ORIGINAL ARTICLE APMC – 372

Factors Associated with Medical Residents Burnout in Tertiary Care Hospital in Karachi

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ABSTRACT

Background: Doctors have a higher degree of psychological morbidity and are at a higher risk of stress-related psychosocial problems such as burnout. Sustained response of long term emotional and interpersonal stressors at job express itself in the form of burnout. This study was conducted to evaluate the factors related to burnout in Pakistani Residents during their period of training. **Methodology:** This cross-sectional study was conducted among 278 post-graduates of Civil Hospital, Karachi. Questionnaire given to the residents consisted of demographic data and Maslach job Burnout Inventory (MBI). Chi-square test was applied to analyze relationship between burnout and other variables. **Results:** High levels of burnout were prevalent in around one-third of resident physicians. Also, females reported more about low and high levels of burnout as compared to males. There was a significant rise of high burnout level in residents working for more than eighty hours per week. Physicians who were living in rented houses reported increased moderate and high levels of burnout. **Conclusion:** This study expressed some major factors for burnout syndrome in residents such as job working hours and housing status. Results shown in the study indicate that rate of burnout syndrome in residents is excessively high.

Keywords: Burnout. Medical residents, psychological stress, emotions

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Submitted for Publication: 26-02-2017 *Accepted for Publication: 10-04-2017*

Article Citation: Washdev, Das K, Subhani MH, Ramesh P, Maria A, Hashmi S. Factors Associated with Medical Residents Burnout in Tertiary Care Hospital in Karachi. APMC 2017;11(2):122-125.

INTRODUCTION

The field of Medicine is challenging. The period of Residency is particularly demanding and stressful during which residents are expected to work long hours and have a huge responsibility on their shoulders.[1] This burden may lead to increased tension in their life, which results in mental, emotional and physical strain i.e. burnout.[2] According to studies conducted in the west, doctors have a higher degree of psychological morbidity and are at a higher risk of stress-related psychosocial problems including increased suicidal tendencies and alcohol dependence.[3-5]

Maslach elaborated the burnout syndrome as sustained response of long term emotional and interpersonal stressors at job expressed in three parts: emotional fatigue, depersonalization and ineffectiveness.[6] Emotional fatigue is the state when a person's emotional resources are overextended, exhausted and depleted due to workplace stress.[7,8] Depersonalization refers to unattached, negative and dissociated attitude towards surrounding people at job.[7,8] Ineffectiveness is characterized by the feeling of inadequacy at one's profession.[7,8]

Burnout etiology is mainly associated with environment of workplace. Those features of job environment may be high workload, greater working hours than individual's capacity, and lack of resources such as fair opportunities or proper guidance.[9, 10] Several other factors in a healthcare organization individually influence a doctor at an emotional and psychological level, for instance misbehavior, non-compliance and hostility of patients or their relatives.[9]

There is very limited literature regarding association between particular demographic and professional factors with burnout among American surgeons.[11] Studies show that younger physicians are more prone to experience burnout as compared to older colleagues.[11] Moreover, other study expresses no significant difference in the risk of burnout among both genders, even though they are affected in separate ways.[9]

Martini compared frequency of burnout syndrome in residents of several medical specialties, which showed mean frequency of burnout as fifty percent and there was no statistically significant difference among different specialties.[12]

Burnout is an important predictor of physicians' career satisfaction.[11] Burnout can affect both physician's job satisfaction and effectiveness of treatment to their patients/clients.[13] It has a negative impact on physician's productivity and puts them at a higher risk of committing medical errors.[14]

Many studies have been conducted recently to highlight Physician career satisfaction and determine the level of burnout and considerable evidence of increasing dissatisfaction with medical practice is found.[14] Some studies on burnout, depression and job satisfaction has been done on emergency physicians in the United States and Canada.[10] But there are limited studies available on Residents working in Asian countries. This study was conducted to evaluate the factors which are associated to burnout in Pakistani Residents during their period of training.

METHODOLOGY

A cross-sectional study was conducted among 278 post-graduates of Civil Hospital, Karachi. It was conducted during May 2016 to August, 2016. Non-probability purposive sampling method was used to recruit the subjects. Resident doctors were given the necessary explanation about the objective, by the researchers. Informed consent was taken and questionnaires were filled anonymously. Inclusion criteria consisted of those doctors who (a) gave verbal consent, (b) had worked in hospital setup for more than a year, (c) were 20-40 years old, and (d) were posted in Medicine and Surgery wards only. Those doctors were excluded from the study who (a) had a psychiatric history of any illness, and (b) did not completely fill the information required in the questionnaire.

