

Burnout in COVID-19 Residency

Sachin Kale¹, Pratik Dhabalia¹, Ajit Chalak¹, Abhiraj Patel¹, Abhineet Chand¹, Sonali Das¹

Abstract

Objective: Burnout is a syndrome denoting the outcome of chronic work stress which has not been managed successfully. Burnout has only sometimes been at the forefront of studies in healthcare, where patient care and management have received more attention. This study focuses particularly on burnout of residents and healthcare workers during the COVID-19 pandemic that has changed the working environment.

Material & Methods: Questionnaires in the form of surveys have been used to receive feedback regarding work experience within the bubble of isolation and high patient load unique to COVID-19 pandemic. A full and complete analysis of the research is provided after the definition, description, and measurement of burnout are given.

Results: According to a review of the burnout literature, burnout affects medical students, residents, and practicing doctors, with prevalence rates ranging from 28% to 45% for each group. First-year residency during the COVID-19 pandemic, in particular, is plagued with unmanageable burnout symptoms and a depleted support system. Burnout among residents is said to be caused by time demands, a lack of control, poor work organization, naturally challenging employment settings, and interpersonal connections. Workplace solutions might take the form of burnout education, workload adjustments, diversifying job roles, stress management training, mentorship, emotional intelligence seminars, and training in emotional intelligence. In addition, developing interpersonal and professional relationships, meditation, therapy, and exercise are examples of self-directed behavioral, social, and physical activities.

Conclusion: Educators should consider including pertinent instructions and interventions during the process of instructing resident doctors. In addition, they should actively become aware of burnout. Early detection aids in better management of burnout.

Keywords: burnout, COVID-19, residency, work-life balance

Introduction

Over the past few years, burnout in healthcare has drawn much attention. During the COVID-19 pandemic, patient care required more attention as standard operating protocols were changing daily, resulting in faster depletion of healthcare worker time and energy. Clinicians are especially prone to burnout because of due to the high emotional demands of the work environment, which is in addition to the

regular professional stress. Residency training during COVID-19 results in many clinicians facing burnout, which interferes with people's capacity to build relationships, solve diagnostic conundrums, and make sophisticated treatment decisions. Overall, burnout is linked to several detrimental impacts, such as depression, a higher chance of medical errors, and detrimental effects on patient safety. This review aims to give medical educators and leaders a

summary of the current risk factors for burnout, its effects, and recommendations for interventions to lessen burnout.

Definition of Burnout

In an article titled "Staff Burnout," psychologist Herbert Freudenberger [1] first used the term burnout to describe job unhappiness brought on by stress from the workplace. Burnout has long been understood to be a trinity of emotional depletion (emotional overuse and tiredness), depersonalization (negative, callous, and distant responses to others), and reduced personal accomplishment (feelings of competence and achievement in one's work) [2].

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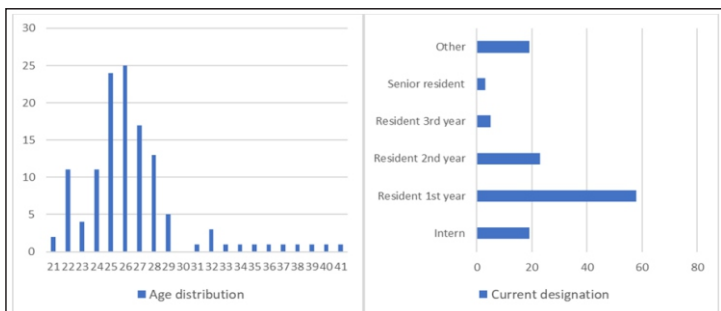


Figure 1: Age and designation distribution of respondents.

