



PREVALENCE OF BURNOUT AMONG POSTGRADUATES IN A GOVERNMENT MEDICAL COLLEGE, VISAKHAPATNAM CITY USING MBI-HSS SCALE: A CROSS-SECTIONAL STUDY.

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ABSTRACT An observational cross-sectional study was conducted at Government Medical College, Visakhapatnam during the month of October- November 2020 among a sample of 100 randomly selected Postgraduates of all professional years with an objective to estimate the prevalence of burnout among medical postgraduates and to study the factors associated with burnout. The study tool used was the Modified Maslach Burnout Inventory-Human Services Survey which assesses three core aspects of burnout Emotional exhaustion, Depersonalization & Personal Accomplishment. Data was collected using google forms after obtaining informed consent. Results obtained in the study showed the mean age of study participants was 26.3 ± 1.88 years and 66.2% of them were females, 85% were unmarried. Considering the disciplines, 23% belong to Pre and para-clinical disciplines whereas 77% belong to clinical disciplines, and 67%, 16%, and 17% were from the 1st, the 2nd, 3rd, and professional years respectively. It was observed that 48% of study participants are at very severe risk of burnout and 48% of postgraduates have emotional exhaustion, 19% have depersonalization and 43% have a lack of personal accomplishment. There is a significant association with no. of working hours and burnout. Clinical departments have burnout which was found to be Statistically Significant.

KEYWORDS : Burn Out, Post graduates, MBI-HSS Scale.

INTRODUCTION

Burnout syndrome, first described in 1974, is a psychological syndrome caused by an ongoing response to chronic interpersonal stressors at work. It is defined as "a state of physical, emotional and mental exhaustion, or a coping mechanism to working conditions that are stressful, demanding and lack of recognition"(1).

Burnout among healthcare professionals has gained significant attention in recent times. As the field is filled with high expectations and demands, doctors are prone to develop burnout and its associated adverse consequences (2).

Although resident burnout is still under-recognized, many important issues are still up for debate. First, because of the variety of working conditions in various medical and surgical specialties, the global prevalence of burnout in residents is unknown. Previous studies (3,4) concentrated on the prevalence of burnout syndrome in a single specialty. Second, variations in burnout prevalence rates have been reported, ranging from 18.7% to 74.8%, owing primarily to different assessment methods and small sample sizes (5).

Workplace stress among healthcare professionals has become a major health issue for both workers and the global economy. Optimal level of stress enhances learning while excess stress can lead to health problems. If untreated can lead to multiple disorders like sleeping disturbances, insomnia and further may lead to BURNOUT. Medical education and healthcare are inherently stressful and demanding. Medical professionals are more prone to Burnout due to heavy workload especially in the current covid pandemic situation. Medical Postgraduates especially in government setting experience long working hours, huge patient load, poor infrastructure, balancing academics simultaneous make them vulnerable for burnout. Resident physicians During this period they are subjected to sleep deprivation, high workload and unsatisfactory salaries, as well as taking on many responsibilities in their workplaces.(6,7,8,9)

Focusing on its subdimensions, emotional exhaustion (EE), refers to feelings of overload and depletion of emotional resources; depersonalization (DP), is the negative response to other people, such as colleagues and patients, in a cynical and isolated way; and reduced personal accomplishment (PA), occurs when the subject feels less competent in his/her role.

In this context, the Maslach Burnout Inventory (MBI)(10) is the most

commonly used self-completion questionnaire for assessing burnout, as it presents greater validity and increased reliability concerning the multiple dimensions of the syndrome than other less common instruments. As there is limited information regarding burnout among medical postgraduates in India, the present study was taken up.

OBJECTIVES

1. To estimate the prevalence of burnout among medical postgraduates
2. To study the factors associated with burnout.

METHODOLOGY

STUDY DESIGN: Observational cross-sectional study

STUDY SETTING & STUDY POPULATION: Medical Postgraduates of a government medical college, Visakhapatnam.

