



Prevalence of depression among students of preparing for pre-medical and pre-engineering competitive examination at coaching institutes in Jaipur city of Rajasthan

Authors

Dr Raj Choudhary¹, Dr Govardhan Meena², Dr Rameshwar Lal^{3*}

^{1,2}Department of PSM, S.M.S. Medical College, Jaipur

³Department of Health Research, S.M.S. Medical College, Jaipur

*Corresponding Author

Dr Rameshwar

Flat No 707, Imperial Heights, Gandhi path west, Vaishali estate, Jaipur, India

Abstract

Objective: To study the prevalence of depression in students of preparing for pre-medical and pre-engineering competitive examinations at coaching institutes located in Jaipur city of Rajasthan.

Settings and Design: A cross-sectional study in six coaching institutes of Jaipur city of Rajasthan.

Participants: A total of 1200 students (males 53.75% and females were 46.25%) aged 15 to 23 years selected by simple stratified sampling.

Methods & Analysis: Cross-sectional study by using simple screening instrument Beck Depression Inventory (BDI) among students. Statistical analysis was carried out by using Microsoft Excel for analyse the data.

Results: Based on the cut-off scores, 819 students (68.25%) were found to be non-depressed, 167 (13.92%) were mild mood disturbance, 89 (7.42%) were borderline clinical depression, 87 (7.25%) were moderately depressed, 31 (2.58%) severely depressed and 7 (0.58%) were extreme depressed.

Conclusions: The prevalence of depression in coaching students was found to be quite high (31.75%) and is a matter that should evoke public health concern.

Keywords: Depression, Students, Pre-medical, Pre-engineering.

Introduction

Depression is a disorder of major public health importance, in terms of its prevalence and the suffering, dysfunction, morbidity, and economic burden. Depression is more common in women than men. The report on Global Burden of Disease estimates the point prevalence of unipolar depressive episodes to be 1.9% for men and 3.2% for women, and the one-year prevalence has been

estimated to be 5.8% for men and 9.5% for women. It is estimated that by the year 2020 if current trends for demographic and epidemiological transition continue, the burden of depression will increase to 5.7% of the total burden of disease and it would be the second leading cause of disability-adjusted life years (DALYs), second only to ischaemic heart disease¹. Globally more than 300 million people

of all ages suffer from depression². The lifetime prevalence for major depression in adolescence is 15% to 20% globally³. Depending on the number and severity of symptoms, a depressive episode can be categorised as mild, moderate, or severe. Depression is characterised by persistent sadness and a loss of interest in activities that you normally enjoy, accompanied by an inability to carry out daily activities, for at least two weeks. In addition, people with depression normally have several of the following: a loss of energy; a change in appetite; sleeping more or less; anxiety; reduced concentration; indecisiveness; restlessness; feelings of worthlessness, guilt, or hopelessness; and thoughts of self-harm or suicide. Depression is treatable, with talking therapies or antidepressant medication or a combination of these⁴.

Therefore, this study is planned to assess the prevalence of depression in students of pre-medical and pre-engineering competitive examinations at coaching institutes located in Jaipur city of Rajasthan.

Materials and Methods

This is a cross-sectional study done in Sawai Man Singh Medical College, Jaipur, Rajasthan to find out prevalence of depression in students preparing for pre-medical and pre-engineering competitive examination in coaching institutes of Jaipur city, Rajasthan. After getting approved from institutional research review board and ethical committee, plan of study was executed. Data collection for this study was carried out from 1st April, 2017 to 31st March, 2018 to survey 1200 students.

The sample size was calculated 1031 at 95% confidence interval and 5% relative error to verify the expected minimum 60.8% prevalence of depression among adolescent students. This sample size had been round off to 1200 to cover adequately other variables.

