

**STUDY OF DEPRESSION AMONG INDIAN COLLEGE YOUTHS**

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**BACKGROUND:** Depression, the most common disorder in psychiatry, affects about 121 million people worldwide. World Health Organization states that depression is the leading cause of disability as measured by Years Lived with Disability and the fourth leading contributor to the global burden of disease. Today, depression already is the second cause of disability adjusted life years in the age category 15-44 years. There is paucity of studies done in undergraduate students in our country.**AIMS AND OBJECTIVES:** To find out the prevalence of depression among undergraduate students and finding correlation between various demographic variables and depression. Cross sectional study carried on 1066 under graduate students of medical, dental, engineering and basic science branches. **METHODS AND MATERIAL:** CRF (containing demographic details) & Beck Depression Inventory Scale-II were given. Students'  $\geq 18$  years of all academic years were included in the study. Statistical Analysis used were multiple ANOVA test and student t test.**RESULTS AND CONCLUSIONS:** Prevalence of depression was found to be 26.54%. More males (29.75%) than females (23.36%) (P value=.0001). Highest depression was found in basic Science undergraduate students (34.53%) followed by engineering undergraduate students (22.82%) followed by MBBS students (18.99%) and least in dental undergraduate students (17.54%) (P value=.00003). Students living at hostel (24.10%) showed least depression and maximum depression was found in students living at private rooms (31.54%) (P value= .0002). There is a need to diagnose and treat undergraduate students with depression at an early stage. This will help them to overcome their difficulties and lead a healthier life.

**KEY WORDS:** depression, undergraduate students, medical, dental, engineering, basic science.

**INTRODUCTION:** Depression is a major cause of morbidity worldwide <sup>1</sup>. Depressive disorder is one of the most common mental disorders, with lifetime prevalence of 16.2% <sup>2</sup>. Depressive symptoms are widely distributed in the population and disrupt people's normal life.

In much of the developing world, however, depression is largely unexplored as a research topic. Even though the mental disorder has been recognized as a research priority, only a few numbers of relevant studies have been carried out in low- and middle-income countries <sup>3</sup>. Approximately 60% of these countries have contributed fewer than five articles to the international mental health indexed literature <sup>3</sup>.

University students are a special group of people that are enduring a critical transitory period in which they are going from adolescence to adulthood and making many major life decisions. Studies have shown that prevalence of depression among young adults seems to be increasing <sup>4</sup> and this can lead to impairment in the development of professional, academic, and social skills <sup>5-8</sup>. Academic burden, though have been identified as source of depression <sup>9</sup>. Also there is a strong relationship between severity of depressive symptoms and suicidal ideation in college students <sup>10</sup>.

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It is important to study depression among university students because most lifetime mental disorders have their first onset during the typical university age <sup>11</sup>. In this vital stage, undergraduate students can face many problems, such as accommodation, interpersonal relationships, competition and difficulties in academic studies, economic stress, and struggles with making important decisions.

The primary aim was to find prevalence of depression amongst medical, dental, engineering and basic science students. The second aim was to find out relationship between various demographic variables and depression in undergraduate students.

**METHODS:** An analytical cross sectional study was conducted in Vadodara in five institutes. Sample comprised of - undergraduate students of medical, dental, engineering and basic science branches. Participants were selected through stratified random sampling which consisted of 4 strata (undergraduate medical and dental student, engineering and basic science). Student's  $\geq 18$  years of all academic years were included in the study. Study was carried from October 2012 to November 2013. Sample size comprised 1066 students; 531 males and 535 females. Written informed consent was taken from those who were willing to take part in the study. Standardized CRF (containing demographic details) & Beck Depression Inventory Scale-II were given. CRF was such that it didn't reveal identity of the subject as they were not required to mention name on it. Beck Depression Inventory is a 21 item self-administered inventory where 1 statement is to be chosen from each item. Created by Dr. Aaron T. Beck, one of the most widely used instruments for measuring the severity of depression. It is designed for individuals aged 13 and over. It is a 21-question multiple-choice inventory. BDI-II demonstrates good reliability and validity in clinical and nonclinical samples <sup>12</sup>.

**Ethics:** This study was carried out on undergraduate medical, dental, engineering college and basic science students of five institutes in Vadodara. It was done after taking written informed consent of the students and the colleges involved in the study. The students were not supposed to mention their names on the CRF. So there was no ethical issue involved in carrying out this study.

**Statistics:** 1100 students were intervened. 44 subjects were lost because of incomplete forms and not willing to take part in survey. Data thus generated was tabulated and categorized and analysis was done. Suitable statistical parameters such as mean, multiple ANOVA test and student T test to assess factors related with depression were done.

