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RESEARCH ARTICLE

MENTAL HEALTH STATUS OF POST GRADUATE MEDICAL STUDENTS WORKING IN GOVERNMENT MEDICAL COLLEGE AND HOSPITAL- A CROSS SECTIONAL STUDY

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Abstract

During post-graduation stress led to untoward consequences such as impaired academic performance, burn out, substance abuse, suicide, cynicism, attrition from medical school, medical errors, broken relationships, poor selfcare (poor diet, poor sleep, inadequate exercise etc.) and a decline in physical health. Stress increases more in females. Up to 11.1% of medical students experience suicidal ideation. Furthermore, endorsement of suicidal ideation has been demonstrated to increase the risk of suicide completion over the next year by 100-fold. Earlier Studies reported a high prevalence of depression in medical students but studies on Indian post graduate medical students are lacking.

Aim and Objectives: 1. To study profile of mental illness (stress, anxiety, depression) among the pg. students. 2. To study associated psychosocial factors with mental health status.

Methods: Cross sectional study was conducted during May 2023 – September 2023 covering post graduate students in govt medical college Aurangabad. Data collected by using pretested, pre designed questionnaire.

Observations & Result: Prevalence of depression was 16.48%, prevalence of stress was – moderate stress- 73%, severe stress – 26%, the study revealed the prevalence of both together stress and depression to be 16.48%. Those who were having severe stress also had depression, prevalence of depression and stress in incapacitating (impairing) productivity of individuals it has seen to be 16.48% (30 participants have both severe stress and depression). Our findings show that females are more depressed than males during their residency. – it is seen that stress is more seen in 1st year residents. Study shows that financial difficulties of own leads to depression in residency.

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Introduction:-

Medical education is highly challenging and often places heavy demands on the mental health of its students¹. The **three main stressors identified are work load, financial responsibilities, post-graduation years¹**. Several other factors such as **curriculum , traumatic events related to patients , ethical dilemmas , also make them vulnerable to depression¹**. Gender, lack of family support, sleep deprivation are also one of the risk factors¹

According to World Health Organization (WHO) depression is the second greatest predominant mental situation in the world². prevalence of depression among medical students was about 27.2 % around the world and for suicidal depression prevalence was 11.1%².

Post-graduate medical training environment has always been regarded as highly stressful to students³. **The consequences of high level of perceived stress include depression, anger/ irritability, anxiety, poor sleep, fatigue ,substance abuse³**. Studies show that doctors who work with reduced level of mental concentration can be harmful to themselves their colleagues, and patients³. **Several studies demonstrated that one fourth to one third of residents may be clinically depressed at some point of their training³**.

There are very few studies in this context in India and very few in Maharashtra , keeping all these factors in mind ; Present study was planned to describe findings of depression anxiety and stress among postgraduate students of government medical college. **Need for the study:**

There is need to understand about mental health among medical postgraduates, we have limited literature available to evaluate the mental health status among postgraduates. With this regard, it was thought of importance to make a study about the mental health status among postgraduates in a Medical College with the **OBJECTIVES:**1. To study profile of mental illness (stress, anxiety and depression) among the pg. Students. 2. To study associated psychosocial factors with mental health status.

Materials and Methods:-

1. **Study Design :** A cross-sectional study.
2. **Study Setting:** The study was carried out among postgraduates in a Government Medical College of Maharashtra.
3. **Ethical Considerations:** Ethical committee approval was obtained from the Institutional ethical committee prior to the start of the study.
4. **Study Duration:** Study was conducted from may 2023 to september 2023.
5. **Study Population:** Among all admitted residents 182 residents willingly participated from all the departments.

Inclusion criteria

The residents willing to give informed written consent were included in the study .

Exclusion criteria

Residents who refused to participate in study .

Sampling techniques :

The study was carried out among post graduate in a medical college of Maharashtra ,**Among all admitted residents 182 residents participated from all the departments, willingly that fulfil inclusion and exclusion criteria** . one of the medical college in Maharashtra were selected purposively. The written and informed consent of the subjects was obtained prior to the collection of data . data was collected anonymously without revealing the names of the participants . data was collected by pretested, pre designed questionnaire . approval of institutional ethical committee was taken prior to the start of study .

6.Data collection tools and techniques.

