

From Burnout to Breakdown

**Investigating the consequences of medical
errors on healthcare providers**

**A systematic
review**

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Overview

This research examines medical errors in hospitals, focusing on:

- Their root causes
- Their psychological and professional impact on healthcare providers
- Institutional responses to mitigate errors and support the affected staff



Global Burden of Medical Errors

U.S. statistics (BMJ, 2016)-

- 2,50,000+ annually due to preventable medical errors
- 3rd leading cause of death after heart disease and cancer

Low- and Middle-Income Countries-

- Underreporting due to lack of systems, but estimated to be equally severe



Indian Healthcare Challenges

Systemic Pressures-

- Overburdened staff
- Under-resourced public hospitals

Documentation and reporting gaps-

- Fear of legal action
- Cultural stigma around committing mistakes



Problem Statement

Gaps Identified:

- Lack of standardized error reporting in India due to fear of litigation, professional stigma and hierarchical cultures.
- Minimal research on provider's psychological trauma - Second victim syndrome



Research Aim

- To examine the causes of medical errors in hospitals and evaluate the impact of such errors on healthcare providers

Null Hypothesis (H0)

There is no significant impact of medical errors on the emotional, psychological, or professional well-being of healthcare providers.

Alternate Hypothesis (H1)

Medical errors significantly affect the emotional, psychological, and professional well-being of healthcare providers.

Research Objectives

- To identify the medical errors in hospital settings.
- To identify the root causes of medical errors in hospital settings.
- To assess the impact of those medical errors on healthcare providers.

Methodological Framework

01

Research Design

- Design: Qualitative systematic review
- Studies Analyzed: 19 peer-reviewed articles

02

Data Collection

- Databases: PubMed, BMJ, WHO reports, NABH
- Focus: Hospital-based errors in India & global contexts

03

Analysis

1. Thematic Synthesis:

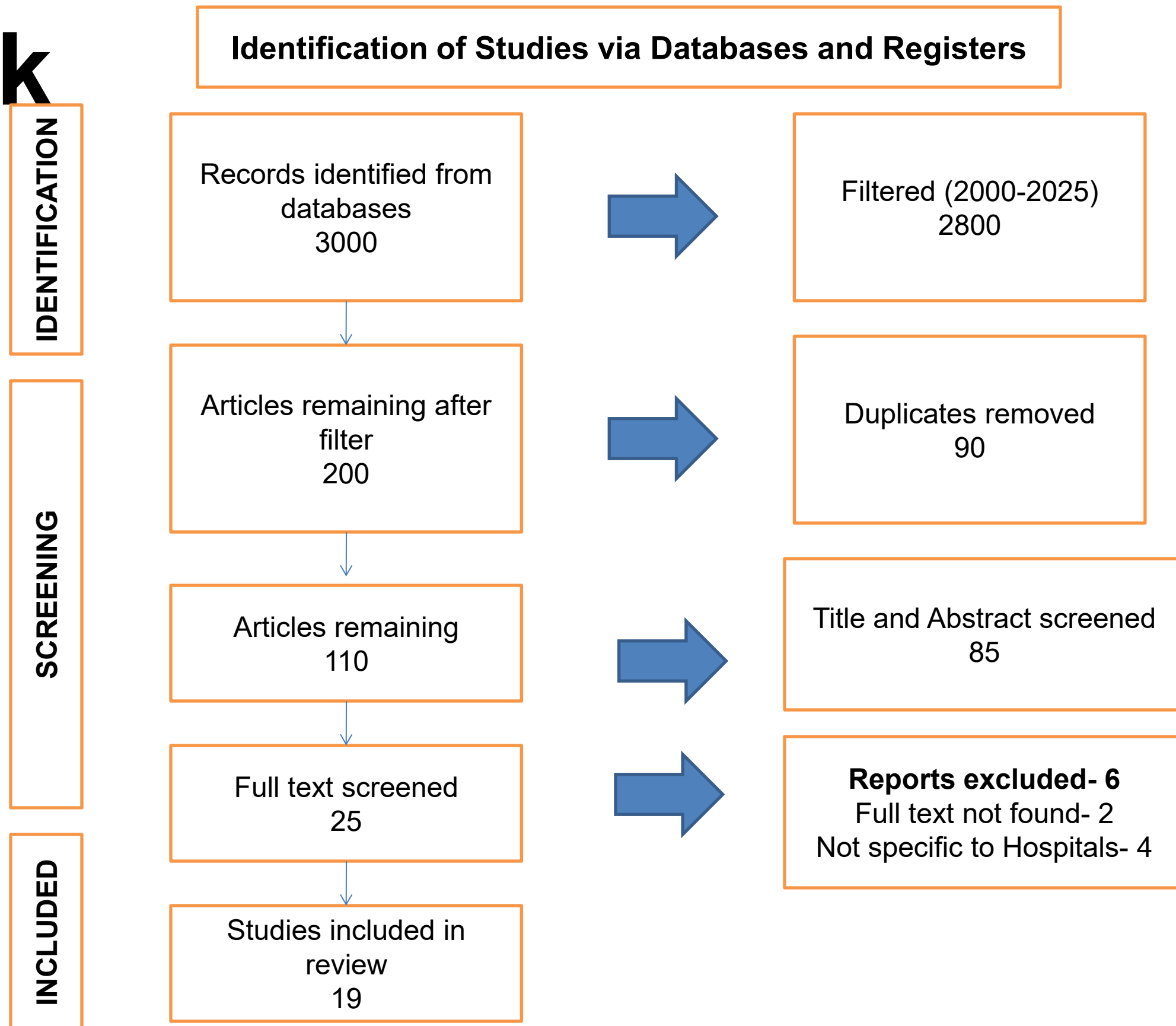
- Identified patterns in:
 - Burnout contributors
 - Error types
(diagnostic/medication/surgical)
 - Institutional support gaps

