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Chapter

Occupational Stress among Health Care Workers

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Abstract

Occupational stress is a harmful response particularly physical and emotional, due to a mismatch between job requirements and the qualifications, resources, and worker's needs; its chronic form is termed “Burnout.” Stress among health care workers is multifactorial. Its prevalence among healthcare professionals ranges from 27−87.4%. Occupational stress is a significant reason for physical and mental health, substance use, work-related delay, absenteeism, and emigration rate. Additionally, it can lead to patient safety concerns and poor quality of care. The mismatch between job requirements and the available resources, work overload, working environment, work experience, workplace conflict, gender discrimination, marital status, educational status, job satisfaction, and not being rewarded were some of the factors significantly associated with occupational stress among health care professionals. Moreover, the coronavirus disease 2019 (COVID-19) pandemic introduced additional stressors, such as staff redeployment and the fear of infection. WHO identified good primary health care as fundamental for achieving universal health coverage without financial hardship. Healthcare professionals' physical and mental well-being is crucial for attaining this. Developing culturally and organizationally appropriate early interventions is the need of the hour to prevent a health care worker from entering a stress level that is non-adaptable beyond their coping abilities.

Keywords: occupational, stress, burnout, physicians, health care workers

1. Introduction

The term “stress” was derived from the Latin word “stringere,” meaning the experience of physical hardship, starvation, torture, and pain. Its chronic form is termed 'Burnout.' Stress at the workplace has gained much attention recently. It has been recognized as a global disease due to its negative impact on the physical, emotional, and psychological well-being of people in various occupational groups.

Stress has become an endemic problem in healthcare, contributing to health-related challenges which decrease efficiency and productivity. Stress among health care workers is multifactorial. The mismatch between job requirement and the available resources, work overload, working environment, work experience, workplace conflict, gender discrimination, marital status, educational status, job satisfaction, and not being rewarded were some of the factors significantly associated with
occupational stress among health care professionals [1]. Moreover, the coronavirus disease 2019 (COVID-19) pandemic introduced additional stressors, such as staff redeployment and the fear of infection [2]. Occupational stress is a significant reason for physical and mental health, substance use, work-related delay, absenteeism, and emigration rate [3, 4]. World Health Organization (WHO) recognized good primary health care as fundamental for achieving universal health coverage (UHC) without financial hardship [5]. Healthcare professionals’ physical and mental well-being is crucial for attaining this [1]. Maslach Burnout Inventory (MBI) is still the gold standard for assessing burnout among HCWs [6]. Developing culturally and organizationally appropriate early interventions is the need of the hour to prevent a health care worker from entering a stress level that is non-adaptable beyond their coping abilities.

2. Measuring burnout

Maslach Burnout Inventory (MBI) is the most widely accepted standard for burnout assessment. It includes a Human Services Survey applicable to healthcare professionals.

MBI is comprised of 22 items, out of which emotional exhaustion domain consists of nine items, depersonalization domain consists of five items, and accomplishment domain consists of eight items. Each domain scored from 0 to 6 based on self-reported frequency of the feeling addressed by each item.

Conceptions of burnout that address only emotional exhaustion are incomplete [7, 8] as depersonalization may actually align more strongly with the most negative consequences of burnout [9].

As studies on physicians have often found the personal accomplishment domain of burnout to correlate only weakly with outcomes, overall burnout has commonly been defined as a high level of either emotional exhaustion or depersonalization. Main drawback of using MBI outside of structured research studies is its length. For larger survey, a short assessment tool is developed and used in some studies.

One study of more than 10,000 medical students and physicians found strong correlations between single item tool and their respective emotional exhaustion and depersonalization domain scores from the full MBI, and area-under-the-curve measures of 0.94 and 0.93, respectively, against the full MBI domains [10].

In addition, replacing the full MBI with these single items in physician studies yielded similar estimates of burnout. Many physicians have applied this shorter version of tool in different burnout studies. Alternative abbreviated assessments have been proposed. McManus applied a shortened MBI using three items from each domain, but validity of this approach is lacking.

The Physician Work Life and MEMO studies use a single item, “how severe is my burnout”, on a scale of 1–5 [11].