The objective and purpose of the study was explained to respective study participants .

- **Mental health status was assessed using pretested questionnaire and screening for depression using PHQ-12 scale⁹ (national institute of health and clinical excellence)⁹ similarly PSS (PERCEIVED STRESS SCALE – 10) was used to asses stress⁸**

- a semi structured questionnaire to evaluate the sociodemographic variables and associated factors

7.Data was compilation and entered into Microsoft excel 2019 worksheet .

8.Data analysis : done by using open epi -info version3.01. Descriptive statistics (percentage , frequency) were used to describe data appropriately.

9. Reference Citation: Vancouver⁸ system of listing and citing of reference was used. The references were numbered according to their appearance in the text and listed accordingly.

Operational definition:

Mental Health Status- is scored as

- **Normal for pss scale- stress**
Normal - score 0-13
- **Diseased for pss scale- stress**
MODERATE STRESS- score 14-26
SEVERE/ HIGH PERCEIVED STRESS- score 27-40

Normal for PHQ-12 SCALE – DEPRESSION

NORMAL – score 0- 6

Diseased for PHQ-12 SCALE - DEPRESSION

DEPRESSED – score 7 -12

Romantic Relationship –

Defined as Mutual ongoing and voluntary interactions between two partners that is characterised by specific expression of affection and intimacy .

Results:-

Table 1:- Sociodemographic distribution of study population .(n= 182).

Sociodemographic variables		Male(n=112)	Female(n=70)	Total (n=182)
age	< 30 yrs	89 (66%)	46 (35%)	135(74%)
	>30 yrs	23 (49%)	24 (51%)	47 (26%)
Population type	Urban	76 (62%)	46(38%)	122 (67%)
	rural	36 (60%)	24(40%)	60 (33%)

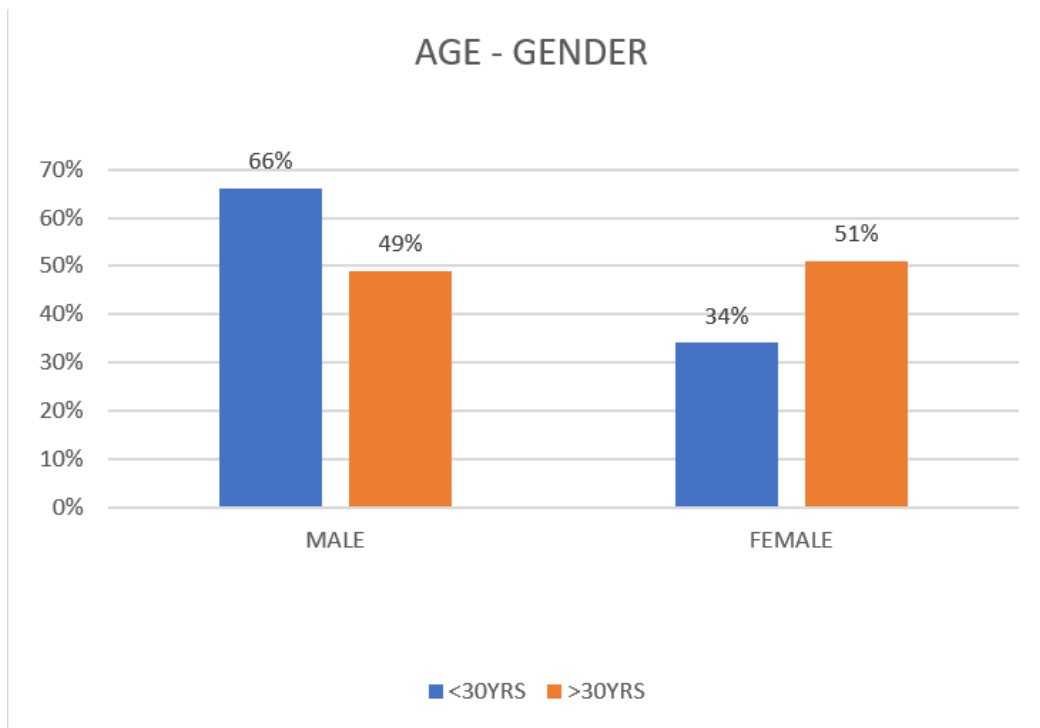
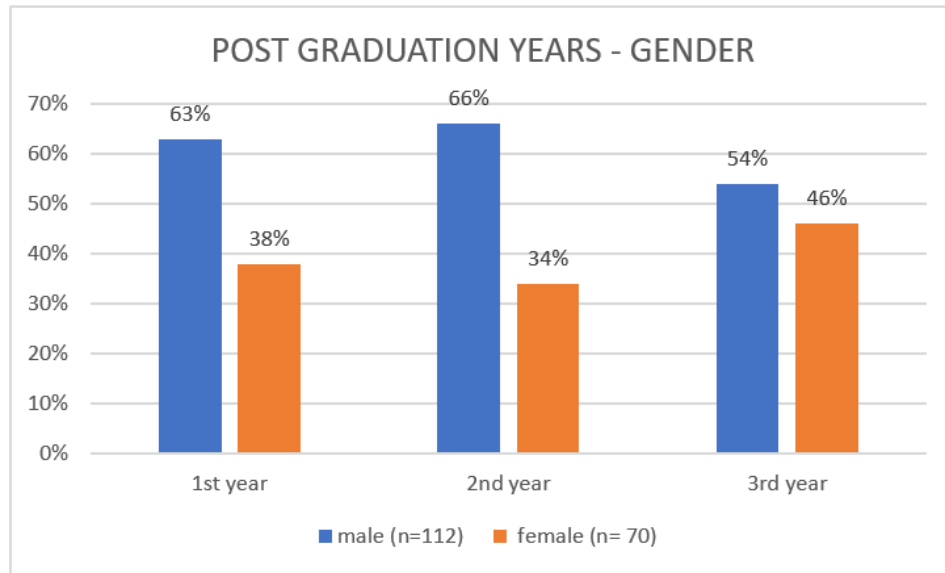


