

Review Article

Burnout among doctors in India: epidemiology, determinants, consequences and policy imperatives

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ABSTRACT

Physician burnout, characterised by emotional exhaustion, depersonalisation and reduced professional accomplishment, is a major concern in India's healthcare system. This review synthesised evidence on the prevalence, determinants, consequences and policy gaps related to physician burnout in India. Systematic searches of PubMed, Google Scholar and IndMED databases between January 2010 and December 2024 using the terms ("physician burnout" OR "occupational stress") AND ("India" OR "Indian"). WHO publications, National Health Profile reports, and National Medical Commission directives were grey literature that were reviewed. Studies utilising validated tools (Maslach Burnout Inventory, Copenhagen Burnout Inventory) and policy evaluations of working circumstances were given priority under the inclusion criteria. Career-stage stratification is seen in the incidence of burnout: 30–75% among medical students, 60–80% among residents (with a high of 85% in surgical specialities), and 35–65% among practicing physicians. An extra 600,000 doctors are needed nationwide due to critical labour shortages. Reduced patient safety, increased depression and suicidal ideation risks, and attrition in the healthcare system are some of the consequences. Current regulations lack nationally standardised, quantitatively defined and enforceable duty-hour limits and mandated institutional wellness infrastructure. Physician burnout is a systemic failure that calls for coordinated interventions, such as mandatory institutional wellness infrastructure, medicolegal reform, nationally standardised duty-hour regulations, strategic workforce expansion with equitable distribution, and cultural transformation that positions wellbeing as a professional competency. For policy accountability and adaptive improvement, national surveillance mechanisms must be established.

Keywords: Burnout, Physician, Occupational stress, Healthcare workforce, India, Health policy

INTRODUCTION

Burnout is a symptom of prolonged working stress that is poorly handled. It is typified by emotional weariness, depersonalisation, and decreased personal

accomplishment.¹ Burnout among doctors poses a threat to patient safety, personal well-being, and the viability of the healthcare system.² Rather than being the result of individual failure, the problem is now seen as an occupational danger having systemic origins.³ The healthcare system in India has particular difficulties that

increase the likelihood of burnout. The workforce is always under pressure, with a doctor-to-population ratio of about 0.7 per 1000, which is below the World Health Organization's recommended level of 1:1000.⁴ With 65% of doctors concentrated in metropolitan areas servicing just 35% of the population, this deficit is made worse by a glaring geographic maldistribution.⁵ Burnout is encouraged by the intense workload that results, especially in public sector institutions.

The Indian situation is unique due to a number of contextual considerations. First, the growth of medical education has led to a rise in graduate output without a corresponding gain in faculty strength or training infrastructure. This has resulted in deficiencies in supervision, exposing trainees to high-pressure, unsupported conditions.⁶ Second, most doctors are routinely exposed to long shifts exceeding 80–100 hours per week in training settings due to the lack of rigorous work-hour rules.⁷ Third, there has been an increase in violence against healthcare professionals; several polls have shown that 60–75% of doctors have experienced verbal and physical abuse, undermining psychological safety.⁸ Fourth, widespread worry is caused by medicolegal pressures and the criminalisation of medical malpractice under Section 304A of the Indian Penal Code.⁹ Despite increasing awareness, comprehensive research on physician burnout in India is still few, dispersed among specialisations and geographical areas, and hindered by methodological variability. In order to describe the issue, pinpoint its causes, assess its effects, look at current policy frameworks, and suggest treatments that are appropriate for the situation, this review synthesises the research that is currently available.

METHODS

A systematic search approach was used in this narrative review to find pertinent material. From January 2010 to December 2024, we used the following search phrases to search the PubMed, Google Scholar, and IndMED databases: ("physician burnout" OR "doctor burnout" OR "occupational stress" OR "job satisfaction") AND ("India" OR "Indian"). Other queries included "healthcare workforce India," "medical student stress India," and "resident burnout India." The National Health Profile (2023), Rural Health Statistics (2022–2023), National Medical Commission reports, Ministry of Health and Family Welfare papers, and publications from the WHO Global Health Workforce Alliance were among the grey literature sources. Studies describing the prevalence of burnout using validated instruments (such as the Maslach Burnout Inventory, Copenhagen Burnout Inventory, or validated single-item assessments), qualitative research examining factors, and policy papers pertaining to work circumstances were all included in the inclusion criteria. While we included worldwide literature on interventions and regulatory frameworks for comparative analysis, we gave priority to Indian research. We carefully looked through the listed studies' reference lists to find further

references. Formal quality evaluation and meta-analysis were not carried out due to the narrative character. Prevalence, determinants, repercussions, policy landscape, and interventions were all included in the thematic synthesis of the data.

