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- **Editorial: Closing the Gap: Why Autonomous AI Needs Human Partners in Eye Care**
- **Burnout Among Ophthalmologists**
- **Intralesional Bevacizumab for Pterygium**
- **Near Work and Convergence Insufficiency**
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- **Therapeutic Meibomian Gland Expression in Dry Eye**

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When The Healer Needs Healing: Assessing Burnout Among Ophthalmologists Using The Copenhagen Burnout Inventory

Amna Rizwan¹, Muhammad Ali Haider², Nida Khalid³

Abstract:

Objective: To evaluate the prevalence of burnout among ophthalmologists in Pakistan. Additionally, the study aimed to identify specific personal, professional, and demographic characteristics that may increase the likelihood of experiencing burnout.

Methods: This descriptive cross-sectional study was conducted at Al-Ehsan Welfare Eye Hospital, Lahore from February 2025 to July 2025. After obtaining approval from the hospital ethical committee, we included 126 ophthalmologists by non-probability convenient sampling. They filled out a questionnaire based on the Copenhagen Burnout Inventory (CBI) to classify burnout. Data analysis was performed using SPSS version 20 with frequency and percentage computed for qualitative data, and the mean and standard deviation computed for quantitative data. Independent samples t-test was performed to check whether differences in means were statistically significant with p-value <0.05.

Results: Mild burnout was seen in 58.7% of ophthalmologists, moderate burnout was seen in 35.7%, and high burn out was seen in 5.6% of ophthalmologists. The mean CBI burn out score is significantly higher in ophthalmologists with age below 45 years ($p=0.000$), general ophthalmologists ($p=0.001$), and in consultant ophthalmologists and senior registrars ($p=0.000$). It is higher for those working less than eight hours per day ($p=0.002$).

Conclusion: This study demonstrated that burnout is a significant concern among ophthalmologists in Pakistan, with more than half experiencing mild burnout and over one-third moderate burnout. Although only a small proportion exhibited high burnout, the presence of this severe form among specific subgroups highlights the need for targeted interventions. *Al-Shifa Journal of Ophthalmology 2026; 22(3): 114-122.*

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Introduction:

Healthcare professionals usually rank higher in stress levels as compared to others, due to long working hours and emotional exhaustion¹. This stress can lead to burn out, a state of physical, mental and emotional exhaustion, typically leading to fatigue, which eventually affects the quality of care the patient receives. For instance, long shifts and lack of sleep cause healthcare professionals to feel detached and unmotivated². In recent years, burnout among healthcare workers has escalated as reported by Nigam et al., 2023 who have looked at indicators of burnout worsening between 2018 to 2022³. The problem is further intensified during public health emergencies, such as epidemics and pandemics, which place additional strain on already overburdened professionals⁴. It is

imperative that we seek to understand the causes of burnout and address them. This typically involves improving the work-life balance and improving conditions at the workplace.

The 11th revision of the International Classification of Diseases of the World Health Organization (WHO) recognizes burnout as a major health hazard⁵. Burnout can start with intermittent physical and mental exhaustion and can progress to a more permanent feeling of exhaustion that has adverse effects in both the workplace and for the personal life of the individual. The situation can worsen to a feeling of detachment from the workplace. At a personal level, burnout causes a loss in self-confidence, further reducing the capacity of the individual to lead a normal life at the workplace and beyond⁶. Burnout is frequently accompanied by conditions such as anxiety, depression, insomnia and physical weakness⁷.

Stress and burnout in health care workers (HCWs) is particularly troubling as it will invariably compromise the quality of patient care and can have disastrous implications. It is known that stress and burnout can lead to a higher incidence of hospital-acquired infections as well as increase the chance of medical errors⁸. It is, therefore, no surprise that patient satisfaction is negatively correlated with increased burnout⁹. HCWs need to interact with a full team in order to deliver treatment, whereas stress and burnout complicate interactions with co-workers thereby further jeopardizing patient-care¹⁰. Pakistani ophthalmologists, like most doctors in Pakistan, are typically exposed to exhausting work hours and high patient loads, essentially high-risk factors contributing to stress and burnout. The primary objective of this study was to investigate the incidence of burnout in Pakistani ophthalmologists and seek to understand what personal, professional or demographic characteristics lead to higher burnout.