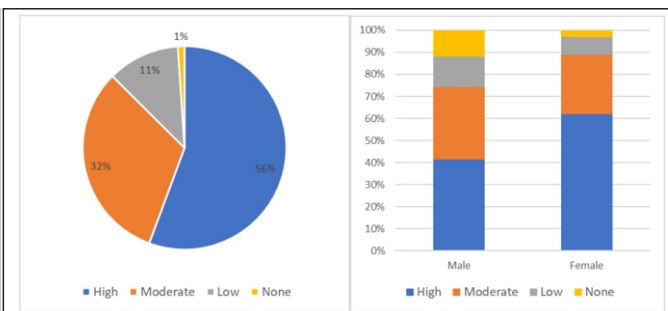


Figure 2: Stress and anxiety distribution of respondents.

Burnout is referred to as a "condition of vital depletion" in the 10th revision of the International Classification of Diseases by the World Health Organization. Burnout is a definite illness with major effects, despite the Diagnostic and Statistical Manual of Mental Disorders not specifically mentioning it as a diagnosis.

Reduced productivity and decreased job satisfaction may be linked to burnout. Isolation from the familial support system during the COVID-19 pandemic contributed to increased burnout reporting from clinicians. It has been shown that depression, suicide ideation, planning, and attempts are more common in burnout states and tend to decrease as people recover from them. During the recovery period, the recovery process would be halted if isolated from the support system as often during the pandemic.

Cardiovascular disease [2] and elevated inflammatory biomarkers are further concerns [3].

Numerous physical symptoms may be present, such as sleeplessness, altered appetite, lethargy, colds or the flu, headaches, and gastrointestinal problems. Physical issues alone may

make it difficult to feel happy and perform well. [5,34,65].

Lack of access to mental health care during the COVID-19 pandemic further deteriorated the process of recovery from burnout for clinicians. According to Kottler [67] in a 2008 preliminary study that included 178 matched pairs of patients and doctors who had recently been hospitalized, the depersonalization component of physician burnout was linked to lower patient satisfaction and a longer post-discharge recovery period (after adjusting for illness severity and demographic factors) [8]. Daydreaming when tending to patients, frequent cancellations, putting off paperwork, and professional chores are all possible symptoms of burnout, which were frequently seen with the increase in patient load, as was the case during the COVID-19 pandemic [3]. Increased drug or alcohol usage due to burnout may potentially affect patient care. [9,10].

Review Methods

We surveyed healthcare workers in a 1500 bedded hospital using questionnaires detailing the impact of COVID-19 on their working

environment. After examining published articles on "burnout" and "residency," key conclusions were obtained.

Measuring Burnout with Maslach Burnout Inventory (MBI)

In research investigations, the Maslach Burnout Inventory (MBI) [11] is the most often used questionnaire to assess burnout. In addition, the MBI Human Services Survey is a 22-item, self-administered questionnaire created to assess burnout in human services professionals and is widely considered the "gold standard" in the field. [12,18]. The MBI items, which include statements like, "I feel emotionally tired from my work," scored on a Likert scale from 0 to 6. It is intended to evaluate the three main factors contributing to burnout: emotional tiredness, depersonalization, and personal achievement.

Based on normative data from 1104 medical professionals, burnout is identified using cutoff values of high emotional weariness (≥ 27), high depersonalization (≥ 10), and low personal accomplishment (≤ 33). [12,13]. Burnout is frequently defined in studies employing the MBI as a high level of depersonalization or emotional weariness. Personal accomplishment scores are less frequently used because they are believed to have a weaker correlation with psychological stress. [12,18].