Table 2:- Distribution of Study Population to Post Graduation Years.

POST GRADUATION YEAR	MALE(n=112)	FEMALE(n=70)	TOTAL (n=182)
1 ST YEAR	60 (63%)	36 (38%)	96 (53%)
2 ND YEAR	31 (66%)	16 (34%)	47 (26%)
3 RD YEAR	21 (54%)	18 (46%)	39(21%)

**Table 3:-** Psychosocial factors associated with depression.

Associated factors		Number of participants		Frequency (n =182)	Depression P value
		depressed	Not depressed		
1. gender	male	13	99	(11.6%)	0.024
	female	17	53	(24.28 %)	
2. department	clinical	21	65	(24.41%)	0.006
	Non clinical	9	87	(9.3 %)	
3. comfortable with hod	yes	21	105	(16.6%)	0.9
	no	9	47	(16%)	
4. time for relaxation	yes	9	81	(10%)	0.019
	no	21	71	(22.8%)	
5. how much time for relaxation%	>1 hour	6	84	(6%)	0.0004
	<1hour	24	68	(26%)	
6. time to practice hobby	Yes	8	50	(13.79%)	0.5686
	no	22	102	(17.7%)	
7. financial responsibilities of own.	Yes	12	20	(37.5%)	0.0004
	no	18	132	(12%)	
8. Having GF or BF	yes	13	23	(36%)	0.0003
	no	17	129	(11.64%)	

9. Financial difficulties	yes	21	65	(24%)	0.4
	no	19	77	(19.79%)	
10. professional relationship with colleague	Good - Better-	44 10	81 27	(35.2%) (27.02 %)	0.62
	bad	6	14	(30 %)	

Table 4:- Psychosocial factors significantly associated with stress.

Associated factors		Number of participants		Frequency (n=182)	Stress p value
		stressed	Non stressed		
1.post graduation years	1 st year	33	63	(34.37%)	0.005
	2 nd year	6	41	(12.76%)	
	3 rd year	6	33	(15%)	
2.time for relaxation	yes	7	83	(7%)	0.000038
	no	38	54	(41%)	
3.how much time for relaxation	<1hour	30	50	(37.5%)	0.0004
	>1 hour	15	87	(14%)	
4.time to practice hobby	Yes	15	65	(18.75 %)	0.083
	no	30	70	(30 %)	
5.do you have gf /bf	yes	28	60	(31.81%)	0.0318
	no	17	77	(18%)	
6.departtment	clinical	28	58	(32%)	0.02
	Non clinical	17	79	(17%)	
7.financial responsibilities of own	Yes	28	46	(37.8 %)	0.00068
	no	17	91	(15.7%)	

Table 5:- Psychosocial factors significantly associated with both (stress + depression).