PREVALENCE OF BURNOUT ACROSS CAREER STAGES

Medical students

Early in medical school is when burnout first appears. According to Indian research, emotional tiredness is the most common factor among undergraduate medical students, with prevalence rates ranging from 30 to 75%.¹⁰ In a study of first-year medical undergraduates in India, burnout was identified in 62% of students using two-dimensional criteria and 30% using three-dimensional criteria, with academic stress being the most prominent source of stress.¹¹ Stress was significantly greater among female students, highlighting potential differences in vulnerability to psychological distress during medical training.¹¹ The early years of medical education may be particularly challenging because students must adapt to a demanding curriculum, new learning methods, and substantial academic expectations.¹¹

Resident doctors

The category most at danger is postgraduate trainees. Research continuously shows that the rate of burnout among residents in all specialties is more than 60–80%.¹² 76.3% of 1200 residents in a historic multi-center survey satisfied the criteria for burnout; the greatest rates were reported in surgical specialties (85.1%) and emergency medicine (81.7%).¹³ Indian studies among resident doctors have documented prolonged working hours and substantial burnout. In a study of resident doctors in public-sector hospitals in Mumbai, the average reported working time was 88 hours per week, with 56.7% meeting the study criteria for burnout.¹⁴ Another Indian study documented that 64% of residents worked approximately 81–100 hours per week or more, with many reporting prolonged continuous duties.¹⁵ Vulnerability is exacerbated by the majority of training institutions' lack of formal wellness programs.¹⁶

Practicing physicians

Depending on the speciality and practice environment, the rate of burnout among consultant-level doctors varies from 35 to 65%.¹⁷ Due to increased patient loads, resource limitations, administrative difficulties, and lower pay, public sector physicians report far higher levels of burnout than private practitioners.¹⁷ Due to professional isolation, a lack of specialised support, community pressure, and poor infrastructure, rural medical officers exhibit very high depersonalisation and tiredness ratings.¹⁸ Specialty-specific trends suggest that intensivists and emergency doctors had the greatest rates (70–75%), followed by

surgeons and obstetricians (60–65%), general practitioners (45–55%), and psychiatrists and dermatologists (35–45%).¹⁹

DETERMINANTS AND RISK FACTORS

Systemic factors

The lack of doctors in India and their unequal distribution are key structural factors. To reach the WHO-recommended density, the nation is expected to need an extra 600,000 physicians, with the majority of these needs being in underserved and rural regions.²⁰ In 2022–2023, primary health centres had 87.1% of authorised doctor posts whereas community health centres only had 37.8% of the necessary experts.²¹ There are significant differences per state. While Uttar Pradesh (0.32:1000), Bihar (0.34:1000), Jharkhand (0.38:1000), and Madhya Pradesh (0.41:1000) have severe shortages, Kerala, Goa, and Puducherry maintain ratios over 1:1000.²² There is a significant skew in the distribution between urban and rural areas, with an average of 2.5–3.0 doctors per 1000 in urban areas and 0.3–0.4 in rural areas.²³ Individual doctors in underprivileged regions are forced to handle patient numbers and clinical complexity at levels that are unsustainable due to this maldistribution.

Organizational factors

Systems that reduce the workload of physicians are frequently absent from healthcare institutions. Inadequate support staff ratios cause doctors to do duties that could be assigned to nurses, technicians, or administrative staff, which increases cognitive load and fragments concentration.²⁴ When used, electronic health record systems usually increase the amount of paperwork without improving workflow.²⁵ Advocacy for better working conditions is hampered by the lack of physician leadership in administrative decision-making.²⁶

Regulatory gaps

India does not have extensive work-hour laws for doctors, in contrast to many other nations. Limited protection is offered by the Factories Act (1948) and many state Shops and Establishments Acts, which sometimes omit healthcare or allow long hours.²⁷ Although "duty hour norms" are mentioned in the National Medical Commission's Postgraduate Medical Education Regulations (2021), there are no precise quantitative restrictions or enforcement procedures.²⁸ While safety and standards are covered by clinical establishment statutes in some jurisdictions, physician work hours are not.²⁹

Individual and interpersonal factors

Although burnout is essentially a systemic issue, risk is influenced by individual traits. Early-career doctors who do not have well-developed coping mechanisms are more vulnerable.³⁰ Stress is increased by inadequate work-life

integration, which especially affects doctors with young families.³¹ Workplace violence and harassment are important contributors to occupational stress among doctors and may further increase vulnerability to burnout.

