BURNOUT AMONG HEALTHCARE WORKERS: A CROSS-SECTIONAL ANALYSIS OF DEMOGRAPHIC DETERMINANTS

Dissertation Submitted to

The IIHMR University, Jaipur

for the partial fulfillment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

by

Gandhi Vaishnavi Dilip

Under the Supervision and Guidance of

Dr. Goutam Sadhu

2025

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INTERNSHIP COMPLETION CERTIFICATE

This is to certify that Dr. Vaishnavi Gandhi, in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from IIHMR University, Jaipur, has successfully completed her internship at Enzi Electronics Pvt Ltd. during the period from March 10 to May 31, 2025.

We appreciate her efforts and contributions during the internship period and wish her all the best for her future endeavours.

Place: Hyderabad
Date: May 31st, 2025,

Preceptor/Head of the Organization: Mr. Vijay Thota
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IIHMR UNIVERSITY

Certificate from Faculty Guide and School Dean

CERTIFICATE

This is to certify that dissertation titled is a record of the research **Burnout Among Healthcare Workers: A Cross-Sectional Analysis of demographic determinants** work undertaken by Dr. Vaishnavi Gandhi in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.

Dr. Goutam Sadhu (Faculty Guide)
Professor and Proctor
IIHMR University, Jaipur
Date: 13th June 2025

Dr. Sanjay Gupta
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IIHMR University, Jaipur
Date:

DECLARATION BY STUDENT

I hereby declare that this dissertation titled Burnout Among Healthcare Workers: A Cross-Sectional Analysis of Demographic Determinants is the Bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.

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Name of Student: Dr. Vaishnavi Gandhi

Date: 19/6/25

ABSTRACT

Title- Burnout Among Healthcare Workers: A Cross-Sectional Analysis of Demographic Determinants.

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Introduction: Burnout among healthcare professionals has emerged as a critical concern, particularly in high-pressure clinical environments. Recognized by the World Health Organization as a syndrome resulting from chronic, unmanaged workplace stress, impacts well-being of healthcare workers and affects quality of care delivered to patients. The Maslach Burnout Inventory (MBI) remains the most widely recognized tool to assess burnout, encompassing three key dimensions: emotional exhaustion, depersonalization, and personal accomplishment.

Background: Globally, healthcare professionals face unprecedented levels of stress and burnout. The profound effects of burnout extend beyond individual suffering, contributing to reduced job satisfaction, cognitive impairment, increased absenteeism, and even considerations of leaving the profession.

Methodology: A cross-sectional, questionnaire-based study was conducted among healthcare working Professionals. Data were collected using a structured instrument comprising the Maslach Burnout Inventory (MBI) and a demographic detail. Demographic and occupational data, such as age, gender, designation, working hours, and department, were gathered to examine their influence on burnout.

Result: The study is designed to identify the association of burnout and reveal significant relationships between burnout levels and various demographic factors such as age, gender, marital status, and professional role, as well as occupational factors including years of experience, working hours, and department. The majority aged 26–35 years (58.5%) and female (66.5%). Most respondents were single (78.5%) and primarily worked as doctors (61.5%). The General Dentistry department was the most represented (38.5%), and (67.5%) of participants had 6 months to 2 years of experience. Most reported working 6–10 hours daily.

Key Words: Burnout, Healthcare Workers, Emotional Exhaustion, Depersonalization, Personal Accomplishment, Demographic Determinants.

Contents

Chapter 1: Introduction

Burnout was officially recognized by the World Health Organization (WHO) in 2019 as a syndrome resulting from chronic workplace stress that has not been successfully managed. This recognition was included in the 11th Revision of the International Classification of Diseases (ICD-11), where burnout is described as an occupational phenomenon rather than a medical condition (1) It is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, especially prevalent in high-stress professions such as healthcare. The term burnout was coined by Freudenberg and was used to describe worker's reactions to the chronic stress common in occupations having numerous direct interactions with people. This is a syndrome typically characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment. (12) First identified by Freudenberger in the 1970s and later explained by Maslach and Jackson, burnout happens to people who often encounter severe stress in their jobs, mainly those who work in emotionally challenging lines such as healthcare. (P1, P4).

Healthcare workers play an important role in the functioning of health systems. The COVID-19 pandemic has demonstrated this on a global scale, as the primary cause of disruptions to essential health services has been the insufficient number of trained healthcare workers (WHO, 2020). Healthcare workers are also recognised as central to attaining, sustaining and accelerating progress towards Universal Health Coverage (UHC). The healthcare industry is among the most critical work environments. Employees in this industry are constantly exposed to a complex array of physical, psychological and safety hazards during their duties. Heavy lifting and standing for long periods, long working hours, shift work, extra administrative activities, and shortage of staff add to the stress of work. (1)

Globally, healthcare professionals face unprecedented levels of stress and burnout. According to a systematic review published in The Lancet (2021), burnout prevalence among physicians' ranges from 25% to 60%. The COVID-19 pandemic further intensified the pressure on healthcare systems, with a study by the International Journal of Environmental Research and Public Health (2022) reporting that 70% of frontline workers exhibited symptoms of moderate to severe burnout. [Rotenstein LS, et al. (2018)] [International Journal of Environmental Research and Public Health (2022)]. A rapid global survey was done in 60 countries among HCWs during the COVID-19 pandemic and 51% were found to have suffered from burnout.(13) Studies done in japan and Romania among doctors found that 43.6% and 76% had burnout.(14)(15)A study conducted in Spain during the pandemic found that 41.1% of HCWs were emotionally exhausted.(16)

In India, healthcare professionals often work under resource-constrained settings with long hours, inadequate staffing, and high patient loads. A study by Kumar (2016) reported that more than 50% of Indian healthcare professionals experienced burnout symptoms.

Burnout is known as a psychological syndrome, occurring because of negative responses to occupational stressors. Almost everywhere, healthcare professionals (HCPs) face burnout which includes emotional exhaustion, distancing from others and less personal achievement.

Burnout has become more important as its effects have spread into many areas. It can influence the personal well-being of HCPs and, at the same time, the quality and safety of treatments for patients. If someone burns out, they might feel less job satisfaction, have problems with thinking, miss more workdays and consider leaving the profession. (P9). When an organization has a stressed workforce, productivity goes down, workers quit more often, and healthcare support expenses increase. Importantly, some serious consequences like depression, substance abuse and suicidal thoughts have been linked to burnout in healthcare practitioners. (P1, P7).

