



Original Article

Burnout Among General Surgeons: A Cross-Sectional Study

Eastiak MF¹, IslamMS^{2*}, IslamMS³, Salim M⁴, Kamal MF⁵, Rahman MZ⁶

Abstract

Introduction: Burnout is increasingly recognized as a major occupational health issue in surgical practice. It is characterized by “emotional exhaustion, depersonalization, and a diminished sense of personal achievement”. General surgeons are particularly vulnerable due to demanding workloads, prolonged duty hours, and high pressure clinical environments. The objective of this study was to determine the prevalence of burnout among general surgeons and surgical trainees in a tertiary care hospital in Bangladesh and to identify key occupational and social factors associated with burnout.

Methods: A cross sectional study was conducted from January 2023 to August 2023 among the general surgeons and trainees at Bangladesh Medical University. Data was collected using a structured questionnaire that included demographic variables, work related characteristics, and the Maslach Burnout Inventory. Descriptive and inferential statistics were applied, with significance set at $p < 0.05$.

Results: A total of 120 participants were included. Approximately half met the criteria for burnout. Emotional exhaustion was the most frequently reported dimension, followed by depersonalization and reduced personal accomplishment. Burnout was more prevalent among the younger trainees and surgeons, particularly those aged 25–35 years, where “66% demonstrated burnout”. Extended working hours, frequent night duties, early career stage, limited social support, and financial pressures were significantly associated with higher levels of burnout.

Conclusion: Burnout is highly prevalent among general surgeons and trainees in this setting, driven primarily by excessive workload, repeated on call duties, and poor work life balance. Younger surgeons appear particularly vulnerable. Institutional strategies—such as balanced duty rosters, protected rest periods, mentorship, and access to psychological support—are essential to mitigate burnout and enhance surgeon well being.

Keywords: Burnout, General surgeons, Maslach Burnout Inventory, Workload, Emotional exhaustion.

1. Dr. Mohammad Faroque Eastiak, Associate Professor, Department of General Surgery, Bangladesh Medical University, Shahbagh, Dhaka.
2. Dr. Md. Saiful Islam, Associate Professor, Department of General Surgery, Bangladesh Medical University, Shahbagh, Dhaka.
3. Dr. Md. Shahidul Islam, Associate Professor, Department of Colorectal Surgery, Bangladesh Medical University, Shahbagh, Dhaka.
4. Dr. Mohammad Salim, Assistant Professor, Department of General Surgery, Bangladesh Medical University, Shahbagh, Dhaka.
5. Dr. Md. Faysal Kamal, Medical Officer, Department of General Surgery, Bangladesh Medical University, Shahbagh, Dhaka.
6. Dr. Mohammad Ziaur Rahman, Assistant Professor, Department of General Surgery, Bangladesh Medical University, Shahbagh, Dhaka.

***Correspondence:** Dr. Md. Saiful Islam, Associate Professor, Department of General Surgery, Bangladesh Medical University, Shahbagh, Dhaka, Bangladesh. E-mail: saifultipu32@gmail.com
Phone: +8801914331022

Introduction

Burnout is a work-related psychological syndrome that develops after prolonged exposure to chronic occupational stress and is classically characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment.^{1,2,6} Burnout was defined as the presence of high emotional exhaustion and/or depersonalization. In clinical practice, this syndrome is especially relevant because it affects both the health professional and the quality of care delivered to patients. Surgeons are particularly vulnerable because surgery combines cognitive intensity, manual precision, urgent decision-making, ethical burden, and repeated exposure to suffering, complications, and death. In addition, general surgeons frequently work in demanding environments marked by prolonged duty hours, heavy operative schedules,

emergency responsibilities, interrupted sleep, and substantial administrative pressure. These cumulative demands may gradually erode psychological resilience and professional satisfaction, ultimately leading to burnout.^{1,2,6}

International evidence suggests that burnout is not a marginal problem in surgery; rather, it is a common occupational hazard. Systematic reviews and national surveys have shown a substantial prevalence of burnout across surgical specialties, and general surgery repeatedly appears among the disciplines at higher risk.^{1,3,4,7} Previous studies have linked burnout with long weekly working hours, frequent night duty, low social participation, poor work-life balance, unsupportive institutional culture, and the pressures experienced early in surgical training and practice.^{1,2,4,7} Surgeons in the earlier stages of their careers may be more susceptible because they often face steep learning curves, greater uncertainty, financial insecurity, examination pressure, and limited autonomy in decision-making. At the same time, senior surgeons may also remain at risk if they continue high operative loads, private practice after office hours, or prolonged administrative responsibilities.