HEALTH AND SYSTEM-LEVEL CONSEQUENCES

Impact on physician health

Anxiety disorders (OR 2.2–3.5), sadness (OR 2.5–4.0), and suicidal thoughts are all markedly increased among burned-out doctors.³² According to a multi-city poll, 28% of those with high levels of burnout said they had considered suicide in the year prior.³³ Burned-out doctors looking for unhealthy coping strategies are more likely to suffer from substance use disorders, such as alcoholism and prescription drug abuse.³⁴ Cardiovascular disease, metabolic syndrome, musculoskeletal issues, and immunological dysfunction are examples of physical health repercussions.³⁵ Sleep loss linked to burnout exacerbates these hazards.³⁵

Patient safety and care quality

There is strong evidence that patient outcomes are negatively impacted by physician burnout. Increased medical mistakes (OR 1.9–2.2), poorer patient satisfaction scores, less adherence to evidence-based procedures, and a decline in the provision of preventative care are all linked, according to systematic studies.³⁶ Burned-out doctors in Indian contexts report 40% poorer empathy scores on validated measures and 2.5 times greater rates of perceived medical mistakes.³⁷ There is less time spent on patient education and collaborative decision-making, and communication quality declines.³⁸ This is especially troubling in India, where patient-physician contact is crucial to adherence and results yet health literacy is still low.

Healthcare system sustainability

Physician attrition is caused by burnout. According to studies, burnout and unfavourable working circumstances are the main reasons why 35–45% of Indian medical graduates think of leaving their country.³⁹ Government infrastructures are already under stress due to domestic brain drain from the public to private sectors.⁴⁰ The system loses trained capacity due to early retirement and speciality switching. Investments in prevention are significantly outweighed by the costs associated with physician turnover, which include hiring, training, and lost productivity.⁴¹

System capacity is further undermined by lower output among burned-out doctors who continue to practise (presenteeism).⁴² This leads to vicious cycles: as doctors quit or become less productive, their colleagues' workloads increase, hastening their own burnout.

CURRENT INDIAN REGULATORY FRAMEWORK

National medical commission guidelines

The Medical Council of India was superseded by the National Medical Commission (NMC), which was founded in 2020 and has more regulatory power.⁴³ Although resident welfare is acknowledged in the Postgraduate Medical Education Regulations (2021), there are no explicit, legally binding regulations pertaining to duty hour monitoring, mandated rest breaks, or limit labour hours.²⁸ The rules place a strong emphasis on faculty development and competency-based training, but they do not require wellness initiatives or infrastructure for mental health assistance.

Labour law provisions

Healthcare organisations are frequently excluded from the Factories Act of 1948's 48-hour weekly work restriction with overtime allowances because of their need for continuous operation.²⁷ State-specific Stores and Businesses Acts differ greatly; several states have proposed modifications that would restrict shifts to 12 hours with compensatory rest, but their implementation is still uneven.⁴⁴ Regulatory fragmentation results from the lack of a cohesive national framework.

Recent developments

Several governments established committees to investigate duty hours and working conditions in response to high-profile examples of resident abuse and suicides.⁴⁵ Although they were not legally enforced, the Maharashtra Medical Council published guidelines about resident work hours.⁴⁶ Some institutions established support programs after the COVID-19 pandemic brought attention to the wellness of healthcare workers, but systematic implementation lags.⁴⁷

State-wise workforce distribution and implications

The differences in India's healthcare personnel have a significant impact on the epidemiology of burnout. Based on doctor density and urban-rural distribution, states may be divided into three levels, which directly affects the likelihood of burnout.

Tier 1 (Better resourced): The densities in Kerala (1.3:1000), Goa (1.8:1000), Puducherry (1.4:1000), and Tamil Nadu (0.9:1000) are close to or higher than WHO standards.²² These states have greater rural penetration (40–45% of physicians in rural regions) as a result of persistent investments in public health, educational facilities, and immigration retention strategies.⁴⁸ Although it does occur, the prevalence of burnout is lower (35–50%), and risk is somewhat reduced by improved organisational support systems.⁴⁹

Tier 2 (Moderate): Despite having a significant urban concentration (75–80%), Karnataka, Maharashtra, Delhi, Punjab, and Gujarat retain ratios of 0.6–0.8:1000.²² Despite total state-level figures, rural amenities are severely lacking. The national average for burnout rates is between 55 to 70%, with notable inter-district variations.⁵⁰

Tier 3 (Critically underserved): There are significant shortfalls (0.3–0.45:1000) and severe rural shortages in Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh, Chhattisgarh, and Rajasthan.²² In these states, a single doctor may treat 10,000–30,000 people with little assistance from specialists.⁵¹ Although there is still little study, the rate of burnout is probably higher than 75–80%, and retention issues are significant.⁵²

Different policy approaches are required due to this spatial variability. While Tier 1 states can focus on organisational changes and quality improvement, Tier 3 states need immediate workforce augmentation and retention incentives.

