

ORIGINAL RESEARCH**Prevalence of Stress amongst post graduate residents by using DASS-21 and Perceived Stress Scale: a cross sectional study at a tertiary care centre**

Vanshree A. Kamble¹, Satish K. Wadde², Ajit S. Nagaonkar³

¹ Junior Resident, Department of Community Medicine, Vilasrao Deshmukh Govt. Institute of Medical Science, Latur, Maharashtra, India.

² Assistant Professor, Department of Community Medicine, Vilasrao Deshmukh Govt. Institute of Medical Science, Latur, Maharashtra, India.

³ Professor, Department of Community Medicine, Vilasrao Deshmukh Govt. Institute of Medical Science, Latur, Maharashtra, India.

Received Date: 14/11/2022

Acceptance Date: 19/01/2023

ABSTRACT

Introduction: Medical Profession is unique and challenging than any other profession in the world. It gives both great degree of professional and personal satisfaction. But the post graduate residents have to face many stressors by considering various roles & responsibilities in personal and professional life. They usually have to work for many long hours, face various clinical emergencies and academic or research work during their training period. These factors are responsible to develop stress and psychological disorders. If this long-term stress left unattended can lead to psychiatric disorder like anxiety, depression and even suicide.

Objective: To study the prevalence of stress amongst post graduate residents by using DASS-21 and Perceived Stress Scale.

Methodology: Present cross-sectional study was conducted among all post graduate residents in Government Medical College, Latur. Residents were called and asked for free time. After taking consent from them a predesigned questionnaire was provided and asked to fill themselves and return it to the principal investigator. The questionnaire included identification data, possible factors aggravating stress. Perceived Stress Scale (PSS) and Depression, Anxiety and Stress Scale (DASS-21) customized for stress related questions only was used to assess the stress.

Result: Majority of study participant belong to 24 to 29 years of age. 32.72% of PG residents were suffered from mild to extremely severe degree stress as per DASS-21 scale and 56.36% were included in moderate level of stress as per PSS scale.

Conclusion: Stress does affect physical and mental health. Academic & psychological were the leading causes of stress. Various preventive measures such as improving time management, coping skills to optimize the balance between professional and social commitment, fixed duty hours, better living facilities in hostel and good quality of food in mess would go a long way to improve the physical and mental wellbeing of these young doctors.

Keywords: Stress, DASS-21, Perceived Stress Scale, Postgraduate residents.

Corresponding Author: Dr. Vanshree A. Kamble, Junior Resident, Department of Community Medicine, Vilasrao Deshmukh Govt. Institute of Medical Science, Latur, Maharashtra, India.

Email: kvanashree601@gmail.com

INTRODUCTION

The Medical education is a very long duration, challenging and complex process for both undergraduate and postgraduate who, in future will be caretakers for physical and mental wellbeing of patients^{1,2}. During this process they are responsible for patients care, have research assignments and participate in teaching programmes^{3,4}. Therefore they considered as “backbone of entire medical system”. Due to long working hours they are at risk of acquiring various degrees of hospital acquired infections, health related risks and a lot of stress⁵. Stress is an important occupational health problem among medical profession. United Nation labelled stress as “The 20th century Diseases”.

Objectives:

1. To determine the prevalence of stress among post graduate residents by using DASS-21 and Perceived Stress Scale.
2. To find out causes of stress among resident doctors.

MATERIAL AND METHODS

Study Design: Cross Sectional Study

Study Setting: Vilasrao Deshmukh Govt. Institute Medical Science, Latur

Study Period: 2 Months

Study Participant: Total 165 postgraduate residents of VDGIMS Latur who participated in study. Those who didn't give any response after repeated visits, were excluded from the study.

Ethical Approval: Study started after taking permission from Institutional Ethical Committee.

Data Collection: A predesigned closed questionnaire was used for collecting the data. Perceived Stress Scale (PSS) and Depression, Anxiety and Stress Scale (DASS-21 scale) were used to assess the stress amongst them.

Statistical Analysis: The data was entered in Microsoft excel and was analyzed by frequencies, percentages and chi square test using Epi Info version 7.2.2.6.

RESULTS

The maximum age being 43 yrs & minimum is being 24yrs. Among 165 post graduate residents, nearly 72.12%(119) were between age group of 24 to 29 yrs and very few i.e 3.03%(05) were between 35 to 43 years.