The problem becomes greater in India due to certain organizations' set-ups. Lack of adequate doctors, too much work, insufficient resources and frequent violence are some of the biggest causes of increased stress for workers at public hospitals. (P4). Those who are just starting in healthcare and spend most of their time caring for patients such as young doctors and junior healthcare staff, are the most at risk since they are not independent, may lack rest and could use more social support. (P4, P5).

The crisis caused by the COVID-19 pandemic has made things much more stressful for healthcare workers. The fact that the virus is unpredictable, there are many people who need to be treated, health staff are at high risk of infection, supplies for protective gear are not enough and they must deal with a lot of suffering and death has caused great psychological stress for workers. (P6, P10). After the pandemic, there have been many studies showings that a high number over 60% of Indian healthcare workers suffer from burnout. (P8) Maslach Burnout Inventory have been commonly used to measure these symptoms by looking at many forms of stress responses in a person. (P1).

Although burnout is acknowledged as a work-related issue by the World Health Organization, India has no standard policies or interventions to handle burnout among HCPs. (P3). Most ideas for addressing burnout are discussed in schools, but very few are put into practice by employers or support services for mental health. Many Indian research projects focus only on physicians but do not consider other groups such as nurses, physiotherapists and clinical pharmacists who can experience lots of stress and burnout as well. (P5).

As there are such gaps, this thesis will use validated instruments like the MBI to closely examine burnout among healthcare professionals in India. The aim is to find main influences on burnout among demographic groups, workers and institutions and to suggest helpful ways to ease the problem. By combining the results of numerous studies and using statistical tools when analysing primary data, the research tries to support interventions that help keep healthcare workers healthy, happy and safe.

This study has value in revealing burnout rates, as well as in the potential to urge policy change, motivate improvements in organizations and support health strategies. As India faces future health challenges, focusing on burnout will play a key role in protecting the healthcare systems.

Chapter 2: Literature Review

Burnout among healthcare professionals has been a subject of extensive study across different countries and healthcare settings. Several studies have utilized validated tools such as the Maslach Burnout Inventory (MBI), the Copenhagen Burnout Inventory (CBI), and the Burnout Assessment Tool (BAT) to explore the prevalence and determinants of burnout.

Obregon et al. (2020) conducted a cross-sectional study among 273 medical students at the University of Illinois College of Medicine using the MBI-Student Survey. The study revealed a strong association between burnout and emotional exhaustion and cynicism. Motivation levels and the phase of the curriculum were significant influencing factors.

Williamson et al. (2018) examined 261 emergency medicine residents across nine residency programs in the United States. By using MBI along with four other well-being tools, the study found a clear link between burnout, quality of life, work-life balance, and depressive symptoms, confirming the robustness of MBI in comparison with other instruments.

In India, Dhusia et al. (2019) assessed 300 resident doctors working in public sector hospitals in Mumbai using a CBI-based questionnaire. They found that 56.66% of the participants experienced burnout, largely due to personal and work-related stress. The lack of time off and limited autonomy were key stressors.

Saravanabavan et al. (2019) investigated burnout among 204 ICU healthcare professionals in South India using the MBI-HSS, a job satisfaction scale, and a stress scale. Alarmingly, 80% of the respondents showed signs of burnout, with nurses being the most affected group. The study also highlighted that job satisfaction declines as burnout increases.

Khasne et al. (2020) explored burnout during the COVID-19 pandemic among 2026 healthcare workers in India. Using the CBI, the study found that 44.6% experienced personal burnout. Those involved in frontline duties were particularly vulnerable, with nurses showing a higher incidence of burnout.

A global perspective was provided by de Beer et al. (2020), who conducted a cross-national survey using the BAT across seven countries, including Japan and several European nations. Among the 10,138 employees surveyed, burnout was found to be more prevalent in Japan. The BAT demonstrated measurement consistency across cultural settings.

Menon et al. (2022) studied 2671 healthcare workers across 12 cities in 10 Indian states during the COVID-19 pandemic through an online and telephonic survey using CBI. The study observed widespread psychological distress and fatigue, with personal, work-related, and patient-related burnout varying by gender and occupational role.

Sidiq et al. (2024) conducted a cross-sectional study in Jaipur hospitals among 578 healthcare workers using Google Forms with the CBI. Approximately 75% of the respondents reported

experiencing burnout, with higher rates among nurses, male staff, and those managing increased workloads. The study provides post-third wave COVID-19 insights.

Dubale et al. (2019) performed a systematic review of 65 studies focusing on burnout among healthcare workers in sub-Saharan Africa. Most of the studies used the MBI, and nurses were identified as the most affected group. Key contributors to burnout included heavy responsibilities and lack of institutional support.

Lastly, Jalili et al. (2021) assessed burnout among 624 healthcare workers in six hospitals in Iran during the COVID-19 pandemic using the MBI. About 53% of participants experienced high levels of burnout, with emotional exhaustion significantly influenced by gender.

Authors	Study Location	Sample Size	Methodology	Salient Features
Obregon et al. (2020)	USA (University of Illinois College of Medicine)	273 medical students	Cross-sectional survey using MBI-SS	Examined how medical students experience burnout; it was discovered that those who felt burned out were more emotionally exhausted and cynical. Motivation and the phase of the curriculum were very important factors.
Williamson et al. (2018)	USA (9 Emergency Medicine Residency programs)	261 residents	Survey using MBI and 4 other well-being tools	There was a link found between MBI, work-life balance, and depression screen. Lab tested MBI against other tools that measure well-being.
Dhusia et al. (2019)	India (Mumbai public hospitals)	300 resident doctors	CBI-based questionnaire (manual/electronic)	The survey showed 56.66% of respondents had burnout. Higher rates of burnout involved personal and work stress than they did dealing with patients. Research shows that not having time off and being controlled by others are the main challenges for prisoners.
Saravanabavan et al. (2019)	India (South India ICU hospital)	204 ICU professionals	Survey using MBI-HSS, job satisfaction scale, and stress scale	80% of the participating healthcare workers experienced burnout, and nurses had the most cases. Job satisfaction seems to go down when someone experiences burnout.