2. Tools Used:

- PRISMA framework for study selection
- Excel for coding recurring themes



Framework



Sr. No.	Author(s) & Year	Study Title	Objective of Study	Methodology	Key Findings	Relevance to Research Question
1	Robertson JJ & Long B (2018)	Suffering in Silence: Medical Error and its Impact on Health Care Providers	Explore emotional and psychological effects of medical errors on healthcare workers	Narrative Review	Medical errors lead to stress, guilt, depression, and job dissatisfaction among providers	Highlights emotional burden on healthcare providers
2	Li CJ et al. (2023)	Physician Burnout and Medical Errors: Exploring the Relationship, Cost, and Solutions	Examine relationship between physician burnout and medical errors	Review + Data Analysis	Burnout significantly increases risk of medical errors	Links burnout to higher medical errors
3	Aubin DL et al. (2022)	Support for Healthcare Workers and Patients after Medical Error through Mutual Healing	Study healing processes after medical errors	Qualitative Interviews	Support groups help reduce emotional distress post-error	Suggests importance of institutional support
4	Waterman AD et al. (2007)	Emotional Impact of Medical Errors on Physicians	Assess emotional impact of errors on physicians	Cross-sectional Survey	Increased anxiety, guilt, and lower job satisfaction reported	Quantifies emotional effects on doctors
5	Tawfik DS et al. (2018)	Physician Burnout, Well-being, and Work Unit Safety	Analyze relationship between burnout and medical errors	Cross-sectional Study	High burnout levels associated with poor safety grades and more errors	Shows need to address provider well-being
6	Shanafelt TD et al. (2010)	Burnout and Medical Errors Among American Surgeons	Study association between burnout and self-reported errors	Survey	Surgeons with burnout twice as likely to report medical errors	Reinforces burnout's impact on error rates
7	Scott SD et al. (2009)	The natural history of recovery for the healthcare provider after adverse patient events	Study recovery stages after an adverse event	Qualitative Interviews	Healthcare providers go through shock, guilt, and isolation phases	Provides psychological recovery models