Burnout in Residency Training

The seeds of burnout may be sown in medical professionals as early as medical

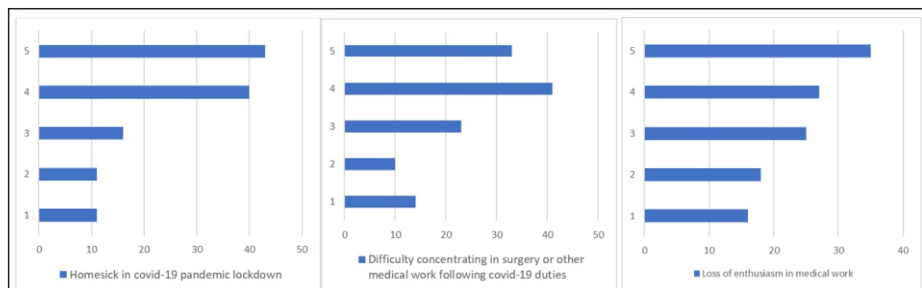
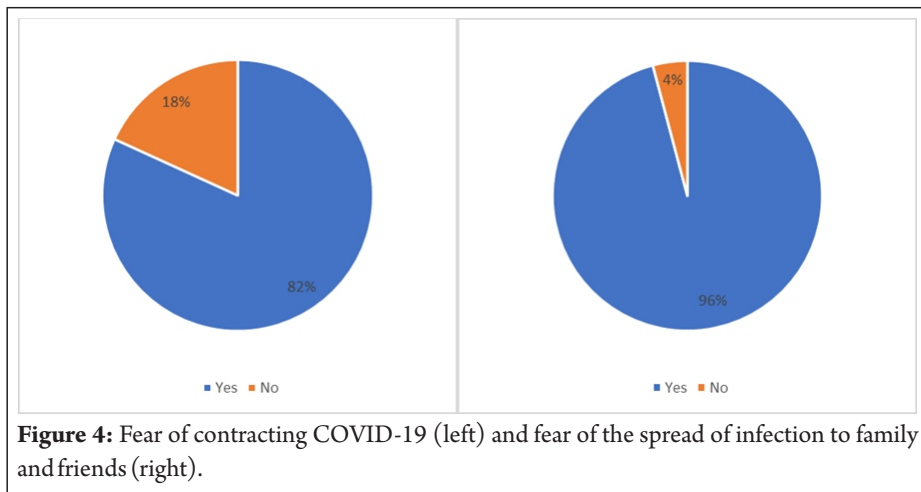


Figure 3: Effect of COVID-19 on attention to patient care.



school. In these researches, residents state that stressors that may contribute to burnout include time demands, a lack of control over time management, work planning, work organization, naturally challenging employment settings, and interpersonal connections. [13,14, 15].

Prevalence of Burnout During Residency in COVID-19

During the COVID-19 pandemic, there is an increased patient load, with every patient needing the same amount of attention to a new, evolving disease, resulting in higher levels of burnout amongst clinicians.

Age, Family, and Cultural Factors All Affect Burnout During Residency.

Burnout rates in resident doctors have been demonstrated to be influenced by a wide range of innate and environmental factors. Isolation from family during the COVID-19 pandemic has brought on clinicians' faster onset of burnout. On the depersonalization subscale, emotional exhaustion subscale, and personal accomplishment subscale, some research revealed that female residents performed much worse than male residents, but other studies revealed the opposite. [14,15,16,17]. Age and burnout were compared by Woodside et al. [16,18], who found an adverse relationship between residents' depersonalization ratings and age.

Burnout's Effect on Patient Care

Studies have looked into how burnout affects patient care in many ways. According to certain research, residents who were burnt out were more likely to self-report poor patient care, practices, and medical errors than residents who were not burnt out [15,16,19], one probable theory stemming from feelings of reduced personal accomplishments. COVID-19 duties also contributed to a deterioration in non-COVID- related

medical and surgical work.

Fear of Contracting COVID-19

An added stress factor for clinicians working during the pandemic was the fear of contracting COVID-19, an evolving disease that had inconclusive data about the long-term complications of the infection. This fear extended to a higher proportion for the spread of infection to family members.

