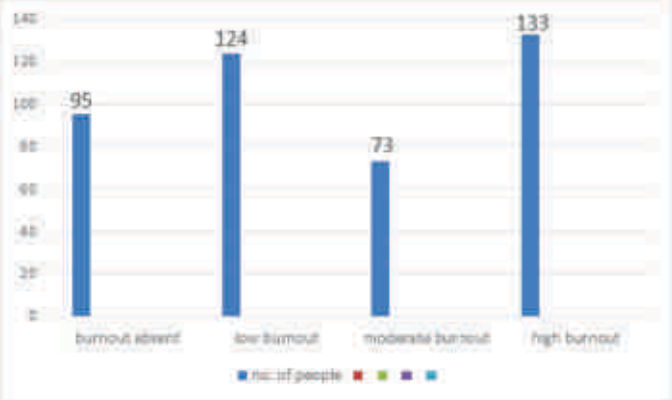

Figure 1: *Degree of Burnout in Resident Doctors*

Burnout, of varying degree, was reported by 77.6% of residents (31.2% high, 17.1% moderate and 29.1% low) (Table 1). High and moderate level burnout was more common in female residents (33.4% and 18.5%) than males (28.7% and 15.6%) with odd ratio

Table 1: *Frequency of Burnout in Medical Residents*

	Male	Female	Total N(%)	Odds Ratio	C.I
Low	58(29.3)	66(29.1)	124(29.1)	0.8	0.6-1.4
Moderate	31(15.6)	42(18.5)	73(17.1)	0.7	0.5-0.9
High	57(28.7)	76(33.4)	133(31.2)	0.7	0.6-2
No burnout	52(26.3)	43 (19)	95(22.4)	1.2	1-3.8
Total	198	227	425		

0.7 in both groups. C.I was 0.6-2, 0.5-0.9 respectively in high and moderate group. (Table1). On the other hand, low-level burnout frequency was almost equal

in both genders (approx. 29%), with odd ratio 0.8.

There was an inverse relationship between the amount of monthly income and degree of burnout.

Table 2: *Burnout and Monthly Income**

Monthly Income*	Low burnout	Moderate burnout	High burnout	P value
40-55	20	23	69	1.4
56—70	23	18	46	0.06
70 and above	81	32	18	0.8
Total	124	73	133	

*Income in thousands of Rupees

The majority of residents with monthly income less than fifty-five thousand reported of high burnout levels, in contrast, most of the residents with monthly income more than seventy thousand had low levels of burnout (Table 2).

Burnout in residents living alone (86.3%)was more frequent than residents living with joint family (67.2%) with Odd Ratio 1.5 and C.I 1-2.2 (Table 3). Doctors having nuclear family reported burnout frequency as; high burnout in 50.2%, moderate

Table 3: *Burnout and Type of Family*

Level of Burnout	Nuclear	Joint	OR	C.I
Low	67(33.3)	57 (**44.2)**	1.1	0.8-2.2
Moderate	33**(16.4)**	40**(31)**	0.8	0.5-1.4
High	101**(50.2)**	32**(24.8)**	3.1	2.1-5.5
Total Burnout	201 (86.3)	129 (67.2)	1.5	1-2.2
No burnout	32(13.7)	63(32.8)	0.5	0.3-0.8

burnout in 16.4, and low burnout in 33.3% (Table 3). Burnout in those doctors who belonged to a joint family was prevalent as; high burnout in 24.8%, moderate burnout in 31%, and low burnout in 44.2% (Table 3). The Odds Ratio (OR) was found as 3.1, 0.8, and 1.1 in high, moderate and low burnout respectively.

Discussion

In this study residents seemed to have high frequencies (77.6%) of burnout of di erent grades. Similar results were expressed by Zubairi AJ and Noordin S about the frequency of burnout syndrome in resident doctors (74%) of Lahore.[19] Comparatively, there was less prevalence of burnout among physicians of U.S. (65%) and U.K. (32%) 9, 20. This vast di erence in both the setups can be explained by the statistics that hospitals in our country are economically, environmentally weaker than western countries which expose physicians to lack of skills and financial support.

Females were seen to be more prone to burnout syndrome in our study which is also expressed by some of the studies in U.S.[21, 22] whereas several other studies show male prevalence.[19] Working women in Asian countries also bear the responsibilities of household along with their profession. This increased workload might also increase emotional vulnerability and eventually result in burnout.

Regarding etiology of burnout, Zubairi A J and Noordin S also reported a significant relationship between dissatisfaction with salary and high levels of burnout.[19] We also observed the similar trend of rise in the degree of burnout as the monthly income decrea-sed individually. It is not surprising that phenomenon of burnout is more likely when there is an imbalance between workload and job reward. Financial stability plays a significant role in an individual's mental strength and work satisfaction.

Sharma A et al postulated that surgeons who lived with their family were more compatible with dealing job stressors.[20] This study also showed that resident doctors living with a joint family had less frequency of burnout as compared to those who lived alone. Many people in our country are part of a joint family, their emotional and moral support can be the key factors for diminishing the e ect of job stress.

This study had a limitation that it was only conducted among residents of surgery and medicine departments of a tertiary care hospital due to lack of contact access to other departments. It is recommended that further studies should cover several departments and types of hospitals for evaluating vast areas for predictors and outcomes of burnout syndrome.

Conclusion

More than three fourth of residents were found to have some degree of burnout and that was more commonly associated with female residents. Residents having more monthly income have less burnout as compared to less monthly income. Joint family has shown as positive factor and was inversely related to burnout.

Recommendation

Considering the enormous prevalence of burn-out in residents, serious steps must be taken regarding the awareness of burnout symptoms and several ways for its prevention on an individual as well as organizational level. Secondarily, institutions should focus on adjusting the salaries of physicians according to the demands of their job and physicians should spend time with their families to distract themselves from professional burdens. These measures are essential for the health of resident doctors and patients as well.

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