

# Burnout and Mental Illness related Stigma among Healthcare Professionals in Pakistan

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## Abstract

Burnout and Mental illness are both considered the major contributing factors to the global health crisis. The present study aimed to assess burnout and mental illness-related stigma among Pakistani healthcare practitioners. The study design was a descriptive cross-sectional one. Maslach Burnout Inventory (MBI), a pre-validated tool for measuring burnout, Generalised Anxiety Disorder Scale (GAD-7), a tool for measuring anxiety symptoms, and the Occupational Depression Inventory (ODI) quantified the severity of work-attributed depressive symptoms among 382 healthcare professionals. Data was collected and analyzed using SPSS. Spearman's correlation determined the relation between burnout dimensions and occupational depression. The results of the current study highlighted overall no significant difference in MBI scores with respect to different demographic characteristics. The results of the present study showed a weak positive correlation between burnout and ODI. However, all the burnout dimensions correlated with each other. The results of the present study concluded that healthcare professionals encounter high levels of burnout along with mild anxiety and a moderate level of occupational depression. Male healthcare professionals had higher symptoms of generalized anxiety disorders as compared to females. Occupational depression was higher among male professionals, those having more than 20 years of experience, and professionals working as nurses and in community pharmacy settings.

**Keywords:** Burnout, Mental illness, Healthcare professionals, Pakistan

## INTRODUCTION

Burnout is characterised as "a syndrome conceptualised as resulting from chronic workplace stress that has not been successfully managed" by the International Classification of Diseases (ICD-11). It involves (i) sensations of physical or mental tiredness; (ii) a growing mental detachment from one's employment; (iii) emotions of pessimism or cynicism about one's career; and (iv) a decline in professional effectiveness. It is not categorised as a medical issue but rather as an occupational phenomena [1]. Despite various initiatives implemented throughout the globe, mental illness remains extremely stigmatized due to the presence of negative stereotypes in the community [2]. Numerous campaigns have paid particular attention to changing the attitude of healthcare providers, as they usually carry the same negative stigma towards mental illnesses as the community. This not only adds to the disease burden by averting the public from seeking medical help, but it also inflicts this stereotype in the culture of the medical society, thus causing future medical professionals to have the same mindset [3]. The major obstacle to the effective management of mental illnesses includes the stigma associated with mental illness [4, 5]. Detriment, incomprehension, and discrimination are the three main components of the stigma linked with such illnesses [6]. Mental illness stigma can be a barrier to grasping many opportunities in life and being deprived of equal chances in society [7]. Stigma can affect the campaign that supports the

need for treatment. As a result of this, few people turn up for the treatment and the majority remain undiagnosed which in turn reduces the quality of life and increases the burden on the individual as well as the community [8]. Healthcare providers are generally perceived as empathetic with a positive mindset towards the patients offering them solicitous care. However, this might not always be the case, and the healthcare system itself might be adding to this stigma in some settings [9].

Mental illnesses are seen to be commonly linked with burnout in professionals. A study conducted in Japan explained the association of burnout with mental illnesses-related stigma.

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The findings showed that mental illness, associated stigma, and occupational exhaustion are all inversely correlated. Therefore, strict action must be taken against mental illness-related stigma to refrain from developing burnout [10]. A study conducted in USA and Lithuania showed a higher level of burnout in the US sample compared to Lithuania, the study concluded that the Lithuania sample was also found more resilient and adaptable to harsh working environments [11]. A qualitative study carried out in Ghana concluded that primary healthcare professionals mainly encounter job-related stress and experience burnout, which may act as a factor for the high turnover of staff and dissatisfaction of both patients and caregivers [12]. A study conducted in France examined the association between borderline personality depression and burnout. In females, burnout was associated with the “affective insecurity” and “impulsiveness” components of Borderline Personality [13]. A study conducted in Bahrain evaluated the link between mental illness stigma and evidence-based care provision and showed healthcare professionals who approved acquiring evidence-based practices reflected less stigma directed toward patients with mental illness [14].