This indicates Correlations with the emotional exhaustion domain of the full MBI have been demonstrated to be moderate. The Copenhagen Burnout Inventory [12] and the Oldenburg Burnout Inventory [13] are also examples of tool developed as a response to debate concerning the optimal conceptualization of physician burnout. However, despite ongoing efforts to refine burnout instruments, the MBI remains the current “gold standard” for burnout assessment, with the full MBI representing the preferred version when possible.
3. Prevalence

Many studies in different countries quoted tremendous stress among health care workers, resulting in burnout. In the Coping with COVID study, a US national survey was administered by multiple healthcare organizations covering 20,947 respondents in 42 organizations and reported that daily stress was scored as high or very high by 30% of healthcare workers [14]. Anxiety or depression was described by 38% of workers in the health care sector [14]. A stress summary score (SSS) was 9.52 (SD 2.82, possible range 4–16), with burnout (present, high, or very high) in 49% of the healthcare workers [14]. Women workers described more challenging work environments than men. Work overload, fear of exposure to infection, and self-reported anxiety/depression are some of the factors related to burnout [15]. Other studies suggest that the mean prevalence of burnout among physicians in the United States is between 40% and 50% [15]. The burnout rate in US physicians is about 1.5 to 2.5 times higher than it is for US workers in other professions [16, 17].

Studies in low- and middle-income countries among primary health-care professionals suggest that burnout is substantial, mainly because of the workforce and resource shortages in these countries. Estimates ranged from 2.5% for severe burnout among family physicians in China to 87.9% for burnout among midwives in Uganda [18].

Factors associated with HCWs burnout: Burnout among HCWs is multifactorial. Individual and workplace-related factors act independently and synergistically for HCW’s burnout.

a. Individual Factors: Various studies have shown an association between gender, age, education level, education debt, marital status, spouse occupation, and children’s age with HCW burnout [1, 19, 20]. High burnout among females in one study was linked to work-home conflict, domestic violence, and non-engagement of men in household work [21–24]. Burnout among younger physicians was found to be more than among older physicians in most studies; however, few studies report a positive association with age [1, 19]. Higher educational level, marriage, children younger than 21 years, and non-physician HCW were associated with increased burnout [1, 19, 20]. Individual characteristics like personality, interpersonal relationships, and personal experiences may also help modify burnout’s impact [25].

b. Work factors: An imbalance between job demands and the available resources, understaffed, work overload (including overtime, shift work, and high patient turnover), working environment, inadequate breaks for food, work experience, workplace conflict, violence, gender discrimination, job insecurity, job dissatisfaction, working in a rural or economically deprived places with poor infrastructure and not being rewarded were some of the factors significantly associated with occupational stress among HCWs [5, 17, 20]. Moreover, the coronavirus disease 2019 (COVID-19) pandemic introduced additional stressors, such as staff redeployment, lack of personal protective equipment, and the fear of infection [2].

c. Social factors: Wide availability of negative behavior in social media, decreasing respect toward Health care workers, increasing violence against HCWs by
patient’s relatives, lack of adequate Government policies to protect the HCWs, and limited interprofessional collaboration also influence burnout [2]. Moreover, discrimination in society against HCWs during the initial month of Covid-19 pandemics was an additional stressor.

4. Pathophysiology

The burnout and its contributing factors can be related to a microbiologic disease process in which burnout is the disease, environment works as a pathogen and an individual’s resilience works as an immune system. As such, an individual working in a negative or negative environment (aggressive pathogen) is having hazards of burnout despite personal resilience, whereas an individual having poor resilience (immunosuppressed) may be having hazards for burnout even in a positive environment. This concept may help in understanding the reason for not developing burnout with same challenges. Considering this resemblance, environment could be considered as the pathogen for burnout. However, working as well as home environment is helpful in building our resilience, similar to the preparedness of immune system by vaccine against different diseases. A positive-working environment can have features like opportunities for personal growth, meaningful work, recognition from leaders, psychological safety, supportive colleagues, and adaptability. Personal physical, social, mental health, and positive interactions are other factors outside work environment that build resilience.

Thus, there are multiple factors taking part in the interactions contributing to developing burnout, it can be categories in two broad headings: institutional factors and individual (or personal) factors.

Institutional factors include the work environment, work culture, work schedule, growth opportunities, participation in decision making and peer support. Individual factors include self-care, work-life balance, and supportive relationships. Absence of these factors is predisposing factor for burnout.

