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Screening Of Depression, Anxiety, Stress And Assessment Of Coping Strategies Among Medical Postgraduates In A Tertiary Care Hospital.

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ABSTRACT

There has been a concern regarding the mental well-being of the medical students. Suicide in medical post graduates is burning issue in current era. Suffering of postgraduate student due to depression, stress and anxiety will in turn affect patient services and academic performance of students. There is relation between coping skills and development of stress related mental health problems. To screen depression, anxiety and stress and to assess coping strategies among medical postgraduate students. Total 97 postgraduate medical Students were assessed using self-administered questionnaire, Depression Anxiety Stress Scale (DASS-21) and BRIEF COPE inventory. Data was analyzed using SPSS 20.0. In this study significant number of students suffering from depression (32%), anxiety (66%), and stress (31%). Those working in clinical department had more stress than those of non-clinical department. Depression, anxiety and stress not varied according to semester in which students were studying. Majority of students were using healthy coping mechanism like active coping, emotional support, self-distraction and humour to deal with stress. 13% students involved in substance abuse. Active efforts to address stress related mental health problems in postgraduate students to improve their mental health is need of time which will in turn improve quality of health care provided by resident doctors.

Keywords: postgraduate, medical, depression, stress, anxiety, coping

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INTRODUCTION

Medical education promises a well secured career options for students, but it brings along a lot of stress since post graduate medical education demands high efforts and dedication towards work. A physically and emotionally demanding course can inadvertently lead to physical and psychological problems in students. This leads to vicious cycle of state of stress and anxiety among postgraduate students. There has been a concern regarding the mental well-being of the medical students. Suicide in medical students has been focus of attention in current period [1, 2]. Contemporary literature suggests that medical education particularly postgraduate medical education might adversely affect student's mental health. Study burden and a busy schedule of work are the major reasons for their higher stress level [3]. The policies about medical education are frequently changing in relation with entrance and exit tests; even about the length of the course and unrealistic expectations from doctors by the society are the major hurdles which makes this journey more difficult.

Postgraduate medical Resident doctors often find it difficult to maintain their work life balance due to hectic work schedule, hostile working environment and increase in incidences of violence against doctors. Directly and indirectly these factors become the reasons of psychological illness in them ranging from mild depression to psychosis, from eating disorders to sleeping disorders and even substance abuse [4]. Studies have indicated that there is a significant percentage of students suffering from mental disorders especially depression and stress disorders [5]. Even compared to students of other professional courses, higher percentage of population is found suffering from depression in medical institutes [6]. As compared to wide data available about the undergraduate students; the studies amongst post-graduates are comparatively lacking. The reasons and complications of the mental health issues form a vicious cycle and in turn it impairs communication skills of the students and affects their healthy relationship with patients [7].

To avoid such consequences, it is of utmost importance to get the precise idea about the gravity of mental health issues among medical students, how they coped with the situation and then to take appropriate measures to prevent or resolve stress induced psychological illnesses in them. Hence this study was carried out with an aim to screen the proportion of medical postgraduate students for depression, anxiety and stress and to assess their coping strategies for the existing problems.

Aims and objectives

- To screen depression, anxiety and stress in medical postgraduate students.
- To assess coping strategies in postgraduate students.

METHODOLOGY

The study was initiated after receiving approval from institutional ethics committee (IEC) of a tertiary healthcare institute having granted seats for post-graduation. Postgraduate students (junior residents-JR) studying in the institute and consenting for the survey were included in the study. Students not consenting for the study and those who were diagnosed with significant medical illness were excluded from the study.

Total 97 students participated in the study. Students who fulfilled the inclusion criteria were provided with written informed consent form. Self-administered questionnaire was given to all subjects for comparison of socio- demographic variables.

For screening of depression, anxiety and stress disorders; Depression Anxiety Stress Scale (DASS-21) was used. It is a 21-item self-report inventory designed to measure the presence and severity of symptoms of depression, anxiety and stress among the subjects. Respondents were asked to use 4-point severity / frequency scales to rate the extent to which they have experienced each state over the past week. Gamma coefficients that represent the loading of each scale on the overall factor (total score) are 0.71 for depression, 0.86 for anxiety, and 0.88 for stress. The reliability of the test is considered adequate and test-retest reliability is likewise considered adequate with 0.71 for depression and 0.79 for anxiety [8].

