

## Original Article

# Psychological morbidity in medical students after entering into clinical training

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## Abstract:

Psychological morbidity is emerging as an important issue for medical students after entering clinical training due to extensive working hours. Students find themselves unable to balance competing demands on their time and cannot allocate appropriate time to family, spouses and even to themselves; this leads to complaints about exhaustion and lack of efficiency in their profession. **Objective:** To assess

Psychological morbidity in interns, medical officers and residents. **Methods:** a cross sectional study was conducted. A google form was designed with questions adopting from the three scales of the Maslach Burnout Inventory-General Survey (MBI-GS). Question from all three categories of MBI-GS such as emotional exhaustion, depersonalization and personal accomplishment were considered. The form was distributed via email and Whatsapp to 87 house officers, medical officers and residents of six public healthcare facilities in Lahore. Responses were captured from 73 participants who completed the General Health questionnaire. Seven of these forms were filled by nurses, so in the present study only the response of those 66 participants who conformed to the study cross-section were considered. The results were analyzed using SPSS version 22 for descriptive statistics and chi-square association.

**Results:** A significant association was found between long working hours and emotional exhaustion, depersonalization and personal accomplishment questions in particular. The findings suggests long working hours ruin the mental health of medical professionals, which ultimately produce psychological health impacts. **Conclusions:** It was concluded that these factors should be considered to reduce psychological morbidity in health professionals.

**Keywords:** Psychological, Emotional exhaustion, Depersonalization, Personal accomplishment, Whatsapp

## Introduction:

Psychological morbidity is emerging as a big issue for professionals. Colloquially psychological morbidity is referred to as 'burnout'. Burnout has been described by the "Maslach Burnout Inventory-General Survey" (MBI-GS) as dimensions of exhaustion, cynicism and lack of efficacy in employees [1]. It is usually recorded in health professional (or healthcare professionals) who provide health care treatments. It also includes all those who work as a surgeon, physician assistant, medical assistant, nurse, physiotherapist, occupational therapist, dentist, midwife, psychologist, psychi-

atrist, or pharmacist or who perform services in allied health professions. A health professional may also be a public health or community health practitioner [2].

Workload is key determinant for burnout, along with various other factors such as perceived job control, the nature cases, countertransference reactions, supervisory support, and mental health [3]. Muzafar *et al.* [4] also reported that a very high levels of burnout in medical students was significantly associated with age, gender, doctor parents; no help or no supportive resources (e.g., from colleagues), lack of time off,

lack of belief in what you do, fear of failure, family responsibilities, and uncertain future.

Shanafelt *et al.* [5] also evaluated the relationship between burnout and professional satisfaction and found that burnout and declining satisfaction were strongly associated with actual reductions in professional work effort over the following 24 months. Ogawa *et al.* [6] analyzed that a working week of 80 to 99.9 hours was associated with a 2.83 fold higher risk of burnout and 100 hours or more working week was associated with a 6.96-fold higher risk of developing depressive symptoms compared with a working week of less than 60 hours. Working excessively long hours was significantly associated with the development of depressive symptoms. Lahlouh *et al.* [7] studied the relationship between burnout and sleep and found that the majority (90%) of residents reported poor sleep quality. There are strong effects of night shift work on health status due to increased likelihood of smoking, fatigue, bad eating habit, insufficient sleep and a low propensity to physical activity [8-9]. Kancherla *et al.* [10] also noted the important role of sleep in the incidence of physician burnout. Burnout also results in rude, dismissive and aggressive (RDA) communication between professions [11-12].

Johnson *et al.* [13] suggested that poor well-being and burnout is increasing in healthcare staff, which harms the quality and safety of patient care delivered, and increases service costs because stress and burnout means higher rates of practitioner sickness, absence and turnover. Alongside studying factors that enhanced burnout levels in healthcare professionals, research is also ongoing to find possible ways to reduce this prevailing burnout condition. Yang *et al.* [14] (2017) reported that higher levels of mindfulness lowers the levels of stress and burnout (disengagement and exhaustion). A number of literature studies also agreed that mindfulness trainings is effective in reducing stress and improving mindfulness and compassion, but was not a significant contributor to decrease incidences of burnout

[15-16] (Klein *et al.* 2020; Suyi *et al.* 2017). Physical therapy is also recommended for 43.3% of health professionals by Martínez-López *et al.* [17] when reporting on the psychological impact of the COVID-19 pandemic on health professionals in Spain. According to Lu *et al.* [18], lowered working hours, sufficient salary, and proper training are possible factors which can reduce burnout in healthcare professionals.