Over the past few years, WHO has categorized “Burnout” as an officially diagnosable syndrome that results from chronic work environment stress. It affects almost a quarter of the workforce worldwide [15]. While due to mental illness specifically depression, 264 million people are affected around the globe. In low- and middle-income countries, 76% to 85% of people with mental illness receive no treatment. Burnout costs around \$125-\$190 billion every year in the US [16]. In Pakistan, the prevalence of mental illness is rising as it is considered a social taboo, so most cases go undiagnosed. The ever-increasing job burden on healthcare professionals is affecting their work productivity and increasing the chances of developing burnout as well as the stigma of mental illnesses hinders work productivity in such challenging environments. A research done in Pakistan highlighted that no considerable association was found between burnout and the doctor-patient relationship [17]. Another cross-sectional survey conducted in Pakistan on gynecological residents concluded high levels of burnout in government institutes as compared to private institutes [18]. A study conducted in Lahore concluded that the prevalence of high-degree burnout in physicians was higher than those reported internationally [19]. A study conducted on nurses of a tertiary care hospital in Pakistan signified that burnout in nurses was very common because of increased workload which can negatively affect their quality of life leading to compromised patients [20].

Burnout is a result of occupational workplace stress and the underpaid labor market. Keeping in view the inflation rate in Pakistan, healthcare professionals have to work more due to low salaries. Non-conducive work environment and long working hours add to the mental fatigue resulting in decreased quality of life. Mental illness is considered a societal taboo due to which most of the cases go undiagnosed

and unreported. Society does not accept healthcare professionals to be suffering from any mental illness or stigma which adds to the misery of the professionals as they try to cope with their stressors and burn out on their own resulting in low productivity and compromised professional services provided to the patients. Limited studies have been conducted in Pakistan to identify the barriers associated with burnout and mental health among healthcare professionals. Therefore, the present study was designed to assess burnout and mental illness-related stigma among healthcare professionals in Pakistan.

## MATERIALS AND METHODS

To examine burnout and stigma associated with mental illness among healthcare professionals in Pakistan, a descriptive cross-sectional study design was utilised. The correlation between burnout and the stigma associated with mental illness was discovered by this study. The Hamdard University's Ethical Committee granted permission for the current study to be conducted (Ref. No. HU/DRA/2022/085). The study sites included hospitals (district headquarters, tertiary care hospitals), public and private health care facilities, medical institutes, industries, regulatory affairs departments, sales and marketing departments, and pharmacies in Pakistan. Doctors, nurses, and pharmacists were the respondents. As there was no updated or validated record of all healthcare professionals in Pakistan, convenience sampling technique was used for this study, and all respondents available at the time of data collection who were willing to participate were included in the study. The sample size was calculated using Rao soft at a 95% confidence interval and a 5% margin of error, which came out to be 382. Three pre-validated questionnaires Maslach Burnout Inventory (MBI) were used to assess the level of burnout in healthcare professionals. MBI has three sections: the first section explores emotional exhaustion; the second section assesses depersonalization, and the third section deals with personal achievement. It has 22 items which are scored on a Likert scale of 0 to 6, (0 = Never, 1 = A few times per year, 2 = Once a month, 3 = A few times per month, 4 = Once a week, 5 = A few times per week and 6 = Every day). Each section was separately scored and then a total score of the entire questionnaire was calculated [10]. The generalized Anxiety Disorder Scale (GAD-7) was used to assess anxiety symptoms. It has 7 items and an additional subsidiary question. The 7 items are scored on a liker scale of 0 to 3, (0 = Not at all, 1 = Several days, 2 = More than half the days, and 3 = Nearly every day). The total is then calculated by adding all scores together. It is a widely used screening tool for assessing anxiety symptoms in an individual [21]. The Occupational Depression Inventory (ODI) was used to generate preliminary diagnoses of job-attributed depression and to assess the severity of work-related depressed symptoms. There are nine things in the ODI, plus a question about turnover intention. The 7 items are scored on a liker scale of 0 to 3, (0 = Never or almost never, 1 = A few days only, 2 = More than half the days, and 3 = Nearly every day).