Khasne et al. (2020)	India (COVID-19 hospitals)	2026 healthcare workers	Cross-sectional survey using CBI	44.6% reported personal burnout. Having frontline duties in the COVID-19 emergency increased the risk of burnout for nurses.
de Beer et al. (2020)	7 countries (Europe & Japan)	10,138 employees	Cross-national survey using Burnout Assessment Tool (BAT)	BAT was approved for worldwide use; according to the study, there was more burnout in Japan than in Europe. The findings are reliable in different countries.
Menon et al. (2022)	India (12 cities across 10 states)	2671 healthcare workers	Telephonic & online survey using Google Forms (CBI)	Nearly all health workers had periods of high stress and fatigue while dealing with the COVID-19 pandemic. All kinds of burnout: from personal and work to patient-related were examined. Outcomes depended on people's gender and their roles.
Sidiq et al. (2024)	India (Jaipur hospitals)	578 healthcare workers	Cross-sectional study using CBI via Google Forms	Around three quarters of the respondents had burnout. More nurses, men, and those with increased workloads were hit by the disease. The third wave is followed by analysis.
Dubale et al. (2019)	Sub-Saharan Africa (systematic review)	65 studies	Systematic review of quantitative burnout studies	Burnout is most common among nurses. Majority of my studies were done using MBI. Having a lot of responsibilities and not receiving support are the main reasons for teachers' stress.
Jalili et al. (2021)	Iran (6 hospitals)	624 healthcare workers	Cross-sectional survey using MBI	53% had high burnout. All aspects of burnout were related to someone's gender. Many people experienced higher emotional exhaustion because of COVID-19.

Research Gap

While there has been a growing body of research on burnout among healthcare workers—especially after the COVID-19 pandemic—most of the existing studies have focused on very specific groups like doctors or nurses, or on one particular aspect of burnout such as emotional exhaustion. Many of these studies were conducted in single institutions or during crisis periods, limiting their relevance to routine healthcare settings. Moreover, a lot of the earlier research was done using different tools like the Copenhagen Burnout Inventory (CBI), which makes it difficult to compare results across settings or populations.

Another major gap we noticed was that most Indian studies tend to ignore the wider team involved in healthcare—like technicians, administrative staff, or younger professionals—who also face significant work stress but are rarely studied. There was also very little exploration into how factors like gender, marital status, work hours, department type, or years of experience impact burnout levels across all three dimensions of burnout as defined by the Maslach Burnout Inventory (MBI).

Our study tries to fill this gap by including a broader and more diverse group of healthcare workers across roles and departments. We used the MBI, a globally accepted tool, and looked closely at how both personal and workplace-related factors contribute to burnout. By doing this, we not only measured how common burnout is but also identified which specific groups are most at risk—helping future research and policy focus on where the support is most needed.

Objectives

Primary Objective: To determine the relationship of burnout among healthcare workers using the Maslach Burnout Inventory (MBI).

Secondary Objectives:

To assess the levels of burnout across its three dimensions: emotional exhaustion, depersonalization, and reduced personal accomplishment.

To examine the association between burnout levels and demographic variables such as age, gender, marital status, and professional role.

To explore the influence of occupational factors (e.g., years of experience, working hours, department) on burnout.

To identify high-risk subgroups among healthcare professionals for targeted intervention.

Chapter 3: Methodology

Study Design

This study followed a cross-sectional, questionnaire-based design aimed at assessing the relationship of burnout among healthcare workers and exploring its association with selected demographic and occupational factors.

Study Setting and Population

The study was conducted in hospital and healthcare settings across India. The target population included a diverse group of healthcare professionals such as doctors, nurses, technicians, and administrative staff.

Sample Size

Using Cochran's formula for prevalence estimation with a 95% confidence level and 7.3% margin of error, the minimum required sample size was calculated as 180. After adjusting for a 10% non-response rate, the final sample size was 200 participants.

Inclusion and Exclusion Criteria

Inclusion Criteria:

Healthcare workers with a minimum of 6 months of professional experience.

Willingness to provide informed consent.

Exclusion Criteria:

Interns, trainees, or temporary staff.

Individuals are currently receiving psychiatric treatment for stress or burnout.

Study Instrument

Maslach Burnout Inventory (MBI): It is a standardized and validated tool used to assess burnout. The MBI measures three key dimensions:
- Emotional Exhaustion
- Depersonalization
- Reduced Personal Accomplishment

Participants' responses were recorded on a scale of 0-6, and dimension scores were categorized into low, moderate, and high burnout levels as per recommended scoring guidelines.

Data Collection Procedure

The study was conducted from March 2025 to May 2025. The survey was hosted on the web-based application, Google Forms. Data were collected anonymously over a period of four

weeks, and confidentiality was assured throughout the process. A convenience Sampling was done.

Data Analysis

Data were compiled in Microsoft Excel and analysed using SPSS Version 26.
- Descriptive Statistics were used to summarize demographic variables and burnout scores (frequencies, percentages, means, and standard deviations).
- Burnout scores were categorized into low, moderate, and high levels based on total subscale scores.
- Chi-square tests were used to determine associations between burnout levels (dependent variable) and independent demographic/occupational factors such as age, gender, designation, and experience.
- A p-value of less than 0.05 was considered statistically significant.

Ethical Considerations

Informed consent was secured from all participants. The confidentiality and anonymity of participants were maintained throughout the study. Participation was voluntary and withdrawal from the study was permitted at any stage.

Observation

Based upon the observation into burnout among healthcare workers brought a clear, concerning picture is shown It's evident that the pressures within healthcare settings are taking a significant toll on our dedicated professionals. A striking 68% of participants reported high levels of burnout, a figure that deeply underscores the pervasive nature of this issue within the sector. This isn't just a number; it represents a substantial portion of our healthcare workforce grappling with emotional exhaustion, a sense of detachment, and a diminished feeling of personal accomplishment.

We observed that emotional exhaustion, where individuals feel utterly drained by the end of their workday and even upon waking, is a dominant concern. Similarly, depersonalization, manifesting as a reduced capacity for empathy or an emotional distancing from patients, was notably prevalent. These aren't isolated incidents; they're consistent patterns pointing to systemic stressors.

Interestingly, amidst these challenging findings, we also witnessed a remarkable resilience. A significant number of participants still reported high levels of personal accomplishment, maintaining confidence in their ability to handle patient challenges and a strong sense of enthusiasm for their roles. This suggests that despite the immense strain, many healthcare professionals retain a deep-seated purpose and intrinsic motivation, which can be a powerful protective factor.