O'Connor *et al.* [19] studied the correlation between increasing age being associated with an increased risk of depersonalization that comes under burnout, but also noted a heightened sense of personal accomplishment. According to Dreison *et al.* [20] person-directed interventions were more effective than organization-directed interventions at reducing emotional exhaustion in burnout in mental health professionals. Ortiz-Fune *et al.* [21] studied burnout in mental health professionals to show the roles of psychological flexibility, awareness, courage, and love. Love was recorded as the strongest predictor of depersonalization over and above psychological flexibility. Kalani *et al.* [22] reported in a systematic review on interventions for physician burnout; this research has shown that reaching conclusions about effective interventions (individual- or organization-directed) for physician burnout is not easy and that a number of mediating or moderating variables probably influence the effectiveness of these interventions.

It is necessary to understand approaches and interventions for the prevention or reduction of physician burnout to fill the gaps in research. The present study aims to determine the effects of over working burn-out in medical students, after they entered in clinical set up in under-developed countries.

## Methods:

A cross-sectional study was conducted to see psychological morbidity in house officers, medical officers and residents. All participants (house officers, medical officers and residents) from six public healthcare facilities of Lahore were considered. A socio-demographic and

General Health questionnaire was designed by adopting the three subscales of the Maslach Burnout Inventory. Data was collected using a Google form. The form was shared with 87 participants via email and Whatsapp. However, only 73 participants completed the questionnaire. For final analysis only 66 participants were considered. The form contained questions from all three subscales of the Maslach Burnout Inventory and for questions on emotional exhaustion, depersonalization and personal accomplishment methods of Sirsawy et al. [23] were followed. Six questions including gender, age in years, marital status, designation, working experience, and any administrative responsibility were designed for socio-demographic characteristics.

### Statistical Analysis

SPSS version 22 was used to analyze the results. A chi-square test was applied and a significant association ( $<0.05$ ) was found in 10.3 % participants who are working for above 90 duty hours. Moreover, psychological problems were high in those who are emotionally affected by the pain of their patients.

### Results:

#### Demographic Characteristics

To assess burnout in medical professional, a cross sectional study was carried out. A questionnaire was designed and participants were involved via Google survey form. The form was shared with 87 participants, however, only 66 participants were considered for the final analysis. For demographic characteristics variables such as age, gender, marital status, working experience, designation in medical profession and their administrative duties of their current job were measured. It was noticed in our study that out of 66 participants, only 28.8% participant were males and rest (72.1%) were females. According to age, 55 out of 66 participants were 24-28 years old group while only 3 % were between 34-38 age group. Most of the participants were single (83.3%) while all others were married (Table 1).

According to designation, 28.8% were interns (house officers), 56.1% were medical officers, and 15.2% were residents. Out of them, 22.7% had administrative responsibility and 75.8% had no administrative responsibility associated with the current status of their job. There were 78.8% with work experience less than 2 years, 18.2% with 3-5 years' experience and only 3% with 6-9 year's work experience (Table 1). Out of them, 42.6% worked 24-48 hours per week, 25% worked 49-72 hours per week, 22.1% worked 73-90 hours per week and 10.3% worked 90 and above hours. It was noticed that working more than 72 hours affected the physical and emotional health of respondents, correlating with evidence reported by De Jonge et al. [24] that these kinds of jobs had higher risk for physical and emotional stress. It was noticed in the present study that 48 participants (72.7%) felt emotionally exhausted after working in a hospital, however, 9 participants or (13.6%) from each different category did not feel emotionally exhausted and even not sure (Table 2).

### Discussion:

A study on nurses was found in line to our results as workload positively associated with emotional exhaustion [25]. It was also seen that 42 participants (64.7%) believed that their job put work strain on them. Karhula et al. [26] reported that healthcare jobs increased strain by decreasing sleep. However, 13 participants (19.1%) answered in the negative to their job putting strain on them, and 11 (16.2%) were not sure (Table 2). This may be due to their interest and intentions when joining this profession. In the present study, frustration was not recorded in those who were happy to join this profession. However, 32.4% felt frustrated from pressure in the work place from higher ups, 20.6% felt frustrated from no time for spouse or family. In our study 44.1% of the participants felt frustration due to lack of sleep this have a significant association ( $p= 0.041$ ) with long duty hours. Similarly, a significant association of burnout syndrome with less than 6 hours sleep in medical students was also reported by Asghar et