The total is calculated by adding all scores together [13]. Data was collected from January to May 2022 and all the collected data was then checked, cleaned, coded, entered, and statistically analyzed using Statistical Package for Social Science (SPSS) version 21. Descriptive statistics comprising frequency and percentages were calculated. Non-parametric tests as well as correlation and regression were performed to find out the differences as well as associations among different variables.

## RESULTS AND DISCUSSION

of the 382 respondents, 51.3% (n=196) were men and 49.7% (n=186) were women. The majority of the respondents 38% (n=145) were from the age group of 25-30 years. Of the total respondents, 34% (n=130) were single and 63.1% (n=241) were married. The income level varied across respondents where the majority of the respondents 40.8% (n=156) earned between Rs 51,000- Rs 100,000. Of the total respondents, 38% (n=145) were Doctors, 34.6% (n=132) were Pharmacists and 27.5% (n=105) were Nurses. A detailed description is given (Table 1).

**Table 1. Demographic Characteristics of Respondents**

Indicator		n (%)
Age	25-30Y	145 (38.0)
	31-40Y	160 (41.9)
	41-50Y	62 (16.2)
	51-60Y	10 (2.6)
	>60Y	5 (1.3)
Gender	Male	196 (51.3)
	Female	186 (49.7)
City	Islamabad	105 (27.5)
	Rawalpindi	98 (25.7)
	Taxila	93 (24.3)
Setting	KPK	64 (16.8)
	Others	22 (5.8)
	Urban	328 (85.9)
Marital status	Rural	54 (14.1)
	Single	130 (34.0)
Years of experience	Married	241 (63.1)
	Others (Divorced, widowed)	11 (2.9)
	≤2 Years	65 (17.0)
Income	3-5 Years	115 (30.1)
	6-10 Years	167 (43.7)
	11-20 Years	25 (6.5)
Income	>20Years	10 (2.6)
	≤ 30,000	24 (6.3)
	31,000-50,000	116 (30.4)

Profession	51,000-99,000	156 (40.8)
	100,000-200,000	70 (18.3)
	>200,000	16 (4.2)
	Doctor	145 (38.0)
	Pharmacist	132 (34.6)
	Nurse	105 (27.5)
Working setting	Hospital	212 (55.5)
	Academia	78 (20.4)
	Community Pharmacies	31 (8.1)
	Sales & Marketing	21 (5.5)
	Regulatory affairs	14 (3.7)
Industry	Industry	26 (6.8)
	Others	0 (0)

The mean score for MBI was 60.32 (± 15.58) that indicated a high level of burnout, GAD-7 was (7.7, ± 4.53) which indicated a mild level of anxiety among healthcare professionals, ODI was 9.91 (±5.86) indicating a moderate level of occupational depression (Table 2).

**Table 2. Mean Scores of Maslach Burnout Inventory, GAD, ODI for Healthcare Professionals**

Indicator	Mean (±S.D)
Exhaustion	15.4 (±8.20)
Depersonalization	13.15 (±8.61)
Personal Achievement	31.74 (±10.23)
<b>Composite</b>	<b>60.32 (±15.58)</b>
Generalized Anxiety Disorder (GAD-7)	7.7 (±4.53)
Occupational Depression Inventory (ODI)	9.91 (±5.86)

