

# Burnout Among Orthopaedic Surgeons in India: A Systematic Review of Prevalence

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## Abstract

**Background:** Burnout represents a critical occupational hazard in medicine, severely affecting surgeons' well-being and patient outcomes. Orthopaedic surgeons are particularly vulnerable due to heavy clinical demands, long work hours, and significant physical and emotional strain. In India, where healthcare is segmented into resource-limited public hospitals and high-pressure private sectors, these stressors may be even more pronounced.

**Objective:** To rigorously review and synthesize current evidence on the prevalence of burnout among orthopaedic surgeons in India and elaborate on the key systemic, professional, and individual contributors, as well as proposed solutions.

**Methods:** A systematic literature search was conducted across major medical databases for studies from India reporting on burnout among orthopaedic surgeons, including prevalence rates, risk factors, and context-specific influences. Data extraction and qualitative synthesis focused on disparities between healthcare sectors and underlying drivers.

**Results:** Studies indicate a moderate-to-high prevalence of burnout among Indian orthopaedic surgeons, especially in government facilities, but also significant in private practice. Common contributors include excessive duty hours, overwhelming patient loads, complex medico-legal environments, administrative overload, and insufficient institutional support. Younger surgeons and trainees face heightened risk, compounded by steep learning curves, frequent emergencies, and inexperience in coping mechanisms. Burnout leads to detrimental consequences including reduced quality of care, impaired professional performance, and risks to patient safety.

**Conclusion:** Burnout in Indian orthopaedic surgery is a multifaceted systemic issue needing urgent multi-level intervention.

**Keywords:** Burnout, Orthopaedic surgeons, India.

## Introduction

Burnout, defined as a psychological syndrome of emotional exhaustion, depersonalization, and diminished sense of accomplishment, is a pressing threat in modern healthcare, disproportionately affecting surgical specialties. Orthopaedic surgeons operate within uniquely demanding environments, characterized by:

- Lengthy and physically strenuous surgeries
  - Frequent night shifts, on-call duties, and emergency cases
  - Increasing administrative requirements
  - Emotional burden from traumatic injuries and high patient morbidity
- Globally, burnout rates among orthopaedic surgeons are well documented, often ranging from 30% to 60% in Western nations [1, 2]. Indian orthopaedic practice, however, poses further complexities: public hospitals are strained by very high patient volumes, limited human and material resources, and poorly regulated work hours; private hospitals, while better resourced, introduce pressures such as performance benchmarking, medico-legal liability, and competition. Social stigma around mental health, lack of institutional support, and

cultural expectations that doctors tolerate hardship exacerbate underreporting and under-recognition of burnout in India [3].

Understanding the actual burden and nuanced contributors is crucial for the development of effective prevention and intervention strategies tailored to the Indian context.

## Methodology

A comprehensive systematic review of published literature was conducted using major databases (PubMed, Scopus, Google Scholar) up to August 2025.

## Inclusion criteria:

Studies examining burnout in orthopaedic surgeons within India  
Reports on prevalence, associated risk factors, sector-specific differences, and intervention strategies

## Exclusion criteria:

Non-orthopaedic disciplines  
Studies outside the Indian context

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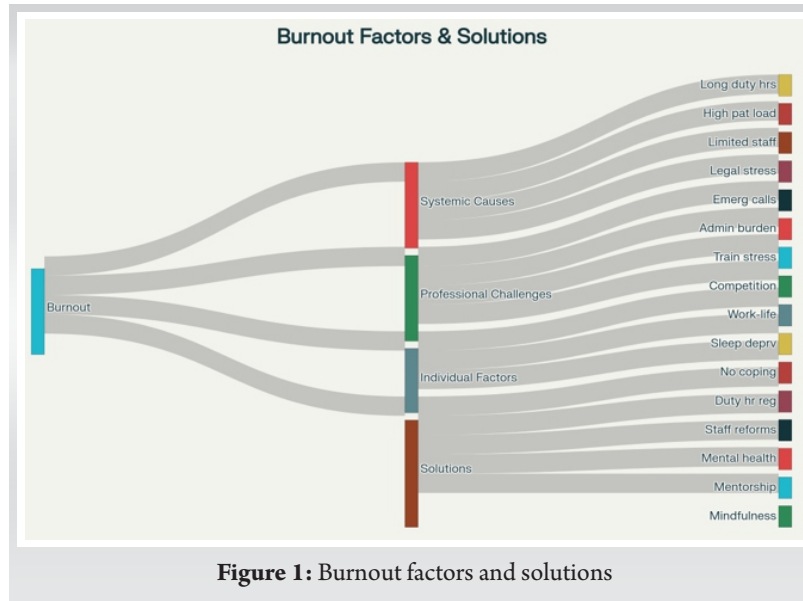


Figure 1: Burnout factors and solutions

Steep learning curves for trainees

**Individual Factors:**

- Lack of work-life balance
- Sleep deprivation
- Inadequate training in resilience or coping skills
- Reluctance to seek mental health support due to stigma or professional pride

**3. Impact of Burnout**

**Burnout leads to a spectrum of negative outcomes, including:**

- Poor concentration and decision fatigue
- Increased risk of clinical mistakes and compromised patient safety
- Decreased job satisfaction, absenteeism, and greater intent to leave the profession
- Deterioration of personal health (mental and physical) among surgeons

**Articles lacking primary data on burnout**

Data from each study were extracted—sample demographics, study design, burnout assessment instruments (e.g., Maslach Burnout Inventory, Oldenburg Burnout Inventory), prevalence rates, identified risk factors, and commentary on work environment. Where relevant, sectoral differences between government and private hospitals and the impact on trainees/early-career surgeons were identified.