INTERNATIONAL MODELS AND LESSONS

ACGME duty hour standards (United States)

Progressive duty hour limitations were put in place by the Accreditation Council for Graduate Medical Education. These included a maximum of 80-hour work weeks spread over four weeks, required 10-hour breaks in between shifts, and a maximum of 24 hours of continuous duty (plus 4 hours for transitions).⁵³

Hour limitations alone are insufficient without addressing task intensity, autonomy, and culture, as evidenced by the conflicting results of outcomes research, which demonstrate better resident welfare in some studies but ongoing burnout in others.⁵⁴ India's lessons: While vital, setting maximum work-hour norms is not enough. Expanding the workforce to provide safe handoffs and sufficient coverage, cultural changes that prioritise wellbeing in addition to clinical efficiency, and strong monitoring systems with sanctions for infractions are all necessary for implementation.

European working time directive (EWTD)

The EWTD requires paid leave, an 11-hour break in between shifts, and an average workweek of 48 hours.⁵⁵ Implementation has varied throughout Europe, with healthcare receiving special treatment. Although issues with adequate training and service continuity originally surfaced, countries that achieved compliance (such as the Netherlands and Denmark) claim better physician wellbeing.⁵⁵ India's lessons: Adoption may be aided by phased deployment that is flexible for various healthcare tiers. Enforcement must come after supporting infrastructure, such as more residency slots and mid-level practitioners.

NHS people plan (United Kingdom)

Flexible work schedules, mental health assistance, leadership development, anti-racism and anti-bullying programs, and physician participation in system reform are all highlighted in the UK National Health Service People Plan (2020).⁵⁶ Although sustainability necessitates ongoing investment, preliminary evidence points to increased retention and satisfaction.⁵⁶

India's lessons: Compared to standalone treatments, multifaceted interventions that target organisational culture, professional growth, and psychological safety may have a stronger impact. Contextual appropriateness is improved by physician leadership in policy creation.

RECOMMENDATIONS***National duty hour regulation for residents***

To reduce excessive weariness and risky clinical practice, standardised national duty-hour norms for resident physicians are advised. To guarantee openness and compliance, this calls for independent resident monitoring committees and computerised duty-hour tracking systems. The National Medical Commission's official formulation of duty-hour limitations, which is closely related to accreditation and regulatory ramifications, is the required policy reform. The rationale is supported by strong global data demonstrating that controlled work schedules greatly lower medical mistakes and physician fatigue, enhancing patient safety and trainee wellbeing.⁵⁷

Workforce expansion and equitable distribution

To combat structural overwork, it is advised to increase the size of the medical staff and make sure that it is distributed logically among regions and specialties. This calls for both the systematic deployment of mid-level practitioners for task-shifting and improved capacity for undergraduate and postgraduate training. Coordinated state and federal workforce planning with incentive-based postings in rural and underserved areas is the necessary policy reform. The rationale is that, in the absence of systemic workforce rectification, individual-level resilience techniques are useless since persistent physician shortages continue to be a major upstream source of burnout.²⁰⁻²³

Mandatory institutional wellness systems

All teaching hospitals and public health facilities should be required to have a complete wellness infrastructure. This calls for peer support systems, regular burnout screening, dedicated wellness officers, and private outside mental health treatments. The addition of wellness infrastructure and reporting as required requirements in NMC certification standards is the equivalent policy shift. The rationale is supported by data showing that organizational-level treatments are among the best methods for lowering burnout and enhancing the mental health of doctors.⁵⁸

Medicolegal and legal protection reform

Reforming medicolegal frameworks is advised in order to shield doctors from criminal punishment for making legitimate therapeutic decisions. This necessitates the creation of specialised medical tribunals, uniform documentation procedures, and reasonably priced professional indemnity insurance plans. Restricting the use of criminal negligence laws, including IPC Section 304A, in normal medical treatment while maintaining civil responsibility is the main policy reform. The rationale is that clearer and more proportionate medicolegal mechanisms are needed within the broader regulatory framework governing medical practice in India.⁴³

CONCLUSION

In India, physician burnout is a predictable result of systemic neglect stemming from organisational strain, regulatory loopholes, labour shortages, and maldistribution rather than personal failure. Beyond physicians, it has an adverse effect on patient safety, the standard of treatment, and the long-term viability of the healthcare system. Coordinated, multi-level action that includes workforce growth, legal protection, duty-hour regulation, and organisational cultures that prioritise wellness in addition to productivity is necessary for an effective response. International models provide helpful guidance, but solutions must be tailored to the particular social, economic, and health-system circumstances of India. The cost of delay greatly exceeds the cost of prevention, thus prompt, coordinated action is necessary even if reform requires commitment and determination.

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