STUDY PERIOD: October-November 2020

SAMPLE SIZE: In the previous studies, the prevalence of burnout among medical professionals was reported to be 45%. A sample size of 99 was derived by applying a prevalence of 45% in the formula $4pq/L^2$. Rounding off the sample size, 100 was taken as the study sample. The absolute precision of 10 was taken.

$$N=4pq/L^2 = 4 \times 45 \times (100-45)/10 \times 10 = 99$$

SAMPLING TECHNIQUE: There are around 560 postgraduates in GMC, Visakhapatnam at the time of study commencement and this includes all 3 professional years. A list of postgraduates was obtained from the college office. System-generated random numbers were taken.

Inclusion Criteria: Postgraduates were contacted and those who had given consent are included in the study.

STUDY TOOL: The study tool used was Modified Maslach Burnout Inventory –Human Services survey (MBI-HSS). The licensed version of the scale was obtained with permission from mind garden and used which is a validated tool. Other sociodemographic and working details were also obtained.

The three dimensions of burnout that were measured by this 22-point scale were Emotional Exhaustion (EE; nine items), Depersonalization (DP; five items), and Personal Accomplishment (PA; eight items). It

was designed to evaluate the three subdimensions and consists of 22 items divided into three subscales. The EE subscale evaluates the complaints about feeling on edge and exhausted by work. The DP subscale measures impersonal responses and lack of empathy during professional activity, while the PA subscale evaluates the feelings of competence and achievement of success at work.

Participants were asked to rank these items on a seven-point Likert scale where 0 means “never”, 1: “a few times a year”, 2: “monthly”, 3: “a few times a month”, 4: “weekly”, 5: “a few times a week” and 6: “everyday”.

The questionnaire was sent to study participants through google forms and after obtaining their consent

The scores on MBI-HSS scale range from 15-75. The score above 60 indicate very severe risk of burnout.

Table no 1 : Categorization of Burnout and respective scores

Categorization of Burnout	Score
No signs of burnout	15-18
Little signs of burnout	19-32
At risk of burnout	33-49
Severe risk of burnout	50-59
Very severe risk of burnout	60-75

The subscale score thresholds that were recommended by the MBI manual were used to identify individuals who met the criteria of burnout “cases”– EE: > 26, DP: > 12, and PA: < 32.

Table no 2: Categorization of items in burnout

Categorization of items in burnout	score	
Emotional exhaustion	>26	Higher the score ,higher the degree of burnout
Depersonalisation	>12	Higher the score ,higher the degree of burnout
Personal accomplishment	<32	Lower the score ,higher the degree of burnout

RESULTS

Table no 3 : Distribution of study population based on Socio-demographic details

Variable	Category	Frequency(%)
Gender	Male	32 (32 %)
	Female	68%
Age	<26years	64%
	27 to 29	29%
	30 to 32	7%
Marital status	Married	15%
	Unmarried	85%
Professional year	1st year	67%
	2nd year	16%
	3rd year	17%
No. of working hours	<9hours	74%
	10 to 19hours	24%
	>20 hours	2%

Out of 100 subjects, 68% are females and 32% are males. The mean age of study sample was 26.3 ± 1.88 . 85% of the study participants were unmarried. 67% were pursuing 1st professional year. 74% of them were working for less than 9hours. Among the study subjects, 23% belong to non clinical disciplines where as 77% belong to clinical disciplines.

Table no 4: Mean scores of items in burnout

Burn out Items	Mean score
Emotional Exhaustion Score	24.3 ± 12.51
Depersonalisation Score	8.77 ± 5.59
Lack Of Personal Accomplishment	32.66 ± 8.33
Total Burnout Score	65.67 ± 18.11

Among the total subjects 48% are at very severe risk of burn out. The average burnout score among study subjects was 65.67 ± 18.11 .

