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# RISING FLAMES OF BURNOUT IN MEDICAL STUDENTS - A STUDY FROM TERTIARY CARE INSTITUTE IN INDIA

Psychiatry

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## ABSTRACT

**Background:**Burnout is an increasingly prevalent phenomenon worldwide. In recent times, the level of burnout has increased exponentially in medical students. This increasing prevalence or "rising flames of burnout" affects the mental as well as physical wellbeing of an individual.

**Materials & Methods:**We decided to conduct a study with aims to assess the prevalence of burnout in medical students, and to study the socio-demographic profile of students with burnout. Institutional Ethics Committee approval was obtained.It was a cross-sectional study wherein random100 medical students studying in MBBS were selected. A semi-structured questionnaire to obtain details about socio- demographic profile and Burnout Measure-Short Version Scale was administered. Statistical analysis was done.

**Results:** The present study shows prevalence of burnout as 64%.No significant association of burnout was found with age. Burnout was significantly more in females (75%) , hostellers (79.69%) and students studying in final year (34.37%) or in internship (43.75%). There was no significant difference in burnout n non-burnout group with respect to rural or urban background and socioeconomic class. High prevalence of burnout can lead to serious consequences. Its early detection will therefore definitely help in carrying out timely interventions

## KEYWORDS

Burnout, Medical students

## INTRODUCTION:

During the last few decades we have seen a gradual paradigm shift in the medical profession. Burnout has been presented as an increasingly prevalent phenomenon in modern societies and has received growing attention from both researchers and practitioners. Burnout among students has garnered significant attention because of the negative impact it renders on patient care and medical student themselves. In 1980, Pine and Kafry[1] found that higher degree of burnout was experienced by university students as compared to service workers.

In an article[2]entitled "Staff Burnout", psychologist Herbert Freudenberger first coined the term 'burnout'. A broadly applicable description defines burnout as a state of mental and physical exhaustion related to work or care giving activities. The article mainly discusses job dissatisfaction precipitated by work-related stress. According to Maslach C et al,[3]Burnout has been defined as a combination of emotional exhaustion, depersonalization, and reduced personal accomplishment caused by chronic work stress.

Burnout has three dimensions: emotional exhaustion (EE), cynicism (CY) and reduced professional efficacy (PE). Emotional exhaustion refers to an individual being overextended emotionally, which leads to the depletion of an individual's resources. Cynicism refers to a negative, callous or excessively detached response to various aspects of the job. Reduced professional efficacy represents a general sense of one's inefficacy at work and to a feeling of lack of professional success and competency. [4]

It has been mentioned in the 10th edition of the International Classification of Diseases (ICD-10) – burnout is coded Z73.0 and defined as a state of vital exhaustion.[5] Though it doesn't appear in the 5th edition of the Diagnostic and Statistical Manual of Mental Disorders [(DSM-5); [6]

In 2001, Richard Smith[7] asked "Why are doctors so unhappy?" and concluded that "The most obvious cause of doctors' unhappiness is that they feel overworked and under supported". Medical undergraduate education is a long process where students face multiple stressors such as common academic overload, lack of leisure time, emotional pressure to maintain good grades, and specific conditions of learning complex medical procedures while working concurrently with patients.[8,9]

In the environment of training for being a doctor, several such factors may become stressful leading to multiple physical symptoms, psychological symptoms, and substance abuse, all of which can impact a student's quality of life. Burnout among students can result in mental fatigue, anxiety, lack of motivation, and absence from class, which undoubtedly threatens their physical as well as mental health. The prevention of burnout among students is essential for improving their quality of life.

In an article published in The Atlantic Magazine by Dr. Gunderman[10], burnout was talked of as "the sum total of hundreds and thousands of tiny betrayals of purpose, each one so minute that it hardly attracts notice"; which is remarkably consistent with theories that a larger more intrinsic and more complex cause for burnout may exist, rather than simply the effects of external stressors.

Maslach [11]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."