Sampling technique

After approval from Research review board of SMS Medical college, Jaipur and with due

permission of Principal and Controller, PHOD-PSM, attached to SMS Medical college, Jaipur, data collection was started from all the selected coaching institutes selected by simple random sampling. Study population of 1200 selected by systemic random sampling technique. Prior consent was taken from head of each respective institute. All the necessity of study explained to their respective coaching institute managing director and then similarly to the participating students in their respective section of class in institutes and then ask them to give consent for study and fill their Beck Depression Inventory questionnaire in next 40-50 minutes. The self-administered questionnaire consisted of 21 items with multiple choice answers were given to all the study subjects and scoring was done as per the recommendation. Maximum score was 63. A score of 0—16 mild mood disturbance 17-20 as borderline depression, 21-30 as moderate depression, 31—40 as severe depression and 41—63 as extreme depression. Privacy and confidentiality of data was ensured by asking not to write down names of the students and collections of questionnaire was done in a carton with only a slit and effort was made that nobody was able to peep in to questionnaire while students were filling it.

Results

Table number-'01' showing the prevalence of depression in present study was 31.75% (381/1200). Table number '02' showing level of depression in males and females respectively. It was found that mild mood depression was found most common among students (13.92%) followed by borderline clinical depression (7.42%), moderate depression (7.25%), severe depression (2.58%), and least common was extreme depression (0.58%). Table number '3' showing that depression was more significantly associated with male than female (35.66% v/s 27.21%).

Table: 01 Prevalence of depression in study population (n=1200)

Depression	Frequency	Percentage (%)
Present	381	31.75
Absent	819	68.25
Total	1200	100

Prevalence of depression

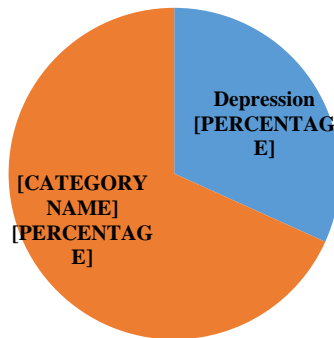


Figure: 01

Table: 02 Association of BDI score with sex of the students

Score of BDI	Level of depression	Male Number (%)	Female Number (%)	Total Number(%)
1-10	Normal	415 (64.34)	404 (72.79)	819 (68.25)
11-16	Mild mood disturbance	97 (15.04)	70 (12.61)	167 (13.92)
17-20	Borderline clinical depression	50 (7.75)	39 (7.03)	89 (7.42)
21-30	Moderate depression	53 (8.22)	34 (6.13)	87 (7.25)
31-40	Severe depression	25 (3.88)	6 (1.08)	31 (2.58)
>40	Extreme depression	5 (0.78)	2 (0.36)	7 (0.58)
Total		645 (100)	555 (100)	1200 (100)