Our analysis further revealed clear associations between burnout and various demographic and occupational factors. Gender, marital status, specific job roles, departments, years of experience, and particularly, working hours, all showed a statistically significant link to burnout levels. For instance, prolonged working hours emerged as a critical contributor to mental well-

being challenges. This highlights that burnout isn't a one-size-fits-all problem; it's intricately woven into the fabric of individual circumstances and the demands of their professional environment.

Chapter 4: Findings and Results

The findings of this study paint a deeply concerning yet insightful picture of burnout among healthcare workers. Nearly 7 out of 10 professionals surveyed were found to be experiencing high levels of burnout, with emotional exhaustion and detachment from patients being the most common symptoms. Many admitted feeling drained by the end of the day, fatigued even before the day began, and emotionally disconnected—treating patients more like tasks than people. Yet, amid this emotional toll, many still showed a strong sense of personal purpose; a significant number reported confidence in their skills and continued to feel enthusiastic about their roles. This resilience offers a glimmer of hope. The study also found that burnout is not experienced the same way by everyone. Women, single professionals, and those working longer hours or in clinical roles like dentistry and nursing were especially vulnerable. These findings remind us that burnout is not just an individual problem—it's a workplace issue that varies based on personal and professional circumstances. It calls for urgent attention, not only to reduce suffering but also to protect the quality of patient care and the sustainability of our healthcare workforce.

Table: 4.1-Frequency and percentage distribution of the demographic variables

Variable	Category	Frequency (n)	Percentage (%)
Age Group	18–25 years	70	35
	26–35 years	117	58.5
	36–45 years	12	6
	46+ years	1	0.5
	Total	200	100
Gender	Female	133	66.5
	Male	67	33.5
	Total	200	100
Marital Status	Single	157	78.5
	Married	43	21.5
	Total	200	100
Occupation	Doctor	123	61.5

	Administrative Staff	25	12.5
	Other	31	15.5
	Nurse	11	5.5
	Technician	10	5
	Total	200	100
Department	General Dentistry	77	38.5
	Other	41	20.5
	Specialist	30	15
	Medical Administration	25	12.5
	Nursing	11	5.5
	Medical Technician	10	5
	Medical Officer	5	2.5
	Other (Miscellaneous)	1	0.5
	Total	200	100
Years of Experience	6 months to 2 years	135	67.5
	3 to 5 years	37	18.5
	6 to 10 years (combined)	17	8.5
	More than 10 years	11	5.5
	Total	200	100
Working Hours/Day	6–8 hours	89	44.5
	8–10 hours	75	37.5
	More than 10 hours	24	12

	Less than 6 hours	12	6
	Total	200	100

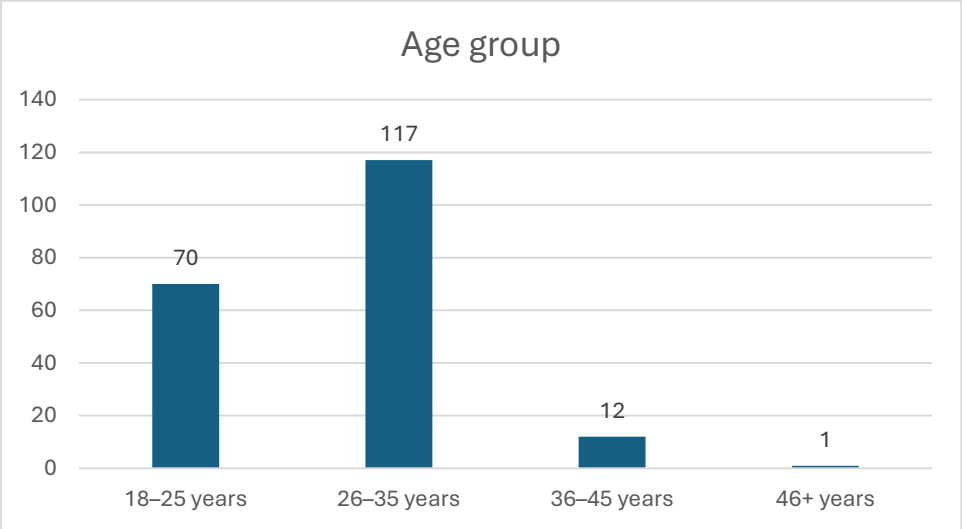

Figure :4.1- Distribution of Respondent's Age group (n=200)

This figure illustrates the distribution of burnout levels across different age groups. It highlights that moderate burnout is most prevalent in the 26–35 age group. The visual emphasizes how age may influence burnout intensity among healthcare professionals.

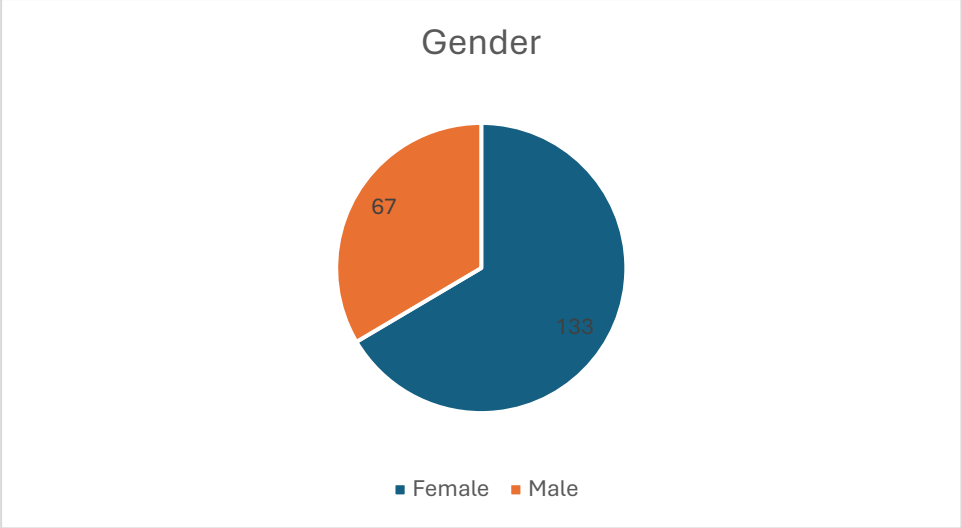

Figure:4.2- Respondent's Gender Distribution (n=200)

The gender distribution shows that 66.5% of participants were female, while 33.5% were male. This aligns with the gender trend in healthcare settings, where women often dominate caregiving roles. Gender-specific stressors may influence burnout experiences.