**DISCUSSION:** The boundary between depressive disorder and the human distress is a grey zone. The findings show the prevalence of depression (26.54%) in undergraduate medical students. This finding is comparable with the results (31.2%) of similar study done and published in BMJ <sup>13</sup> but more in comparison to findings of studies from Sweden (12.9%) <sup>14</sup>. Vaidya and Malgaonkar reported a prevalence of depression as 39.44% among 109 medical students of T. N. Medical College, Mumbai <sup>15</sup>. This could be either due to the different instruments used in other studies or it could be a real difference.

More males (29.75%) than females (23.36%) ( $P=.0001$ ) had depression. This was in keeping to a study recently published (October 2013) in Journal of American Medical Association which analyzed subjects using the scale that included alternative, male-type symptoms of depression found that a higher proportion of men (26.3%) than women (21.9%) ( $P = .007$ ) met criteria for depression. Analyses also using the scale that included alternative and traditional depression symptoms found that men and women met criteria for depression in equal proportions: 30.6% of

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men and 33.3% of women ( $P = .57$ )<sup>16</sup>. However, most studies have shown that the prevalence of depression among women is between one and a half and three times more than the prevalence among men<sup>17-20</sup>.

Maximum depression was found in basic science (34.53%) students followed by engineering (22.82%), MBBS students (18.99%) dental students (17.54%) ( $P=.00003$ ). In a similar study done, non-medical students showed a higher prevalence of moderate and severe depressive symptoms than their medical student peers, although medical students reported more symptoms of mild depression<sup>21</sup>.

Higher percentage of depression was seen in students who were living in private room (31.52%) (Students living outside hostel) followed by students living in home (27.94%) and least in students who were living in hostel (24.10%) ( $P=.0002$ ), and to our knowledge, this is only study which has tried to find and compare prevalence of depression in four education fields (medical, dental, engineering and basic science under graduate students). Students of this age group have to deal with new social demands as well as academic demands. Depression often results in lower academic performance, behaviour problem, and poor socialization. There is need to diagnose undergraduate students with depression at an early stage. If identified early can be managed by behavioral therapy, emotional support, interpersonal psychotherapy and social skill training etc.

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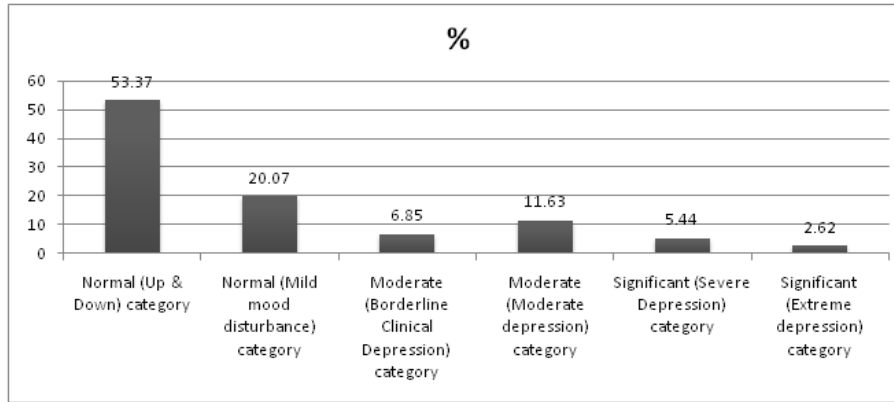
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Group	Type	Frequency n (%)		Type of Depression category	n	p value	
Age		1066 Age: 19 -28 Mean: 19.12 SD: 1.41					
Gender	Male	531	49.81	Normal	373	0.0001	
				Moderate	106		
				Significant	52		
	Female	535	50.18	Normal	410		
				Moderate	91		
				Significant	34		
Educational Field	Basic Science	475	44.55	Normal	311	0.00003	
				Moderate	109		
				Significant	55		
	Dental	171	16.04	16.04	Normal		141
					Moderate		25
					Significant		5
	Engineering	241	22.6	22.6	Normal		186
					Moderate		42
					Significant		13
	Medical	179	16.79	16.79	Normal		145
					Moderate		21
					Significant		13
Residency	Home	501	46.99	Normal	361	0.0002	
				Moderate	98		
				Significant	42		
	Hostel	473	44.37	44.37	Normal		359
					Moderate		82
					Significant		32
	Private Room	92	8.63	8.63	Normal		63
					Moderate		17
					Significant		12

Table depicts distribution and comparison of depression according to gender, education field and residency.



**Figure/Graph depicts prevalence of depression according to different categories**

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