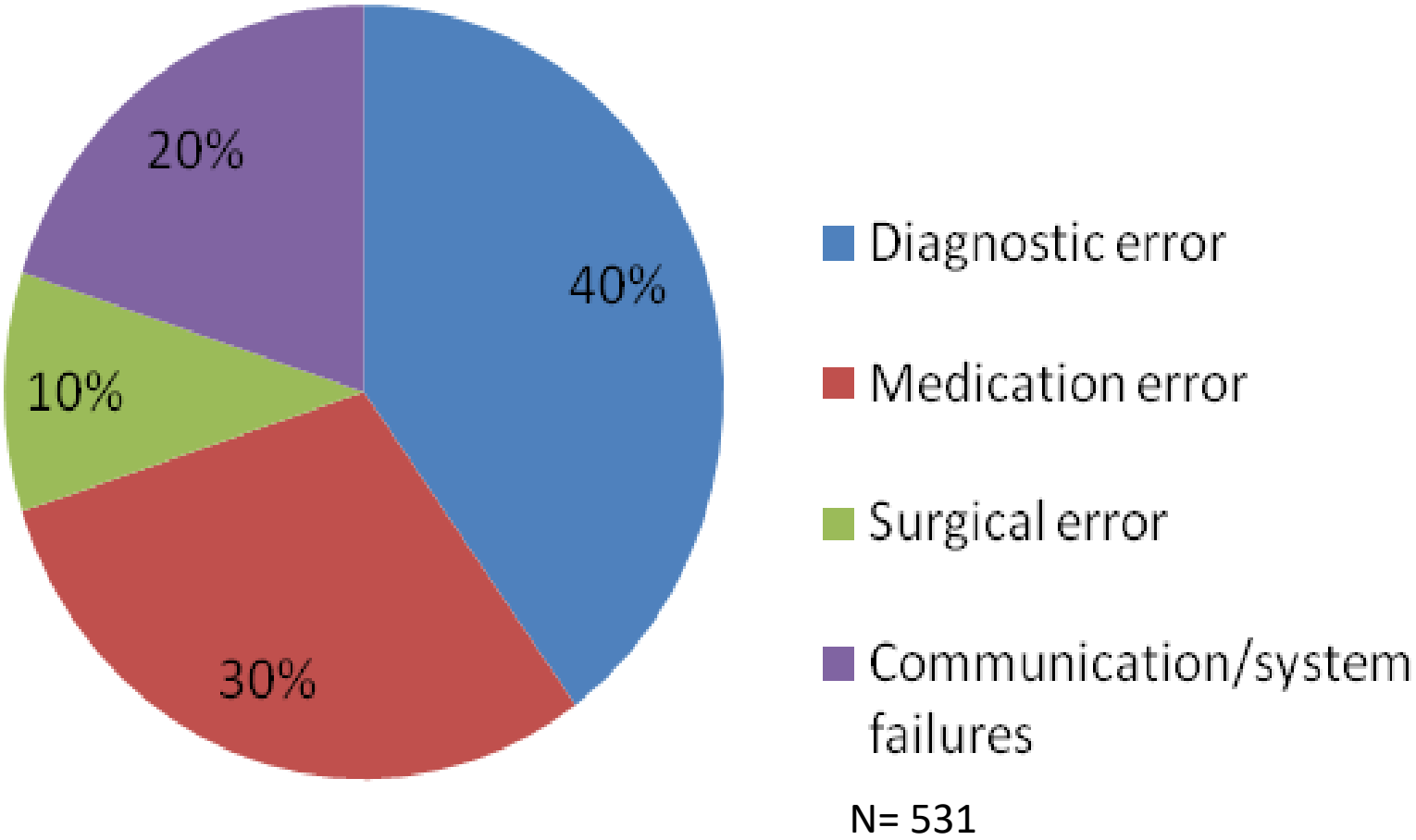
Literature Review

Sr. No.	Author(s) & Year	Study Title	Objective of Study	Methodology	Key Findings	Relevance to Research Question
8	West CP et al. (2006)	Association of Perceived Medical Errors with Resident Distress and Empathy	Explore impact of perceived errors on emotional distress	Prospective Cohort Study	Errors increase distress and lower empathy in residents	Links emotional exhaustion with error perception
9	Waterman AD et al. (2006)	Error Disclosure: Physician Attitudes and Practices	Investigate physician attitudes about disclosing errors	Cross-sectional Survey	Physicians feel guilt but fear legal consequences of disclosure	Emotional impact and fear after medical errors
10	Gallagher TH et al. (2003)	Patients' and Physicians' Attitudes Regarding Disclosure of Medical Errors	Study communication gap in error disclosure	Mixed Methods Study	Physicians experience stress and confusion around disclosure	Links emotional distress with communication difficulties
11	Chan DK et al. (2016)	Burnout in Health Professionals	Review burnout causes and consequences	Systematic Review	Burnout linked to absenteeism, reduced care quality, and errors	Context for stress and medical errors
12	Cañadas-De la Fuente GA et al. (2015)	Risk factors and prevalence of burnout syndrome in healthcare professionals	Systematic Review of Burnout	Analyze burnout prevalence	High burnout correlates with high error rates	Shows systemic problem affecting providers
13	Hall LH et al. (2016)	Healthcare Staff Well-being, Burnout, and Patient Safety	Systematic Review	Investigate relationship between staff well-being and patient safety	Poor staff well-being increases safety incidents	Directly connects burnout to patient risk
14	Rodziewicz TL et al. (2025)	Medical Error Reduction and Prevention	Comprehensive overview of errors and their impact	Review	Emphasizes need for systemic error reporting and emotional support	Broad understanding of error consequences

Literature Review

Sr. No.	Author(s) & Year	Study Title	Objective of Study	Methodology	Key Findings	Relevance to Research Question
