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PERIOPERATIVE MEDICINE

The anesthesiologist, stress, burn-out and the coping strategies

Muhammad Arslan Zahid¹, Huma Nasir², Zahra Zahid³

Author affiliation:

- 1. Fellow Cardiothoracic Anesthesia, Agha Khan University Hospital, Stadium Road, Karachi, Pakistan.
- 2. Resident, Ziauddin University Hospital, Karachi, Pakistan.
- 3. BS Clinical Psychology, Khwaja Fareed University of Engineering & Information Technology (KFUEIT), Rahim Yar Khan, Pakistan.

Correspondence: Muhammad Arslan Zahid; E-mail: arslan.zahid@aku.edu; dr.arslanzahid@gmail.com; Phone: 0334 5914326

SUMMARY

Burnout among anesthesiologists is a significant concern, and is thought to be due to the highly demanding and stressful nature of their work. Anesthesiologists face unique stressors, including long working hours, on-call duties, emotionally challenging situations, and limited control over surgical procedures. Factors such as inadequate institutional support, lack of adequate resources, and insufficient job recognition, contribute to the risk of burnout. We highlight the negative impact of burnout on anesthesiologists' physical and mental health, including increased risks of cardiovascular problems, a weakened immune system, and emotional exhaustion. Also are discussed coping mechanisms, such as seeking emotional support, practicing mindfulness and relaxation techniques, prioritizing self-care, and engaging in physical exercise. The role of organizational culture and support in addressing stress among anesthesiologists by policies promoting work-life balance and providing access to support programs is emphasized. It also explores emerging trends and advancements in stress management techniques tailored specifically for anesthesiologists, including mind-based therapies, resilience training, and technology-enabled stress management tools. Understanding and effectively managing stress is crucial for anesthesiologists to maintain their well-being, enhance job satisfaction, and ensure quality patient care.

Key words: Burnout Syndrome; Anesthesiologist; Stress Management; Job satisfaction; Professional development; Counselling

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Introduction

Freudenberger originally referred to staff burnout in 1974. The concept of staff burnout is examined in terms of physical symptoms, behavioral clues, cognitive, moral, and emotional aspects. It also examines who is susceptible to it, and what commitment and devotion might entail from both a positive and bad standpoint. It can be prevented, and if it is identified, steps may be taken to ensure the patient is cared for and is properly followed-up.¹

Due to a number of variables specific to their line of work, anesthesiologists are more susceptible to developing burnout syndrome. Stress and burnout are common among anesthesiologists due to the nature of their demanding and high-stress jobs.² Anesthesiologists frequently work long hours, they are required to be oncall and work demanding schedules which might interfere with their personal life, cause exhaustion.³

Anesthesiologists routinely deal with emotionally taxing situations, including seeing patients in agony and even having to cope with unfavorable results after surgery. These emotional factors might contribute to the burnout.⁴ A high degree of accountability and concerns about the patient safety, may also lead to stress and burnout.⁵ Anesthesiologists could struggle with inadequate institutional support, a lack of resources, a lack of opportunity for professional growth and development, and lack of recognition. All these factors can be upsetting emotionally and raise the risk of burnout. Anesthesiologists usually have little influence over how

surgical procedures are timed and carried out, which is a big factor causing dissatisfaction and a feeling of burnout.⁶

The vast canvas

The management of acute and chronic pain, as well as emergency and intensive care, are now included in the anesthesiologist's range of duties. In addition, they also administrative, research, and teaching have responsibilities at teaching hospitals. As a result, there is a significant shortage of anesthesiologists and those who are available are overworked.7 The recent pandemic of COVID-19 tested the anesthesiologists to maximum; having to administer anesthesia to known or suspected patients, with a high risk of disease transmission during intubation, and the essential requirement to use the cumbersome protective gear. Many studies were conducted regarding stress during pandemic.⁸⁻¹⁰

The high-stress environment of the operating room may have a major negative influence on an anesthesiologist's wellness. Due to the difficult nature of their profession and exposure to life-or-death circumstances, anesthesiologists frequently feel emotional distress. Emotional tiredness can result from seeing patients in agony or misery, dealing with unforeseen problems, and making decisions that save lives.¹¹

