



## Prevalence Of Stress Among Medical Interns Working In Tertiary Care Center, Tamilnadu

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### Abstract

Medicine is special and intimidating, as is the case in many fields around the world. Worldwide studies have shown that there is a risk of developing mental health problems for professionals, especially resident doctors/trainees or faculty members, including depression, anxiety, and medication. However, work stress has also been associated with emotional fatigue, which can contribute to work excitement, suffering, trapping, and defeat. The study was conducted with 131 medical interns, 56 of whom were male and 75 were female. Based on the prevalence of stress, 111 had stress and 20 had no stress out of 131. There is a risk that mental health problems, including depression, anxiety, and drug use, may develop for professionals. Marital status 110/124 is single with a stressful percentage of 88.2 percent. The working time factor with more than 8 hours is 63.3 percent stressful. In conclusion, the stress level among medical interns is 85 percent, with marital status, sleep time of fewer than 6 hours, erratic food intake, and more than 12 working hours.

**Keywords:** Medicine, depression, anxiety, emotional fatigue, medical practitioners, stressful

### Introduction

As with other industries around the world, medicine is unique and daunting [1-5]. This is associated with a high level of satisfaction, not only personal but also technical, but also a high level of work stress and burnout. Studies around the world have shown that there is a risk of developing mental health problems, including depression, anxiety, and drug use for professionals, in particular resident physicians/trainees and faculty [2]. In addition, work stress has often been linked to emotional fatigue, which can lead to a loss of enthusiasm for work, a sense of helplessness, trapping, and defeat [3]. Resident doctors also describe occupational stressors as intrinsic to the job, related to patient requests, feelings overwhelmed positions within the company,

and those related to working and career relationships. There are only a few national studies and some specific hospital studies available in the literature on psychological problems faced by physicians [6-9]. A major national study conducted by 2584 Canadian physicians showed that both male and female physicians had a high level of occupational stress associated with lower levels of satisfaction [10]. In a postal survey of 524 UK physicians, including medical psychologists, general practitioners, and senior hospital administrators, about 27 percent of the sampled physicians ranked in the area of depression [11]. Comparatively, a research study of 50,000 Australian physicians and medical students found that severe psychological distress was increased, as were 2-fold increased suicidal ideas among

physicians compared to the general population. There is evidence that more medical errors and poor outcomes are often the results of psychological morbidity and burn-out among resident doctors [12].

Few such studies in India have also assessed the psychological problems, stress, and burnout of resident doctors [13]. The study was mainly limited to doctors and interns, and only a few resident doctors were studying courses [14]. Studies have shown that almost one-third of doctors working in residence have tension [15]. Research between medical students and Medical research estimates that three-fourths of participants is overwhelming and that workers have a prevalence of up to 91.1% [16]. Research findings that reported psychiatric morbidity to suggest that more than half of medical undergraduates are depressed (51.3 percent), anxious (66 percent), and stressful (53 percent) [17]. These wide variations between the different studies have to do with the differences in the instruments used to evaluate the different psychological structures [18]. Studies have also assessed barriers to the search for mental health care, suggesting that stigma, secrecy, lack of awareness, and fear of unwanted intervention are the main barriers to helping with mental health problems. Strangely, none of India's research looked at the stress and psychological problems of the elderly [19].

Medical practitioners are also vulnerable to violence and drug use conditions. Research has shown that nicotine dependence and the use of other substances such as alcohol, cannabis, and benzodiazepine have been highly prevalent [20]. Because there are limited data from India and there are increasing mental health problems in the healthcare sector, resident doctors (faculty and resident physicians need to assess mental health issues [21]. Enhancing awareness among physicians of mental health problems will help to change the policies on working hours and training for residents. The present research was aimed at assessing various psychological issues among resident doctors employed in government-funded tertiary care facilities (depression, perceived stress, substance abuse, and burnout) [22].

## Objectives

1. To find the prevalence of stress among the medical interns of government dharmapuri medical college, dharmapuri.
2. To assess the association between other factors and stress.

## Methodology

This cross-sectional research was conducted at the Dharmapuri Hospital, India, among a small group of 131 MEDICAL INTERNS OF GOVT DHARMA PURI MEDICAL COLLEGE, DHARMAPURI. Research classes included a variety of veterans, junior students, interns, student physicians, teachers, and nurses, as well as teachers and laboratory technicians. The analysis was completed one month after October 2019 with 131 participants.

Participants were fully informed and written consent was obtained on the nature and purpose of the study. The research was conducted using an anonymous questionnaire specifically designed to obtain qualitative and quantitative data for the classification of semi-designed QUESTIONNAIRE & PERCEIVED STRESS SCALE (2)-related predictions. Knowledge concerns related to preventive measures such as HBV vaccination, use of safety tools, and intervention in the event of an unknown source have also been addressed.