COVID-19 as an Added Stressor in Burnout

Survey indicated that COVID-19 duties contributed significantly to the deterioration of clinicians' mental health, resulting in a compounding effect. COVID-19 duties also curtailed leisure time for clinicians, resulting in less time spent on destressing activities such as exercise, walking, swimming, reading for pleasure, and cooking. Loss of options to relax compounded the effects of work stress causing a higher number of individuals who would have otherwise found an outlet for burnout management

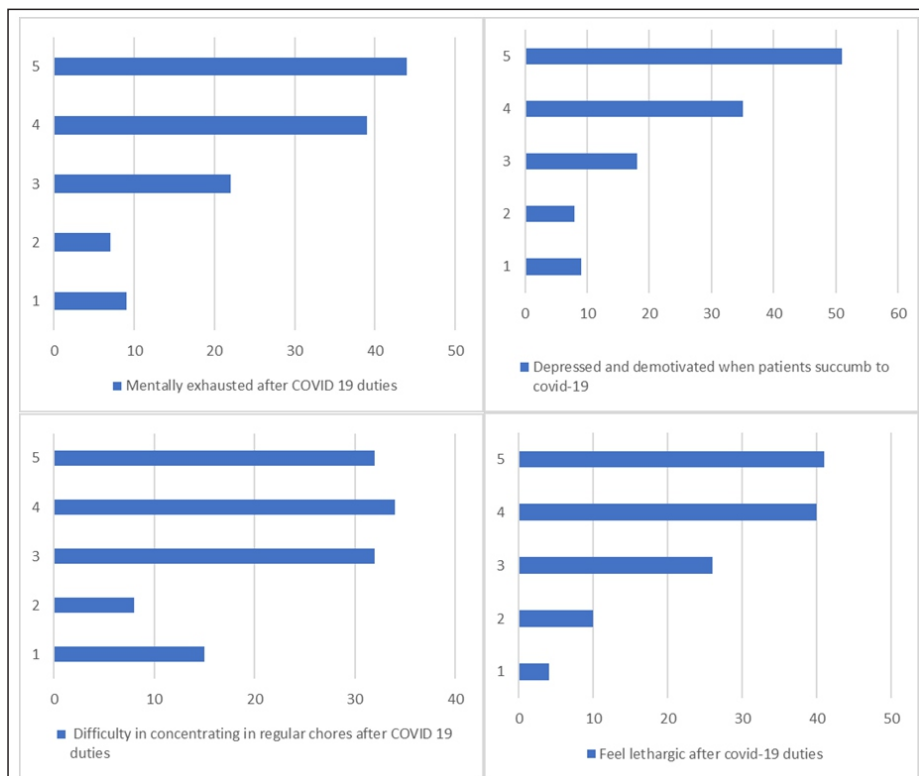


Figure 5: COVID-19 as a stressor.

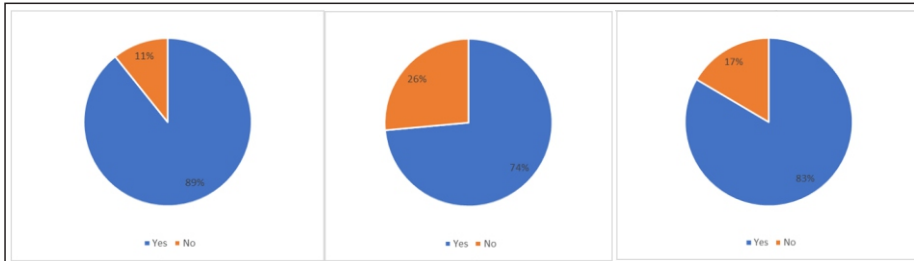


Figure 6: Support from colleagues (top left), physiological effects of burnout in respondents during COVID-19 such as insomnia (top right), reduced appetite (bottom).

fail to do so.

Use of Personal Protective Equipment

Survey indicates that use of PPE (personal protective equipment) has taken a toll on clinicians, creating barriers in communication, face-to-face conversations, and an environment of reduced humanistic support.

COVID-19 Pandemic Effect on Mental Health

Clinicians needed a higher presence in their home during the COVID-19 pandemic, as the closure of schools, parks, and meeting centers prevented their children, parents, and other cohabitating family members from interacting with others.

The COVID-19 pandemic has taken both a professional and personal toll on clinicians.

COVID-19 Physical Stressor

COVID-19 Physical Stressor

Many clinicians contracted COVID-19 during their service, affecting their ability to perform their activities.