**Discussion**

**1. Prevalence of Burnout in India**

Reported prevalence among Indian orthopaedic surgeons varies widely, but moderate-to-high rates are consistent across studies [4, 5]. Burnout is significantly more pronounced in government hospitals, characterized by:

- Long, unpredictable duty hours (often 60–80 hours/week)
- Minimal off-duty or recuperation time
- Overburdened facilities and resource limitations
- Private sector surgeons, while sometimes better compensated, report significant stress from:
  - High patient expectations
  - Intense job competition
  - Practice sustainability concerns
  - Pressure for patient satisfaction scores and medico-legal risks

**2. Key Contributing Factors**

**Systemic (Institutional) Factors:**

- Insufficient staffing (forcing longer work hours)
- High patient-to-doctor ratios
- Lack of administrative support, with doctors often tasked with nonclinical paperwork
- Medico-legal anxiety and risk of litigation

**Professional Factors:**

- Emergency duties at odd hours
- Minimal support for clinical decision-making
- High complexity of trauma cases and surgical outcomes (heightening sense of responsibility and stress)

**4. Interventions and Recommendations**

**A multi-tiered approach is essential:**

**Regulatory and Policy Interventions:**

- Institution of duty-hour regulations
- Strengthening medico-legal protections
- National-level guidelines for workload and shift patterns

**Institutional Support:**

- Recruitment to ensure adequate staffing
- Streamlining administrative processes
- Offering regular wellness programs and psychological counseling access
- Establishing mentorship and peer-support networks

**Professional Development:**

- Structured induction for trainees
- Continuous professional development, focusing on time

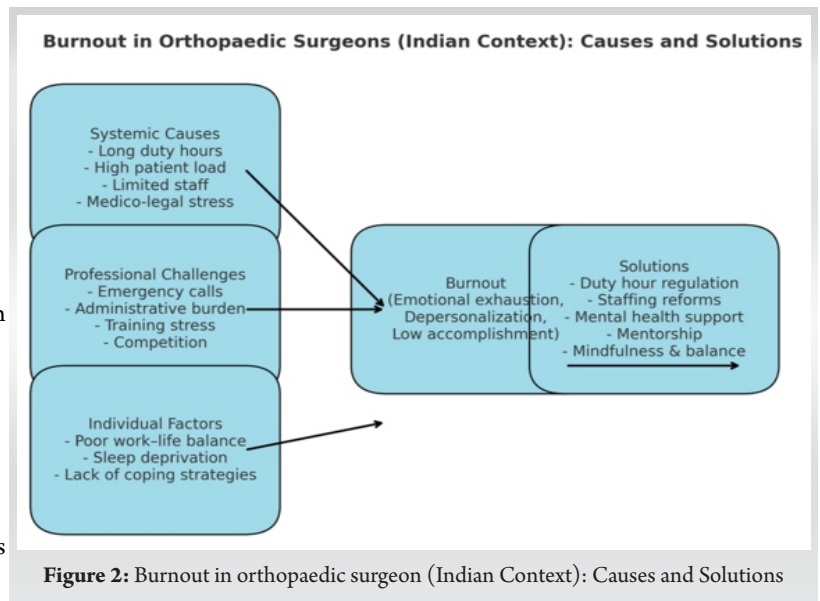


Figure 2: Burnout in orthopaedic surgeon (Indian Context): Causes and Solutions

management, stress coping, and resilience

#### Personal Strategies:

Encouragement of mindfulness, self-care, and professional help-seeking

Work-life integration workshops

#### 5. Sectoral Differences and Role of Professional Associations

**Professional bodies like the Indian Orthopaedic Association play a crucial role in:**

Advocacy for systemic reforms

Initiating national surveys to quantify burnout

Creating professional support groups

Conducting de-stigmatizing campaigns around mental health in medicine

#### Conclusion

Burnout among India's orthopaedic surgeons is both common and under-addressed, with harmful consequences for surgeons and patients alike. Its roots are deeply systemic and require national and institutional attention alongside personal and professional interventions. Only a multi-faceted, de-stigmatized approach can meaningfully improve surgeon wellbeing and clinical outcomes.

**Declaration of patient consent:** The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his/her consent for his/her images and other clinical information to be reported in the Journal. The patient understands that his/her name and initials will not be published, and due efforts will be made to conceal his/her identity, but anonymity cannot be guaranteed.

**Conflict of Interest:** None, **Source of Support:** None

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