No considerable variation (p > 0.05) in Maslach Burnout Inventory scores was seen among healthcare professionals in association with gender, setting, age, years of experience, income, profession, and working setting. A considerable difference (p ≤ 0.05) in Generalized Anxiety Disorder scores was observed among healthcare professionals in relation to gender. Male healthcare professionals were found to have relatively more generalized anxiety disorder in comparison to female healthcare professionals. However, there wasn't a considerable difference (p > 0.05) between other demographic characteristics for healthcare professionals. A significant difference (p ≤ 0.05) in Occupational Depression Inventory scores was observed among healthcare professionals in relation to gender, years of experience, profession, and working setting. Male healthcare professionals had comparatively more occupational depression than female healthcare professionals. Moreover, healthcare professionals with experience greater than 20 years had more occupational depression. Nurses were found to have more occupational depression in comparison to

doctors and pharmacists. In relation to the work setting, community pharmacists were found to have more occupational depression. However, no significant difference ( $p > 0.05$ ) was observed among other demographic characteristics for healthcare professionals. The analysis

reported Spearman's relationship amongst burnout dimensions as well as occupational depression. Burnout and ODI showed a shaky positive association. All of the burnout dimensions were connected (**Table 3**).

**Table 3.** Comparison of Maslach Burnout Inventory (MBI), Generalized Anxiety Disorder and Occupational Depression Inventory score among Healthcare Professionals

Indicator	n	Maslach Burnout Inventory (MBI)			Generalized Anxiety Disorder Scale (GAD-7)			Occupational Depression Inventory(ODI)			
		Mean Rank	Test Stats	P-Value	Mean Rank	Test Stats	P-Value	Mean Rank	Test Stats	P-Value	
Gender	Male= 196	197.50	17052.50 <sup>a</sup>	0.268	205.45	15493.50 <sup>a</sup>	<b>0.010</b>	210.93	14419.500 <sup>a</sup>	<b>0.001</b>	
	Female= 186	185.18			176.80			171.02			
Setting	Urban= 328	191.89	8727.0 <sup>a</sup>	0.860	191.83	8746.50 <sup>a</sup>	0.887	191.78	8763.0 <sup>a</sup>	0.906	
	Rural= 54	189.11			189.47			189.78			
Age	25-30Y= 145	197.05	1.867 <sup>b</sup>	0.767	185.79	1.758 <sup>b</sup>	0.788	192.83	4.133 <sup>b</sup>	0.391	
	31-40Y= 160	185.34			194.45			191.63			
	41-50Y= 62	194.02			190.23			176.36			
	51-60Y= 10	173.25			211.55			234.85			
	>60Y= 5	232.70			238.50			249.80			
Years of experience	≤ 2Y= 65	197.70	1.349 <sup>b</sup>	0.855	164.80	8.826 <sup>b</sup>	0.068	188.30	9.825 <sup>b</sup>	<b>0.046</b>	
	3-5Y= 115	198.47						203.72			
	6-10Y= 167	184.46						187.72			143.22
	11-20Y= 25	191.34						143.22			255.50
	>20Y= 10	189.00						255.50			255.50
Income	≤ 30,000= 24	206.06	1.489 <sup>b</sup>	0.828	203.63	195.78	160.36	204.90	2.546 <sup>b</sup>	0.643	
	31,000-50,000= 116	198.56						197.54			
	51,000-99,000= 156	188.59						188.10			
	100,000-200,000= 70	182.95						178.91			
	>200,000= 16	184.28						231.85			215.88
Profession	Doctor= 145	182.87	2.514 <sup>b</sup>	0.284	188.25	0.157 <sup>b</sup>	0.997	186.93	8.549 <sup>b</sup>	<b>0.015</b>	
	Pharmacist= 132	203.44			189.19			176.06			
	Nurse= 105	188.40			192.67			217.22			
					192.25			198.47			
Working setting	Hospital= 212	188.70	7.456 <sup>b</sup>	0.186	202.27	3.973 <sup>b</sup>	5.929 <sup>b</sup>	207.50	19.608 <sup>b</sup>	<b>0.001</b>	
	Academia= 78	183.40			176.52			157.16			
	Community Pharmacies= 31	231.92			195.46			222.76			
	Sales & Marketing= 21	196.29			169.22			184.50			
	Regulatory affairs= 14	227.18			179.47			162.75			
	Industry= 26	167.38			200.07			147.96			
		178.65									

The findings of the hierarchical multiple linear regression analysis of the ODI scores and the scores for each of the burnout dimensions were examined. The analysis for EE's first step revealed no significant predictors. In step 2, ODI took the change in variance into account ( $F = 30.13, p < 0.01$ ). In step 1 of the analysis for DP, gender significant predictor. In step 2, ODI accounted for a significant additional variance ( $F = 76.90, p < 0.01$ ) (i.e., stigma predicted a higher level of DP). In step 1 of the analysis for PA, there was no significant predictor. In step 2, ODI accounted for the change in variance ( $F = 23.03, p < 0.01$ ). A detailed description is given (**Table 4**).