To address challenging medical conditions, anesthesiologists must be mentally sharp, which can cause mental exhaustion and increased stress.¹² In the operating room, anesthesiologists have to work closely with other specialties. However, a high-stress atmosphere, deadline pressure, and hierarchy can obstruct efficient cooperation and communication, increasing stress levels and decreasing job satisfaction.¹³

Because of their heavy duty in ensuring patient safety, anesthesiologists may experience heightened stress and other health-related issues. Due to this, work-life balance is challenging.¹⁴

As anesthesiologists often have long working hours and on-call duties, which can lead to fatigue and work-life imbalance. Additionally, they are responsible for extensive documentation and record-keeping, leading to increased workload and potential stress.^{15,16}

Anesthesiologists are required to make important judgements quickly and effectively in a fast-paced highstress setting.¹⁷ They must be equipped to address unforeseen crises and difficulties during surgery, which calls for quick thinking and excellent stress management. Anesthesiologists are in-charge of making sure patients are safe throughout surgery by closely watching their vital signs, modifying the anesthesia level, and addressing any risk factors.¹⁸ According to reports, those between the ages of 30 and 50 are most likely to experience burnout.¹⁹ In both our personal and professional life, stress is unavoidable. Stress may build up to levels that are harmful to our health and well-being if it is not properly controlled. One such result is burnout. With the right information and guidance, we may learn to better regulate and control the severity of stress since it is an active process.

Chronic stress can have long-term negative effects on an anesthesiologist's physical and mental health, including a higher risk of cardiovascular problems, a weakened system, digestive immune system problems, musculoskeletal problems, anxiety disorders. depression, and post-traumatic stress disorder (PTSD), as well as emotional exhaustion, impaired cognitive performance, reduced decision-making skills, a decreased capacity to handle challenging or highpressure situations, and a decreased level of job satisfaction.

To lessen the effects of stress on their physical and mental health, anesthesiologists should prioritize selfcare and seek help. The effects of chronic stress might differ from person to person, and may need to be mitigated in a tailor-made strategy.

A questionnaire was employed in research to examine and measure the burnout syndrome, and Maslach Burnout Inventory was created. Depersonalization was noted in 48.5% of respondents and low work satisfaction in 47.7%. The prevalence of burnout syndrome was 10.4%, and it predominately affected men between the ages of 30 and 50 y (64.2%), and ladies with children (57.1%). The following additional characteristics were noted; having a title of specialist (42.8%) over 10 y in the field (64.2%), working at nights (71.4%), living a sedentary life (57.1%), and not participating in courses or activities outside of medicine (78.5%). There was no distinction between married and single people.²⁰

However, a review of literature enables us to draw the conclusion that burnout may develop differently and that not all types of burnouts have the same effects on professionals. In some, high scores in burnout do not significantly worsen the health of an individual, while on other occasions, high scores do cause deterioration in the workability as well as the personal health.²¹

In another study burnout levels were compared between physicians (n = 373) and nurses (n = 161). The Polish version of the Spanish Burnout Inventory was used to assess the levels of burnout (Cronbach's alpha >.70). It was found that 18.63% of the nurses and 12.06% of the anesthesiologists had high levels of burnout, while 3.74% of the nurses and 5.90% of the anesthesiologists had critical levels. The subscales of 'enthusiasm for the job', 'psychological weariness', and 'indolence' showed statistically significant differences between the nurses and doctors.²²

Coping with stress

Anesthesiologists use a variety of coping mechanisms to deal with stress in their day-to-day employment. Here are a few strategies anesthesiologists frequently use; they frequently turn to their coworkers for emotional support and to discuss experiences and difficulties, including fellow anesthesiologists, nurses, and healthcare professionals.²³ They can manage stress and enhance their mental health with the use of mindfulness and relaxation techniques.²⁴ To alleviate stress and enhance general wellbeing, anesthesiologists need to place a high priority on physical exercise, self-care practices, and ongoing education and professional development. Keeping a healthy work-life balance, participating in hobbies, getting enough sleep, and adopting healthy lifestyle practices are some of these activities.²⁵ It's crucial to remember that coping mechanisms might differ amongst people, so they must identify the ones that suit them the best. In addition, receiving professional assistance through counselling or therapy can be helpful for stress management and wellbeing.