Before the study was conducted, the Institutional Ethics Committee received clearance of the research procedure. In order to identify the different aspects of the INSTITUTIONAL CLEARANCE OBTAINED COMMITTEE research, the results were evaluated under different headings. The methods used were ratio, ratio graph, histogram, MS Excel, and other simple data analysis techniques. The statistical tools SPSS 21 Version has been used.

## Results

### Prevalence Of Stress And Sex-Wise Analysis-

The study was carried out with 131 participants, out of which 56 males and 75 females. According to prevalence of stress 111 had stress and 20 has no stress out of 131 [see figure 1]. Meanwhile, the prevalence of sex wise ratio is stating females have more stress than males i.e. 13/9 has stress and 1/1 is having no stress (female/male ratio) [see figure 2].

Figure 1: Demonstration of the Prevalence of Stress in a pie-chart form that out of 111 are stressed (blue) and 20 are not stressed (orange).

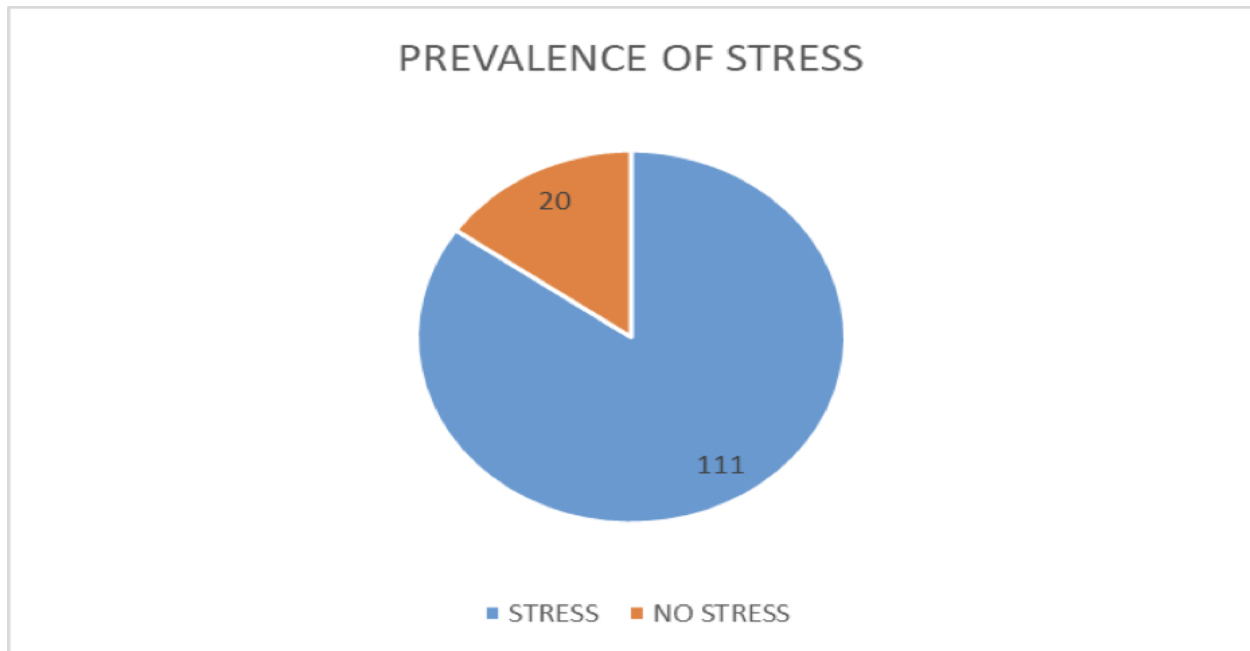


Figure 2: according to this bar females are more when compared prevalent to stress sex-wise than males. [Blue is for males and orange is for females]



### Stress Classification

The stress has been classified into four forms here **severe stress** is 28 percent, **moderate stress** is 37 percent, **mild stress** is 46 percent, and **No stress** in

20 percent found in the respective study [see figure 3]. The severe stress is among 28/131, moderate stress is 37/131, mild stress is 46/131 and no stress is 20/131 samples.

The result shows that 111 patients have stress out of 131 which is pretty surprising i.e. 84.7 percent sample population. And there are multiple factors involved with this amount of alteration in stress levels. Studies around the world have shown that there is a risk of developing mental health problems,

including depression, anxiety, and drug use for professionals, in particular resident physicians/trainees and faculty. In addition, work stress has often been linked to emotional fatigue, which can lead to a loss of enthusiasm for work, a sense of helplessness, trapping, and defeat.