For the assessment of coping strategies, BRIEF COPE inventory was used which is a modified version of COPE inventory. Both the scales are previously validated for screening amongst normal population [9]. The complete questionnaire is filled by each participant personally.

The data was analysed using SPSS 20.0. The data is presented with use of graphs, frequency, mean and standard deviation. The comparison of categorical variables was done using chi-square or Fisher's exact test whenever necessary. The comparison of quantitative variables was done using t test. The significance was considered if p value is less than 0.05.

RESULTS

As table (1) depicts, most of the junior residents were between 25-28 years of age (n=82). Out of 97 junior residents 59 were females and 38 were males. 96 residents were unmarried. All residents stayed in hostel. 87 residents had nuclear family type. 13 residents were suffering from substance abuse. 14 residents are dissatisfied with the existing exam criteria for their study course.

As table (2) depicts, Most of the junior residents had age between 25-28 years (82, 84.54%). Out of 97 junior residents 59 (60.82%) were females and 38 (39.18%) were males. Out of all residents 96 were unmarried. All residents stay in hostel. 89.69% residents had nuclear family type. 13.40% residents suffering from substance abuse. 14.43% residents dissatisfied with exam criteria. No any significant relation of clinical and non-clinical departments observed with demographic variables.

As table 3 depicts, out of 97 residents, 31 were suffering from depression. Out of 31, 4 residents had extremely severe depression, 1 resident had severe depression, 16 residents had moderate depression and 10 residents had mild depression. Out of 97 residents, 54 were suffering from anxiety. Out of 54, 10 residents had extremely severe anxiety, 14 residents had severe anxiety, 19 residents had moderate anxiety and 11 residents had mild anxiety. Out of 97 residents, 30 were suffering from stress. Out of 30, 2 residents had extremely severe stress, 5 residents had severe stress, 8 residents had moderate stress and 15 residents had mild stress.

Depression, anxiety and stress did not vary according to semester of students since no significant difference was observed in DASS score within JR1, JR2 and JR3 groups.

As table 4 depicts, for depression, anxiety and stress, 26 residents used self-distraction, 40 residents used active coping, 42 residents used emotional support, 19 residents used positive reframing, 37 residents went for humour, 16 residents used some planning, 16 residents used to blame themselves, 28 residents accepted the stress as it is and 13 residents denied it. (Fig.1)

Self-distraction, active coping, humour, planning and acceptance are the coping strategies which were observed significantly different in JR1, JR2 and JR3.

As table 5 depicts, in clinical departments 27 (32.93%) residents had mild to extremely severe depression and in non-clinical department only 4 (26.67%) residents were suffering from mild to extremely severe depression. No any significant difference observed in depression within clinical and non-clinical residents.

In clinical departments 46 (56.09%) residents had mild to extremely severe anxiety and in non-clinical department only 8 (53.33%) residents are suffering from mild to extremely severe anxiety. No any significant difference observed in anxiety within clinical and non-clinical residents.

In clinical departments 29 (35.36%) residents had mild to extremely severe stress and in non-clinical department only 1 (6.67%) resident is suffering from mild to extremely severe stress. Significant difference observed in stress within clinical and non-clinical residents. Clinical department residents had more stress than the non-clinical department.

As table 6 depicts, to deal with depression, anxiety and stress, 18 clinical residents and 8 non-clinical residents use self-distraction, 33 clinical residents and 7 non-clinical residents use active coping, 38 clinical residents and 4 non-clinical residents use emotional support, 17 clinical residents and 2 non-clinical residents use positive reframing, 32 clinical residents and 5 non-clinical residents go for humour,

14 clinical residents and 2 non-clinical residents use some planning, 13 clinical residents and 3 non-clinical residents blames themselves, 25 clinical residents and 3 non-clinical residents accept it and 13 clinical residents and none of the non-clinical residents deny it. No any significant difference observed in clinical and non-clinical residents with the use of coping strategies.

