



Case Report

Burnout in a Multidisciplinary Thoracic Surgery Team: A Cross-Sectional Assessment Using the Maslach Burnout Inventory

Mirko Ruffolo

MSN, University Thoracic Surgery Unit, University Hospital Policlinico di Bari, Bari, Italy.

***Corresponding Author:** Mirko Ruffolo, MSN, University Thoracic Surgery Unit, University Hospital Policlinico di Bari, Bari, Italy.**Citation:** Ruffolo M (2026) Burnout in a Multidisciplinary Thoracic Surgery Team: A Cross-Sectional Assessment Using the Maslach Burnout Inventory. J Surg 11: 11666. DOI: 10.29011/2575-9760.011666**Received Date:** 14 July 2026; **Accepted Date:** 28 July 2026; **Published Date:** 30 July 2026**Abstract**

Background: Burnout is a work-related syndrome characterized by emotional exhaustion, depersonalization and reduced personal accomplishment. Healthcare professionals in surgical settings are particularly exposed to high levels of occupational stress. This study aimed to evaluate burnout within a multidisciplinary thoracic surgery team. **Methods:** A cross-sectional study was conducted in a university thoracic surgery unit. Burnout was assessed using the Maslach Burnout Inventory (MBI), administered anonymously via an online questionnaire [1]. A total of 36 healthcare professionals participated. Data were analyzed using a mode-based aggregation approach to assess burnout at the group level. **Results:** High burnout levels were identified in two of the three dimensions analyzed by the MBI: emotional exhaustion (score = 31) and depersonalization (score = 12). Personal accomplishment showed a moderate level (score = 34), close to the high-risk threshold. These findings indicate a significant prevalence of burnout, particularly in emotional and relational domains. **Conclusions:** The findings suggest a significant burden of burnout among healthcare professionals working in a surgical environment. Organizational strategies focusing on work engagement and team-based interventions are essential to mitigate its impact and improve both staff well-being and quality of care [2].

Keywords

Burnout; Healthcare Professionals; Thoracic Surgery; Maslach Burnout Inventory; Work Engagement; Occupational Stress.

Introduction

Burnout is a psychological syndrome resulting from chronic workplace stress, characterized by emotional exhaustion, depersonalization and reduced personal accomplishment. It has been increasingly recognized as a major issue among healthcare professionals, particularly in high-intensity environments such as surgical units.

Surgical settings are usually associated with elevated workload, time pressure and emotional demands, all of which contribute to increased burnout risk. Understanding burnout at a team level is essential for developing effective organizational interventions.

This study aimed to assess burnout levels within a thoracic surgery unit and to explore implications for clinical practice and

organizational management.

Materials and Methods

This cross-sectional observational study was conducted in early 2025 in the University Thoracic Surgery Unit of the Bari Polyclinic, one of the major hospital campuses in Southern Italy [3].

The sample of participants included physicians, resident doctors, nurses and healthcare assistants. Burnout was assessed using the Maslach Burnout Inventory (MBI), a validated instrument measuring three domains: emotional exhaustion, depersonalization and personal accomplishment.

The questionnaire was distributed via an anonymous online platform. Participation was voluntary and informed consent was obtained.

At the time of data collection, the multidisciplinary thoracic surgery team consisted of 40 eligible healthcare professionals. Of these, 36 completed the survey, yielding a response rate of 90%.

Participants included attending physicians, resident physicians, nurses and healthcare assistants.

A mode-based aggregation approach was adopted to identify the most frequently reported response patterns within the team. This method was selected to provide an organizational-level representation of burnout and to highlight shared experiences among healthcare professionals rather than individual variability.

Burnout scores were analyzed collectively at the team level rather than by professional category, reflecting the study objective of assessing the organizational climate and shared experiences within a multidisciplinary surgical team.

Data analysis was subsequently performed using this mode-based aggregation method, allowing evaluation of burnout as a group-level phenomenon. Burnout levels were interpreted according to established MBI scoring thresholds for emotional exhaustion, depersonalization, and personal accomplishment [4].

Results

The study revealed significant levels of burnout within the team.

- **Emotional Exhaustion:** Score of 31, indicating high levels of burnout.
- **Depersonalization:** Score of 12, indicating again high levels of burnout.
- **Personal Accomplishment:** Score of 34, indicating moderate burnout, close to high-risk threshold.

These findings highlight a pronounced burden of burnout, particularly in emotional fatigue and interpersonal detachment.

The distribution of burnout scores across MBI domains is illustrated in **Figure 1**, while comparisons with established high-risk thresholds and overall risk classifications are presented in **Figures 2 and 3**.