Methodology:

This descriptive cross-sectional study was conducted between February 2025 and July 2025 after obtaining approval from the ethical review committee of AL-Ehsan Welfare Trust Eye Hospital, Lahore. We included 126 ophthalmologists based on an estimate of $n=124$ for the sample size based on a 90% confidence interval for this study¹¹. Non-probability convenient sampling technique was used to collect data via a generated form based on the Copenhagen Burnout Inventory with ophthalmologists over WhatsApp. This mechanism allowed us to conveniently invite our colleagues to fill in the form. Ophthalmologists registered with the Pakistan Medical and Dental Council were included in this study. Data about basic demographic features like age, gender, and marital status were noted, as well as precipitating factors like working hours per week, and workload. The questions assessing burnout in ophthalmologists were taken from the Copenhagen Burnout Inventory (CBI), which consists of 19 items. The CBI evaluates personal, work, and client related burnout by posing 6, 7 and 6 questions, respectively. Twelve items have responses of frequency along a five-point Likert scale ranging from always (100), often (75), sometimes (50), seldom (25) to never/rarely (0). The remaining seven items also use a five-point uniform Likert scale categorizing intensity being of a very low degree (0) to very high degree (100). The responses are then averaged to compute mean burnout scores for each ophthalmologist in the three categories (personal, work, and patient related) as well as an overall burnout score. A score of 0 to 49 on the CBI corresponds to mild burnout, a score between 50 and 74 corresponds to moderate burnout, a score between 75 to 99 is taken to be high burnout, whereas a score of 100 is taken as severe burnout. The data collected was analyzed using SPSS version 20 with qualitative statistics determined as frequency and percentages, and the mean and standard deviation computed for the

quantitative data. We contrasted the means of various groups to study the factors that may be associated with burnout in ophthalmologists by using the independent sample t-test with $p \leq 0.05$ as signifying a statistically significant difference in the means.

Results:

Out of 126 individuals, 65 (51.6%) were males while 61 (48.4%) were females.

Sixty-three (50%) were from general ophthalmology (i.e. ophthalmologists without further training as super specialists), 27 (21.4%) vitreo-retina surgeons, 17 (13.5%) paediatric ophthalmologists, six (4.8%) glaucoma specialists, four (3.2%) cataract surgeons, four (3.2%) cornea specialists, four (3.2%) oculoplastic surgeons and one (0.8%) uveitis specialist as shown in Figure 01.