**Table 4.** Hierarchical Multiple Linear Regression Analysis and the ODI scores on the Maslach Burnout Inventory

	Emotional Exhaustion		Depersonalization		Personal Achievement	
	Step 1 $\beta$	Step 2 $\beta$	Step 1 $\beta$	Step 2 $\beta$	Step 1 $\beta$	Step 2 $\beta$
Age	-0.19	-.018	-.005	-.003	-.018	-.020
Gender	-.063	.012	-.156	-.053	.085	.018

Occupational Depression Inventory (ODI)		** .001		** .001		** .001
R	.063	.439	.155 <sup>a</sup>	.616	.089	.393
R <sup>2</sup>	.004	.193	.024	.379	.008	.155
R <sup>2</sup> change score	-.001	.187	.019	.374	.003	.148
F	.761	30.13**	4.690*	76.90**	1.517	23.03**

\*p ≤ 0.05; \*\*p ≤ 0.01. Step 1: adjusted for age and gender; Step 2: adjusted for ODI

The public health issue of mental illness-related stigma is increasing worldwide. The stigma is highly prevalent in developing countries because of a lack of coping mechanisms for individuals working specifically in healthcare settings [22]. This in turn decreases the work productivity of healthcare professionals. There are many contributing factors among which occupational stress is one of the major contributors to mental illness-related stigma. If left undiagnosed or untreated, burnout can easily lead to the development of serious mental illnesses [23]. The present research assessed the relationship between Burnout and Mental illness-related stigma among Healthcare Professionals in Pakistan. The results of the present study highlighted a low level of burnout for the exhaustion component of the Maslach Burnout Inventory as the healthcare professionals were less emotionally exhausted as a majority of them experienced its symptoms only once a month. This might as a result of healthcare professionals were already trained to work in such stressful environments. In a research conducted in the USA where doctors were less worn out, similar outcomes were seen [24]. The depersonalization component reported a high level of burnout in healthcare professionals due to cynicism or negative attitude a few times per month of healthcare professionals toward their patients. Personal achievement components reported a high level of burnout in healthcare professionals as the respondents reported doubting their genuine abilities to accomplish things. This might be due to the fact that healthcare professionals were unable to focus on the personal and professional growth due to excessive workload. The results of the current study highlighted overall high level of burnout among healthcare professionals. There was no significant difference in Maslach Burnout Inventory scores among healthcare having experience greater than 20 years had comparatively more occupational depression. This might be due to the fact that they had increased workload as they might be working as specialists. Nurses were reported to have a higher level of occupational depression as compared to other healthcare professionals. A study conducted in the USA concluded that among all the different settings that the healthcare professionals worked in, community pharmacists were found to have the highest level of occupational depression. This might be due to the fact that they suffer from a lack of compassion for patients, managers, and coworkers, eventually, they lose interest in things they once enjoyed [19].

Similar findings were reported in a study conducted in Japan among psychiatric nurses where the majority of the nurses suffered from occupational depression [25].

The current study's findings indicated a shaky positive association between burnout and ODI. All of the burnout dimensions were connected. The results of the present study showed that age and gender contributed to the variance of the emotional exhaustion, depersonalization, and personal achievement subscale of burnout. Same findings were obtained from a research done in Sweden which concluded that the low level of personal achievement component of burnout was significantly correlated with avoidant behavior and attitude of psychiatric staff members toward patients [26]. Another study conducted in Japan showed that mental illness-related stigma has a significant effect only on the depersonalization component of burnout [10]. The negative direction of beta indicated that age negatively contributed to all three subscales of burnout. A study conducted in Spain reported that all burnout dimensions were associated with mental healthcare professionals' pessimistic feelings toward clients/patients [27].