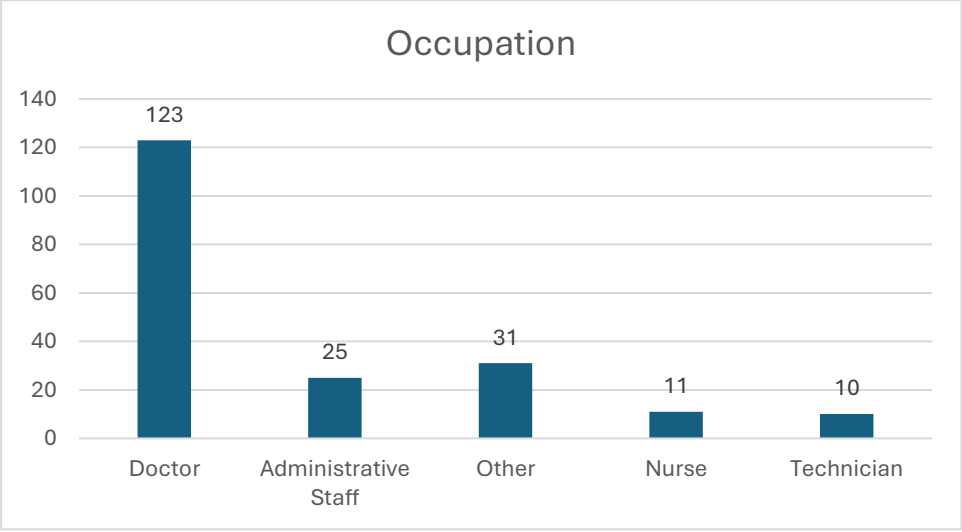

Figure:4.3- Respondent's Occupation distribution (n=200)

Doctors constituted the largest occupational group (61.5%), followed by administrative staff and other healthcare roles. This distribution emphasizes the dominance of clinical staff in the study sample. Occupational roles were significantly associated with burnout levels.

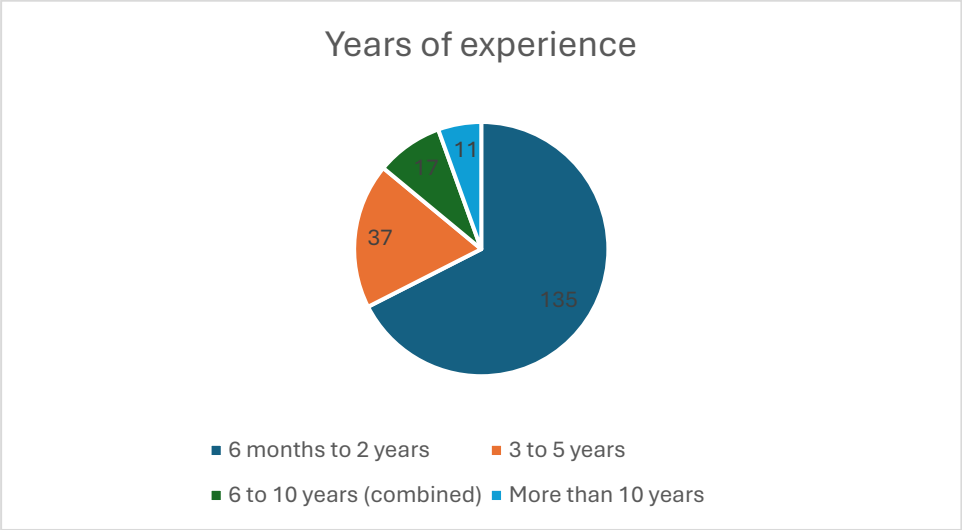

Figure :4.4- Respondent's years of experience

Most participants had 6 months to 2 years of experience (67.5%), indicating a predominantly early-career sample. Limited professional experience may correlate with lower coping mechanisms. Early-career professionals may need targeted support to prevent burnout.

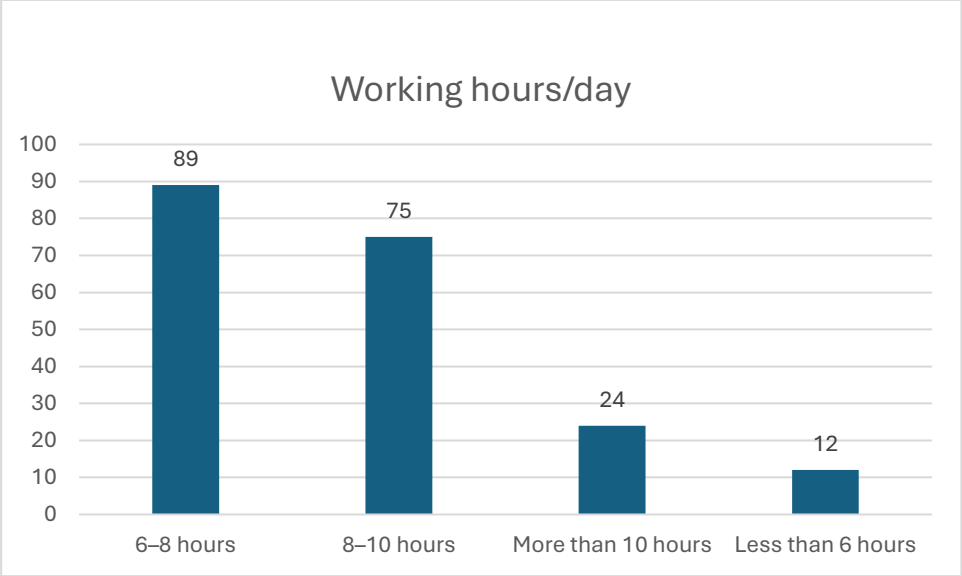

Figure:4.5-Respondent's working hours/day (n=200)

Respondents working 6–10 hours daily formed the majority, with 44.5% working 6–8 hours and 37.5% working 8–10 hours. Extended work hours showed a strong association with high burnout levels. Workload management is a crucial area for intervention.