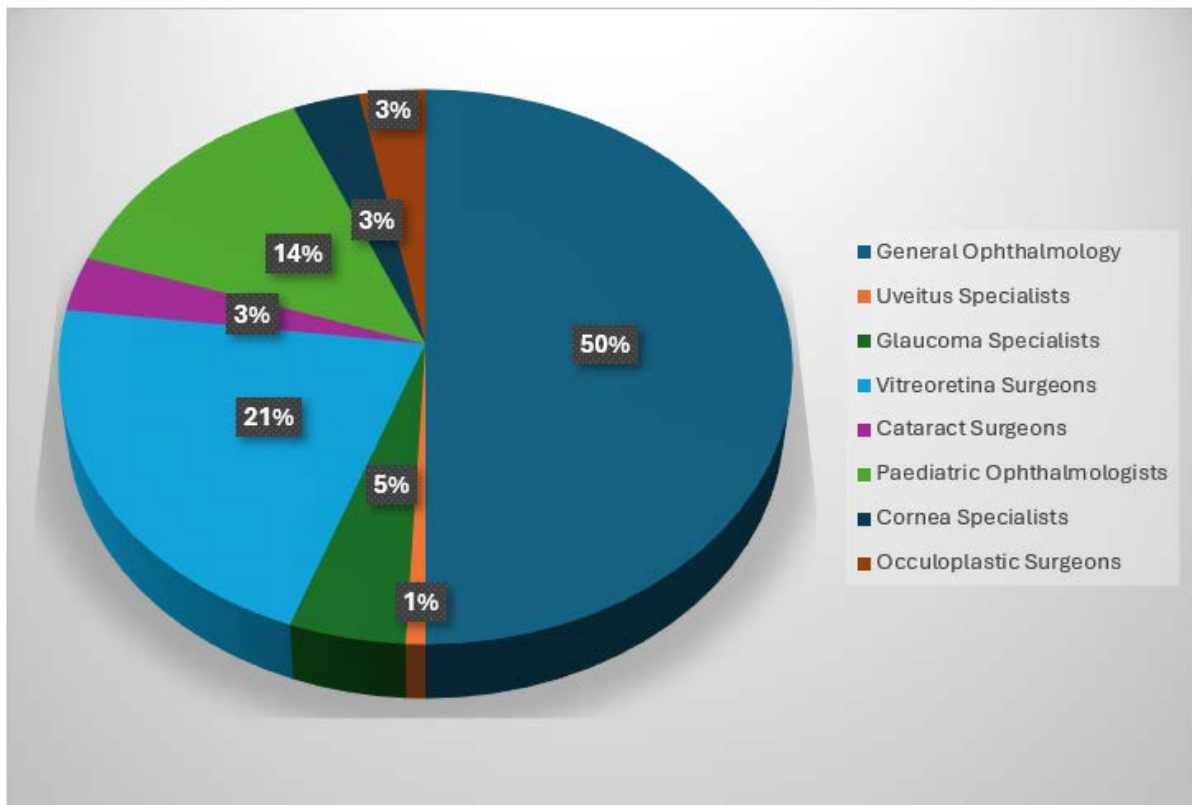


Fig 01: Distribution of sub-specialities among respondents.

Forty-seven (37.3%) were in age group 25-35 years, 61 (48.4%) in the 36-45 year group, 10 (7.9%) in the 46-55 year group, and eight (6.3%) in the 56-65 year group. Eighty-two (65.1%) were doing only one job, 25 (19.8%) were doing two jobs, 13 (10.3%) were doing three jobs and six (4.8%) were doing four jobs. Around 117 (92.9%) of the doctors were married, seven (5.6%) were single and two (1.6%) were divorced. Thirty (23.8%) were senior registrars (SRs), 26 (20.6%) were assistant professors, 11 (8.7%) were associate professors, five (4%) were professors, and

the remaining 54 (42.9%) were consultant ophthalmologists. A majority of the doctors (45.2%) worked 6-8 hours per day followed by 8-12 hours (40.5%), 4-6 hours (8.7%), and finally 5.6% worked more than 12 hours per day. Considering the time after postgraduate completion, 42.9% have worked for 0-5 years, followed by 6-10 years (19.8%), 11-15 years (24.6%), 16-20 years (4%), 21-25 years (4%) and 4.8% for more than 25 years.

It was reported that 9.5% ophthalmologists didn't do any surgeries on a weekly basis, 35.7% performed up to 10 surgeries per

week, 47.6% performed up to 20 surgeries per week, while only 7.1% performed more than 20 surgeries on a weekly basis. The total burnout scores as well as the personal, work, and patient related burnout scores are shown in Table 01 depicting the frequencies, percentages and cumulative percentages of ophthalmologists experiencing mild, moderate and high

burnout. In seven individuals who reported to have high burn out, all were males, four were consultant ophthalmologists and three were SRs. Six of these were general ophthalmologists and one was a uveitis specialist. Moreover, all of these high burnout cases were of married individuals aged 36-45 years.

Table 01: Frequency, percentage and cumulative percentage of total, personal, work and patient burnout among 126 ophthalmologists.