Nominal Variables	Ordinal Variables	Frequency	Percentage
<b>Gender</b>	Male	19	28.8
	Female	47	71.2
<b>Age in years</b>	24-28	55	83.3
	29-33	8	12.1
	34-38	3	4.5
<b>Marital Status</b>	Single	55	83.3
	Married	11	16.7
<b>Designation in medical profession</b>	Intern (house officer)	19	28.8
	Medical officer	37	56.1
	Resident	10	15.2
<b>Working Experience</b>	Less than 2 years	52	78.8
	3-5 years	12	18.2
	6-9 years	2	3.0
<b>Do you have any administrative responsibility along with current status of Job</b>	Yes	15	22.7
	No	50	75.8
	Maybe	1	1.5
<b>Was you happy to join this profession?</b>	Yes	42	
	No	15	
	May be	9	

**Table 1:** Demographic characteristics of house, medical officers and residents

Sr. No	Questions	Response	24-48 hrs	49-72 hrs	73-90 hrs	90 above	% of Responses
<b>1.</b>	Do you feel emotionally exhausted after working in the hospital?	Yes	17	12	12	7	72.7%
		No	6	1	2	-	13.6%
		Maybe	4	4	1	-	13.6%
<b>2.</b>	Does your job put strain on you?	Yes	12	13	11	6	64.7%
		No	8	2	2	1	19.1%
		Maybe	7	2	2	-	16.2%
<b>3.</b>	Which things makes you feel more frustrated?	Lack of sleep	9	7	8	6	44.1%
		Skipping family events	1				2.9%
		No time for spouse/family	8	3	2		20.6%
		Pressure in work place from higher ups	9	7	5	1	32.4%
<b>4.</b>	How much pain of patients affects you?	Not at all	-	-	1	2	5.9%
		A little bit	3	1	4	7	23.5%
		Moderate	3	10	7	12	47.1%
		A lot	1	3	6	6	23.5%
<b>5.</b>		Not at all	1		1	-	4.5%

	How much death of patients affects your mental concentration?	A little bit	8	2	5	2	23.9%
		For some time	14	11	7	5	56.7%
		Very much	4	4	2	-	14.9%
6.	Is there a feeling of achievement after correct diagnosis of patient?	Yes	27	15	15	7	95.6%
		May be	-	2	-	-	4.4%
7.	Do you feel you are not getting enough reward from working in medical field?	Yes	16	14	11	7	70.6%
		No	5	2	1	-	11.8%
		Maybe	6	1	3	-	17.6%
8.	Do you feel you have converted into an emotionless robot from working overtime?	Yes	12	11	8	4	55.9%
		No	9	3	3	3	26.5%
		Maybe	6	3	4	-	17.6%

**Table 2:** Questions from all three sub-classes Maslach Burnout Inventory data

al. [27]. Sufficient sleep time is required for good physical health of all the individuals for normal working conditions. Otherwise, lack of sleep or insufficient sleep also results in deterioration of mental health and also be related with the metabolic disorders such as diabetes, and obesity [28]. It was found in the current study that 2.9% were frustrated from skipping of family events.

Similarly, Turkoglu and Cansoy, [29] recently reported that workload results in family conflict, stress and emotional exestuation. Moreover, in the current study, 70.6% participants felt a positive reward from working in medical field and significantly no association  $>0.05$  was noticed with more working hours. However, 11.8% answered they are getting no reward and 17.6% were even not sure (Table 2). A similar study was carried out on German nurses and it was reported that burnout strongly associated with feelings of no reward [24,30]. The current study also recorded that 55.9% of the professionals felt that they had turned into emotionless robots due to over working, while, 26.5% answered in negative

and 17.6% were not sure. 23.5% were affected by the pain of their patient, 5.9% were not affected at all, 23.5% were affected a little bit and 47.1% were moderately affected. Jackson et al. [31] also agreed that emotional attachment during care of patients really hurts their physicians. Out of the current study's respondents, 56.7% were affected by the death of patient for some time, 23.9% were affected a little bit, 14.9% were very much affected and had effect on their mental concentration and 4.5% were not affected at all. 95.6% felt achievement after correct diagnosis and 4.4% were not sure. Studies suggest that a decrease in workload and close supervision facilitate correct diagnosis for Medical Officers [32]. Geller et al. [33] reported correct diagnosis by the professionals enhance organizations repute. However, Graber, [34] reported diagnostic errors increases stress in professionals.

### Conclusions:

It is suggested that working hours should be controlled and efforts should be made to foster a friendlier environment, along with paid jobs for

house officers. Otherwise, the current working conditions put a great physical and emotional strain on healthcare professionals, which is detrimental to their health as well as the whole healthcare industry.

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