The importance of burnout extends beyond physician distress alone. Higher burnout among surgeons has been associated with lower job satisfaction, absenteeism, attrition from practice, reduced empathy, impaired professionalism, and an increased likelihood of involvement in self-reported medical errors, thereby raising concerns for patient safety and the sustainability of the surgical workforce.^{1,5,8} In low- and middle-income settings, these concerns may be amplified by resource constraints, workforce shortages, limited counseling services, crowded public hospitals, and social pressures outside the workplace.⁹ Despite growing international attention, evidence from developing countries remains relatively limited, and local data are essential for understanding context-specific drivers of burnout and for designing realistic institutional interventions. Therefore, this study was undertaken to determine the prevalence of burnout among general surgeons and surgical trainees in a tertiary care hospital and to identify the occupational and social factors associated with this problem. By documenting the burden of burnout in our setting, the study aims to support targeted strategies that can enhance surgeon well-being, strengthen workforce retention, and improve the overall quality and safety of surgical care.^{1,5,8,9}

Materials and Methods

This cross-sectional study was conducted over eight months from 1st January 2023 to 31st August 2023 among general surgeons working in a tertiary care hospital (Bangladesh Medical University). Participants included both consultant surgeons and surgical trainees actively engaged in clinical practice who were willing to participate. The cohort that provided incomplete questionnaire responses was excluded from the study. Data were collected using a structured, self-administered questionnaire. The questionnaire included: Demographic variables, work-related characteristics such as working hours and on-call frequency and burnout assessment using the Maslach Burnout Inventory (MBI). Data was analyzed using descriptive and inferential statistical methods. A p-value of less than 0.05 was considered statistically significant.

Result

A total of 120 surgeons, including trainees, participated in the study.

Demographic Profile

The mean age of participants was 34.5 years. The majority were male, with females representing a smaller proportion. From the results, it appears that surgeons and surgical trainees working in their 3rd and 4th decade is maximal under stress, leading to surgical burnout.

Table-I: Demography of the participants

Age group	No of participants	Gender		Demonstrating burnout (%)
		Male	Female	
25-35	82	64	18	66
36-45	16	12	4	56
46-55	12	10	2	50
56-65	10	10	0	28

Table I shows that the majority of participants were in the 25–35 years' age group (82 of 120), followed by 36–45 years (16), 46–55 years (12), and 56–65 years (10). Male participants predominated in all age groups. The highest proportion of burnout was observed in the youngest age group, where 66% demonstrated burnout, followed by 56% in the 36–45 years group, 50% in the 46–55 years group, and 28% in the 56–65 years group. These findings indicate that burnout was more common among younger surgeons and trainees and tended to decline with increasing age.

Understandably, our social and cultural burden, responsibilities for the family (especially for the female trainees), the ever-increasing financial pressure and money inflation disproportionate to the payroll are the main reasons playing in this zone. Again, in the 4th and 5th decades, the surgeons usually attain a certain level of performance, payment structure, less frequent necessity to attend an emergency and in most cases a stable family structure leading to less surgical burnout.

Work Characteristics

A large proportion of surgeons reported working more than 60 hours per week. Frequent on-call duties and poor work-life balance were also commonly reported.

Prevalence of Burnout

Approximately 50% of participants met the criteria for burnout (Table I). Emotional exhaustion was the most commonly reported component, followed by depersonalization and reduced personal accomplishment.

Associated Factors

Burnout was significantly associated with extended working hours, frequent night duties, early stage of surgical career, limited social and emotional support, limitations in the dominating sociopolitical environment for obtaining trainee positions in Bangladesh, especially if the candidate is a government service holder and increasing stress on the pocket due to money inflation disproportionate to the workload.