	Frequency	Percent (%)	Cumulative Percent
Total Burnout Grading			
Mild burnout	74	58.7	58.7
Moderate burnout	45	35.7	94.4
High burnout	7	5.6	100.0
Personal Burnout Grading			
Mild Burnout	49	38.9	38.9
Moderate Burnout	49	38.9	77.8
High Burnout	28	22.2	100.0
Work Burnout Grading			
Mild Burnout	74	58.7	58.7
Moderate Burnout	46	36.5	95.2
High Burnout	6	4.8	100.0
Patient Burnout Grading			
Mild Burnout	92	73.0	73.0
Moderate Burnout	30	23.8	96.8
High Burnout	4	3.2	100.0

Table 02: Comparison of mean burnout (total, personal, work, and patient related) between selected groups:

	Groups	N	Total Burnout			Personal Burnout			Work Burnout			Patient Burnout		
			Mea n	SD	p	Mea n	SD	p	Mea n	SD	p	Mea n	SD	P
Gender	Male	65	43.7	18.2	0.763	52.7	20.6	0.219	40.5	17.0	0.047	37.7	21.6	0.031
	Female	61	44.4	14		57.1	19.4		46.2	14.9		30.3	16.8	
Age	>=45 y	18	32.2	8.5	0.000	46.9	14.3	0.026	35.9	12.0	0.013	13.9	7.7	0.000
	<45 y	108	46.1	16.4		56.1	20.7		47.7	16.0		37.5	19.1	
Type	Speciali sts	63	39.5	14.5	0.001	50.5	18.3	0.016	38.6	14.2	0.001	29.2	17.8	0.005
	General Ophth	63	47.7	16.7		59.1	21.0		48.0	16.9		39.0	20.5	
Work Hours	>8hr/da y	58	39.3	15.2	0.002	48.7	19.2	0.001	39.0	14.5	0.032	30.1	17.8	0.005
	<=8hr/d ay	68	48.2	16.0		60.0	19.5		37.6	20.0		37.6	20.7	
Teachi ng Faculty	Junior (SR+AP)	56	46.9	15.6	0.000	58.1	18.4	0.000	46.0	14.5	0.035	36.6	21.1	0.001
	Senior (Assoc + Prof)	16	33.2	9.3		41.1	11.8		37.5	13.2		20.8	12.5	

Comparison of mean burnout between selected groups as well as the p values from the independent samples t-test. Also given are the standard deviation (SD) values. Ophth: Ophthalmologists, SR: Senior registrar, AP: Assistant professor, Assoc: Associate professor, Prof: Professor

Independent samples t-tests was performed on the collected data in Table 02. In order to be able to apply the independent sample t-test to our data, we divided the full data into various groups described in the second column of Table 2. The total burnout score difference is statistically significant in specialists versus general ophthalmologists, those working more versus those working less, and junior versus senior teaching faculty. And whereas there is no statistically significant difference between the genders in terms of total burnout score, there is a difference in the patient related and work related burnout scores. There was no statistically significant difference in mean burnout while comparing teaching faculty with consultant ophthalmologists. Likewise, we did not find any statistically significant difference in mean burnout considering number of years after post-graduation, the number of surgeries done per week, or marital status.

Discussion:

Mild burnout was seen in 58.7% of ophthalmologists, moderate burnout was seen in 35.7%, and high burnout was seen in 5.6% of ophthalmologists. High burn out was seen in males, 36-45 years of age, married, general ophthalmologists, and in consultant ophthalmologists and senior registrars.

Physicians within the 36–45year age cohort, typically categorized as Millennial generation, demonstrate a disproportionately high prevalence of burnout, with nearly 50% reporting associated symptoms¹². This population is particularly vulnerable due to the concurrent demands of professional advancement, family responsibilities, and financial obligations, which collectively contribute to heightened stress levels and increased risk of burnout. Our results are consistent with other studies in which younger age groups reported to have high burn out^{13,14,15}.

