

Interactive role of personal and work related factors in psychological burnout: a study of Pakistani doctors

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Abstract

Objectives: To evaluate the direct and interactive role of personal and work-related factors in psychological burnout among doctors.

Methodology: The cross-sectional study was conducted in September, 2018, at three hospitals of the twin cities of Rawalpindi/Islamabad, Pakistan, and comprised doctors aged 24-49 years. Data was collected using a demographic questionnaire and the self-reporting Copenhagen Burnout Inventory. Data was analysed using SPSS 23.

Results: Of the 161 doctors, 66(41%) were males and 96(59%) were female. The overall mean age of the sample was 26.44 ± 4.80 years (range: 24-49 years). There was significant direct effect of work setting and indirect effect of gender and work setting on psychological burnout ($p < 0.05$). Doctors experienced more burnout in emergency room settings compared to wards and outpatient departments ($p < 0.05$). Further, young and low-salaried doctors were more prone to psychological burnout, and continuous working hours added to the adversity of burnout ($p < 0.05$).

Conclusion: Personal and workplace related factors were found to play a significant role in psychological burnout which may possibly affect the overall efficiency of doctors.

Keywords: Burnout, Gender, Work setting, Age. (JPMA 70: 1413; 2020).

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Introduction

Being a more stressful and inflexible work setting, medicine is one of the fields with the highest rates of psychological burnout. Psychological burnout is described as exposure of occupational hazard and negative personal reactions toward the challenges faced in one's work setting e.g., healthcare services. Literature has documented personal and work-related factors strongly linked with increase in mortality and morbidity, contributing to mental and physical health and decrease in medical health professionals.¹ Further, psychological burnout when characterised by emotional exhaustion, prolonged fatigue and pressure to meet challenges at cognitive level, influenced professional work negatively, mental health adversely and individuals' overall functionality consequently.² Previously, many uncontrollable and unavoidable personal and work-related aspects are found in link with psychological burnout, like specialisation,³ gender,⁴ work setting⁵ (i.e.,

Emergency Room [ER]), working hours⁴ and age.⁶

Many of the empirical studies on the presence of psychological burnout across physicians and other medical samples, like nurses, have been done in American and European populations.^{3,4} A study in American physicians found burnout dominantly prevalent in middle career physicians, inducing in them the tendency to leave medicine practice before the age of retirement and this tendency was equally prevalent across men and women.³ In another comparison of men and women physicians from the United States and Netherland, women demonstrated high ratio (28%) of psychological burnout than their male counterparts (21%), whereas gender differences were non-significant for the Dutch sample. However, women physicians in both states had fewer working hours than men.⁴

Though literature lacks in terms of identifying any comparison of psychological burnout across different work settings, like ER, general ward or outpatient department (OPD), a high degree of severity of burnout (55%) was observed across a sample of Italian physicians placed in ER or Critical / Intensive Care Units (ICUs).^{5,6} In

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extension to this, previously work setting has been estimated in terms of rural or urban placements and in relation to many factors other than psychological burnout across Australian medical health professionals.¹ Little is known about pervasiveness of burnout across doctors of different age groups. In an Australian study, young and older doctors were compared on psychological burnout, work stress, sleep quality, value of acknowledgement, and working hours.⁷ The results revealed presence of low psychological burnout, estimated as emotional exhaustion and depersonalisation in older doctors with more years of experience on burnout.

While addressing the above-documented personal and work-related factors linking with psychological burnout in the local context, only a few studies have estimated burnout of the general prevalence across samples of medical students⁸ and military doctors.⁹ Clearly, these factors need to be examined in depth. The current study was planned to investigate direct as well as interactive role of personal (age, gender) and work (setting, working hours, experience, salary) related factors in psychological burnout among doctors.

Subjects and Methods

The cross-sectional study was conducted in September, 2018, at three hospitals of the twin cities of Rawalpindi/Islamabad, Pakistan. After getting approval from the research review board of COMSATS University, Lahore, the sample size was calculated using OpenEpi software.¹⁰ Those included were doctors of either gender aged 24-49 years. To control the confounding factors of time-related adjustment and mental and physical health, only those doctors were selected who had been serving in these hospitals since the preceding 6 months with overall experience of at least one year, who had not been referred for any counselling services or therapeutic sessions, and were not diagnosed with any illness.

After taking informed written consent from the participants, self-reporting tool of Copenhagen Burnout Inventory (CBI)¹¹ and a self-constructed demographic questionnaire about gender, age, specialisation, placement, years of experience, salary etc. were administered in a one-to-one setting. CBI is a 19-item self-reporting measure assessing burnout as emotional exhaustion and fatigue in three dimensions; personal, work and client related. High scores are indicator of high

level of psychological burnout. Multiple analysis of variance (MANOVA)¹² was applied for categorical constructs, like gender, work setting. and Correlation analysis was performed for continuous variables, like age, work experience, weekly working hours.