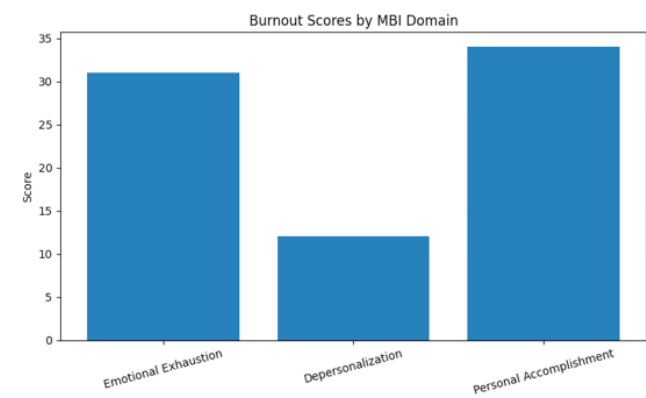


Figure 1: Distribution of Burnout Scores across MBI Domains.

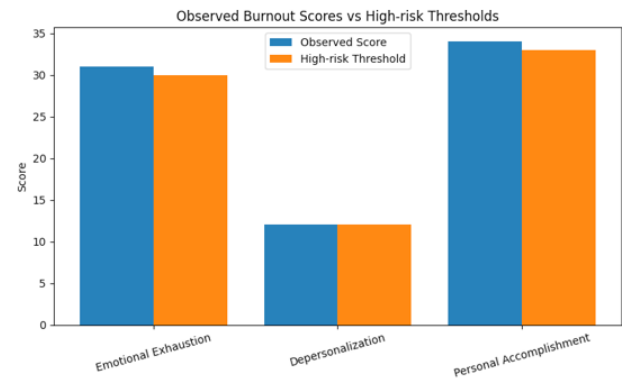


Figure 2: Burnout Scores Compared With High-Risk Thresholds.

Discussion

This study demonstrates a high prevalence of burnout among healthcare professionals in a thoracic surgery setting, confirming the vulnerability of surgical teams to occupational stress [5].

Emotional exhaustion emerged as the most critical domain, reflecting sustained psychological overload. This is consistent with literature identifying workload intensity and chronic stress exposure as key contributors in surgical environments.

Depersonalization was also significantly elevated, suggesting a tendency toward emotional distancing from patients. While this may initially serve as a coping mechanism, it can negatively impact patient care and professional relationships when persistent [6].

Personal accomplishment, although not yet in the high-risk range, was close to the threshold, indicating early signs of reduced professional satisfaction. This aspect is particularly relevant, as declining personal accomplishment is associated with decreased motivation and increased turnover risk [7].

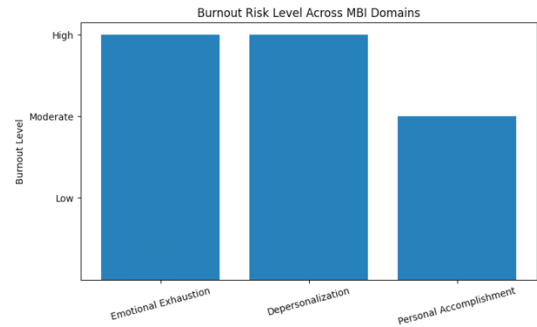


Figure 3: Burnout Risk Classification by MBI Dimensions.
The findings underline the importance of organizational interventions. Promoting work engagement, enhancing team

cohesion and implementing psychological support programs may be essential strategies to mitigate burnout. Leadership strategies focused on team development, staff engagement, and talent management may contribute to reducing burnout and improving organizational resilience [8].

Importantly, the group-level analytical approach adopted in this study provides a systemic perspective, emphasizing that burnout should be addressed as an organizational issue rather than solely an individual condition.

Indeed, the growing prevalence of burnout among healthcare professionals has become an international concern, particularly following the COVID-19 pandemic. Surgical departments have faced increasing organizational pressures, workforce shortages, and higher clinical demands. Moreover, in many healthcare settings, evidence-based safe staffing standards and an appropriate skill mix among physicians, nurses, and healthcare assistants are not consistently maintained. This imbalance increases workload, organizational strain, and reduces opportunities for effective teamwork and recovery, ultimately contributing to higher levels of emotional exhaustion, diminished professional satisfaction, and impaired team functioning. In this context, burnout should not be viewed solely as an individual psychological condition but rather as a multifactorial organizational challenge requiring comprehensive organizational and systemic interventions [9-13].

Implications for Practice

The findings of this study suggest that healthcare organizations should prioritize interventions aimed at improving employee well-being and work engagement. Potential strategies include structured psychological support programs, leadership development initiatives, workload optimization and team-based resilience training. Early identification of burnout risk factors may contribute to improved staff retention, enhanced job satisfaction, and consequently better patient outcomes [14].

