REVIEW OF REASONS AND REMEDIAL MEASURES FOR BURNOUT DURING RESIDENCY PROGRAMME

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Abstract

Burnout in health care professionals has gained significant attention over the last few decades. As a result of the intense emotional demands of the work environment, clinicians are particularly susceptible to developing burnout above and beyond usual workplace stress. Residency training, in particular, can cause a significant degree of burnout, leading to interference with individuals' ability. Overall, burnout is associated with a variety of negative consequences including depression, suicidal ideation, physical symptoms related to fatigue, risk of medical errors, and negative effects on patient safety. The purpose of this review is to provide medical educators and administrators with an overview of the factors that contribute to burnout, the impact of burnout, specialty wise variation, and suggestions for interventions to decrease burnout. Unlike medical institutions and the universities running postgraduate courses in developed countries, the importance of the post and the role of residency coordinator are underestimated in most of the medical schools in India. Residency coordinator has greater role to play between various key persons involved in residency training programme.

Keywords: Burnout, Residency training, Stress during residency, Residency coordinator

1. Introduction:

1.1. Definition of Burnout - The term burnout was coined by psychologist Herbert Freudenberger in 1974 in an article entitled "Staff Burnout" in which he discussed job dissatisfaction precipitated by work-related stress. A broadly applicable description defines burnout as a state of mental and physical exhaustion related to work or care giving activities. A long standing conceptual and operational definition characterized burnout as a triad of emotional exhaustion (emotional overextension and exhaustion), depersonalization (negative, callous, and detached responses to others), and reduced personal accomplishment (feelings of competence and achievement in one's work). In the World Health Organization International Classification of Diseases, 10th revision, burnout is defined as a "state of vital exhaustion.

1.2. Physical and psychological hazards of burnout during residency - It may be associated with decreased productivity and decreased job satisfaction. The rates of depression, suicidal ideation, plans, and attempts were noted to be high in burnout states. Other risks include cardiovascular disease and increased inflammation biomarkers. Physical symptoms may take many different forms, including insomnia, appetite changes, fatigue, colds or flu, headaches, and gastrointestinal distress. Physical symptoms alone may interfere with one's sense of well-being and ability to function fully at work. Psychological symptoms such as low or irritable mood, cynicism, and decreased concentration can negatively affect productivity.

Burnout rates in medical students range from 28% to 45%. Evidence shows that the factors contributing to burnout include environmental aspects such as stress during medical school, as well as inherent personality traits such as introversion and neuroticism. Burnout is a phenomenon that may present during medical schools, and may develop or continue to exist in residents and practicing physicians. Several studies have explored possible reasons for burnout in residency training. In these studies, residents report that time demands, lack of control over time management, work planning, work organization, inherently difficult job situations, and interpersonal relationships are stressors that may contribute to burnout.

1.3. Prevalence of Burnout during Residency - Various studies have investigated the burnout rates among resident doctors. A 2006 study by Rosen et al. reported that at the beginning of intern
year, 4.3% of internal medicine residents met criteria for burnout. By the end of the first year, the rates had increased to 55.3%, with a significant increase in both the depersonalization and emotional exhaustion subscales. Burnout Rates Vary across Different Residency Specialties in 2004, Martini et al\textsuperscript{19} did a unique study that compared burnout rates among the different specialties. The overall burnout rate was 50% and ranged from 27% to 75% among different specialties. This variation among specialties was not statistically significant; however, burnout rates were as follows: 75% in obstetrics-gynecology followed by 63% in internal medicine, 63% in neurology, 60% in ophthalmology, 50% in dermatology, 40% in general surgery, 40% in psychiatry, and 27% in family medicine. However, this variation among specialties was not statistically significant.

1.4. Influence of Age, Family, and Culture on Burnout During Residency- Some studies showed that female residents scored significantly lower than male residents on the depersonalization subscale, emotional exhaustion, and personal accomplishment subscales, whereas other studies have shown the opposite.\textsuperscript{17,20,21} Marriage and parenting have also been examined in relation to burnout. Martini et al\textsuperscript{19} showed that 65.2% of single, divorced, or unmarried residents met the criteria for burnout compared with 40.0% of married individuals (P, .01). Other studies report no correlation between marriage and burnout.\textsuperscript{21,22} Parenting has a possible humanizing effect on residents, resulting in less detachment and depersonalization.\textsuperscript{21} Collier et al\textsuperscript{23} showed that having children during residency resulted in lower rates of depression and cynicism as well as an increase in humanistic feelings. However, other studies showed that parenting has no effect on burnout.\textsuperscript{24}

1.5. Effect of burnout on quality of patient care - Residents reporting burnout were more inclined to self-report suboptimal patient care and practices and medical errors than those without burnout.\textsuperscript{20,25} However, in a study by Fahrenkopf et al\textsuperscript{26}, no actual correlation was found between burnout and the number of medical errors seen in collected data. One plausible explanation may be that residents reporting symptoms of burnout may be more likely to over report their errors.

1.6. Outcome of Duty Hour Restrictions on Burnout -The effect of work hour limitations on residents has been researched widely as an important environmental consideration in the development of burnout. Residents who reported working more than 80 hours had higher rates of burnout (69.2%) compared with a burnout rate of 38.5% after the time restriction was in effect. Overall internal medicine residents reported that the work hour limits have had a positive effect with a decrease in the amount of teaching by attending physicians, as well as “having to cut corners” on both patient care and educational activities.\textsuperscript{27}.