CBI was also evaluated for mean and standard deviations, and internal consistency in terms of Cronbach alpha coefficient. The values obtained were 0.874, 0.726 and 0.801 for work, personal and client-related burnout. Alpha coefficient for overall psychological burnout was 0.91 which demonstrated that CBI was a reliable instrument to measure burnout in doctors. Bartlett sample sufficiency test / homogeneity of variance was also calculated to evaluate the equal variance across comparison groups. MANOVA was run to assess the interactive effect of gender and work setting on psychological burnout and its dimensions. Pearson product correlation analysis was performed to assess the relation of age, work experience, and weekly working hours with overall psychological burnout as well as its dimensions. All hypotheses were tested using SPSS 23. $P < 0.05$ was considered significant.

Results

Of the 161 doctors, 66(41%) were males and 96(59%) were female. The overall mean age of the sample was 26.44 ± 4.80 years (range: 24-49 years). Also, 62(39%) doctors were serving most of the days in ER, 33(20%) in OPD and 66(41%) in a ward setting. Overall, 43(27%) doctors were associated with House Job, 46(29%) were from General Medicine, 21(13%) from General Surgery, 3(2%) from Psychiatry, 11(8%) from Paediatrics, 7(4%) from Gynaecology, and 30(17%) from other specializations, including Ophthalmology, Pharma, Ear, nose and throat (ENT), and Neurosurgery.

In terms of weekly working hours, 15(9%) doctors worked for 30 or <30 hours, 44(27%) served for 31-60 hours, 67(42%) worked for 61-90 hours, and 35(22%) worked 91 or >91 hours. Overall, 142(88%) doctors had 5 or <5 years of work experience, 7(4%) had 6-10 years, 3(2%) had 11-15 years, and 9(6%) had >16 years of experience. In case of monthly salary, 42(26%) participants earned <Rs 50,000, 60(37%) in the range of Rs 51,000-Rs100,000 and 59(37%) had >Rs 100,000.

When examined direct effect of gender and work setting on burnout, there was non-significant effect for gender ($p=0.239$), and significant effect for work setting

Table-1: MANOVA Demonstrating Direct Effect of Gender and Work Setting of Psychological Burnout.

Measures	f(%)	Person R. Mean±SD	F(Sig)	Work R. Mean±SD	F(Sig)	Client R. Mean±SD	F(Sig)	P. Burnout Mean±SD	F(Sig)
Gender									
Male	66	10.95±5.15	0.76 (0.399)	12.39±5.60	1.17(0.282)	9.63±3.23	1.87(0.175)	32.98±12.62	1.44(0.231)
Female	95	9.84±4.47		11.18±5.10		8.85±2.97		29/89±11.08	
Work Setting									
Emergency	60	10.80±4.66	2.26(0.108)	12.70±4.86	6.87(0.001)	9.78±3.31	4.02(0.020)	33.28±11.03	5.39(0.005)
OPD	33	9.12±4.70		9.06±5.34		8.01±2.93		26.18±11.75	
Ward	60	10.41±4.87		12.06±5.37		9.20±3.01		31.68±11.92	

R= related, P=psychological, SD; Standard deviation; MANOVA: Multiple analysis of variance.

Table-2: Correlations between Personal (age), Work Related (experience, working hours, salary) Characteristics and Burnout.