Associated factors		Number of participants having both (stress + depression)		Frequency (n=182)	Both p value
		present	absent		
1.Department	clinical	21	65	(24.41%)	0.006
	Non clinical	9	87	(9.37%)	
2. comfortable with hod	yes	19	107	(15%)	0.44
	no	11	45	(19.64%)	
3.Time for relaxation	yes	9	81	(10 %)	0.0197
	no	21	71	(22.82 %)	
4.How much time get for relaxation	<1 hour	24	34	(41.37%)	0.00002
	>1hour	6	118	(4.83%)	
5.Time to practice hobby	yes	8	122	(6.15%)	0.0000

	no	22	30	(42 %)	
6. having gf or bf	Yes	13	33	(28%)	0.012
	no	17	119	(12.5%)	
7. Financial responsibility of own	yes	11	39	(22 %)	0.217
	no	19	113	(14 %)	

Fig 1:- Results show that the overall prevalence of depression was found 16.48 % , (83.52 %) were found to be normal.

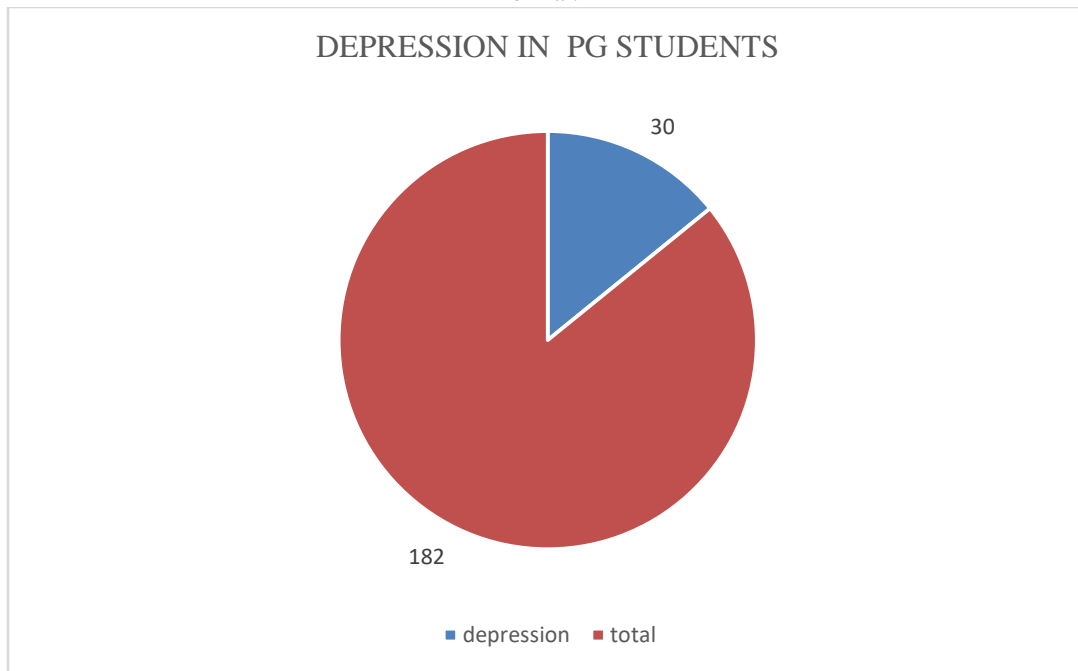
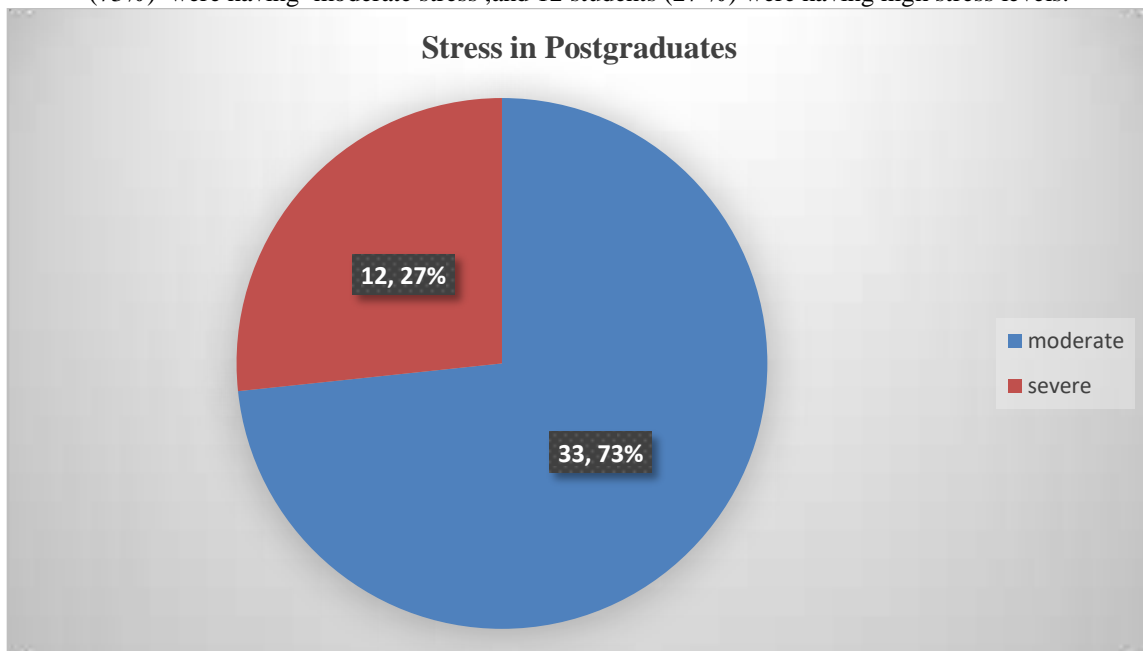