Chi-square = 16.295 with 5 degrees of freedom; P = 0.006

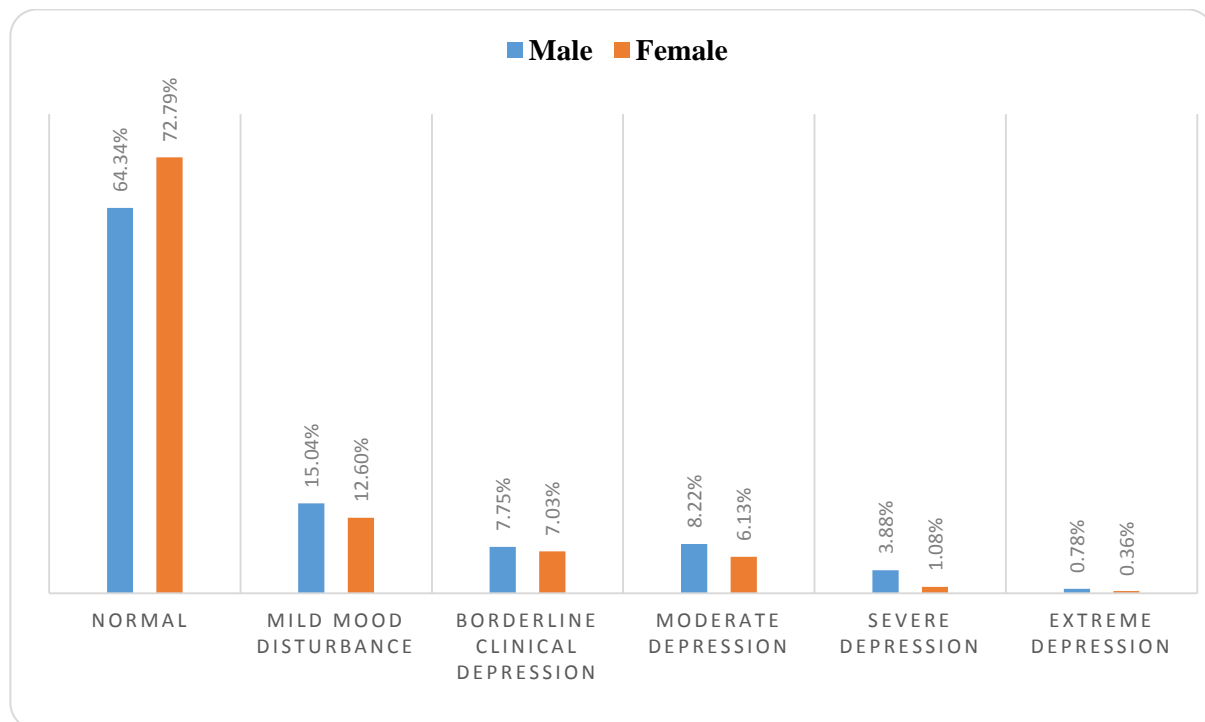


Figure: 02

Table: 03 Association of depression with sex of cases

Sex	Depression		No depression		Total	
	Number	%	Number	%	Number	%
Male	230	35.66	415	64.34	645	100
Female	151	27.21	404	72.79	555	100
Total	381	31.75	819	68.25	1200	100

Chi-square = 9.447 with 1 degree of freedom; P = 0.002

Discussion

The prevalence of depression was found to be 31.75% in our study. This was comparable to the results of the study made by Fernandes MA et al (2018)⁵ observed 30.2% prevalence of depression in a cross sectional study conducted in students of a public federal university in the Northeast of Brazil. A similar finding also observed by Amin G et al, (1998)⁶ who conducted a study by using beck depression inventory (BDI) on randomly selected 200 patients who were attending for primary care were screened and observed 30% prevalence of depression.

In contrast prevalence of depression was high in observation of Lodha RS et al (2016)⁷ was 71.3% and in another study which was conducted in a medical college of Karnataka by Kumar GS et al (2012)⁸ prevalence of depression was 71.25%. In other finding of depression, according to Eisenberg D et al (2007)⁹ prevalence of depression was found 13%. Another study by Mehtalia K et al (2004)¹⁰ concluded that frequency of SAD in adolescents in was 12.8%. So prevalence rates of depression are estimated to range from 12.8% to 71.3% in various studies.

The commonest type of depression in our study is mild depression (13.92%) followed by borderline depression (7.42%), moderate depression (7.25%), severe depression (2.58%) and extreme depression (0.58%). Almost similar observation was made by Kumar GS et al (2012)⁸ study among students of medical college of Karnataka and Kumar GS (2017)¹¹ study conducted in medical students at Puducherry, India.

In our study we found that sex of the students significantly associated with prevalence of depression. Observations in our study found that males being significantly more depressed than females. Similar observation was also made by

Nagendra k et al (2012)¹². On other hand studies by Yousef et al (2017)¹³, Singh A et al (2010)¹⁴ reported a higher prevalence of depression among males than female. kumar GS et al (2012)⁸, Joseph et al (2011)¹⁵, observed higher prevalence of depression in female than males but statistically not significant.

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