

## Impact Of Stress On The Mental And Physical Health Of Dental Practitioners In Mumbai

Dr. Renuka S Savant<sup>1</sup>

<sup>1</sup>Assistant Professor (MMS), DES's NMITD, Mumbai, Maharashtra, India.

Email: [renuka.savant@despune.org](mailto:renuka.savant@despune.org)

### ABSTRACT

Among dental practitioners, occupational stress is increasingly recognized as a serious global health issue, with significant implications for both physical and psychological well-being. Dentistry is inherently demanding due to high procedural precision, patient anxiety management, ergonomic strain, and financial pressures. This paper focuses on the impact of stress on dental practitioners in Mumbai, India, contextualized within a dense metropolitan healthcare environment characterized by high patient load and competitive private practice. A systematic narrative review of post-2020 literature from PubMed, Web of Science and scopus was conducted. Findings indicate that stress among dentists is multifactorial and strongly associated with musculoskeletal disorders, fatigue, cardiovascular risk, anxiety, depression, and burnout. Evidence suggests that the COVID-19 pandemic has intensified stress levels, while systemic factors such as workload and financial instability remain key contributors. The study proposes a conceptual framework linking stressors, mediators, and health outcomes, and recommends multi-level interventions to improve occupational well-being. Addressing stress in dentistry is essential for enhancing practitioner health, clinical performance, and patient safety...

**Keywords:** Occupational Stress, Dentists, Mumbai, Burnout, Mental Health, Musculoskeletal Disorders.

### INTRODUCTION:

Occupational stress is a pervasive issue in healthcare professions, significantly affecting both individual well-being and organizational performance. Among healthcare workers, dental practitioners are particularly vulnerable due to the nature of their work, which combines clinical precision, patient interaction, and business management responsibilities.

Dentistry involves prolonged static postures, repetitive movements, and high cognitive demands. Practitioners must maintain concentration while performing intricate procedures in confined spaces, often under time constraints. Additionally, dentists must manage patient anxiety, pain, and expectations, which adds a psychological burden to their clinical responsibilities.

In metropolitan cities such as Mumbai, these stressors are amplified. Mumbai's healthcare ecosystem is characterized by high patient density, intense competition among private practitioners, rising operational costs, and limited institutional support. Dentists frequently operate as independent entrepreneurs, balancing clinical work with administrative and financial responsibilities.

Recent evidence indicates that occupational stress in dentistry has intensified in the post-COVID-19 era. The pandemic introduced additional challenges, including infection risk, financial instability, and changes in clinical protocols. Studies report increased levels of anxiety, psychological distress and burnout among dental professionals globally.

This study aims to:

- Identify key stressors affecting dental practitioners in Mumbai

- Examine the physical and mental health consequences of stress
- Develop a conceptual framework linking stressors to outcomes
- Provide evidence-based recommendations

### 2. Literature Review

#### Occupational Stress in Dentistry

Occupational stress in dentistry arises from a combination of clinical, organizational, and psychosocial factors. Dentists face high job demands, including workload, patient expectations, and regulatory requirements.

A bibliometric analysis of dental stress research highlights that occupational stress is a "significant concern" due to unique professional demands and increasing workload pressures. These stressors are compounded by the need for precision and the consequences of clinical errors.

A cross-sectional study (2024) found that 81% of dentists reported moderate to high stress levels, demonstrating the widespread nature of the problem.

#### Psychological Distress and Burnout

Burnout is one of the most critical outcomes of chronic stress in dentistry. It is characterized by:

- Emotional exhaustion
- Depersonalization
- Reduced personal accomplishment

A systematic review reported high prevalence rates of burnout and emotional exhaustion among dentists. Burnout is strongly associated with workload, lack of autonomy, and poor work-life balance.

Additionally, evidence across the globe suggests that mental health risks begin early, with dental students already experiencing significant stress and burnout.

### Physical Health Consequences

**i) Musculoskeletal Disorders:** Musculoskeletal disorders (MSDs) are among the most common physical health issues affecting dentists. A systematic review found that MSDs are strongly linked to occupational ergonomics and repetitive strain.

Another study demonstrated that MSDs significantly affect work ability and job satisfaction among dental professionals.

**ii) Fatigue and Sleep Deprivation:** Fatigue is a critical but quite often ignored and overlooked among dental practitioners. Long working hours and inadequate rest contribute to physical and mental exhaustion. Research highlights that fatigue is driven by mental stress, ergonomic challenges, and extended working hours.