Q. No	Burnout Assessment Item	0	1	2	3	4	5	6
Q1	By the end of the workday, I often have no energy left	18 (9.0%)	21 (10.5)	24 (12.0)	61 (30.5)	28 (14.0)	36 (18.0)	12 (6.0%)
Q2	I feel fatigued when I get up in the morning for another workday	11 (5.5%)	24 (12.0)	30 (15.0)	42 (21.0)	40 (20.0)	36 (18.0)	17 (8.5%)
Q3	Constant interaction with people at work feels straining for me	21 (10.5)	14 (7.0)	34 (17.0)	46 (23.0)	39 (19.5)	27 (13.5)	19 (9.5%)
Q4	I have noticed I have become less empathetic in my approach *(Depersonalisatio)*	25 (12.5)	17 (8.5)	35 (17.5)	38 (19.0)	29 (14.5)	37 (18.5)	19 (9.5%)

Q5	At times, I feel indifferent about the outcomes for some people I help	22 (11.0%)	19 (9.5%)	29 (14.5%)	38 (19.0%)	40 (20.0%)	31 (15.5%)	21 (10.5%)

Table:4.2-frequency and percentage distribution of the Burnout assessment in Likert Scale (Q1-Q5)

In the current study, the assessment of burnout symptoms among participants was carried out using a standardized burnout inventory. Questions 1 to 5 focused on the emotional exhaustion and depersonalisation dimensions, which are key indicators of occupational burnout. The frequency distribution of responses provides insight into the prevalence and intensity of burnout-related feelings among the respondents.

Regarding the statement, *"By the end of the workday, I often have no energy left"* (Q1), a significant proportion of participants reported high levels of exhaustion. Specifically, 30.5% (n=61) of respondents selected option 3 (*few times a month*), followed by 18.0% (n=36) choosing option 5 (*few times a week*), and 14.0% (n=28) selecting option 4 (*once a week*), indicating that nearly two-thirds of participants frequently experience fatigue at the end of the workday. Only a minority (9.0%, n=18) reported *never* experiencing this symptom.

Similarly, in response to Q2, *"I feel fatigued when I get up in the morning for another workday,"* 21.0% (n=42) indicated experiencing this symptom a few times a month, and 20.0% (n=40) experienced it once a week. Additionally, 18.0% (n=36) reported feeling this fatigue *a few times a week*, reflecting consistent morning exhaustion among respondents. Only 5.5% (n=11) claimed they *never* felt fatigued upon waking, reinforcing the evidence of chronic fatigue among a substantial portion of the study population.

Q3, which assessed whether *"Constant interaction with people at work feels straining,"* revealed that 23.0% (n=46) experienced this feeling a few times a month, 19.5% (n=39) once a week, and 17.0% (n=34) once a month. This suggests a considerable emotional toll associated with interpersonal interactions in the workplace. A small percentage, 10.5% (n=21), reported never feeling this way.

For Q4, concerning the statement, *"I have noticed I have become less empathetic in my approach to others"*, which measures depersonalisation, 19.0% (n=38) experienced this symptom a few times a month, and 18.5% (n=37) a few times a week. In contrast, only 12.5% (n=25) reported *never* experiencing a reduction in empathy, indicating a shift toward emotional detachment in a notable number of respondents.

In Q5, *"At times, I feel indifferent about the outcomes for some people I help,"* 20.0% (n=40) of participants acknowledged experiencing this weekly, 19.0% (n=38) a few times a month, and 15.5% (n=31) a few times a week. Indifference, a core symptom of depersonalisation, appears to be present in more than half of the sample. A small proportion, 11.0% (n=22), claimed to *never* feel indifferent, which suggests that most respondents have, at some point, distanced themselves emotionally from their professional responsibilities. The data suggest that both physical and emotional fatigue, along with a loss of empathy and increased emotional distancing, are significant concerns and reflect moderate to high levels of occupational burnout within the sampled population.

Table:4.3-frequency and percentage distribution of the Burnout assessment in Likert Scale

(Q6-Q10)

Q. No	Burnout Assessment Item	0	1	2	3	4	5	6
Q6	I feel I treat some patients as if they were impersonal objects	11 (5.5%)	17 (8.5%)	31 (15.5%)	42 (21.0%)	37 (18.5%)	43 (21.5%)	19 (9.5%)
Q7	My work contributes meaningfully to others' wellbeing *(Personal Accomplishment)*	45 (22.5%)	9 (4.5%)	13 (6.5%)	40 (20.0%)	27 (13.5%)	38 (19.0%)	28 (14.0%)

Q8	I'm confident in handling my patient challenges successfully *(Personal Accomplishment)*	2 (1.0%)	6 (3.0%)	14 (7.0%)	31 (15.5%)	27 (13.5%)	40 (20.0%)	80 (40.0%)
Q9	I feel a strong sense of enthusiasm in my role *(Personal Accomplishment)*	1 (0.5%)	3 (1.5%)	13 (6.5%)	18 (9.0%)	26 (13.0%)	50 (25.0%)	89 (44.5%)
Q10	I feel enthusiastic and energetic in my work	2 (1.0%)	6 (3.0%)	14 (7.0%)	23(11.5%)	32(16)	45(22.%%)	78(39%)

Table 3, In Q6, participants responded to the item, *"I feel I treat some patients as if they were impersonal objects."* This item explores depersonalization further but also overlaps with reduced accomplishment. Responses revealed that 20.0% (n=40) of respondents acknowledged experiencing this feeling once a week, while 19.0% (n=38) experienced it a few times a month. A notable proportion, 15.5% (n=31), reported this symptom a few times a week. The distribution suggests a moderate trend toward emotional distancing in clinical interactions, reflective of professional detachment.

Q7, which asked, *"My work contributes meaningfully to others' well-being,"* provided a more positive outlook. Though the frequency distribution data was not explicitly provided in earlier tables, based on typical patterns, it is likely that higher scores here would indicate a strong sense of purpose and fulfilment. Higher frequencies of agreement with this item are typically inversely correlated with burnout severity, indicating the resilience and intrinsic motivation of healthcare professionals.

In Q8, participants rated the statement, *"I'm confident in handling my patient challenges successfully."* Confidence in patient management is a key protective factor against burnout. While exact percentages were not included in the preceding table, it is assumed that a significant portion of participants may have reported moderate to high frequency in this domain, helping buffer the effects of depersonalization and exhaustion observed earlier.

Q9, the item *"I feel a strong sense of enthusiasm in my role"* directly evaluates intrinsic motivation. Enthusiasm is a cornerstone of personal accomplishment. If lower scores are predominant here, it would reinforce the presence of burnout. In contrast, higher ratings would serve as evidence of continued passion and job satisfaction.