Discussion

The present study demonstrates that burnout is highly prevalent among general surgeons and surgical trainees in our institution, with approximately half of the participants meeting the operational criteria for burnout. This finding is clinically important because it confirms that burnout is not an isolated or occasional experience but a substantial occupational health problem within surgical practice. The pattern observed in this study is broadly consistent with published international literature, where burnout among surgeons has repeatedly been reported at high levels, especially in general surgery and among younger practitioners.^{1,3,4,7} Our results therefore add local evidence to the growing recognition that the surgical profession carries a considerable psychological burden and that burnout should be viewed as a systems-level challenge rather than an individual weakness.

A central finding of this study is the strong relationship between burnout and work-related pressures, particularly prolonged duty hours, frequent on-call responsibilities, and poor work-life balance. These associations are biologically and psychologically plausible. Long working hours contribute to sleep deprivation, impaired emotional regulation, fatigue, and reduced recovery time, while repeated emergency/night duties expose surgeons to sustained vigilance and acute stress. Over time, this combination may produce emotional exhaustion, which is often the earliest and most visible dimension of burnout. The prominence of emotional exhaustion in our participants is therefore understandable and aligns with prior studies suggesting that excessive clinical workload and low opportunities for rest are major drivers of burnout in surgery.^{1,2,5,6} In settings where staffing is limited and patient volume is high, these pressures may become even more intense, leaving little room for recovery or reflective practice.

Another notable observation is that surgeons and trainees in earlier career stages appeared to be more vulnerable to burnout than those in later decades of practice. This may reflect the intersection of professional, financial, and family-related stressors that are particularly intense during the early years of surgical development. Junior surgeons often have lower autonomy, demanding training schedules, uncertainty regarding career progression, examination pressure, and fewer opportunities to control their workload.⁷ In our context, these occupational demands may be compounded by broader social realities such as inflation, financial obligations, family expectations, and limited institutional flexibility. For many younger surgeons and trainees, especially those balancing service commitments with training advancement, the psychological burden can be substantial. By contrast, more senior surgeons may experience some protection through greater professional control, more stable income, more predictable family structure, and reduced frequency of front-line emergency exposure. Nevertheless, this protection is not universal, as some senior surgeons may continue extended work after office hours or combine public and private practice, thereby maintaining a high risk of burnout.

The consequences of burnout extend beyond the individual surgeon. Burnout has been associated with reduced job satisfaction, lower empathy, strained teamwork, attrition from the workforce, and a higher

risk of self-reported medical error, all of which may ultimately affect the quality and safety of patient care.^{5,8} For institutions, this means that surgeon well-being should be regarded as a component of quality assurance and patient safety policy rather than solely a personal wellness issue. The findings of the present study support the need for practical interventions, including more balanced duty schedules, adequate staffing, protected rest, mentorship for trainees, early identification of psychological distress, and confidential support or counseling pathways.¹⁰ Creating a supportive professional culture is equally important, because burnout often worsens in environments where stress is normalized and help-seeking is stigmatized. Finally, the current study should be interpreted in light of its limitations, including its single-center design, modest sample size, and reliance on self-reported responses. Even so, the findings provide a meaningful picture of the burden of burnout in our setting and emphasize the need for larger multicenter research to clarify institutional, social, and policy-level determinants of burnout among surgeons in Bangladesh and comparable healthcare systems.^{9,10} This study had a few limitations, such as being a single-center study, a relatively small sample size, reliance on self-reported data, and may not reflect the actual worldwide scenario due to some faults within our health care delivery system that might be addressed.

Conclusion

Burnout among general surgeons and surgical trainees is a major occupational problem, and this study shows that it affects a substantial proportion of practitioners in our institution. The findings suggest that prolonged working hours, repeated on-call duty, sleep disruption, and limited work-life balance are key contributors to burnout, with younger surgeons and trainees appearing particularly vulnerable because of lower autonomy, career uncertainty, and social or financial pressures. Burnout has important implications not only for surgeons' well-being but also for teamwork, professional satisfaction, retention of skilled staff, and patient safety. These results support the need for institutional measures such as balanced duty schedules, mentorship, protected rest, and access

to confidential psychological support. Larger multicenter studies are needed to clarify the national burden and identify context-appropriate interventions for resource-limited settings.

Ethical Consideration

Informed consent was obtained from all participants, and confidentiality was strictly maintained.

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