### COVID-19 and Stress Intensification

The COVID-19 pandemic significantly exacerbated stress among dental practitioners. Factors include:

- High infection risk due to aerosol-generating procedures
- Financial losses due to clinic closures
- Increased workload post-pandemic

Global reports confirm that burnout and mental health issues worsened during this period.

### Stress in the Indian Context

Indian dental practitioners face additional challenges:

- High competition in private practice
- Limited institutional support
- Financial burden of clinic setup

These factors make urban centers like Mumbai particularly high-risk environments for occupational stress.

## 3. Theoretical Framework

### i) Job Demand–Resource (JD-R) Model

The JD-R model explains stress as a function of imbalance between job demands and available resources:

- High demands: workload, patient pressure
- Low resources: support systems, time

### ii) Transactional Model of Stress

This model emphasizes perception:

- Stress is observed when demands exceed coping capacity
- Individual coping strategies influence outcomes

## 4. Research Methodology

This study uses a **systematic narrative review approach**:

- **Databases:** PubMed, Scopus, Web of Science
- **Inclusion criteria:**
  - Studies published post-2020
  - Focus on dental practitioners
- **Exclusion:**
  - Non-peer-reviewed sources

## 5. Observations and Findings

**Stressors among private dental practitioners in Mumbai**

### i) Clinical Stressors

- High patient volume
  - Complex procedures
  - Time constraints
- ii) Organizational Stressors**
- Administrative burden
  - Lack of support staff
- iii) Financial Stressors**
- High clinic setup costs
  - Expensive equipment
- iv) Psychosocial Stressors**
- Patient anxiety
  - Fear of litigation

### Impact on Physical Health

**i) Musculoskeletal Disorders:** Dentists commonly experience the following

- Neck pain
- Back pain
- Wrist strain

These conditions arise from prolonged static posture and repetitive movements.

**ii) Fatigue:** It reduces efficiency and increases the likelihood of clinical errors.

**iii) Cardiovascular Risk:** Chronic stress is associated with hypertension and cardiovascular disease.

### Impact on Mental Health

**i) Anxiety and Depression:** Chronic stress leads to persistent psychological distress.

**ii) Burnout:** It affects professional performance with patient care quality

**iii) Behavioural Outcomes:** Some practitioners adopt maladaptive coping mechanisms such as substance use.

### Impact on Professional Performance

Stress negatively affects:

- Clinical decision-making
- Patient communication
- Treatment outcomes

So conceptually, Stressors → Mediators → Outcomes

- Stressors: workload, finances
- Mediators: coping strategies, support
- Outcomes: physical + mental health

## 6. Discussion and Recommendations

The findings confirm that dentistry is a high-risk profession for stress-related disorders. In Mumbai, urban pressures significantly amplify stress levels.

Stress not only affects practitioners but also compromises patient safety and healthcare quality.

### Individual Level

- Stress management training
- Ergonomic improvements

### Organizational Level

- Flexible scheduling
- Mental health support

### Policy Level

- Regulation of working hours

## 7. Conclusion

Stress is a major occupational risk for dentists in Mumbai, with detrimental effects on both physical and emotional

well-being. Coordinated actions at the individual, organizational, and policy levels are needed to address this problem.

## REFERENCES

1. Afrashtehfar, K. I., & Jurado, C. A. (2023). Burnout in dentistry. *Journal of Evidence-Based Dental Practice*. <https://doi.org/10.1016/j.jebdp.2023.101886>
2. Al-Emara, Z., et al. (2024). Musculoskeletal disorders in dentists. *Work*. <https://doi.org/10.3233/WOR-230303>
3. Anzar, W., et al. (2022). Occupational stress and burnout. *Work*. <https://doi.org/10.3233/WOR-210555>
4. Badrasawi, T., et al. (2024). Stress and burnout in dentists. *Heliyon*. <https://doi.org/10.1016/j.heliyon.2024.e32034>
5. Dagli, N., & Haque, M. (2024). Occupational stress in dentistry. <https://doi.org/10.3329/bjms.v24i3.82924>
6. Soo, S. Y., et al. (2023). Musculoskeletal disorders in dentists. *Work*. <https://doi.org/10.3233/WOR-211094>
7. Wei, J., et al. (2024). Stress and MSDs in dental hygienists. *Medicine*. <https://doi.org/10.1097/MD.0000000000040967>
8. Takefuji, Y. (2024). Burnout in dentists. *British Dental Journal*.
9. Marya, A., & Viet, H. (2025). Stress and fatigue in dentistry. *British Dental Journal*.
10. Mak, C. H., et al. (2026). Burnout among dental students. *BMC Medical Education*.