5. Strategies to prevent and manage burnout

Burnout among healthcare workers (HCWs) is a complex issue with no clear solution despite nearly a decade’s efforts. This necessitates the expansion of the Triple Aim approach of improving health system performance (health of populations, the experience of health care, and reducing per capita costs of health care) to a Quadruple Aim by adding the aim of improving the work lives of HCWs and their experience of providing health care [26–28]. Given the history of well-being in medicine, the initial steps leaned heavily on the individual. As workplace culture and environment affect burnout, individual-focused interventions alone cannot sufficiently address the issue. Although well-intentioned, individual-focused interventions can hurt physician well-being efforts by promoting quick fixes rather than long-term solutions. Ignoring organizational contributors and potential interventions could percolate the message that individuals face burnout due to poor resilience and strength. Such messages can complicate the underlying problem by making individuals feel unsupported by their organization and losing trust in leadership. In medical school, we were taught that “where there is pus, must be evacuated” even though bandaging is easier and faster.
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than draining the pus, bandaging can make things worse. Likewise, we must fix the system to prevent future burnout and help those who are suffering currently.

Moreover, because of the various etiology of burnout, it is essential to understand each factor before selecting any specific intervention to avoid its futility. Organizational interventions alone will not be able to address burnout among a significant population of HCWs; an added personal intervention would enhance the effectiveness of organizational efforts. A growing body of evidence confirmed the efficacy of organizational interventions targeting the work environment and interventions targeting individuals in managing burnout [29–31].

6. Organizational interventions

Organizational interventions focus primarily on making systematic changes to the work environment, including demands and resources, duty schedules, and interactions with leaders and colleagues.

a. **Work environment intervention**: High demands on HCWs is a primary contributing factor to increased burnout. The 24/7 nature of professional duties affecting personal and family life, the complexity of patients’ medical and social needs, increased medical documentation requirements, financial constraints, and lack of administrative support for clerical tasks are adding to the daily demand. Burnout has also been linked to the number of working hours, the number of night duty, longer duration shifts, and consecutive working days.

Interventions like adding medical assistants, offloading clerical tasks, reducing patient–nurse ratios, and improving workload by streamlining workflow or adding clinical support are the most common strategies for burnout reduction, particularly for physicians [32]. Studies have shown improvement in burnout by reducing resident duty hours, physician hours in intensive care units, and teaching rotations [19, 31]. These approaches resonate with the excessive workload as a contributor to burnout. HCW burnout is not simply because of the increased workload. It also occurs when high demands are not in concurrence with resources and organizational support. Leaders can use this knowledge to reduce burnout by balancing new needs with allocated resources.

b. **Improving HCW voice**: Feeling these highly trained professionals as cogwheels rather than partners can result in decreased engagement and increased burnout [33, 34]. Intentionally involving HCWs in decision-making and problem-solving is an essential strategy for their empowerment. So, engaging HCWs in decisions making at their working place and according to a degree of autonomy to their schedule can help in reducing burnout.

c. **Staff support**: The patient experiencing a medical error is the primary victim, and the HCW involved in the error is described as the second victim [35]. Leadership support plays an important role when a medical error or an unexpected bad outcome has led to a “second victim” [36, 37]. Along with guilt, shame, moral distress, professional incompetency, burnout, and in some cases, posttraumatic stress disorder, “second victims” would also fear punitive action or leave the
profession altogether [35–37]. Organization support can lead to significantly less emotional exhaustion and better safety culture among these HCWs [37].

d. **Interactions with colleagues:** Improving teamwork can profoundly affect HCW interactions with colleagues and their overall work environment. A study among almost 8000 HCWs demonstrated that HCWs routinely exposed to rudeness in their workplace had significantly higher levels of exhaustion emotionally and depression than those not exposed [38].

7. **Individual interventions**

Evidence-based individual interventions include mindfulness, stress management, communication skills training, exercise programs, self-care efforts, and participation in small-group programs that promote connectedness and meaning.

a. **Mindfulness and stress management:** The human brain has a hard-wired “negativity bias” in which negative stimuli capture and hold much more attention than positive ones [39]. Barbara Fredrickson, an expert in this field, states, “The negative screams whereas the positive just whispers.” Therefore, it is essential to deliberately increase positive emotions to counteract the flood of negative emotions accompanying burnout. Psychologic techniques, gratitude, giving to others, and mindful meditation are helpful to combat burnout by retraining positive experiences and social connections [32, 40].

b. **Self-care:** Self-care practices like exercise, yoga, meditation, and adequate sleep are effective in enhancing well-being and reducing burnout, but it all depends on whether these practices are carefully developed over a long period or attempted only during a crisis [32]. In other words, you cannot learn to swim at the time of drowning. So, these practices are more helpful in preventing burnout.

c. **Strengthening social relationships:** Social relationships are vital in improving cardiovascular health and immune function and reducing rates of anxiety and depression [41].