15	Vincent C (2003)	Understanding and Responding to Adverse Events	Discuss how individuals and organizations should respond to medical errors	Conceptual Review	Emphasizes emotional impact on individuals and need for system improvements	Adds depth to recovery process after errors
16	Prentice JC et al. (2020)	Association of Open Communication and the Impact of Medical Error on Patients and Families	Study emotional and behavioral impact post-error	Cross-sectional Survey	Open communication helps mitigate psychological harm	Shows indirect relief for healthcare providers too
17	Scott SD et al. (2009)	The natural history of recovery for the healthcare provider after adverse patient events	Study emotional phases providers go through post-error	Mixed Methods Study	6 emotional stages identified post-event (chaos, intrusive thoughts, etc.)	Details emotional timeline for providers
18	Wu AW (2000)	Medical Error: The Second Victim	Conceptualize the healthcare provider as a "second victim"	Conceptual Paper	Providers experience trauma similar to PTSD after errors	Foundation theory for emotional burden research
19	White AA et al. (2022)	Supporting Clinicians After Medical Error	Examine institutional support strategies	Policy Review	Support programs like peer counseling reduce provider burnout	Practical recommendations for supporting providers
20	Edrees H et al. (2011)	Implementing the RISE second victim support program	Describe development and outcomes of support program	Case Study	Staff peer support improved emotional recovery	Application-based solution to post-error trauma
21	Ozeke O et al. (2019)	Burnout Syndrome and Medical Errors Among Cardiologists	Study burnout rates and correlation with errors	Observational Study	Burnout linked to poor outcomes and higher error rates	Specialty-specific validation of burnout–error link

Frequency of Medical Errors



Impact on Healthcare Providers

Psychological Impact

- Second Victim Syndrome- Emotional and psychological distress experienced by healthcare providers involved in medical errors or adverse patient events.