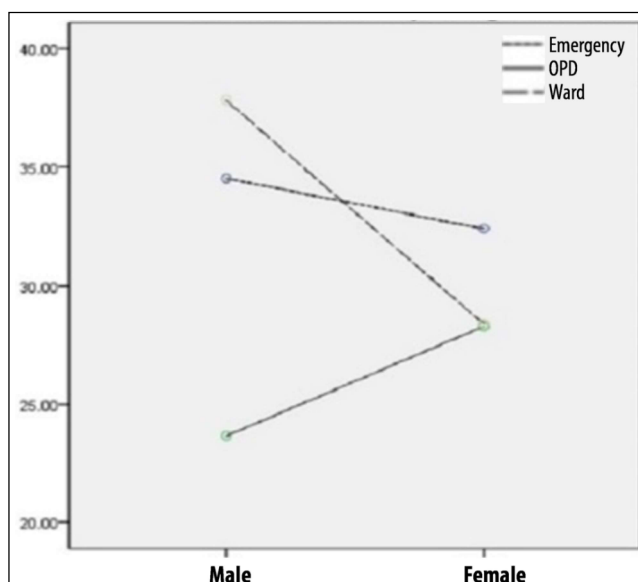
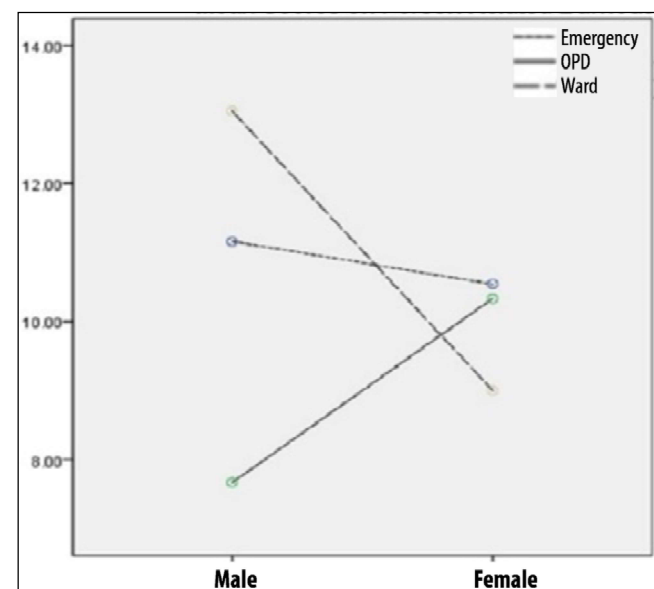
Measures	Overall Sample (n=160)				Male Doctors (n=66)				Female Doctors (n=95)				α	Mean±SD
	Age	W.E	W.H	Salary	Age	W.E	W.H	Salary	Age	W.E	W.H	Salary		
P00. Burnout	-0.234**	-0.136	0.343***	-0.174*	-0.396***	-0.354**	0.508***	-0.399**	-0.120	0.084	0.171	-0.006	0.901	31.71±12.19
Person R.	-0.232**	-0.122	0.254**	-0.202*	-0.412***	-0.371**	0.332**	-0.445***	-0.053	0.178	0.155	0.001	0.874	10.42±5.03
Work R.	-0.203**	-0.148	0.397***	-0.145	-0.382***	-0.342**	0.553***	-0.391**	-0.071	0.018	0.252*	0.023	0.726	11.81±5.46
Client R.	-0.198*	-0.141	0.275**	-0.104	-0.314*	-0.313*	0.492***	-0.244*	-0.160	0.021	0.059	-0.021	0.801	9.28±3.22

*p<.05, **p<.01, ***p<.00, W.E= Work experience, W.H= working hours, P= psychological, R= relate, SD: " Standard deviation

(p=0.005) as ER doctors reported more burnout, especially in subscales of work (p=0.001) and client (p=0.020) related burnout (Table 1). In case of interactive effect, analysis indicated significant (p=0.018) effect on overall burnout; male doctors in ER and female doctors in ward setting encountered more burnout than other settings (Figure 1). However, no difference was noticed in subscale of person-related burnout (p=0.108) (Figure 2). Work-related burnout showed significant (p=0.042) but opposite findings, with male doctors reporting high

burnout in ward setting and female doctors scoring high in ER setting (Figure 3). No significant interactive effect was seen for subscale of client-related burnout (p=0.420) (Figure 4).

Correlational findings revealed significant negative link of psychological burnout with age (p<0.001) and monthly salary (p<0.05) and positive link with working hours (p<0.001) (Table 2). There was a negative link between subscale of work-related burnout and working hours (p<0.05) for male, while all correlations were

**Figure-1:** Mean Scores on Psychological Burnout.**Figure-2:** Mean Scores on Person Related Burnout.

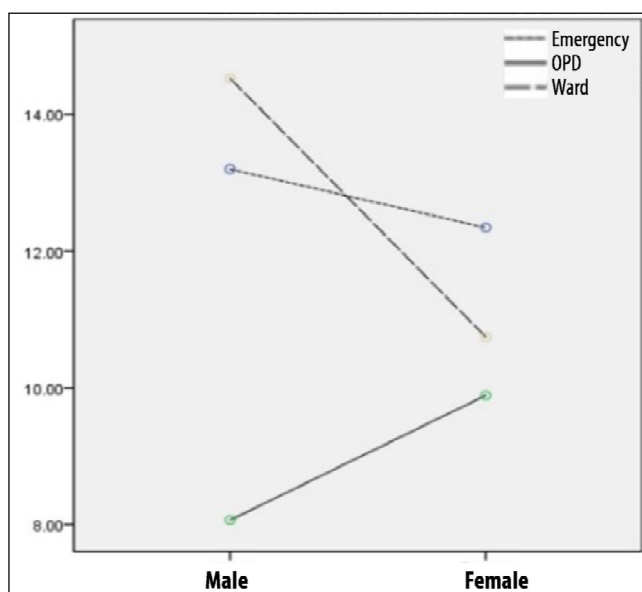


Figure-3: Mean Scores on Work Related Burnout.