### Limitations

The primary restrictions encountered throughout this investigation were time, budgetary, and sample size limits, which could limit the generalizability of the findings to the entire nation. Furthermore, many of the respondents were hesitant to share their views against sensitive questions.

### CONCLUSION

According to the study's findings, stigma associated with mental illness and fatigue among healthcare practitioners are commonplace in the workplace. A high level of burnout was reported along with mild anxiety level and a moderate level of occupational depression among healthcare professionals in Pakistan. Regular health assessment checkups should be arranged at working facilities for all healthcare professionals. Burnout coping techniques like, problem-focused coping, emotion-focused coping, and social support coping strategy should be adopted by the institute/organization to manage burnout. Workplace health promotion programs specifically designed for health professionals should be launched to minimize mental illness-related stigma. Anti-stigma and anti-burnout interventions to support the mental health of healthcare professionals should be endorsed. Healthcare practitioners may benefit from receiving mental health training that emphasises social interaction in order to lessen stigma in the workplace.

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## REFERENCES

1. Organization WH. The WHO special initiative for mental health (2019-2023): universal health coverage for mental health. JSTOR; 2019.
2. Heney DB. Solving for stigma in mental health care. *J Eval Clin Pract.* 2022;28(5):883-9.
3. Hajebi A, Hashemian SS, Abolhassani M, Hajebi A, Alizadeh K, Rahnejat AM, et al. Assessing the impact of stigma reduction interventions in Iran: A qualitative study from the perspective of mental health stakeholders. *Front Public Health.* 2022;10:1027002.
4. Akova İ, Kiliç E, Özdemir ME. Prevalence of burnout, depression, anxiety, stress, and hopelessness among healthcare workers in COVID-19 pandemic in Turkey. *INQUIRY.* 2022;59:00469580221079684.
5. Vaičienė V, Blaževičienė A, Macijauskiene J, Sidebotham M. The prevalence of burnout, depression, anxiety and stress in the Lithuanian midwifery workforce and correlation with sociodemographic factors. *Nurs Open.* 2022;9(4):2209-16.
6. Fernandes R, Sordi B, Vidigal B, Martins A, Bobbili S, Ventura C. Stigma experienced by people with mental illness in South America: an integrative review. *Mendeley Data.* 2022.
7. Fischer IC, Norman SB, Feder A, Feingold JH, Peccoralo L, Ripp J, et al. Downstream consequences of moral distress in COVID-19 frontline healthcare workers: Longitudinal associations with moral injury-related guilt. *Gen Hosp Psychiatry.* 2022;79:158-61.
8. Kim B, Jee S, Lee J, An S, Lee SM. Relationships between social support and student burnout: A meta-analytic approach. *Stress Health.* 2018;34(1):127-34.
9. de Melo Silva Júnior ML, Valença MM, Rocha-Filho PAS. Individual and residency program factors related to depression, anxiety and burnout in physician residents—a Brazilian survey. *BMC Psychiatry.* 2022;22(1):1-10.
10. Mitake T, Iwasaki S, Deguchi Y, Nitta T, Nogi Y, Kadowaki A, et al. Relationship between Burnout and Mental-Illness-Related Stigma among Nonprofessional Occupational Mental Health Staff. *BioMed Res Int.* 2019.
11. Endriulaitienė A, Žardeckaitė-Matulaitienė K, Pranckevičienė A, Markšaitytė R, Tillman DR, Hof DD. Self-Stigma of seeking help and job burnout in mental health care providers: the comparative study of Lithuanian and the USA samples. *J Workplace Behav Health.* 2019;34(2):129-48.