Fig 2:- Shows Results ; out of total 182 participants 45 students were having stress , out of which 33 students (73%) were having moderate stress ,and 12 students (27 %) were having high stress levels.



Number of participants in stress

As we know 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 skills⁴ .thus **low stress here is considered as normal** .

Total number of participants showing both depression and stress : 16.48 %

Discussion:-

In the present study out of all admitted pg students only 182 participated in the study,

Among the residents the **prevalence of depression was 16.48 % , low stress** can produce desirable effects such as tolerance of ambiguity, self confidence, and maturity also may stimulate the acquisition of knowledge and skills⁴ .thus **low stress here is considered as normal, prevalence of stress was –moderate stress- 18 % , severe stress – 6.59 %**,

Those who are having severe stress also have depression , prevalence of depression and stress in incapacitating (impairing) productivity of individuals it has seen to be 16.48 % (30 participants have both severe stress and depression)

Due to lack of availability of similar findings on current literature . we were not able to compare the results/ findings.

Conclusion:-

Prevalence of depression was 16.48 % , prevalence of stress was –, moderate stress- 18% , severe stress – 6.59 % , the study revealed the point prevalence of both together stress and depression to be 16.48 % . our findings show that

Clinical branch departments suffer from depression more than non clinical branches, females are more depressed than males during their residency.–also it is seen that factors like financial responsibilities of own ,having GF / BF also affects depression. it is seen that stress is more seen in 1st year residents. study shows that time for relaxation as well how much time postgraduate student gets for relaxation plays highly significant role in having stress, depression and both simultaneously. Time to practice hobby significantly associated with depression and stress and both. study also shows significant relation of best friends in reducing stress. There is also no significant association between factors like – family support, age, residential address, parenting comfort, comfort with pg. guide, what kind of personal hobbies, marriage addiction, atheist , practicing religious rituals and depression and stress.

Limitations

1. only two mental illness are considered in study
2. only 182 respondents participated in study and was limited to one geographical area so it may affect conclusion

Recommendations:-

1. In curricular planning and clinical work pg. students should get adequate time for relaxation as depression is associated with it .ie> 1 hour .
2. To build a system with counselling facilities in every medical college, where a psychiatrist should be recruited who will perform an in-depth interview with these students , and will do a complete management according to students condition
3. Program considering psychological issues and teaching learning experience should be developed for pg. students.

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