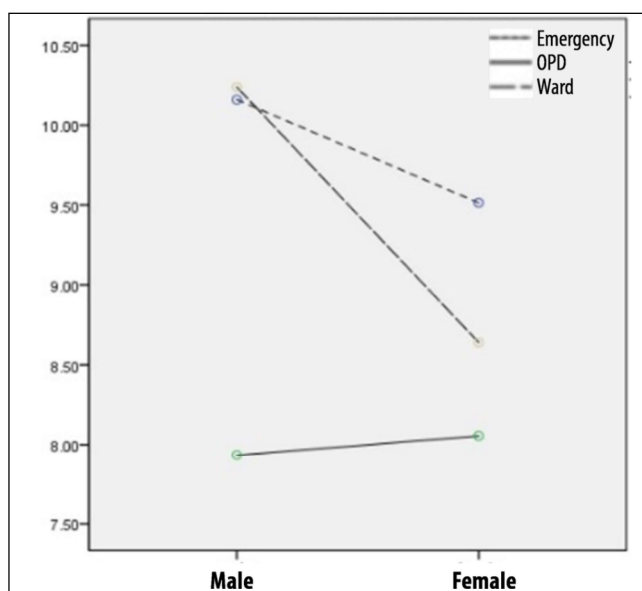


Figure-4: Mean Scores on Client Related Burnout.

significant for female doctors, including negative link between work experience and psychological burnout ($p < 0.001$) which was noted as non-significant for total sample.

Discussion

Psychological burnout is a cognitive process characterised by mental fatigue, emotional exhaustion, decreased motivation and poor performance in the

presence of stress and it becomes more chronic when unavoidable but consistent personal and work-related factors keep intervening. The present study also examined the direct and interactive role of these factors on psychological burnout across medical healthcare professionals. The results revealed significant overall high level of burnout in doctors placed in ER setting than those working in wards and OPDs, particularly in terms of work and client-related burnout. This could be due to the "fishbowl" atmosphere in ER where critical decisions are based on limited available information and are made within seconds.¹³ In addition, as doctors serving in ER have heavy responsibilities, long working hours and have frequent exposure to stress, therefore they experience psychological burnout three times more than those working in general settings.¹³

Overall, male and female doctors demonstrated no differences in exposure to burnout, but interestingly gender differences across various placement setting were observed; male doctors in ER and female doctors in ward settings encountered more burnout than other settings. One reason could be frequency of placement of male doctors in ER setting as female doctors are given margin in ER placements due to household responsibilities and childcare along with "nights on call", inflexible duty hours and work load.¹⁴ That is why when female doctors are placed in ER, they take work pressure and stress and illustrate more burnout.

Findings further demonstrated that young and low salaried doctors experience more burnout that is consistent with a previous observation from a South African study in which doctors aged < 40 years revealed more burnout (87% vs 61%) than their older counterparts when burnout was measured in terms of depersonalisation. Though, age 40 in the current study sample indicated a relatively old age, no other study examining same relationship of age with burnout as was done in the current study.¹⁵

In addition, low salaried doctors reported high psychological burnout which is an indicator of financial stressors adding to psychological stress, fatigue and exhaustion, and, finally, burnout. As Pakistan is a developing country and, like many others professions, doctors are also low paid in comparison to other parts of the world. Along with many other factors, low salary structure is one of the major reasons responsible for brain-drain among physicians in Pakistan.¹⁶ Though

present research demonstrated significant correlations between personal and work-related factors and burnout, these associations were more significant for female doctors' sample which could be due to the high proneness of psychological burnout in females. Being living in the collectivist culture, this vulnerability is increased by several other reasons i.e., household chores, childcare and family responsibilities.¹⁴

The current research also carries some limitations. Data was collected from hospitals of Rawalpindi / Islamabad only which are urban and low-populated area with comparatively better work conditions than other regions and might not be representative of other areas of Pakistan, particularly rural areas. Therefore, expanding the current study's parameters to other regions is recommended to obtain more generalised outcomes. Further, in extension to work setting, differences in burnout across various specialisations could be tested as some of the specialisations induce more exhaustion, fatigue and stress, such as psychiatrist are more prone to experiencing burnout than surgeons and physicians.¹⁷

Conclusion

There was a dominant and significant presence of burnout across doctors with various characteristics. Doctors are known to be taking care of the general population which is only possible when doctors are given sufficient basic work-related facilities. Though these factors are unavoidable and somehow uncontrollable, in order to improve the overall efficiency of medical professionals, factors related to burnout need to be addressed on an urgent basis.

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Conflict of Interest: None.

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