In our study, high burn out was seen in males only which is not consistent with the findings of Hussain et al., 2022, Azam et al., 2017 and Abbott et al., 2025^{13,14,16}. They suggested that female physicians exhibit higher levels of burnout, largely attributable to the simultaneous demands of professional duties and family roles, which often lead to greater physical and emotional exhaustion. These studies had included all categories of doctors, but including only ophthalmologists our findings are unique in the literature as only males reported high burn out. Furthermore, we have not seen any statistically significant difference when comparing total burn out and personal burn out between males and females. But having said this, we do see statistically significantly more burn out in females related to work burn out and in males related to patient burn out.

The high burnout cases (total of 7) in our study are attributed to married individuals. However, this is likely a case of correlation rather than causation as there was no statistically significant difference in any of the burnout scores between married and unmarried respondents. It is amusing to note that of the seven cases of high burn out, six were general ophthalmologists. This finding is consistent with general ophthalmologists being more prone to high burn out as compared to specialists in our results. The lone uveitis specialist reporting high burn out is consistent with a study conducted in Cairo which included 264 ophthalmologists and showed that uveitis specialists had high burn out¹⁷. Another study by Sedhom et al., 2022 conducted in the USA has shown similar results¹⁸.

We have compared the burn out in teaching faculty by dividing it into the two groups of junior faculty (SRs and Assistant professors) and senior faculty (Associate Professors and Professors). We have seen positive correlation as shown in Table 02 between junior faculty and higher burn out. These results are consistent with other studies^{19,20}. The reasons might be higher

clinical burden, and the complexity of the lives of young physicians, juggling new relationships and young children. We also found out that consultants have higher burn out scores as compared to senior teaching faculty.

Our study extends the existing literature on physician burnout and career satisfaction by investigating their connection with academic affiliation and exploring differences across faculty ranks. We find that involvement in teaching role is positively correlated with reducing job related burnout and, presumably, enhancing job satisfaction. Our study indicates the importance of a wide variety of factors that may contribute to burnout: academic affiliation, faculty position, stage of professional development, gender. Interventions need to be tailored to take these factors into account. Zhuang *et al.*, 2022 suggested that Department chairs and institutional administrators can play a pivotal role in mitigating physician burnout and enhancing career satisfaction by safeguarding dedicated time for academic pursuits, such as teaching and mentorship²¹. Our results also indicate that there is a correlation between time spent in mentorship and burnout as we have seen lower burnout in senior teaching faculty (Associate Professors and Professors).

We have found that less burn out was seen in doctors working more than 8 hours a day. These findings are contrary to other studies that have shown positive correlation between long working hours and high burn out^{22,23,24}. Burnout may arise from both excessively long and unusually short working hours, though through distinct pathways. Prolonged hours often cause physical and psychological fatigue, driven by stress, inadequate rest, and disruption of work–life balance. In contrast, reduced working hours, if not properly structured, can foster anxiety, a diminished sense of accomplishment, and feelings of purposelessness. Our results might be because more duty hours mean more financial stability that can potentially lead

to less stress and burnout. Limitations of our study are that these data are self-reported and subject to biases associated with recall and social desirability that could affect participant response. Another limitation is that we did not include the effect of monthly income. There presumably may be more factors that may affect the incidence of moderate to severe burnout which we have failed to consider in this limited study. We believe a larger follow-up study should investigate urban/rural setting, the range of available career opportunities, and the level of institutional and social support.

Conclusion:

This study demonstrated that burnout is a significant concern among ophthalmologists in Pakistan, with more than half experiencing mild burnout and over one-third reporting moderate burnout. The incidence of high burnout indicates an immediate need for targeted interventions particularly amongst males, physicians from 36-45 years of age, married individuals, general ophthalmologists, consultants, or senior registrars. We found that academic affiliation and professional subspecialties tend to reduce the risk of burnout. General ophthalmologists and junior faculty appeared more prone to higher burnout levels. Presumably, academic affiliation and senior faculty ranks provide protective effects, potentially through enhanced career satisfaction and opportunities for teaching and research.

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