Questionnaire used for Survey

1. Gender
 - Male
 - Female
2. Age

3. Current designation
 - Intern
 - Resident 1st year
 - Resident 2nd year
 - Resident 3rd year
 - Senior Resident
 - Other
4. Is there any increase in anxiety and stress levels while working on COVID-19 duties?
 - None
 - Low
 - Moderate
 - High
5. Is there any fear of contracting infection while covid-19 duties which added to mental distress?
 - Yes
 - No
6. Are you concerned about spreading infection to your family members or friends?
 - Yes
 - No

7. Please rate if you felt mentally exhausted after COVID-19 duties?
 - 1 very low
 - 2 low
 - 3 moderate
 - 4 high
 - 5 very high
8. Please rate if you felt depressed and demotivated when you saw patients succumb to covid-19?
 - 1 very low
 - 2 low
 - 3 moderate
 - 4 high
 - 5 very high
9. Please rate if you had any difficulty concentrating in surgery or other medical work following COVID-19 duties?
 - 1 very low
 - 2 low
 - 3 moderate
 - 4 high
 - 5 very high
10. Please rate if you lost enthusiasm in your medical work.
 - 1 very low
 - 2 low
 - 3 moderate
 - 4 high
 - 5 very high
11. Did you have difficulty concentrating on your regular chores while or after COVID-19 duties?
 - 1 very low
 - 2 low
 - 3 moderate
 - 4 high
 - 5 very high

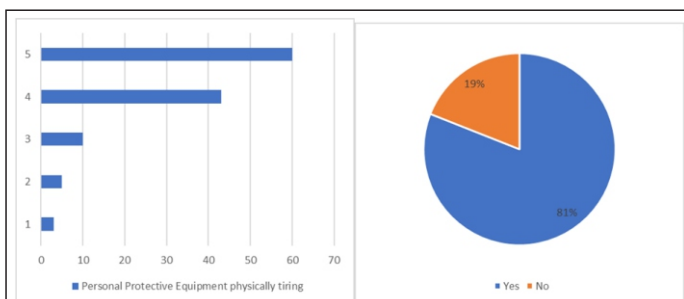


Figure 7: Personal protective equipment found to be tiring (left) and leading to weight loss (right).

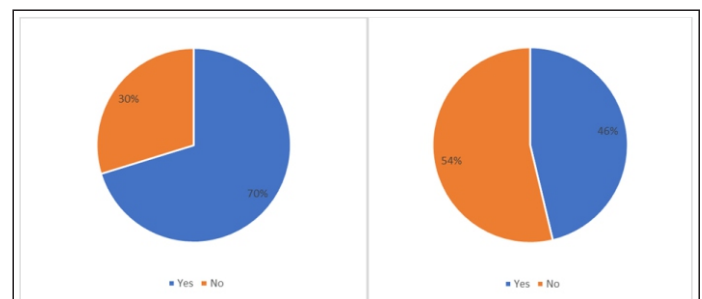


Figure 8: A proportion of respondents have reported a loss of life of someone close (left) and a financial burden (right).