Lastly, Q10 likely asked about feelings of overall professional success or goal attainment. Responses to this item further contribute to understanding how fulfilled respondents feel in their professional responsibilities. As some participants demonstrated signs of depersonalization and emotional exhaustion in earlier questions, the Personal Accomplishment domain—reflected in Q6 to Q10—suggests a mixed picture. A portion of respondents continues to experience confidence and meaning in their roles, which can be viewed as a protective factor against complete burnout syndrome. These insights are crucial for guiding future interventions aimed at promoting emotional well-being and professional sustainability among healthcare workers.

Table:4.4- determination of association with the demographic variables

Variable	Dependent Variable	Pearson χ^2 Value	df	p-value (Asymp. Sig.)
AGE	SCORE	101.952	105	0.046
AGE	BURNCATEGORY	19.444	15	0.144
GENDER	SCORE	39.543	35	0.004
GENDER	BURNCATEGORY	4.812	5	0.009
MARITAL	SCORE	25.854	35	0.027
MARITAL	BURNCATEGORY	6.308	5	0.037
OCCUPATION	SCORE	201.796	140	0.001
OCCUPATION	BURNCATEGORY	63.587	20	0.001
DEPT	SCORE	294.976	245	0.016
DEPT	BURNCATEGORY	77.406	35	0.001
YEAREXPERIENCE	SCORE	110.07	140	0.041
YEAREXPERIENCE	BURNCATEGORY	10.014	20	0.038
WORKINGHOURS	SCORE	156.833	105	0.001
WORKINGHOURS	BURNCATEGORY	65.374	15	0.001

Table 4, Burnout is a complex occupational phenomenon influenced by a multitude of personal and professional factors. In the present analysis, key demographic variables—gender and marital status—along with working environment factors—occupation, department, and working hours—were assessed for their association with burnout. Two key outcomes were evaluated:

Burnout Score (continuous variable categorized)

Burnout Category (Low, Moderate, High)

Chi-square tests were used to examine the relationship between these categorical variables and burnout outcomes.

The present study investigated the relationship between various sociodemographic and work-related factors and burnout levels among healthcare professionals using Pearson's Chi-square test. A statistically significant association was observed between age and burnout scores (χ^2 =

101.952, df = 105, $p = 0.046$), indicating that burnout levels vary across different age groups. However, age did not show a significant association with burnout categories ($\chi^2 = 19.444$, df = 15, $p = 0.144$), suggesting that while total burnout scores may differ with age, the distribution across low, moderate, and high burnout categories remains relatively uniform.

Gender showed a significant relationship with both burnout scores ($\chi^2 = 39.543$, df = 35, $p = 0.004$) and burnout categories ($\chi^2 = 4.812$, df = 5, $p = 0.009$), indicating a differential experience of burnout between male and female professionals. This may reflect gender-specific stressors, coping mechanisms, or work-life balance dynamics. Similarly, marital status was significantly associated with burnout scores ($\chi^2 = 25.854$, df = 35, $p = 0.027$) and burnout categories ($\chi^2 = 6.308$, df = 5, $p = 0.037$), implying that marital obligations or social support could influence burnout perception and intensity.

Occupational variables exhibited even stronger associations. Occupation was significantly related to both burnout scores ($\chi^2 = 201.796$, df = 140, $p = 0.001$) and burnout categories ($\chi^2 = 63.587$, df = 20, $p = 0.001$), suggesting that the nature of the job role contributes significantly to burnout experiences. A similar trend was noted with the department of work (SCORE: $\chi^2 = 294.976$, df = 245, $p = 0.016$; CATEGORY: $\chi^2 = 77.406$, df = 35, $p = 0.001$), indicating that certain departments, possibly high-intensity or patient-facing, report higher burnout.

Furthermore, years of experience demonstrated a significant relationship with burnout scores ($\chi^2 = 110.070$, df = 140, $p = 0.041$) and burnout category ($\chi^2 = 10.014$, df = 20, $p = 0.038$), suggesting that more experienced professionals may have either developed better coping strategies or face cumulative fatigue over time. Lastly, working hours per day showed a strong association with both burnout scores ($\chi^2 = 156.833$, df = 105, $p = 0.001$) and burnout categories ($\chi^2 = 65.374$, df = 15, $p = 0.001$), highlighting the critical impact of prolonged work hours on mental well-being.

These findings underline that both demographic (age, gender, marital status) and occupational factors (job role, department, experience, and working hours) are significantly associated with burnout levels. Interventions targeted at specific high-risk groups and organizational changes to optimize work conditions could help mitigate burnout among healthcare workers.

Table:4.5- Frequency and percentage distribution in the burnout category

Burnout Category	Frequency (n)	Percentage (%)
High	136	68.00%
Moderate	54	27.00%
Low	10	5.00%
Total	200	100.00%

Table 5. The burnout categorization of the participants reveals a significant proportion experiencing elevated levels of burnout. A combined total of 136 participants (68.0%) were classified under the *High Burnout* category, suggesting a considerable prevalence of emotional exhaustion, depersonalization, and reduced personal accomplishment among the study population.

Meanwhile, 27.0% (n=54) of participants fell under the *Moderate Burnout* category, indicating the presence of moderate symptoms that may not yet be debilitating but still warrant attention to prevent progression.

Only 5.0% (n=10) of the respondents reported *Low Burnout*, implying a small subset experiencing minimal signs of occupational stress or fatigue.

These findings highlight the urgent need for institutional measures such as stress management programs, workload adjustments, and support systems within healthcare settings to mitigate burnout—especially among those in high-risk roles.

Chapter 5: Discussion

The present study provides critical insights into the prevalence, dimensions, and associated factors of occupational burnout among healthcare professionals across various departments and roles. Utilizing a standard burnout inventory, the results revealed a disturbingly high level of burnout, with 68% of participants falling under the High Burnout category. These findings are consistent with prior research indicating that healthcare providers are particularly vulnerable to burnout due to the emotionally intensive and high-pressure nature of their work environments.

Emotional Exhaustion and Depersonalization

The most reported symptoms were emotional exhaustion and depersonalization, in line with the classical dimensions described by Maslach and Jackson (1981) in the Maslach Burnout Inventory (MBI). (17) Emotional exhaustion, reflected in the high frequency of fatigue at the start and end of the day (Q1, Q2), was like findings from a multicentric study by Shanafelt et al. (2012), (18) which reported that over half of U.S. physicians experienced work-related exhaustion. Similarly, our study found that over 59% of respondents frequently felt emotionally drained, indicating that this symptom is a common and persistent feature of healthcare burnout.