Anesthesiologists should set clear boundaries between work and personal life, prioritize tasks, set realistic goals, schedule breaks and self-care activities, practice mindfulness and relaxation techniques, exercise regularly, and seek support from coworkers, friends, or support groups. Time management benefits by assisting them with job prioritization, goal-setting, scheduling self-care activities and breaks, lowering feelings of overload, and enhancing work-life balance. Techniques for mindfulness and relaxation can encourage rest, lower stress level, and improve general wellbeing. Regular exercise has been shown to reduce stress, elevate mood, and advance both physical and mental health.²⁶

Utilizing stress management techniques and taking a comprehensive approach to self-care can help lessen the negative effects of stress and promote a more harmonious balance between work and personal life.

The overall psychological state and cognitive abilities of anesthesiologists are both impacted by partial sleep loss. These findings are especially pertinent given the growing job expectations in our contemporary healthcare system, especially with regard to clinical performance. These observations imply that there must be adjustments that affect the patients' safety and the standard of the medical management.²⁷

Understanding the nature and causes of stress, creating control mechanisms for it, and accepting the aspects that cannot be altered, are all part of stress management. Family and personal time are crucial for reducing stress.²⁸ Having a good network of professional associates is essential for anesthesiologists to function smoothly as a team. Never put pressure on anesthesiologists who are sleep deprived to provide anesthesia. Planned naps have been demonstrated in several studies to increase alertness and performance thereafter. Every four to five hours, anesthesiologists should take a 30-minute break. Stress management seminars should also be held often. Anesthesiologists on night duty should have their own chambers.²⁹

Learning to say "No" in an appropriate way, without being aggressive, is the key to avoiding irrational expectations.⁷

Healthcare organizations must recognize and address stress in order to create a supportive environment for anesthesiologists. Policies should support a healthy work-life balance, adaptable working conditions, and enough rest and recuperation time. Support programs should be established, such as access to counselling services, EAPs (employee assistance programs), and peer support networks, to provide a safe space for anesthesiologists to seek assistance and cope with stressors effectively.³⁰

By creating an organizational culture that prioritizes well-being, provides resources for support, and promotes work-life balance. Healthcare organizations can significantly contribute to addressing and mitigating stress among anesthesiologists, ultimately enhancing job satisfaction and patient care.³¹

Healthcare organizations can make a significant contribution to addressing and mitigating stress among anesthesiologists, ultimately improving job satisfaction and patient care by fostering an organizational culture that prioritizes well-being, offers resources for support, and encourages work-life balance.

Emerging trends for anesthesiologists

Healthcare workers, can effectively manage their stress with mindfulness-based therapies like Mindfulnessbased Stress Reduction (MBSR) programs and Mindfulness-Based Cognitive Therapy (MBCT). Resilience training programs include cognitivebehavioral strategies, self-reflection activities, and skillbuilding to increase the capacity to handle and recover from stressful situations.³²

The main goals of emotional intelligence training are the improvement of self-awareness, emotional control, empathy, and effective communication abilities. For anesthesiologists, technology-enabled stress management tools and mobile applications provide features including guided meditation, relaxation techniques, stress tracking, and cognitive-behavioral therapies.³³

Conclusion

Anesthesiologists are particularly concerned about burnout due to their high-stress occupation. Risk factors for burnout include long work hours, call-duty responsibilities, and mental stress, lack of resources and support, and little control over surgical procedures. Burnout is more common among anesthesiologists between the ages of 30-50 y. To reduce stress, anesthesiologists should put self-care first, ask for help from peers, practice mindfulness and relaxation techniques, have a good work-life balance, and use efficient stress management measures. Healthcare organizations should prioritize well-being, offer resources for assistance, and encourage work-life balance. Emerging trends in stress management for anesthesiologists include mindfulness-based therapies, resilience training programs, emotional intelligence training, and technology-enabled stress management tools.

Conflict of interest

No conflict of interest was declared by the authors.