Burnout among the medical fraternity is an area of concern. Pompili et al[12] found that burnout is significantly associated with hopelessness and suicide risk among medical doctors. As mentioned in study[13] on "Factors associated with resilience to and recovery from burnout", students who are resilient to burnout are less likely to experience other dimensions of distress and are more likely to have a higher quality of life. According to Thomas MR et al [14], Burnout can even decrease empathy for patients, and affect patient care.

Mental disorders among medical students have been reported more frequently in recent years, although few studies have described Burnout Syndrome [15, 16] Therefore we decided to conduct a study with aims to assess the prevalence of burnout in medical students, and to study the socio-demographic profile of students with burnout.

## MATERIALS AND METHODS:

### Study design

This was a cross-sectional study done at a government run tertiary care hospital and teaching institute. Institutional Ethics Committee approval was obtained.

### Study population and sample characteristics

Cases were medical students studying in MBBS in the institute. 100students were randomly selected for the study after taking written informed consent. Classroom visits were made and only those students who would volunteer and were devoid of any diagnosed psychiatric illness were selected.

### Procedure of study

Students were administered a semi-structured questionnaire to obtain details about socio-demographic profile. Burnout Measure-Short Version Scale was also administered.

Burnout measure-short version [17] is a briefer version of the longer 21 item Burnout Scale. It is a 10-item, 7 point Likert scale that focuses on assessing career burnout with higher scores indicating greater burnout. This scale has acceptable internal consistency of 0.88 in a population

of health care workers, and high stability with a 3 month test-retest reliability of 0.74. It also has strong validity across cultures and concurrent validity with other, more time intensive, burnout measures.[18]

**Statistical analysis**

Statistical analysis was done. Frequency distribution table was made using appropriate statistical method and Chi-square test was administered.

**RESULTS:**

In our study, prevalence of burnout was extremely high. It was seen that 64 out of 100 medical students had burnout. ($n = 64$; 64%)

With regards to socio demographic profile, we found no significant association of burnout with age. As shown in table 1, burnout was more in females (n=48;75%) as against males (n=16; 25%) and this difference was statistically significant.[$\chi2=26.0461, p < 0.05$]**.** In our study with respect to current residence, burnout was seen significantly more in hostellers (n=51; 79.69%) as compared to day scholars (n=13; 20.31%). [$\chi2=28.7109$ , $p<0.05$] There was no significant difference in burnout and non-burnout group with respect to rural or urban background in our study [ $\chi2=0.1122$, $p=0.7376$] According to modified Kuppuswamy's socio-economic status scale, students belonged to either upper class or upper middle class. However, there was no significant difference in burnout and non-burnout group with respect to socioeconomic class [$\chi2=0.007$, $p=0.93325$]Also of the burnout medical students, most were studying in final year (n=22; 34.37%) or were in internship (n=28; 43.75%) and the difference was statistically significant. [$\chi2=14.8936$. $p<0.05$]

**TABLE 1:**

| | | BURNOUT | NON BURNOUT | |
|---|---|---|---|---|
| **GENDER** | MALE | 16 | 28 | $\chi2=26.046$ |
| | FEMALE | 48 | 8 | $P=0.00003$ |
| **CURRENT RESIDENCE** | HOSTELLER | 51 | 9 | $\chi2=28.7109$ |
| | DAY SCHOLAR | 13 | 27 | $P=0.000$ |
| **NATIVE PARENTAL RESIDENCE** | RURAL | 28 | 17 | $\chi2=0.1122$ |
| | URBAN | 36 | 19 | $P=0.7376$ |
| **SOCIO-ECONOMIC STATUS** | UPPER CLASS | 29 | 16 | $\chi2=0.007$ |
| | UPPER MIDDLE CLASS | 35 | 20 | $P=0.93325$ |
| **EDUCATIONALYEAR** | FIRST YEAR | 4 | 12 | $\chi2=14.894$ |
| | SECOND YEAR | 4 | 6 | $P=0.0049$ |
| | THIRD YEAR | 6 | 4 | |
| | FINAL YEAR | 22 | 6 | |
| | INTERNSHIP | 28 | 8 | |
| **TOTAL** | | 64 | 36 | |

**DISCUSSION:**

Burnout among students is a common serious entity with devastating personal and professional consequences. Interest in the well-being of students has increased because of their contributions to the healthcare system.