Questionnaire given to the residents consisted of demographic data and Maslach job Burnout Inventory (MBI). The demographic questionnaire was composed of information regarding gender, specialty (medicine or surgery), year of residency, and job hours per week and work environment. MBI is a 22 item inventory. It is considered the gold standard because it is consistent, psychometrically suitable, and easy to use and the most used scale worldwide.[15] Respondents had to rate specific behavioral attitude towards job environment ranging from zero to seven according to the MBI scale. It is used for measuring the intensity of the three dimensions in burnout syndrome which include exhaustion, cynicism, and inefficacy. Criteria for severe burnout is high scores in exhaustion and cynicism, and a low score in inefficacy.

The internal reliability of this questionnaire had been reported from 0.77 to 0.91, exhaustion (r = 0.90), cynicism (r = 0.79) and inefficacy (r = 0.71). The scientific reliability had been reported more than 0.90.[15]

RESULTS

High levels of burnout were prevalent in around one-third of resident physicians, both male (29.8%) and female (34.4%). Also, females reported more about low and high levels of burnout as compared to males (table 1).

Table 1: Prevalence of burnout in medical residents

	Male	Female	Total	Odds Ratio	C.I
Low	38	50	88	0.76	0.8-1.2
Moderate	26	23	49	1.13	0.5-1.3
High	37	53	90	0.70	0.4-0.9
No burnout	23	28	51	0.8	0.4-1.8
Total	124	154	278		

There was a significant rise (P=0.02) of high burnout level in residents working for more than eighty hours per week. Furthermore, a majority of the physicians having less working hours, i.e. less than seventy hours per week, were seen to have low burnout levels (table 2).

Table 2: Prevalence of Burnout according to job working hours per week

	Low burnout	Moderate burnout	High burnout	P value
60-69	49	19	11	1.5
70-79	22	9	21	1.2
80 and above	17	21	58	0.02

It was found that housing status affects the burnout in a way that physicians who were living in rented houses reported more about moderate and high levels of burnout. In contrast, there was no impact of housing status on physicians with low burnout levels (table 3).

Table 3: Housing status and burnout

Level of Burnout	House rented	House owned	OR	C.I
Low	42	46	0.9	0.5-1.6
Moderate	34	15	2.2	1.8-5.0
High	62	28	2.2	2.0-3.2
No burnout	21	30	0.7	0.4-0.7

DISCUSSION

Our study found high levels of burnout syndrome in medical residents. Various factors played a significant role in burnout development. In our study, females had a greater chance of burnout, although some studies state otherwise.[9, 16, 17] This is probably due to domestic responsibilities adding to the burdens of female physicians and they are more emotionally vulnerable.

The level of burnout was seen to be directly proportional with working hours. Martini et al also showed that residents for more than eighty hours had very high burnout levels.[12] On the other hand, Gelfand et al and Malik AA et al stated that working hours had no effect on burnout levels.[16, 18] When there are long working hours along with high working demands, physicians get less time for their family and other leisure. Lack of time and energy to recover from professional fatigue and stress exposes the residents to burnout.

Around twenty-two percent residents living in rented houses reported about severe burnout, as compared to only ten percent of those who owned their house. Housing status represents the financial stability of an individual, in which case instability can be psychologically and economically exhausting. In a study to determine the consequence of employment on health status, the results showed no difference in mental and physical health after adjusting for SES and social interactions [19] It has also been noted that high levels of working hours can lead to social anxiety that is associated with depression. [20]

Major causes of burnout in a person are; stressors that are hard to cope with fully. It can be prevented by mutual effects of changes within organization and education of the individual. Maslach and Leiter proposed that imbalance among the six areas of work life; workload, control, reward, connection with the community, lack of fairness and conflict of values, are the culprit for the development of burnout.[21] Adequate resources should be assured to physicians to meet their demands and balance their professional and personal life as well.[21] This will revitalize the positive energy in doctors. Supportive leadership and connection with fellow doctors should be promoted which will also diminish the trend of unfairness in the organization. There is a desperate need for the introduction of stress management therapies in such organizations.

CONCLUSION

This study expressed that rate of burnout syndrome in residents was very high. We analyzed few factors for the evaluation of etiologies of burnout, therefore further studies reports should be given regarding predisposing stressors of burnout. These studies will help in developing advanced knowledge and better ways of managing this syndrome in an effective way.

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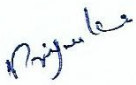
Dr. Priyanka Ramesh Final Year Medical Student Dow University of Health sciences, Karachi	Manuscript writing, Compiled data	
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