Authors' contribution

MAZ: Concept, literature search and manuscript editing HN: Manuscript editing and proof reading ZZ: Proof reading and technical support

REFERENCES

- 1. Freudenberger HJ. Staff burn-out. J Soc Issues. 1974;30(1):159-165. DOI: 10.1111/j.1540-4560.1974.tb00706.x
- Shanafelt TD, Boone S, Tan L, Dyrbye LN, Sotile W, Satele D, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. Arch Intern Med. 2012 Oct 8;172(18):1377-85. [PubMed] DOI: 10.1001/archinternmed.2012.3199
- Brown Mahoney C, Lea J, Schumann PL, Jillson IA. Turnover, Burnout, and Job Satisfaction of Certified Registered Nurse Anesthetists in the United States: Role of Job Characteristics and Personality. AANA J. 2020;88(1):39-48. [PubMed]
- Balch CM, Freischlag JA, Shanafelt TD. Stress and Burnout Among Surgeons: Understanding and Managing the Syndrome and Avoiding the Adverse Consequences. Arch Surg. 2009;144(4):371-376. [PubMed] DOI: 10.1001/archsurg.2008.575
- Rotenstein LS, Torre M, Ramos MA, Rosales RC, Guille C, Sen S, et al. Prevalence of Burnout Among Physicians: A Systematic Review. JAMA. 2018;320(11):1131-1150. [PubMed] DOI: 10.1001/jama.2018.12777
- Wallace JE, Lemaire JB, Ghali WA. Physician wellness: a missing quality indicator. Lancet. 2009;374(9702):1714-1721. [PubMed] DOI: 10.1016/S0140-6736(09)61424-0

- Khetarpal R, Chatrath V, Kaur J, Verma A. Occupational Stress in Anesthesiologists and Coping Strategies: A Review. Int J Sci Study. 2015;3(6). [FreeFullText] DOI: 10.17354/ijss/2015/420
- Huda AU, Yasir M, Saulat SA, AlShaqha MW. Assessment of perceived stress among resident trainees of a tertiary care hospital in Saudi Arabia during COVID–19 pandemic – a crosssectional study. Anaesth. pain intensive care. 2021;25(2):185-188. DOI: 10.35975/apic.v25i2.1471
- Huda AU, Yasir M, Shamsuddin AS. The impact of vaccination on stress level of trainee doctors during COVID-19 pandemic. Anaesth. pain intensive care. 2022;26(3):423-424. DOI: 10.35975/apic.v26i3.1916
- Sadaf S, Mussrat R, Bashir B. Depression, anxiety and stress among healthcare workers in COVID-19 ICUs. Anaesth. pain intensive care. 2022;26(2):217-223. DOI: 10.35975/apic.v26i2.1835
- 11. Carayon P, Gurses AP, Hundt AS. Burnout among anesthesiologists. In: Patient Safety in Surgery. Springer; 2015. p.1-7.
- 12. Wallace JE, Lemaire JB, Ghali WA. Physician wellness: a missing quality indicator. Lancet. 2009;374(9702):1714-1721. [PubMed] DOI: 10.1016/S0140-6736(09)61424-0
- West CP, Huschka MM, Novotny PJ, Sloan JA, Kolars JC, Habermann TM, et al. Association of perceived medical errors with resident distress and empathy: a prospective longitudinal study. JAMA. 2006;296(9):1071-1078. [PubMed] DOI: 10.1001/jama.296.9.1071
- Shanafelt TD, Balch CM, Bechamps G, Russell T, Dyrbye L, Satele D, et al. Burnout and medical errors among American surgeons. Ann Surg. 2009;251(6):995-1000. [PubMed] DOI: 10.1097/SLA.0b013e3181bfdab3
- Flanagan E, Chadwick L. Occupational stressors, stress responses, and satisfaction among resident anesthesiologists in academic practice. J Grad Med Educ. 2019;11(6):657-663.
- West CP, Shanafelt TD, Kolars JC. Quality of life, burnout, educational debt, and medical knowledge among internal medicine residents. JAMA. 2011;306(9):952-960. [PubMed] DOI: 10.1001/jama.2011.1247
- Ortega R. The physiological and psychological impact of anesthesia on anesthesiologists: a narrative review. Saudi J Anaesth. 2019;13(Suppl 1):S16-S21.
- Seidman PA, Stein MH. Anesthesia professionals and burnout: how to approach and intervene. Anesthesiol Clin. 2019;37(4):653-666.
- Maslach C, Jackson SE. The measurement of experienced burnout. J Occup Behav. 1981;2:99-113. DOI: 10.1002/job.4030020205
- Garrosa E, Benevides-Pereira AMT, Jiménez BM, et al. Prevenção e intervenção na síndrome de burnout. In: Benevides-Pereira AMT, editor. Como prevenir (ou remediar) o processo de burnout. 4a ed. São Paulo: Casa do Psicólogo; 2002. p.227-272.
- Tops M, Boksem MA, Wijers AA, van Duinen H, Den Boer JA, Meijman TF, et al. The psychobiology of burnout: Are there two different syndromes? Neuropsychobiology. 2007;55(3-4):143-150. [PubMed] DOI: 10.1159/000106056