Table 1: Comparison of Demographic variables with medical postgraduate students

		JR* 1 st year	JR2 nd year	JR3 rd year	Total	P value
Age	<25	8	0	0	08	0.003
	25-28	26	30	26	82	
	>28	1	2	4	07	
Gender	Female	17	22	20	59	0.178
	Male	18	10	10	38	
Married	Married	01	00	00	01	0.358
	Unmarried	34	32	30	96	
Residence	Hostel	35	32	30	97	1
	Rented Home	0	0	0	0	
Family type	Nuclear	28	30	29	87	0.060
	Combined	7	2	1	10	
Substance abuse	Yes	8	3	2	13	0.116
	No	27	29	28	84	
Dissatisfaction with exam criteria	Yes	4	5	5	14	0.813
	No	31	27	25	83	

(*JR- Junior Resident)

Table 2: Comparison of Demographic variables with medical departments

		Clinical	Non-Clinical	Total	P value
Age	<25	8	0	08	0.054
	25-28	70	12	82	
	>28	4	3	07	
Gender	Female	49	10	59	0.614
	Male	33	5	38	
Married	Married	1	0	01	0.667
	Unmarried	81	15	96	
Residence	Hostel	82	15	97	1
	Rented Home	0	0	0	
Family type	Nuclear	73	14	87	0.614
	Combined	9	1	10	
Substance abuse	Yes	13	0	13	0.209
	No	69	15	84	
Dissatisfaction with exam criteria	Yes	14	0	14	0.084
	No	68	15	83	

Table 3: Comparison of DASS score with medical postgraduate students

DASS Score		JR1*	JR2	JR3	Total	P value
Depression	Normal	22	24	20	66	0.602
	Mild	4	4	2	10	
	Moderate	7	2	7	16	
	Severe	1	0	0	1	
	Extremely severe	1	2	1	4	
Anxiety	Normal	17	15	11	43	0.903
	Mild	2	4	5	11	
	Moderate	7	6	6	19	
	Severe	5	5	4	14	
	Extremely severe	4	2	4	10	
Stress	Normal	19	27	21	67	0.112
	Mild	8	2	5	15	
	Moderate	5	1	2	8	
	Severe	1	2	2	5	
	Extremely severe	2	0	0	2	

(*JR- Junior Resident)

Table 4: Comparison of coping strategy variables with medical postgraduate students

Coping Strategies		JR1*	JR2	JR3	Total	P-value
Self-Distraction	Yes	9	13	4	26	0.048
	No	26	19	26	71	
Active Coping	Yes	11	20	9	40	0.012
	No	24	12	21	57	
Emotional support	Yes	12	13	17	42	0.180
	No	23	19	13	55	
Positive Reframing	Yes	7	4	8	19	0.372
	No	28	28	22	79	
Humour	Yes	13	7	17	37	0.019
	No	22	25	13	60	
Planning	Yes	4	11	1	16	0.003
	No	31	21	29	81	
Self-Blame	Yes	5	4	7	16	0.469
	No	30	28	23	81	
Acceptance	Yes	16	6	6	28	0.023
	No	19	26	14	69	
Denial	Yes	5	5	3	13	0.788
	No	30	27	27	84	

(*JR- Junior Resident)