Professional Consequences

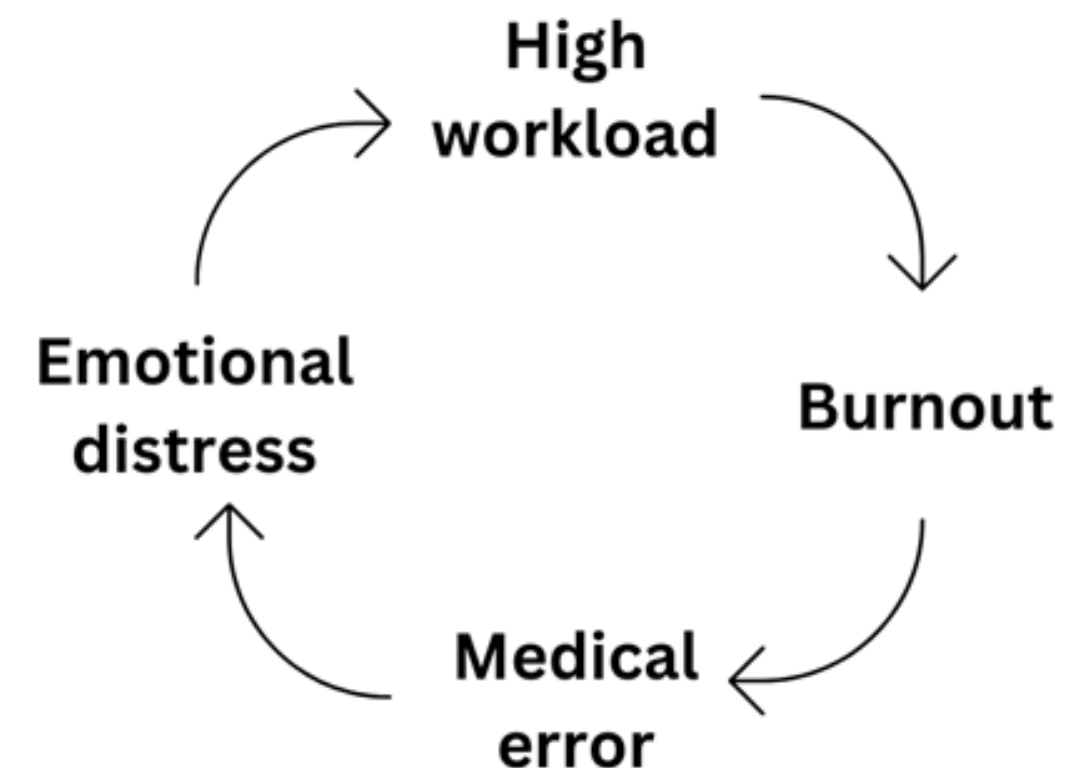


Fig: Cyclical relationship of burnout and error

Key Themes Identified

Page 14

The Vicious Cycle of
medical error and provider
burnout



Systemic failures fuel
medical errors

Cultural barriers to safety

Support- the missing layer

Response



Why systems fail?

01

Culture of fear

02

Structural barriers

Evidence-based solutions

01

Just Culture implementation

02

Root Cause Analysis

03

Peer Support Networks

04

Educating and training

Conclusion

Objective 1: To identify the medical errors in hospital settings

- Common errors: Diagnostic inaccuracies, medication mistakes, and communication failures.

Objective 2: To identify the root causes of medical errors in hospital settings

- Systemic factors and individual factors were identified as primary contributors.

Objective 3: To assess the impact of those medical errors on healthcare providers

- “Second victim” syndrome validated: Guilt, PTSD-like symptoms, and career repercussions.
- Confirmed a bidirectional link: Burnout increases error risk, and errors worsen burnout.

RECOMMENDATIONS

Systemic and Organizational reforms:

- Strengthen error reporting and analysis
- Optimize workflow and workforce
- Technology integration

Psychological and Institutional support:

- Second victim support programs
- Just Culture

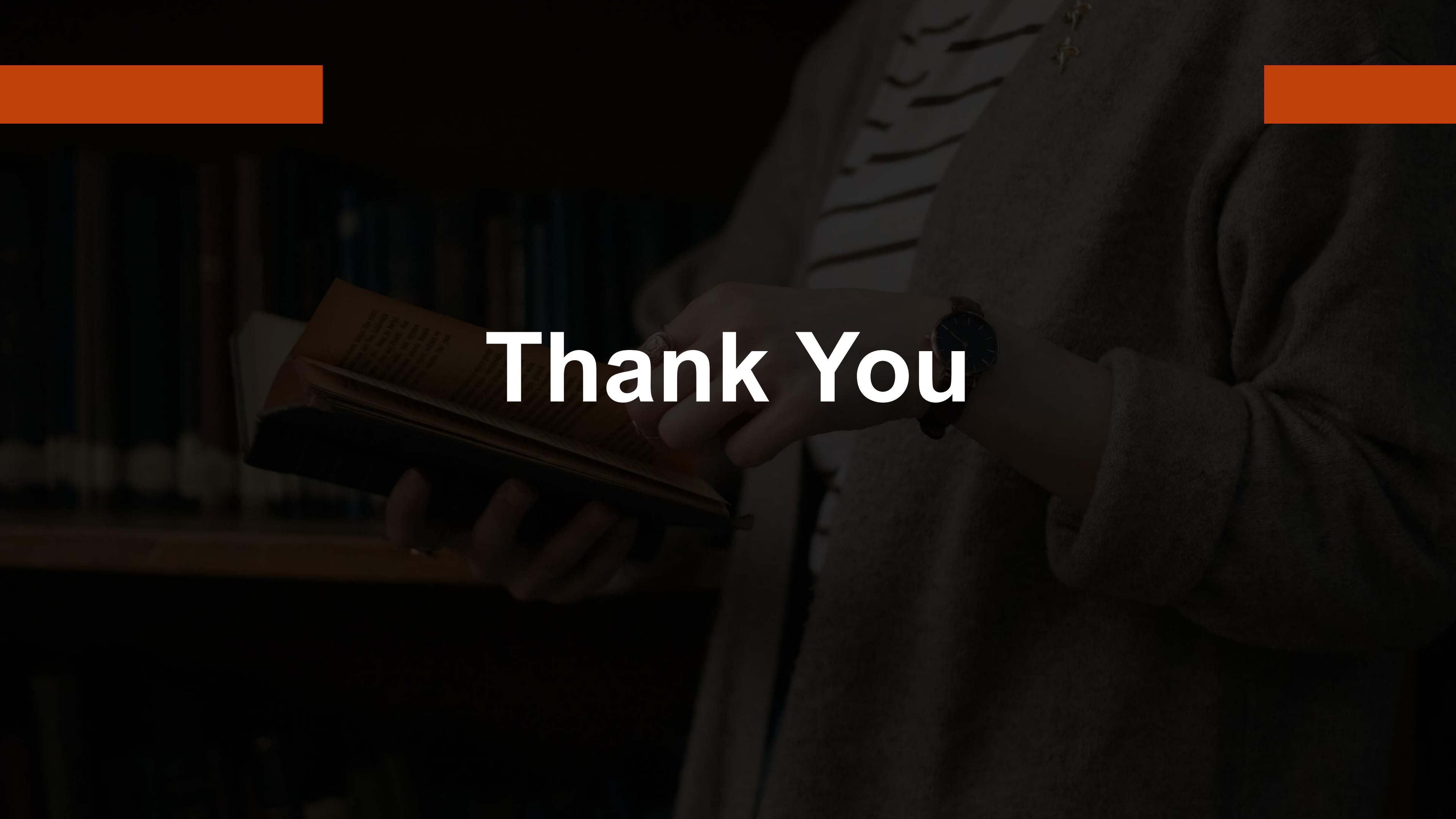
Education and Training Interventions:

- Curriculum enhancements
- Continuous professional developments

Policy and Advocacy Measures:

- National/Regional policies
- Hospital-level leadership actions



A dark, moody photograph of a person's hands holding an open book. The person is wearing a grey sweater and a watch. The background is a blurred bookshelf. Two solid orange rectangular bars are positioned at the top left and top right of the image. The text "Thank You" is centered in a large, white, sans-serif font.

Thank You