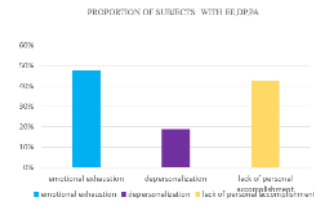


Fig no 6: Proportion of subjects with EE, DP, PA

48% of postgraduates have emotional exhaustion, 19% have depersonalization and 43% have a lack of personal accomplishment.

Table no 5: Sociodemographic details of the study population in relation to burnout score.

VARIABLE S		BURNOUT SCORE		TOTAL	P VALUE
		severe SCORE (50-60)	Very Severe SCORE >60		
Gender	Males	37	31	68	0.482
	Females	15	17	32	
Age	<26	32	32	64	0.179
	27-29	14	15	29	
	30-32	6	1	7	
Marital status	Married	8	7	15	0.911
	unmarried	44	41	85	
Year of post graduation	1 st	40	27	67	0.089
	2 nd	6	10	16	
	3 rd	6	11	17	
Working hours	<9 hours	49	25	74	0.00*
	>9 hours	3	23	26	

In the current study, almost all participants in the study are having burnout of severe and very severe grade. 52% were having severe burnout and 48% were having very severe burnout. Females (54%) got proportionately higher burnout scores than male (43%). There is significant association with no. of working hours and burnout score (p value 0.00) whereas no significant association of burnout was observed with age, gender, years of postgraduation and marital status.

DISCUSSION

The present study reported very severe burnout among 48% of postgraduate students in a GMC Visakhapatnam. In a study conducted by Yohannes, out of 144 medical students, 34.0% had symptoms of burnout (11). In another study conducted by Ratnakaran. B, overall work-related burnout was found in 34.8%, the highest being for junior residents (38.87%, $p = 0.008$) and the least being for super-specialty senior residents (21.67%).(2)

The mean age of study participants was 26 yrs which was similar to the study done in Karnataka and Pakistan (12,13). The mean age of the participants was 30 years in a study conducted by Yohannes G.(11)

The present study reports the prevalence of burnout was found mostly among males and unmarried post graduates although it was not statistically significant. this result was contrary to a study done in Karnataka (12,13). A study conducted in United states has reported women physicians have a higher rate of depression than the general population, lending support to our study that female clinicians experienced more burnout than their male counterparts (14).

In the present study, first-year postgraduates had high burnout which was 40%. In a similar study done by Shetty et al, first-year postgraduates had more burnout than, third year followed by second-year postgraduate students (13). In a study conducted by Ratnakaran. B, showed that as the number of years of residency increased, the burnout in all three dimensions also increased i.e., the first-year residents had the least and the third-year residents had the highest prevalence of burnout in all three dimensions (2).

In the current study, 48% of postgraduates have emotional exhaustion, 19% have depersonalization and 43% have a lack of personal accomplishment. In a study conducted by Yohannes, 61.8% of the study participants scored high on EE sub-scale, 47.9% of the study participants scored high DP sub-scales, and 59.7% of the study participants scored low on PA subscale (11). In a study done in Europe, 43% of respondents had high scores for EE burnout, 35% for DP, and 32% for PA, with 12% scoring high burnout in all three dimensions (15). In another study done in Turkey, the level of emotional exhaustion (37.4%), high level of depersonalization (45.6%), and low perception of personal accomplishment (50.3%) (16).

CONCLUSION

In summary, this study reported a high prevalence of burnout among post-graduates. The high prevalence of burnout had severe consequences such as they may be also at risk of getting depression or other mental health problems including suicide. The study also suggests that there is a need to take immediate preventive, curative, and promotive measures to be implemented. Hence, Furthermore, studies are recommended in this area.

Conflicts of interest:

There are no funding sources. There are no declared conflicts of interest.

Ethical clearance:

The research obtained ethical approval from the Institutional Ethics Committee.

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