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Study of Depression among Medical Students

Dr. N.Anitha.MD[1],Dr.G. Naveen chowdaryMD[2]
[1](Associate professor, Department of Pharmacology, ACSR Government Medical college,Nellore, A.P.,India.)
[2](Assistant professor, Department of Pharmacology, ACSR Government Medical college,Nellore, A.P., India.)
Corresponding Author: Dr. G. Naveen chowdary

Abstract:
Background: Currently, depression among medical students is an important health issue at the global level. Academic pressure, though established, is an unavoidable cause of depression in medical students. It is associated with anxiety and psychological stress.
Aim and objectives: To assess depression levels among medical students by using a self-administered Goldberg depression questionnaire.
Methods:18-item questionnaire was given to the students and information was collected. Goldberg depression scale was used to assess the severity of depression. The results were analyzed using suitable statistical methods.
Results: Among the study population 36.1% of medical students had depressive symptoms. In the present study depression is more among the female students when compared to male students and the difference is statistically significant (p=0.02).
Conclusion:The early identification of depression can be helpful both for physical and mental wellbeing and we can minimize its impact on health by emotional support, interpersonal psychotherapy and communication skill training.

Key words: *Medical students, Depression, Stress*

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I. Introduction

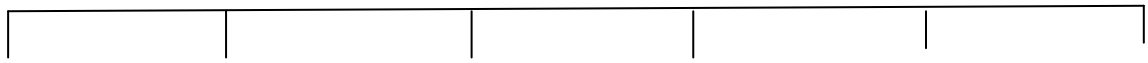
The world health organization has identified depressive disorders of adolescence as "priority mental health disorder". Globally,its prevalence rate is 15% to 20% where as in India it is reported as 11.2%. The consequences of depression are serious, causing suicide, school dropout and drug abuse etc., often adolescent depression leads to adult depression [1]. Depression is a disorder of mood involves varying levels of sadness and despair associated with stress. The term stress was firstly employed in the 1930's by the endocrinologist HansSelye[2]. Depression and anxiety levels in the community are considered as specific indicators for mental status of a person. Various studies have documented stress among medical students [3-5]. Medical education is perceived as being stressful, academic stressors include the volume of material to be learned, academic performance and evaluation (examination and continuous assessment)[6]. Academically less successful students reported somewhat higher levels of depressive ideation and symptomatology [4]. Medical students encounter multiple anxieties in transformation from insecure student to young knowledge physician. Studies have observed that medical students experience a high incidence of personal distress during their undergraduate course. Stress, health and emotional problems increase during the period of undergraduate medical education. This can lead to mental distress and has a negative impact on cognitive functioning and learning[7]. It is confirmed the general impression that there is a considerable amount of stress among medical students.High levels of perceived stress existed in the first and second year undergraduate medical students [8]. Negative effect, depressive mood and salivary cortisol were elevated during exams. [9]The majority of the studies on stress in medical education focus on documentation of stress and information on the correlation of the stress [10-12]. It is not just undergraduate study period which brings the stress but it may continue later in internship, postgraduate study period and later in physician's practical life[13-14] and it may reach burn out level [15].

II. Materials And Methods

A cross sectional prospective study was conducted in Department of pharmacology of ACSR Government Medical College, Nellore. In our study a total no of 152 under graduate medical students of II year were participated. A Goldberg depression questionnaire was given to each of the student to assess the depression. Informed consent was taken from each participant after explaining the objectives of the study. The study was approved by ethical committee. The data were collected and analyzed subsequently. The questionnaire contains 18 questions. The Goldberg depression scale (GDS) [16]is an 18-item self-rating scale (table-1), with each item rated on a 0-5 point Likert scale. The total score can therefore range from 0(complete

absence of depressive symptoms) to 90(most severe depression). The scores have to be summed up to identify not only the presence of depression but also its severity.(Score 0-9= no depression, 10-17=mild, 18-21=borderline, 22-35=mild to moderate, 36-53=moderate to severe depression, 54 and up, severely depressed). The higher the number, the more sever the depression. The Goldenberg depression questionnaire was developed by Dr. Ivan Goldenberg, MD. It was developed in 1993.

Goldberg Depression Scale:



0 1 2 3 4 5

Not at all just a little Some What Moderately Quiet a lot Verymuch

Questionnaire:
1.I do things slowly.
2.My future seems hopeless.
3.It is difficult for me to concentrate on reading.
4.The pleasure and joy has gone out of my life.
5.I have difficulty in making decisions.
6.I have lost interest in aspects of life that used to be important to me.
7.I feel sad, blue and unhappy.
8.I am agitated and keep moving around.
9.I feel fatigued.
10.It takes great effort for me to do simple things.
11.I feel that am a guilty person who deserves to be punished.
12.I feel like a failure.
13.I feel lifeless more dead than alive.
14.I am getting sleep disturbances.
15.I am getting suicidal thoughts.
16.I feel trapped or caught.
17.I feel depressed even when good things happen to me.
18.I have poor appetite or overeating.