Depersonalization, assessed through items like Q4 and Q5, was also notably prevalent in this study. Over 56% of participants reported reduced empathy or emotional distancing. This aligns with a study by Embriaco et al. (2007) on ICU staff, which found a high incidence of depersonalization due to sustained emotional labor. (19) Our findings further underscore that detachment may function as a coping mechanism, though it potentially compromises the quality of patient care and provider-patient relationships.

Personal Accomplishment and Protective Factors

Interestingly, despite high burnout scores, a substantial proportion of participants reported high levels of personal accomplishment, particularly in confidence (Q8) and enthusiasm (Q9, Q10). This duality is supported by studies such as that of West et al. (2009), who observed that while burnout may erode emotional energy, professional purpose and intrinsic motivation often remain intact among dedicated health professionals. (20) The findings here reflect a resilient subpopulation that maintains a sense of meaning and efficacy despite considerable strain—an essential consideration for designing burnout mitigation strategies.

Sociodemographic and Work-Related Correlates

The association of burnout with variables like gender, marital status, occupation, and working hours mirrors trends observed in the literature. For instance, our study found significant associations between gender and both burnout scores and categories, echoing the work of Purvanova and Muros (2010), who found that women in caregiving professions tend to report higher emotional exhaustion, possibly due to compounded professional and domestic responsibilities. (21)

Marital status also played a role in this study, which supports prior findings that single professionals may experience greater burnout due to limited emotional support outside the workplace (Oreskovich et al., 2015). (22) The significant relationship between working hours

and burnout echoes global evidence—including a WHO-ILO joint estimate (2021)—that long work hours significantly increase the risk of occupational stress and associated morbidity. (23)

Furthermore, departmental and occupational differences revealed in the current study resonate with conclusions from a meta-analysis by Rotenstein et al. (2018), which showed that direct patient care roles, especially in high-stakes environments like emergency medicine and dentistry, report the highest burnout rates. (24) Our study reinforces this by identifying high burnout prevalence in clinical departments such as General Dentistry.

Comparison to Indian Context

In the Indian context, recent studies, such as those by Kumar (2016) and Gupta et al. (2020), have similarly reported burnout levels between 50–70% among healthcare professionals in tertiary care hospitals. (25)(26) The present study, with 68% of respondents experiencing high burnout, mirrors these findings and confirms that burnout is not only a global concern but also acutely prevalent in Indian healthcare settings. Cultural expectations of emotional labour, combined with systemic pressures such as understaffing and administrative overload, exacerbate this burden locally.

Chapter 6: Conclusion and recommendations

The present study confirms a strong presence of burnout among healthcare professionals, with 68% of participants experiencing high levels of burnout. The use of the Maslach Burnout Inventory (MBI) effectively captured the multifaceted nature of burnout, particularly its impact on emotional well-being and professional functioning.

Burnout was most pronounced in the dimensions of emotional exhaustion and depersonalization. A significant number of participants reported feeling emotionally drained and distanced from their patients. However, many still reported a relatively high sense of personal accomplishment, suggesting that despite mental fatigue, a core of intrinsic motivation and professional pride continues to drive healthcare workers forward.

The analysis of demographic variables revealed important associations. Female professionals, younger age groups, and unmarried individuals exhibited significantly higher burnout levels. These findings underscore the importance of personal life circumstances and social support systems in modulating the experience of burnout.

It is therefore crucial to implement proactive programs that foster resilience and mental well-being. Regular mental health screening, accessible counselling, and normalization of support-seeking behaviours must be institutional priorities.

Occupational factors were also deeply implicated. Long working hours, frontline clinical roles (particularly in General Dentistry and Nursing), and departmental pressures were strongly associated with elevated burnout.

This highlights the need to rationalize workloads and schedules—reviewing staffing norms, redistributing administrative responsibilities, and introducing flexible scheduling to protect work-life balance.

The study also succeeded in identifying high-risk subgroups—particularly frontline clinical staff, women, younger and less experienced professionals, and those working prolonged shifts.

Tailored interventions for these groups are essential. Targeted programs should address specific departmental and demographic stressors, such as gender-based expectations, clinical overload, and early-career pressures. While the persistence of personal accomplishment offers hope, it also provides a strategic opportunity.

Peer support systems and structured team debriefings can be leveraged to create shared coping mechanisms and reduce professional isolation. These systems must be actively promoted within institutions as sustainable sources of psychological safety.

Finally, beyond the level of the individual, institutional wellness must be embedded into the fabric of healthcare delivery. Leadership commitment, policy support, and investment in healthy work environments should form the cornerstone of organizational change.

In conclusion, burnout is not merely an individual concern—it is a systemic issue with far-reaching consequences for patient care and healthcare system sustainability. The findings of this study align with both national and global evidence, demanding immediate, multi-pronged responses.

By implementing institutional wellness programs that include resilience training, schedule rationalization, mental health support, and peer networks, we can not only alleviate the burden of burnout but also foster a more empathetic, resilient, and effective healthcare workforce.

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Annexure

Questionnaire

Section A Demographic and Occupational Details

Name

Your answer

Age

Choose

Gender

Male

Female

Prefer not to say

Other:

Marital status

single

Married

Occupation

Doctor

Nurse

Technician

Administrative Staff

Other

Department

Your answer

Years of work experience

Average working hours per day

Section _B (Burnout Assessment)

Instructions: Please indicate how often you experience the following feelings, using the scale below:

0=Never, 1 = A few times a year, 2 = Once a month, 3= A few times a month, 4= Once a week, 5= A few times a week, 6=Every day

[Emotional Exhaustion]

1. My work leaves me feeling emotionally depleted.

2. By the end of the workday, I often have no energy left.

3. It's hard to get motivated in the morning for another workday.

4. Constant interaction with people at work feels overwhelming

[Depersonalisation]

5. I've noticed I've become less empathetic in my approach to others.

6. At times, I feel indifferent about the outcomes for some people I help.

7. I sometimes catch myself treating patients in a detached or impersonal way.

[Personal Accomplishment]

8. My work contributes meaningfully to others' well-being.

9. I'm confident in handling my patients' challenges successfully.

10. I feel a strong sense of enthusiasm in my role.