- Misiolek A, Gil-Monte P, Misiołek H. Prevalence of burnout in Polish anesthesiologists and anesthetist nursing professionals: A comparative non-randomized cross-sectional study. J Health Psychol. 2015;22(4):537-548. [PubMed] DOI: 10.1177/1359105315604377
- Kivimäki M, Virtanen M, Elovainio M, Kouvonen A, Väänänen A, Vahtera J. Work stress in the etiology of coronary heart disease—a meta-analysis. Scand J Work Environ Health. 2006;32(6):431-442. [PubMed] DOI: 10.5271/sjweh.1049
- Shapiro SL, Astin JA, Bishop SR, Cordova M. Mindfulnessbased stress reduction for health care professionals: results from a randomized trial. Int J Stress Manag. 2005;12(2):164-176. [FreeFullText] DOI: 10.1037/1072-5245.12.2.164
- Biddiss E, McPherson A. An 'elite' within the medical profession: the perception of orthopaedic surgery by those who work within it. Med Educ. 2004;38(8):925-934.
- West CP, Dyrbye LN, Rabatin JT, Call TG, Davidson JH, Multari A, et al. Intervention to promote physician well-being, job satisfaction, and professionalism: a randomized clinical trial. JAMA Intern Med. 2014 Apr;174(4):527-33. [PubMed] DOI: 10.1001/jamainternmed.2013.14387
- Saadat H, Bissonnette B, Tumin D, Thung A, Rice J, Barry N, Tobias J. Time to talk about work-hour impact on anesthesiologists: The effects of sleep deprivation on Profile of Mood States and cognitive tasks. Paediatr Anaesth. 2016 Jan;26(1):66-71. [PubMed] DOI: 10.1111/pan.12809

- Gupta N, Gupta A, Garg R. Professional burnout in anaesthesia and critical care – How to decrease it. J Anesth Crit Care Open Access. 2015;2:00056. DOI: 10.15406/jaccoa.2015.02.00056
- Shanafelt TD, West CP, Sinsky C, Trockel M, Tutty M, Wang H, et al. Changes in Burnout and Satisfaction With Work-Life Integration in Physicians and the General US Working Population Between 2011 and 2020. Mayo Clin Proc. 2022 Mar;97(3):491-506. [PubMed] DOI: 10.1016/j.mayocp.2021.11.021
- Tawfik DS, Scheid A, Profit J, Shanafelt T, Trockel M. Evidence relating health care provider burnout and quality of care: a systematic review and meta-analysis. Ann Intern Med. 2019;171(8):555-567. [PubMed] DOI: 10.7326/M19-1152
- Firth-Cozens J, Greenhalgh J. Doctors' perceptions of the links between stress and lowered clinical care. Soc Sci Med. 1997;44(7):1017-1022. [PubMed] DOI: 10.1016/s0277-9536(96)00227-4
- Mealer M, Conrad D, Evans J, Jooste K, Solyntjes J, Rothbaum B, et al. Feasibility and acceptability of a resilience training program for intensive care unit nurses. Am J Crit Care. 2014;23(6):e97-e105. [PubMed] DOI: 10.4037/ajcc2014747
- Petrides KV, Furnham A. Trait emotional intelligence: Behavioural validation in two studies of emotion recognition and reactivity to mood induction. Eur J Pers. 2003;17(1):39-57. DOI: 10.1002/per.466