Table No. 1 Prevalence of stress among postgraduate residents according to DASS -21

Sr. No.	Stress as per DASS-21	Frequency (n = 165)	Percentage
1.	Normal	111	67.27
2.	Mild	25	15.15
3.	Moderate	20	12.12
4.	Severe	04	2.42
5.	Extremely severe	05	3.03
Total		165	

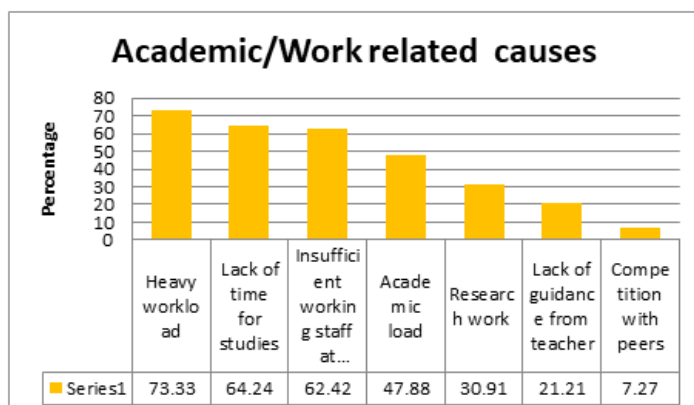
Table 2: Stress among postgraduate residents according to Perceived Stress Scale (PSS)

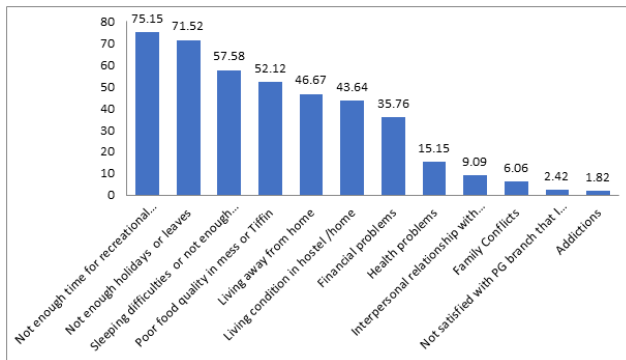
Sr. No.	Stress as per PSS	Frequency (n = 165)	Percentage
6.	Mild	58	35.15
7.	Moderate	93	56.36
8.	Severe	14	8.49

Total	165	100
--------------	------------	-----

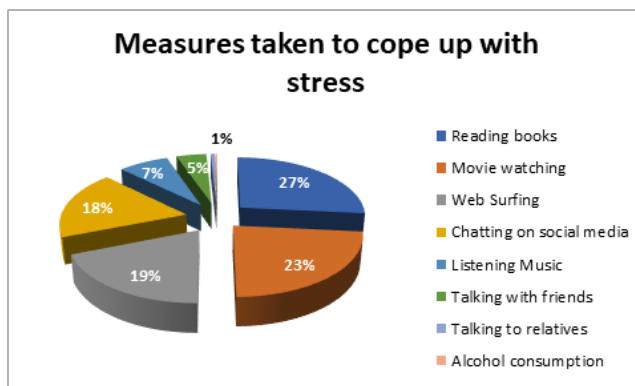
Table 3: Association between variables and stress with DASS – 21

Sr. No.	Sociodemographic Factors	Stress			X ²	‘p’
		Present	Absent	Total		
1.	Sex					
	Male	27 (31.03)	60 (68.97)	87 (100)	0.1	0.75
	Female	27 (52.94)	51 (47.06)	78 (100)		
2.	Year of residency					
	First year	19 (32.2)	40 (67.8)	59 (100)	2.16	0.34
	Second year	23 (63.89)	36 (36.11)	59 (100)		
	Third year	12 (25.53)	35 (74.47)	47 (100)		
3.	Marital status					
	Married	06 (15.38)	33 (84.62)	39 (100)	5.98	0.014
	Unmarried	48 (61.54)	78 (38.46)	126 (100)		
4.	Department					
	Clinical	51 (37.5)	85 (62.5)	136 (100)	6.82	0.009
	Pre and para clinical	03 (11.54)	26 (88.46)	29 (100)		
5.	Place of Residence					
	Maharashtra	46 (31.08)	102 (68.92)	148 (100)	1.17	0.29
	Out of Maharashtra	08 (88.89)	09 (11.11)	17 (100)		
6.	Working days per week					
	3 to 6 days	02 (10.53)	17 (89.47)	19 (100)	3.93	0.04
	All day of week	53 (36.3)	93 (63.67)	146 (100)		
7.	Work duration					
	6 to 12 hours	03 (12)	22 (88)	25 (100)	6.25	0.04
	12 to 18 hours	40 (54.05)	74 (45.95)	114 (100)		
	>18 hours	11 (42.31)	15 (57.69)	26 (100)		
8.	Type of admission					
	Fresh	54 (35.53)	98 (64.47)	152 (100)		0.02*
	In-service	0 (0.00)	12 (100)	12 (100)		
9.	Staying at					
	Hostel	53 (37.86)	87 (62.14)	140 (100)	10.06	0.001
	With family or relatives	01 (4.17)	24 (95.83)	25 (100)		

**Graph 1: Academic causes of stress**



Graph 2: Psychological causes of stress



Graph 3: Measures taken by the PG residents to cope up with stress

DISCUSSION

Stress is an additional pressure to every individual. Now a days it is commonest risk factor for development of various diseases. In our study, prevalence of stress among residents doctors was 32.7% (Table 1). In a similar study conducted by Saini ⁶et al in a tertiary care institute in Delhi that prevalence was 32.8%. The most common age group in study was 24 to 43 years as consistent with study by Issa BA⁷ et al where it was 26 to 46 years due to competitive nature of residency training.