Limitations

This study has several limitations that should be acknowledged. First, the relatively small sample size and the single-center design may limit the generalizability of the findings to other surgical settings. Second, the cross-sectional nature of the study does not allow causal relationships between workplace factors and burnout dimensions to be established. Third, burnout was assessed using self-reported data, which may be affected by response bias and social desirability bias. Finally, the group-level analytical approach adopted in this study, while useful for assessing organizational trends, may not fully capture individual variability in burnout experiences [15-18].

Future multicenter studies involving larger samples and longitudinal designs are desirable to better understand the evolution of burnout among healthcare professionals working in surgical environments.

Conclusion

The findings suggest a significant burden of burnout among healthcare professionals working in the University Thoracic Surgery Unit of the Bari Polyclinic. The presence of high emotional exhaustion and depersonalization highlights the urgent need for organizational interventions. Strategies aimed at improving work engagement and fostering supportive work environments are crucial to enhance both healthcare professional well-being and patient care outcomes.

Ethical Statement

This study was conducted in accordance with the principles of the Declaration of Helsinki. Participation was voluntary and anonymous. Informed consent was obtained from all participants. No identifiable personal data were collected.

Conflict of Interest

The author declares no conflict of interest related to this study.

Author Contributions

Mirko Ruffolo: Conceptualization, methodology, data collection, data analysis, writing – original draft, writing – review and editing.

References

1. Maslach C, Leiter MP (2016) Understanding the burnout experience: recent research and its implications for psychiatry. *World Psychiatry* 15:103-111.
2. Romani M, Ashkar K (2014) Burnout among physicians. *Libyan J Med* 9: 23556.
3. Chandawarkar A, Chaparro JD (2021) Burnout in clinicians. *Curr Probl Pediatr Adolesc Health Care* 51: 101104.
4. Boutou A, Pitsiou G, Sourla E, Kioumis I (2019) Burnout syndrome among emergency medicine physicians. *Eur Rev Med Pharmacol Sci* 23: 9058-9065.
5. Kristensen TS, Borritz M, Villadsen E, Christensen KB (2005) The Copenhagen Burnout Inventory. *Work Stress* 19:192-207.
6. Maslach C, Schaufeli WB, Leiter MP (2001) Job burnout. *Annu Rev Psychol* 52: 397-422.
7. West CP, Dyrbye LN, Shanafelt TD (2018) Physician burnout: contributors, consequences and solutions. *J Intern Med* 283: 516-529.
8. Shanafelt TD, Hasan O, Dyrbye LN, Sinsky C, Satele D, et al. (2015) Changes in burnout and satisfaction with work-life balance in physicians and the general US working population. *Mayo Clin Proc* 90:1600-1613.
9. Freischlag JA, Shanafelt TD, Balch CM (2009) Stress and burnout among surgeons. *American Journal of Surgery* 198: 344-349.

10. Lebares CC, Guvva EV, Ascher NL, Sullivan PSO, Harris HW, et al. (2018) Burnout and stress among US surgery residents. *Annals of Surgery* 267: 50-56.
11. Woo T, Tang A, Tam W, HO R (2020) Global prevalence of burnout symptoms among nurses: a systematic review and meta-analysis. *J Psychiatr Res* 123: 9-20.
12. Dall'Ora C, Ball J, Reinius M, Griffiths P (2020) Burnout in nursing: a theoretical review. *Hum Resour Health* 18: 41.
13. Bakker AB, Schaufeli WB (2004) Job demands, job resources, and their relationship with burnout and engagement. *J Organ Beh* 25: 293-315.
14. Bakker AB, Demerouti E (2008) Towards a model of work engagement. *Career Development International* 13: 209-223.
15. Keyko K, Cummings GG, Yonge O, Wong CA (2016) Work engagement in professional nursing practice: a systematic review. *Int J Nurs Stud* 61:142-164.
16. World Health Organization. Regional Office for Europe (2022) Health and care workforce in Europe: time to act. Copenhagen: WHO Regional Office for Europe. World Health Organization, European Observatory on Health Systems and Policies.
17. World Health Organization, European Observatory on Health Systems and Policies. Strengthening Europe's nursing workforce: strategies for retention. Copenhagen: WHO Regional Office for Europe; 2024.
18. Griffiths P, Maruotti A, Recio Saucedo A, Redfern OC, Ball JE, et al. (2019) Nurse staffing, nursing assistants and hospital mortality: retrospective longitudinal cohort study. *BMJ Qual Saf* 28: 609-617.