8. **A framework for improving well-being in HCWS**

8.1 **Preventive measures and proactive interventions**

The perception of the general population toward healthcare workers needs to be changed. HCWs are also to be recognized as human beings. The human body is full of complexity and each individual is different. Complications are inevitable and these are byproducts of any procedure and medical intervention. Public awareness by judicious use of different electronic and print media is a need of the hour.

8.2 **Work culture**

Work culture is directly or indirectly a significant factor for generating stress and burnout among health care workers. This is not only related to the type of
work but also equally important is the type of work culture. A conducive environment and positive work culture can be an important stress buster. Work culture is not God-gifted, it is created by effective leadership and team efforts by each one in a positive direction. Good work culture is not just a stress buster but also magnify productivity and decrease complication in patient care. A work culture of trust, transparency, respect, and openness is always helpful to reduce stress among healthcare workers.

8.3 The synergic approach between health worker strategies and patient safety policies

- Development of linkages between various quality improvement programs related to health workers’ safety as well as patient safety [42, 43].

- Education and training programs for health workers should be organized to inculcate skills related to personal as well as patient safety.

- Incorporate health worker and patient safety requirements in Health care licensing and accreditation standards.

- Integration of various metrics of patient safety, health worker safety, and quality care indicators, with the health information system.

8.4 Implementation of national programs for occupational health and safety of health workers

- Design and proper implementation of national programs for occupational health pertaining to health workers in congruence with various national occupational health and safety policies.

- To ensure protection of health and safety of all health workers, national regulations and laws for occupational health and safety are to be reviewed and updated.

- A designated authority can be appointed to ensure the occupational health and safety of health workers.

- Intersectoral collaboration need to be strengthened for health worker and patient safety, with appropriate representation from worker and management, including gender, diversity, and all occupational groups.

8.5 Stringing lawful measures to prevent violence against health care workers

- Adoption and implementation of prevailing national law, important policies, and mechanisms to prevent and eliminate violence in the health sector that is serving humanity.

- Zero tolerance toward violence against health care workers.

- Periodic review and amendments of labor laws and relevant legislation.
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• Monitoring and strict supervision to ensure effective implementation of a law to prevent violence and protect health workers.

• Implement helplines to enable free and confidential reporting and support for any health worker facing violence.

8.6 Set priority for the Mental health of HCW

• Transparent policy to ensure the appropriate and fair duration of deployments, working hours, rest breaks, and minimizing the administrative burden on health workers.

• Define and maintain appropriate minimum staffing levels within health care facilities. The minimum number should be prepared to keep in mind rotational duties.

• An insurance should be covered for work-related risks. Indemnity insurance to support and compensated professional and personal losses [44].

• Inculcate a healthy, ethics-based working culture through extended communication, including legal and administrative protection from punitive action for reporting adverse and therapeutic misadventures.

• Provide access and opportunities to mental well-being and social support services for health care workers through the process of socialization and necessary support.

8.7 Protection from physical and biological hazards

• Vaccination of all health workers should be undertaken for all vaccine-preventable infections in accordance with the national immunization policy.

• In emergency or pandemic situations, health workers to newly licensed and available vaccines should be prioritized.

• Provide adequate protective equipment to prevent health workers from all types of injuries and exposures;

• Strict implementation of minimum patient safety guidelines, infection prevention, and control practices, universal precautions, and adherence to occupational safety standards in all health care facilities and health systems.

• Efficient health care systems are not sustainable without HCW’s well-being. So, pressurizing HCWs to do more with fewer resources needs to be stopped as this can lead to moral injury when they feel that patient care is compromised [45].

• Physicians know well their stressors in the working environment that threaten well-being yet often feel helpless in suggesting improvisation [46, 47].
• Ensure availability of good quality personal protective equipment (PPE) keeping in mind the roles and tasks performed by HCWs.

• PPE shall be in adequate quantity and appropriate fit and of acceptable quality.

• Provide and ensure environmental services such as safe water, sanitation, proper hygiene, disinfection, and adequate ventilation at all healthcare facilities.
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