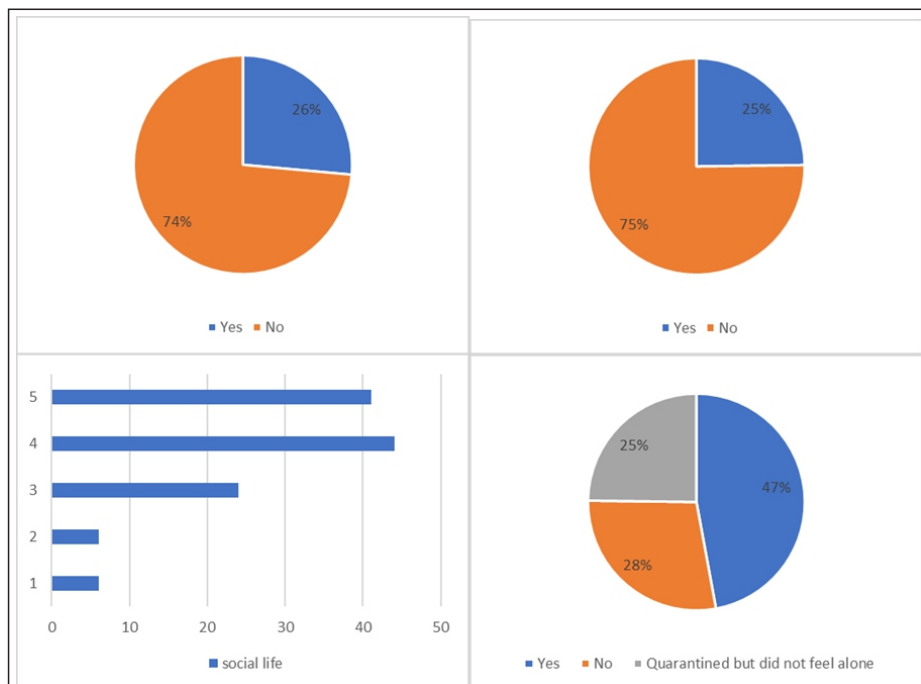


Figure 9: COVID-19 pandemic did not have an effect on alcohol (top left) and tobacco (top right) use in respondents, however, affected their social life (bottom left) and increased feelings of isolation (bottom right).

12. Did you feel homesick in COVID-19 pandemic lockdown?
- 1 very low
 - 2 low
 - 3 moderate
 - 4 high
 - 5 very high
13. How tired and lethargic you felt after COVID-19 duties for your leisure activity (exercise, walking, swimming, reading a book, cooking, etc.)
- 1 very low
 - 2 low
 - 3 moderate
 - 4 high

14. Please rate how tiring it was working while wearing Personal Protective Equipment (PPE) physically.
- 1 very low
 - 2 low
 - 3 moderate
 - 4 high
 - 5 very high
15. Did you lose weight while working in personal protective equipment (PPE) for long hours?
- Yes
 - No

- you in COVID-19 pandemic?
- Yes
 - No
17. Were you quarantined and felt alone at any moment while working on COVID-19 duties?
- Yes
 - Quarantined but did not feel alone
 - Not quarantined
18. Did you have mental and emotional support from colleagues and/or family while COVID-19 duties?
- Yes
 - No
19. Was your appetite disturbed while or after working on COVID-19 duties?
- Yes
 - No
20. Did you have insomnia while or after working on COVID-19 duties?
- Yes
 - No
21. Did you have any financial burden due to covid-19 duties?
- Yes
 - No
22. Did you start consuming alcohol or consume an increased amount of alcohol due to stress or anxiety while working on COVID-19 duties?
- No
23. Did you start smoking tobacco OR increase smoking tobacco due to stress or anxiety while working in COVID-19 duties?
- Yes
 - No
24. Did COVID-19 pandemic affect your social life?
- 1 very low
 - 2 low
 - 3 moderate
 - 4 high
 - 5 very high
25. Were you tested positive while COVID-19 duties? If yes, please mention how many times.
- Yes, once tested positive