Table-1 shows score interpretation.

SCORE	RESULT
0-9	No depression likely
10-17	Possibly mild depression
18-21	Borderline depression
22-35	Mild to moderate
36-53	Moderate to severe depression
54 and up	Severely depressed

III.Results

A total of 152 students were participated in the study**.** The results of the questionnaire were collected and analyzed by using Goldberg depression scale.

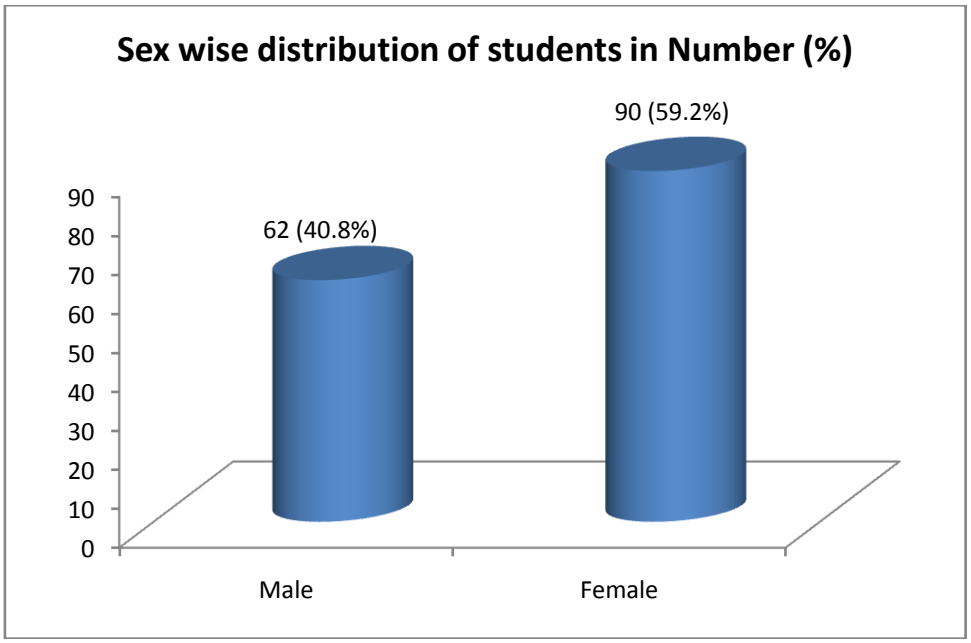


Chart-1 shows sex wise distribution of students among study population.

Table-2 shows severity of depression students among study population

SCORE	RESULT	Frequency	Percentage of students
0-9	No depression	44	28.9
10-17	Possibly mild depression	39	25.7
18-21	Borderline depression	14	9.2
22-35	Mild to moderate	37	24.3
36-53	Moderate to severe depression	18	11.8
Total		152	100

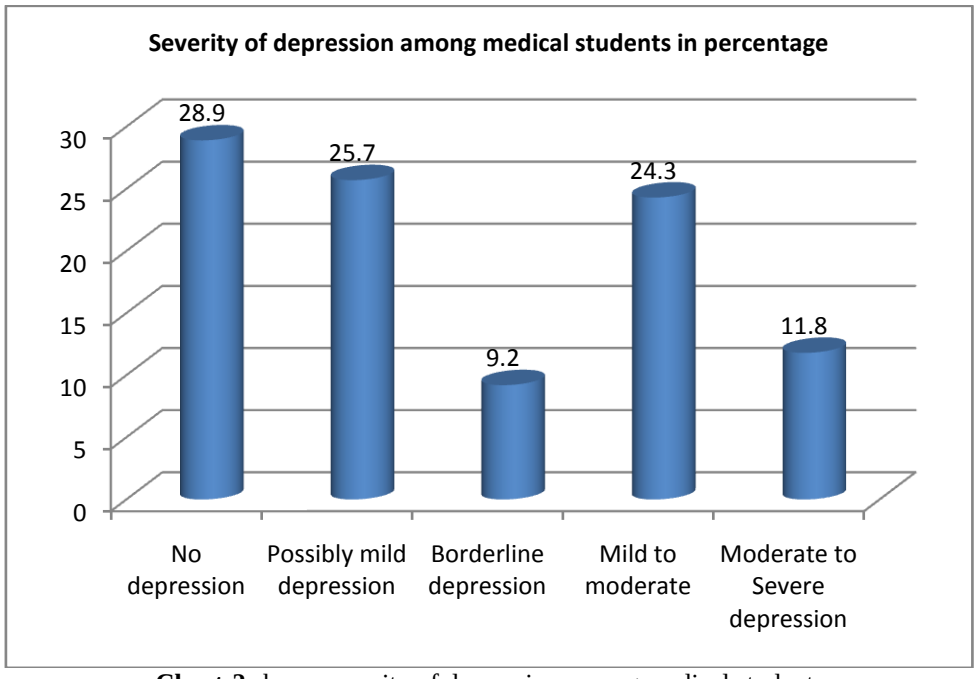


Chart-2 shows severity of depression among medical students

Table-3 shows depression score of males

SCORE	RESULT	Frequency	Percentage of students
0-9	No depression	12	19.4
10-17	Possibly mild depression	13	21.0
18-21	Borderline depression	5	8.1
22-35	Mild to moderate	21	33.9

36-53	Moderate to Severe depression	11	17.7
Total		62	100

Table -4 shows depression score of females.