Burnout is traditionally viewed as a reactive pattern towards negative working conditions, affecting vitality and emotions towards the work The high level of educational demands, lack of time for leisure, family and friends, studying for residency exams, lack of finances, all contribute to stress among medical students.

Burnout can have serious consequences including depression, suicidal ideation and thoughts of dropping out of medical school.[19]It affects work performance, self-esteem, and psychological health, and may progress to other mental disorders.

In the present study, the prevalence of burnout was found to be 64%. This is a very high prevalence. According to study by Lloyd S et al [20] and Spickard A et al [21] Burnout affects 30% to 78% of physicians and residents, and can lead to an increased prevalence of suicide, divorce, depression, loss of income, and disruptive behavior in the workplace Previous studies on Burnout Syndrome in medical students have reported a prevalence from 10% to over 45%[22]Fernandéz-Lopez et al. [23] recorded that the Burnout Syndrome manifests most frequently in certain professions, and among healthcare professionals there is an incidence of 20 to 50%, second only to police officers and teachers We found no association with age, unlike some studies that have reported a higher prevalence in younger students.[24,25]As shown in table 1, burnout was significantly more in females. Females as such are considered a vulnerable group for depressive disorder. Juggling between many social roles, wastes energy and time necessary for learning and resting, which could be the reason for greater distress in professional demands seen in females.

Similar findings were seen in study by Amy Wachholtz and MaiLan Rogoff,[26]wherein women were more likely to be burned out and experience more anxiety, but they were also more likely to engage in Adaptive coping strategies.

As per study by Martínez IMM & Pinto AM, [27] burnout was seen more in females. However , our study would differ from study by De Oliva Costa EF et al,[28] wherein burnout was more in male medical students. In our study with respect to current residence, burnout was seen significantly more in hostellers as compared to day scholars. We assume that there may be lack of emotional familial support for hostellers and missing their family members may add to the stress which the students endure, hence adding up as a major step in the path towards burnout. According to study by Dyrbye LN et al,[13] students who perceive higher levels of social support are more likely to be resilient and recover from burnout than other students. As most students of the sample group were hostellers, we decided to evaluate their parental residential background to see whether the difference between rural and urban background has any significant role in association with burnout. There was no significant difference between rural or urban background in our study.

According to modified Kuppuswamy's socio-economic status scale [29], our students belonged to either upper class or upper middle class. Financial problems may become a cause of stress which may eventually lead to burnout. However, In our study there was no significant difference in the socioeconomic class among the sample population.

Also of the burnout medical students, most were studying in final year or were in internship and the difference was statistically significant. Final year being the most demanding from educational point of view while excess workload along with preparing for post graduate entrance examination during internship may all add to the stress the medical students go through and thus making these years more prone for burnout.

Similar findings were seen in study by Amy Wachholtz and MaiLan Rogoff[26], wherein medical students during their clinical years (traditionally Year 3 and 4) were more likely to experience burnout compared to those in their didactic years (Year 1 and 2).

Early detection of Burnout Syndrome is needed to encourage the adoption of preventive measures and also psychosocial and pharmacological interventions at the right time. By identifying factors that may protect against burnout in medical students, we may provide a two fold-benefit: one directly to the students and another indirectly to patients when students are involved in patient care.

LIMITATIONS: This study was conducted at a tertiary care hospital, which may not be representative of the general population. It was a cross sectional study and not a longitudinal one and the sample size was small. Additionally, the loss of those students who refused to participate in the study requires us to consider the possibility that the most serious cases of burnout may have been among these students.

Thus, we may have underestimated of the prevalence of individuals with burnout in this research.

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