In present study, about 56.36% (Table 2) post graduate residents were found to have moderate level of stress according to Perceived Stress Scale(PSS). Similar study conducted on junior residents, in Bangalore ⁸ city shows that about 72.2% PG residents were under stress as per PSS. Stress level among residents of clinical departments in our study was 37.5% (Table 3) which was higher as compared to pre and para clinical residents(11.54%) and it was statistically significant. Similar findings were seen in an another study by Gobbur SB³ et al in which stress levels among clinical residents was 33.33% But it was statistically insignificant. The cause behind this might be inadequate time for recreational activities, criticism from staff for academics and coping with faculty mood swings.

The statistically significant association was seen between marital status and stress with proportion of 61.54% in unmarried postgraduate and 15.38% in married residents (Table 3) which is consistent with study conducted by Gobbur SB et al³. Contrasting results were found in study conducted in Sahastrabudhe AG⁵ et al that married PG graduate found more stress i.e. 45.5% as compared to unmarried 35.3% because, they had to take care of their families and also study which can be described as dual career.

The proportion of stress among fresh candidate was more (35.33%) (Table 3) than In service, because they had an experience of handling difficult cases at periphery level and had done work in various administrative fields. The residents staying at hostel were more (37.86%) stressed as compared to those who were living with their family or relatives (4.17%)(Table

3); as families are shock- absorber to every individual. We inferred from the study that, not only did the hostelites handled various personal problems, but also faced factors like improper living conditions (43.64%), poor food quality in mess or tiffin (52.12%) and living away from home (46.67%).

The present study showed that about 73.33% were stressed due to heavy workload or long working schedule and similar finding were seen in study conducted by Issa BA⁷ et al which showed that about 89% residents were high clinical workload. The reason may be more clinical work with simultaneous completion of thesis. Most of residents read book(27%) and watched movies(23%) rather than talking to friends and relative(5%)(Graph 3) .

CONCLUSION

Stress does affect physical and mental health. Academic & psychological were the leading causes of stress. Various preventive measures such as improving time management ,coping skills to optimize the balance between professional and social commitment ,fixed duty hours , better living facilities in hostel and good quality of food in mess would go a long way to improve the physical and mental wellbeing of these young doctors.

REFERENCES

1. Jafari P, Nozari F, Ahrari F , Bagheri Z. Measurement invariance of Depression Anxiety stress-21 across medical student genders. *International J of Medical Education*. 2017;8:116-22.
2. Shete A, Garkal K. A study of stress, anxiety and depression among postgraduate medical students. *CHRISMED Journal of health and Research* .2015;2(2):119-23.
3. Gobbur S.B, Nigudgi S.R, Reddy S. Prevalence of stress among postgraduate doctors at Mahadevappa Rampure medical college Kalaburagi, Karnataka. *International J of Community Medicine and Public Health* .2016 Feb;3(2):576-80.
4. Guruprakash KV, Mehta SG, Bajpai A, Prakash J, Divinakumar KJ, Khan SA, et al. A study of relationship between perceived stress coping pattern, burnout and general psychopathology among the postgraduate medical students. *Indian Psychiatry J*.2018;27(1):141-6.
5. Sahasrabuddhe AG, Suryawanshi SR, Bhandari SR. Stress among Doctors Doing Residency: A Cross Sectional Study at a Tertiary Care Hospital in the City of Mumbai. *National J Community Med*. 2015; 6(1):21-4.
6. Saini NK, Agrawal S, Bhasin SK, Bhatia MS, Sharma AK et al. Prevalence of stress among resident doctor working in medical college of Delhi. *Indian J of Public Health*.2010;54(4):119-223.
7. Issa BA, Yussuf AD, Olanrewaju GT, Oyewole AO. Stress in residency training as perceived by resident doctors in a Nigerian University teaching hospital. *European J of Scientific Research* .2009;30(2):253-59.
8. Ramya HS, Nisar Ahamed AR, Rajendra Prasad TC, Awati M. Prevalence of stress among postgraduate junior residents in Bangalore, Karnataka, India. *International J of Contemporary Paediatrics* .2019;6(3):1309-14.