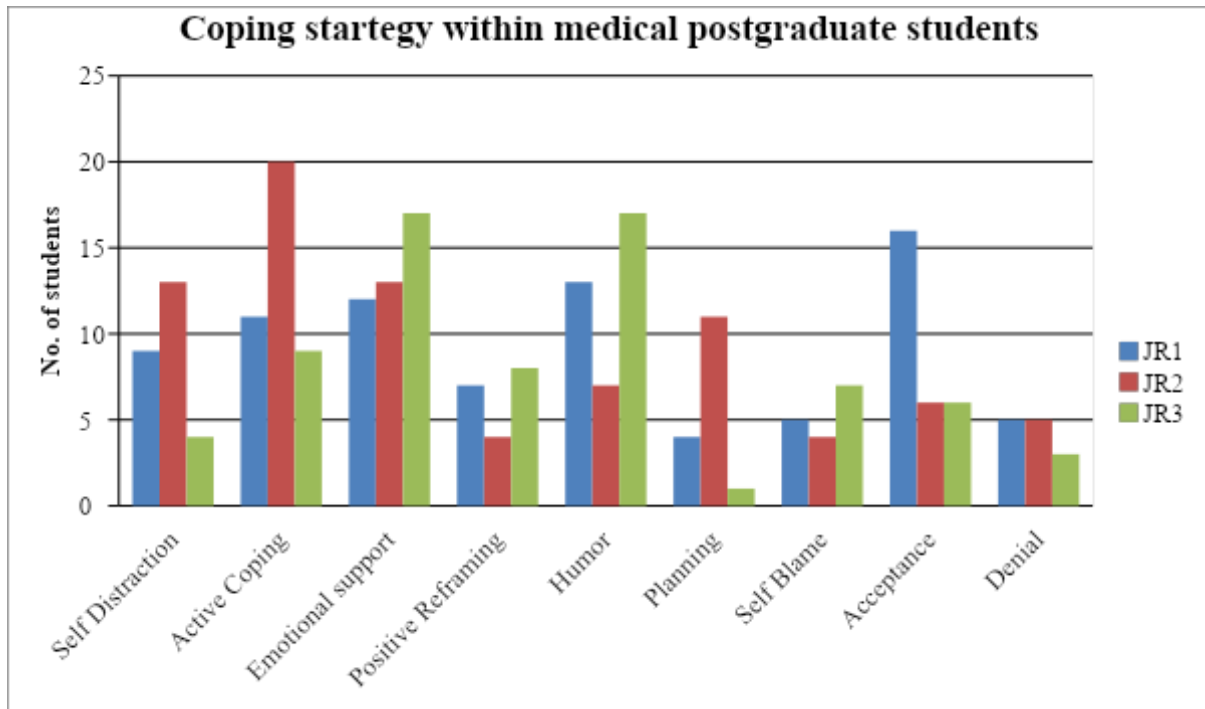
Table 5: Comparison of DASS score with medical departments

DASS Score		Clinical	Non-Clinical	Total	P value
Depression (32%)	Normal	55	11	66	0.720
	Mild	8	2	10	
	Moderate	15	1	16	
	Severe	1	0	1	
	Extremely severe	3	1	4	
Anxiety (66%)	Normal	36	7	43	0.244
	Mild	7	4	11	
	Moderate	18	1	19	
	Severe	12	2	14	
	Extremely severe	9	1	10	
Stress (31%)	Normal	53	14	67	0.043
	Mild	15	0	15	
	Moderate	8	0	8	
	Severe	4	1	5	
	Extremely severe	2	0	2	

Table 6: Comparison of coping strategy with medical departments

Coping Strategies		Clinical	Non-Clinical	Total	P-value
Self-Distraction	Yes	18	8	26(26.80%)	0.012
	No	67	7	71	
Active Coping	Yes	33	7	40(41.23%)	0.642
	No	79	7	57	
Emotional support	Yes	38	4	42(43.29%)	0.157
	No	44	11	55	
Positive Reframing	Yes	17	2	19(19.58%)	0.507
	No	65	13	79	
Humour	Yes	32	5	37(38.14%)	0.677
	No	50	10	60	
Planning	Yes	14	2	16(16.49)%	0.720
	No	68	13	81	
Self-Blame	Yes	13	3	16(16.49%)	0.691
	No	69	12	81	
Acceptance	Yes	25	3	28(28.86%)	0.410
	No	57	12	69	
Denial	Yes	13	0	13(13.41%)	0.209
	No	69	15	84	