1.7. Interventions to reduce burnout – They fall into 2 categories: workplace related interventions and individual- driven behavioral, social, and physical activities.

a) Workplace related Interventions Suggested interventions in the workplace include developing stress-reduction programs, increasing staff awareness of burnout, enhancing support for health professionals treating challenging populations, and ensuring a reasonable workload.\textsuperscript{28} Some programs have attempted to manage workload by instituting night float or home call systems. Positive effects include increased opportunities for rest; potential negative effects include decreased clinical and surgical experience and decreased opportunities for development of professionalism and communication skills.\textsuperscript{29} Furthermore, increasing variety in workplace roles (opportunities to conduct research, teach, and supervise) in addition to performing direct clinical care has been documented to improve satisfaction.

Mentoring programs in residency training can also be helpful in this regard.\textsuperscript{31,32}

b) Individual related Behavioral, Social, and Physical Activities- There are a number of interventions that can be used individually by residents. Peer support around challenging cases can be validating and stress reducing. In a sample of 200 professionals, Maslach\textsuperscript{33} showed that venting, laughing, and discussing care with colleagues decreased personal anxiety. Participating in professional organizations and attending lectures or conferences can further develop work-related social networks. Meditation has been shown to improve burnout.\textsuperscript{34} Physical exercise has also been shown to reduce depression, anxiety, and mood, making it an ideal intervention for burnout.\textsuperscript{35} Creating a defined boundary between work and home has also been strongly suggested in the literature.\textsuperscript{36} Some residency programs are encouraging and supporting personal
psychotherapy for residents. Other suggested interventions include vacation, mindfulness techniques, yoga, reflective writing, spiritual activities, scheduled daily rest, music, massage, and enjoying nature. Maslach summarized effective working through burnout by stating: "If all of the knowledge and advice about how to beat burnout could be summed up in 1 word, that word would be balance—balance between giving and getting, balance between stress and calm, balance between work and home.’

1.8. Residency Coordinators' Social Support of Residents in Family Medicine Residency Programs Stresses of residency education have been described by many workers. Anyone who has spent time observing the day-to-day operation of residency training programs recognizes the central role that many residency coordinators (RCs) play in the social support of residents. The positive contribution of social support to physical and mental health and coping abilities in stressful situations have been well explored and well established.

Unfortunately, residency coordinator’s appears to be the major unacknowledged source of social support for residents during residency training. The three-part distinction of social support activities is commonly used:

1. Emotional—verbal and nonverbal communication of caring and concern,
2. Instrumental—the provision of information used to guide or advise, and
3. Instrumental—the provision of material goods (eg, money, or physical assistance).

In most of the medical universities in developed countries, the RCs report spending approximately 6 hours of their work week providing informational, emotional, and instrumental social support to residents. They describe regularly or frequently talking with residents about the resident's personal and professional lives and problems. From the reports of the various surveys, it is clear that many residency coordinators see themselves as a major on-site source of social support for residents both in terms of the time and the range of support that they provide. While appointing a new RC, specific social support skills be included in the job description and adequately assessed during the interview process. After the appointment, the universities should provide training to cultivate social support skills and plan formal ongoing supervision to assist RCs with both the predictable and unexpected personal and professional dilemmas residents may share with them.

2. Discussion
Common stressors of residency fall into three categories: situational, personal, and professional. Situational stressors include inordinate hours, sleep deprivation, excessive work load, overbearing clerical and administrative responsibilities, too many difficult patients, and conditions for learning that are less than optimal. Personal stressors include family, who may be a source of support, but can also be a source of conflict and negative stress; financial issues, as many residents carry heavy educational debts, and many feel compelled to moonlight; isolation, frequently exacerbated by relocation away from family and friends; limited free time to relax or develop new support systems; psychosocial concerns, brought on by the stress of residency; and inadequate coping skills. Professional stressors include responsibility for patient care, supervision of more junior residents and students, difficult patients and problems, information overload, and career planning, which current health care changes make particularly challenging. Stress, however, is a normal part of residency and can produce desirable effects such as tolerance of ambiguity, self confidence, and maturity. Stress also may stimulate the acquisition of knowledge and skills.

Burnout is a triad of emotional exhaustion, depersonalization, and a sense of decreased personal accomplishment. It is a phenomenon that reflects the complex interaction between environmental stressors, genetic vulnerabilities, and coping styles. Burnout can contribute to multiple physical symptoms, psychological symptoms, and substance abuse, all of which can impact a resident's quality of life, ability to provide sustainable and safe patient care, quality of learning and teaching, and the overall morale of a residency program. The studies suggest that residents, especially in the early years of training, are particularly vulnerable to burnout, with a prevalence rate ranging from 27% to 75%. The negative impact of burnout on patient care includes risk of medical errors, patient safety risks, and potential compromise of quality of care. Negative consequences of burnout on physicians in training include depression, suicidal tendencies, and medical illnesses. Effective interventions to address burnout should be developed at both the individual and institutional levels. Although preliminary studies indicate that work hour limitations have improved resident quality of life, there is potential risk to decreased
educational opportunities and a "shift" mentality. RCs report devoting on average approximately 6 hours a week to the social support of residents.\textsuperscript{51} They provide ideas for solving personal and professional problems, opportunities for residents to express feelings, and emotional support. They frequently discuss resident issues with the residency director and others and often play a role in progress evaluations. The prevalence and importance of the social support provided by RCs to residents has not been thoroughly explored, and their contribution to the gathering and dissemination of information related to residents' professional and personal status within the residency program is often unacknowledged.\textsuperscript{51}

3. Conclusion
Burnout during residency training programme is a well-known phenomenon that must be acknowledged by head of the medical universities. As we are moving towards health care reforms and attempt to restructure our approach to training, attention to personal well-being is important to the successful education of the next generation of doctors. Unfortunately, in most of the medical teaching institutions across the country, residency coordinators position and their role is unacknowledged in the social support of residents. This role raises issues concerning the recruitment, supervision, training, and job expectations of residency coordinators.

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