**Figure 3: Demonstrating the stress classification of patients found in 131 samples**



**Numerous Factors Associated With Personal-Life On The Stress Level**

There are numerous factors affecting the stress levels which are marital status, duration of sleep, working hours, relaxation time, food intake on time, conflict with nursing staff, exclusive hosteller, missed social events, and conflict with patient/relative. Marital status 110/124 is single with a stressed percent of 88.2 percent, while 42.9 percent in married people i.e. 3/7 with a p-value of  $\leq 0.001$ . The other factor affecting is the duration of sleep the ones with less than 6 hours of periods of sleep are stressed levels of 97.7 percent, and those who have 6 to 8 hours of sleep have 82.5 percent of stress and those who have more than 8 hours of sleep have 57.1 percent of sleep with a p-value of  $\leq 0.034$ . The factor of working hours with more than 8 hours has 63.3 percent of stress while 8 to 12 hours have more in comparison which is 84 percent and those who work more than or equal to 12 hours have much higher stress levels i.e. 84 to 100 percent with a p-value of  $\leq 0.003$ .

Factors affected with a relaxation time of fewer than 2 hours have 100 percent stress level, while 2 to 5 hours relaxation time individual has 86.9 percent, and those who relax more than 5 hours has much lesser than have the stress level when compared to the time of 2 hours individual i.e. 73.6 percent. Another factor affecting the stress level is food intake on time is compared to those who skip or have no fixed timing for their foods the fluctuation shows 63.8 to 94.4 percent. Another factor is exclusive hosteller is showing major alteration in percentages i.e. 92.7 to 73 percent with or without of about 19.7 percent with a p-value  $\leq 0.004$ .

Another factor missing social events is also showing major alterations with 91.3 to 68.4 percent i.e. 22.9 percent which is a huge jump in stress levels with a p-value  $\leq 0.027$ . The last factors are conflicts with nursing staff shows about 17.5 percent and conflict with patients or relations show 18.7 percent of stressed levels with a p-value  $\leq 0.027$  [see table 1].

**Table 1: Shows the factor affecting the stress-level percent with Chi-square value and p-value of the 131 sample data.**

S.NO	FACTORS	STRESSED (%)	CHI SQUARE	P VALUE

			VALUE	
1	Marital status Single Married	110/124 (88.2%) 3/7 (42.9%)	10.484	0.001
2	Duration of sleep < 6 hrs 6 – 8 hrs >8 hrs	43/44 (97.7%) 66/80 (82.5%) 4/7 (57.1%)	6.745	0.034
3.	Working hours <8 hrs 8 –12 hrs >12 hrs	17/26 (65.3%) 56/67 (84%) 38/38 (100%)	11.411	0.003
4.	Relaxation time <2 hrs 2—5 hrs >5 hrs	24/24 (100%) 60/69 (86.9%) 28/38 (73.6%)	6.913	0.032
5.	Food intake on time Yes No	30/47 (63.8%) 81/84 (96.4%)	19.662	<0.001
6.	Exclusive hosteller Yes No	77/83 (92.7%) 35/48 (73%)	6.663	0.004
7.	Missed social events Yes No	85/93 (91.3%) 26/38 (68.4%)	8.235	0.027
8.	Conflict with the nursing staff Yes No	64/69 (93.5%) 47/62 (76%)	4.712	0.027

9.	Conflict with patient/their relative			
	Yes	40/41 (97.5%)	4.864	0.027
	No	71/90 (78.8%)		

### Other Factors Causing Stress

There are other factors that affect the stress level among the medical practitioners are classified as gender, conflicts with co-intern and faculty, fear of hospital-acquired infection. The results are in the ratio of male/female and yes/no; Gender: among male-female have more stress level i.e. 0.94 percent with a p-value  $\leq 0.381$ . Another factor is the conflict between co-intern and faculty is 0.95 percent and 1.18 percent with a p-value  $\leq 0.557$  and 0.075 respectively. And the last factor is Fear of hospital-acquired infection is 1.02 percent with a p-value  $\leq 0.155$ .

S.NO	FACTORS	STRESS (%)	CHI SQUARE VALUE	P VALUE
1	Gender			
	Male	46/56 (82.1%)	0.768	0.381
	Female	65/75 (86.6%)		
2	Conflict with co-intern			
	Yes	22/27 (81.4%)	0.34	0.557
	No	89 /104(85.5%)		
3	Conflict with faculty			
	Yes	32 /33 (96.9%)	3.16	0.075
	No	41 /48 (81.6%)		
4	Fear of hospital-acquired infection			
	Yes	73 /83 (87.9%)	2.02	0.155
	No	41 /48 (85.4%)		



## Conclusion:

In conclusion, the stress level found among medical interns is 85 percent and factors affecting are marital statuses, duration of sleep less than 6 hours, irregular intake of food, working more than 12 hours, missing social events, residence, conflicts with nurses/patients/relatives.

## Recommendations:

Increasing sleeping hours should be more than 6 hours and reducing working hours from 12 hours to 8 hours. Eating at regular intervals and maintaining the work-health relationship and improving interpersonal relationships.

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