Graph 1



DISCUSSION

The emotional status of the post graduate medical students during residency training may affect the overall performance of student and lead to impairment of mental health as well as patient care in hospitals. Patient services in tertiary care government hospitals are carried out by resident postgraduate trainee. The current study was conducted to assess the extent of depression, anxiety, and stress among the resident doctors, which might have policy implication. The results of this study revealed a high prevalence of anxiety, depression, and stress among medical post graduate resident doctors. Out of 97 residents, 31(31.95%) were suffering from depression, 54 (55.67%) were suffering from anxiety and 30 (30.92%) were suffering from stress. A study in north India among four medical colleges and associated hospitals found the overall prevalence of stress to be 32.8% in resident doctors [10]. These findings are matching with the results of our study which suggest that the overall in all institution resident doctors are suffering from stress disorder which point out the common etiological factors in every institute. Common factors responsible for stress and anxiety amongst resident doctors are work pressure, less manpower, long working hours, lack of sleep, academic pressure. This study revealed that depression, anxiety and stress were not significantly different in different semester residents which rule out the adjustment problem with new environment as a cause of continuous stress and anxiety. Since third year residents were also suffering from stress and anxiety the factors which are responsible could be academic pressure, burden of more responsibilities at senior resident stage.

13.40% residents were suffering from substance abuse and all were found to be from clinical department suggesting additional patient care burden for clinical resident doctors. Use of substance to relieve stress is unhealthy ways of coping amongst clinical resident doctors. One review research mentioned common substance use among medical students were Alcohol (3.2%–43.8%), followed by tobacco (3.7%–28.8%) and cannabis (1.6%–15%) [11]. Since substance use is a relatively common phenomenon among medical students’ serious consideration are required to better understanding of the problem of substance use and reduce its prevalence.

In our study we found that clinical department residents had more stress than the non-clinical department. These finding are in keeping with the finding of other study conducted in medical college in north India [12].

In our study we found that most of the students expressed more anxiety symptoms (66%) compared to symptoms of depression (32%) or stress (31%). Surprisingly students were less aware about their own anxiety symptoms despite feeling significant distress. Also, those suffering from severe anxiety, stress and severe depression had not approached psychologist or psychiatrist though mental health specialist services were easily available to them. Stigma for mental illness could be the reason for not seeking help from mental health specialist. It highlights the need for awareness session about mental health for students. Many studies have highlighted the need for development of mental and emotional support system by medical institutions [13].

We found that majority of students were satisfied with examination pattern and exam criteria though some of students had significant anxiety about examination and further super-speciality education.

Healthy coping strategies if used efficiently can reduce the effect of stress. Like other studies active coping, emotional support and humour were coping strategies employed by most of the students [14]. 'Planning' is healthy coping mechanism which reduces stress. In one study in south India Planning was the most utilized coping method by the participating students, while substance use was least adopted by them in case of stressful situation [15]. In contrast our study revealed that planning as a coping strategy was less commonly used by resident doctors. It highlights the active need for teaching of planning, time management, and stress management program to reduce stress and anxiety in students. Self-blame and denial were less frequently used as a coping method by post graduate students which is healthy strategy to manage stress. In contrast to our findings results obtained in some studies showed 'self-blame' and 'self-criticism' as the common reactions to stress [16]. Significant number of students were using distraction as a coping mechanism which if used optimally can help reduce stress. Our finding were supported by other studies in different medical institutions [17].

In our study we found that students adapting negative coping strategies like denial, self-blame scored high on depression, anxiety, stress scale and those with high score on positive coping skills like use of emotional support, planning had less score on depression anxiety, stress scale which further highlights importance of adapting positive coping strategies.

CONCLUSION

This study shows the gravity of stress, depression and anxiety amongst medical post graduate students and signifies the lack of awareness about mental health amongst medical students. It further focuses on need of stress management program immediately after joining of institution by student and teaching them healthy coping strategies to increase their coping skills. Also teaching them relaxation techniques, mindfulness practice, progressive muscle relaxation will help student to control their anxiety symptoms. Mentorship Program at institutional level to understand problems of student will promote help seeking behaviour which in turn can prevent mental health problems like substance abuse and suicide. This will not only improve their academic performance but also improves quality of health care services provided by postgraduate students.

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