SCORE	**RESULT**	**Frequency**	**Percentage of students**
0-9	No depression	32	35.6
10-17	Possibly mild depression	26	28.9
18-21	Borderline depression	9	10
22-35	Mild to moderate	16	17.8
36-53	Severe depression	7	7.8
Total		90	100

Table-5 Comparison of depression score between Male and Female students (Sex Versus Total depression Score)

SCORE	MALES	FEMALES	CHI-SQUARE VALUE (Fisher's Exact Test)	PVALUE
0-9	12	32	11.175	0.023;S
10-17	13	26		
18-21	5	9		
22-35	21	16		
36-53	11	7		
Total	62	90		

IV. Discussion

In this study chart-1 shows sex wise distribution of study population, which includes 152 medical students, out of which 40.8% were males and 59.2% were females studying II year MBBS course. Their age limit is 19-20 years.

Table-2(chart-2) shows severity of depression of medical students.28.9% students had normal score (0-9), 25.7% of students shows possibly mild depression symptoms (10-17) , 9.2% of students had borderline depressive symptoms (18-21), 24.3% of students had mild to moderate depressive symptoms (22-35), 11.8% students shows moderate to severe depressive symptoms(36-53), no student had got 54 and above score. Among the study population 36.1% was found to suffer from mild to severe depressive symptoms. Majority of students (24.3%) had mild to moderate depression symptoms. As the diagnosis of depression is made by self-rating scale and not by clinical examination, there is chance that prevalence of 45.3% is inflated data. But Vaidya and Malganokar[17]prevalence of depression was 39.44% among 109 medical students of T.N medical college, Mumbai. A study from Pakistan reported that 60% students suffer from anxiety and depression [18] .It has now proved beyond doubt that adolescents and young can become victim of depression [19].

Table-3 shows depression scores of males. 19.4%(12) male students had normal score. 21% (13) of students show possibly mild depressive symptoms, 8.1% (5) of students show borderline symptoms. 33.9% (21) students show mild-moderate depressive symptoms. 17.7% (11) of students suffer with moderate to severe depressive symptoms. No student represent with very sever depressive symptoms (score is 54 and above).

Table-4 shows depression scores of females. 35.6%(32) female students had normal scores. 28.9%(26) students show possibly mild symptoms. 10% (9) of members show borderline symptoms. 17.8% (16) shows mild to moderate depressive symptoms, 7.8%(7) shows moderate to severe depression symptoms. No student represent 54 and above score.

Table-5 shows comparison of depression scores between Males and Female students. 12 members of male students and 32 members of female studentshad normal scores. 13 males and 26 female students had possibly mild depression scores. 5 male students and 9 female students had borderline depression symptoms.21 males and 16 females had mild to moderate depressive symptoms, 11 males and 7 females had moderate to severe depressive symptoms. There is a difference regarding the severity levels of depression between male and females, however the difference is significant (p value <0.05).So the present study reveal that depression is more among the female students when compared to male students in early stages of depression, in late stages males show higher depression symptoms when compared to females and the difference is statistically significant (p=0.02).The girls had more depression as compared to boys. A recent research reported similar finding by Mohsin S. et al[20](2010) that the overall mean perceived stress was significantly higher among female students.

Wellness and mental health programs are needed to help students to make smooth transitions between different learning environments with changing learning demands and a growing burden. Medical schools in the United States and Canada have initiated health promotion programs and have reported positive results in reducing the negative effects of stress upon medical students' health and academic performance(21-23).This study showed that 24.3% of medical students had mild to moderatedepressive symptoms. 11.8%of students show severe depression symptoms.So totally 36.1% of students show depression symptoms. A recent study from china reported that the prevalence of depression 11.7% which was lesser than our study [24]. The proportion of

participants with severe depression 11.8% in this study was higher than other Indian study which reported it as 7.5% [25].

V. Conclusion

Depression symptoms are more common among medical students. The study reflected that level of depression was more in girls as compared to boys. The main stressor was related to academic examinations. An attempt has been made to identify the depression and related stress profile of II yearmedical students at the time of examinations. Medical students with depression if identified early can be managed by behavioral therapy, emotional support, inter personal psychotherapy and communication skill training; this may help the young medicos to overcome their stress and lead healthier life. In view of the above, stress alleviation and improvement of inter personal relationship may help to reduce the depressive symptoms in medical students. The psychological distress in students is more common than population based estimates; therefore, it may require addressing mental health problems along with common health strategies for our students.

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