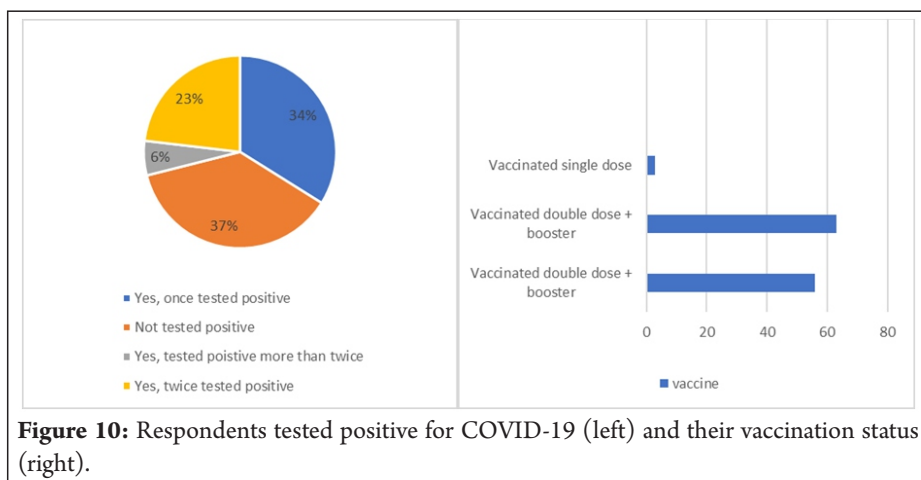


Figure 10: Respondents tested positive for COVID-19 (left) and their vaccination status (right).

twice

o Not tested positive

26. Are you vaccinated? If yes, please mention the type and doses of the vaccine.

o Vaccinated double dose + booster

o Vaccinated double dose

o Vaccinated single dose

27. Do you have any medical conditions? If yes, please specify.

Interventions

Therapies for physicians to better manage burnout do not have any specific framework. Likewise, research into methods of managing burnout in residents is lacking. Behavioral, social, and physical activities driven by the individual fall into two categories: workplace-driven and individual-driven.

Occupational Interventions

Workplace solutions include creating stress-reduction programs, raising staff awareness of burnout, boosting support for medical professionals caring for difficult populations, and assuring a manageable workload [20]. Possible benefits include more time for rest; drawbacks can include fewer opportunities for clinical and surgical work and for developing professionalism and communication skills. Drive-through testing centers for COVID testing reduce the need for preliminary patient interaction for screening.

A greater diversity of job responsibilities – including chances to teach, supervise, and conduct research – improves satisfaction [55]. Residency training

mentoring programs may also be beneficial in this way [12,21]. Training in emotional intelligence and teamwork for residents may lessen fatigue. To maintain productive and appropriate interactions within a team, emotional awareness, and emotional management skills are necessary.

Counseling might provide you the chance to examine professional difficulties and develop self-awareness. Some residency programs promote and encourage residents' individual psychotherapy [22]. In addition, strongly advised in the literature is drawing clear lines of separation between work and home [23]. Maslach [25] stated that all of the information and guidance on how to overcome burnout is one word balance—balance between giving and receiving, the balance between stress and calm, and the balance between work and home.

Discussion

A sense of diminished personal accomplishment, depersonalization, and emotional weariness are the three components of burnout. It is a phenomenon that illustrates the intricate interplay between coping mechanisms, genetic susceptibilities, and environmental stressors. Burnout can cause a variety of medical, psychological, and drug abuse symptoms, all of which can have an effect on a resident's quality of life, capacity to deliver enduring and secure patient care, the effectiveness of learning and teaching, and the general spirit of a residency program. COVID-19 acted as a compounding factor for clinicians already facing an uphill climb to stability and adequate time

management, particularly in their 1st year of residency. Burnout has a detrimental effect on patient treatment, increasing the likelihood of medical mistakes, endangering patient safety, and perhaps lowering the standard of care. Depression, suicidal thoughts, and physical ailments are negative effects of burnout on medical students and residents. Residents "displaced" from their chosen fields of interest and placed in the pool of workforce dealing with COVID-19 patients have also been noted to have faster rates of burnout due to higher levels of work dissatisfaction. As a result, individuals and programs need to use additional interventions to strike a balance between their duty to provide adequate service and their commitment to their academic and training goals. An additional tool for developing training programs that improve resident performance and deliver exceptional, safe, high-quality patient care is easy, and inexpensive access to adequate counseling services.

Conclusion

Leadership in academic medicine must deal with the well-known phenomenon of burnout, which was especially prevalent during COVID-19 pandemic. Paying attention to one's own well-being is essential to the successful education of the upcoming generation of doctors as we work toward national healthcare reform and try to change how we approach training.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the Journal. The patient understands that his name and initials will not be published, and due efforts will be made to conceal his identity, but anonymity cannot be guaranteed.

Conflict of Interest: NIL; **Source of Support:** NIL

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