12. Konlan KD, Asampong E, Dako-Gyeke P, Glozah FN. Burnout syndrome among healthcare workers during COVID-19 pandemic in Accra, Ghana. *PloS one.* 2022;17(6):e0268404.
13. Bianchi R, Laurent E, Schonfeld IS, Bietti LM, Mayor E. Memory bias toward emotional information in burnout and depression. *J Health Psychol.* 2020;25(10-11):1567-75.
14. Al Saif F, Al Shakhori H, Nooh S, Jahrami H. Association between attitudes of stigma toward mental illness and attitudes toward adoption of evidence-based practice within health care providers in Bahrain. *Plos One.* 2019;14(12):e0225738.
15. Claponea RM, Pop LM, Iorga M, Iurcov R. Symptoms of burnout syndrome among physicians during the outbreak of COVID-19 pandemic—a systematic literature review. *InHealthcare* 2022 May 25 (Vol. 10, No. 6, p. 979). MDPI.
16. Schonfeld IS, Verkuilen J, Bianchi R. An exploratory structural equation modeling bi-factor analytic approach to uncovering what burnout, depression, and anxiety scales measure. *Psychol Assess.* 2019;31(8):1073.
17. Ahmad W, Ashraf H, Talat A, Khan AA, Baig AA, Zia I, et al. Association of burnout with doctor–patient relationship and common stressors among postgraduate trainees and house officers in Lahore—a cross-sectional study. *PeerJ.* 2018;6:e5519.
18. Waheed K, Liaqat N, Ejaz S, Khanum A, Ijaz S, Butt A, et al. Burnout among gynaecological residents in lahore, Pakistan: A cross-sectional survey. *Age.* 2017;27(1.69).
19. Kamran R, Bari A, Zaheer N, Shahbaz M, Aslam K, Yasser F, et al. Prevalence of Burnout among Dentists in CMH Lahore Medical College & Institute of Dentistry, Pakistan. *AdvBiores.* 2020;11(6):164-9.
20. Panagioti M, Geraghty K, Johnson J, Zhou A, Panagopoulou E, Chew-Graham C, et al. Association Between Physician Burnout and Patient Safety, Professionalism, and Patient Satisfaction A Systematic Review and Meta-analysis. *JAMA.* 2018;178(10):1317-30.
21. Talih F, Warakian R, Ajaltouni J, Shehab AAS, Tamim H. Correlates of Depression and Burnout Among Residents in a Lebanese Academic Medical Center: a Cross-Sectional Study. *Acad Psychiatry.* 2016;40:38-45.
22. Sachdeva A, Nandini H, Kumar V, Chawla RK, Chopra K. From stress to stigma—mental health considerations of health care workers involved in COVID19 management. *Indian J Tuberc.* 2022;69(4):590-5.
23. Koutra K, Mavroeides G, Triliva S. Mental Health Professionals' Attitudes Towards People with Severe Mental Illness: Are they Related to Professional Quality of Life? *Community Ment Health J.* 2022;1-12.
24. Abdalla R, Ansari S, Hurley M, Attarian H, Fargen K, Hirsch J, et al. Correlation of call burden and sleep deprivation with physician burnout, driving crashes, and medical errors among US neurointerventionalists. *Am J Neuroradiol.* 2022;43(9):1286-91.
25. Ekingen E, Teleş M, Yıldız A, Yıldırım M. Mediating effect of work stress in the relationship between fear of COVID-19 and nurses' organizational and professional turnover intentions. *Arch Psychiatr Nurs.* 2023;42:97-105.
26. Holmberg M, Hammarbäck S, Andersson H. Registered nurses' experiences of assessing patients with mental illness in emergency care: A qualitative descriptive study. *Nord J Nurs Res.* 2020;40(3):151-61.
27. Pelayo-Terán J, Zapico-Merayo Y, Llamas MG, Vega-García S, López-Zapico C, Villa-Carcedo M, et al. Factors associated to stigma in mental health workers of Castilla y Leon. The role of burnout and work motivation. *Eur Psychiatry.* 2022;65(S1):S689-S90.