

## The Prevalence of Depression among Pre-Clinical Medical Students in Al Imam Mohamad Ibn Saud Islamic University

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### **Abstract:**

**Introduction:** Depression levels in the community are considered as specific indicators for mental status of a person. Medicine is one of the hardest science and Huge materials and it is needs a lot of studying that makes medical students most prone to depression.

**Objectives:** To assess the prevalence of depression among Imam Mohammad Ibn Saud Islamic University Medical students, compare the depression in students of different education years and and Compare our University students with King Saud University.

**Methodology:** The present study was a cross-sectional descriptive survey, carried out at Imam Mohammad Ibn Saud Islamic University, college of medicine, Saudi Arabia, from three academic years who had spent more than seven months in the medical school. A pre-tested modified questionner was distributed among 200 medical students. Incomplete questionner were excluded from the study (58). The remaining questionnaires (142) were coded and the data was entered into the SPSS statistical package, version 22.

**Results:** From this study 80 students (56.3%) had depression, 62 students (43.7%) had no depression, 38 students (26.8%) had mild depression, 31 students (21.8%) had moderate depression, 11 students (7.7%) had severe depression. Depression was significantly higher in 1st year and 2nd year students as compared to 3rd year students. It was seen that the GPA, and the distance between the college and student's home did not affect the prevalence of depression unlike the level of exams which had a correlation. The prevalence of depression among medical students at Imam University is comparable to medical students at King Saud University.

**Conclusion:** There is a high rate of depression among students and Year 1 reported experiencing that the highest degree of depression. There are multiple correlations between depression and environmental/academic factors, and the percent of depression was comparable to medical students at King Saud University.

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### I. Introduction

It has been shown that medical students have a higher rate of depressive symptoms than the general population and age- and sex-matched peers. This study aimed to estimate the prevalence of depressive symptoms among the medical students of a large school following a traditional curriculum and its relation to personal background variables<sup>[1]</sup>. Depression levels in the community are considered as specific indicators for mental status of a person<sup>[20]</sup>. Various studies have documented stress among medical Students<sup>[20]</sup>. Among medical students, academic stressors include the volume of material to be learned, academic performance and evaluation (examination and continuous assessment)<sup>[11-16-20-21]</sup>. It is known that studying can be stressful & it is also known that medicine is one of the hardest science professions and it needs a lot of studying so that makes medical students the most prone to stress, hence we wanted to conduct this research to find out if our students in Imam University are or are not stressed, and most importantly if they have reached the point of depression and see if other universities have the same problem and compare the results and try to find and isolate the main causes and exposure to different stressors and the prevalence of depression among medical students at different levels of education<sup>[2]</sup>. Academically less successful students reported somewhat higher levels of depressive ideation and symptomatology<sup>[20-16]</sup>. The potential negative effects of emotional distress on medical students include impairment of functioning in classroom performance and clinical practice, stress-induced disorders and deteriorating performance<sup>[20-16-21]</sup>. There should be a system to identify the prevalence of their training and to specify the relevant contributing factors. This knowledge can assist in instituting specific interventions<sup>[20]</sup>. Medical education can contribute to the development of depression in medical students which may have possible negative academic and professional consequences<sup>[3]</sup>.

### II. Methodology

A cross sectional study was done on the student of imam medical university from three academic years who had spent more than seven months in the medical school. A self-administered questionnaire was given to the students who were present in the class and willing to participate in the study. The instrument used to assess

the depression levels was the Goldberg depression questionnaire: all the test items had positive and significant relationship with the total test score<sup>[30]</sup>. Total validity of the test yielded for people with high school degree, university degree and other were respectively 0.901, 0.861 and 0.817 <sup>[30]</sup>. This amount of validity indicates reliability and stability of the test in diagnosing depression. Furthermore, the results of factorial analysis show that this test consists of three factors which totally cover 44.63 % of all depression variance <sup>[30]</sup>. None of the items Goldberg's depression scale had a factorial load lower than 0.40. Given the high validity of the test, reliability and norm, and small number of items and time needed to score it (about 5 minutes), it could be said that Goldberg's depression scale is a suitable instrument for screening depressed people<sup>[30]</sup>.

**Goldberg's depression scale.** This scale consists of 18 items with 6 choices. For choice (to a great extent) score 5, choice (a lot) score 4, choice (quite a lot) score 3, choice (partly) score 2, choice (only slightly) score 1 and choice (not at all) score 0 are allocated. The more total scores are, the higher depression level will be <sup>[30]</sup>. It should be mentioned that every individual can take this test frequently to assess his/her mental status. Every subject's mental status could be calculated based on Table A <sup>[30]</sup>.

**Table A: Subjects status with regard to raw score before standardization of the scale <sup>[30]</sup>.**

No	Score	Status
1	0-9	Depression unlikely
2	10-17	Possibly minor depression
3	18-21	On the verge of depression
4	22-35	Minor to moderate depression
5	36-53	Moderate to severe depression
6	54+	Severe depression

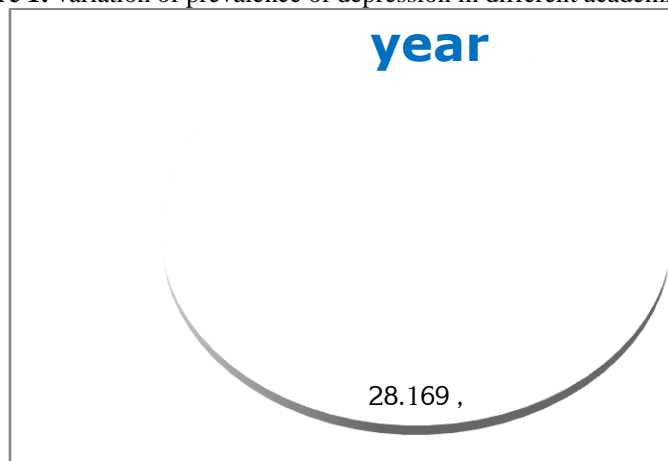
Additional questions were included to assess the relationship between depression and factors like the distance between the college and students home, GPA of student, students regret about going to medical school and level of exams.

### III. Results

The results are; 43.7 % of students had no depression, 26.8% had mild depression, 21.8% had moderate depression, 7.7% had severe depression. The depression rate among medical students at Imam University is comparable with the result of depression at King Saud Medical College. 56.3 % is the overall depression at Imam University which was compared to 48.2 % at King Saud University.

Cumulative Percent	Valid Percent	Percent	Frequency	Valid
28.2	28.2	28.2	40	first
62.0	33.8	33.8	48	second
100.0	38.0	38.0	54	third
	100.0	100.0	142	Total

**Figure 1:** variation of prevalence of depression in different academic years



	Cumulative Percent	Valid Percent	Percent	Frequency	depression
	43.7	43.7	25.7	62	No
	70.4	26.8	26.8	38	mild
	92.3	21.8	21.8	31	moderate
	100.0	7.7	7.7	11	sever
		100.0	100.0	142	

Figure 2. The prevalence of depression among medical students at Imam University

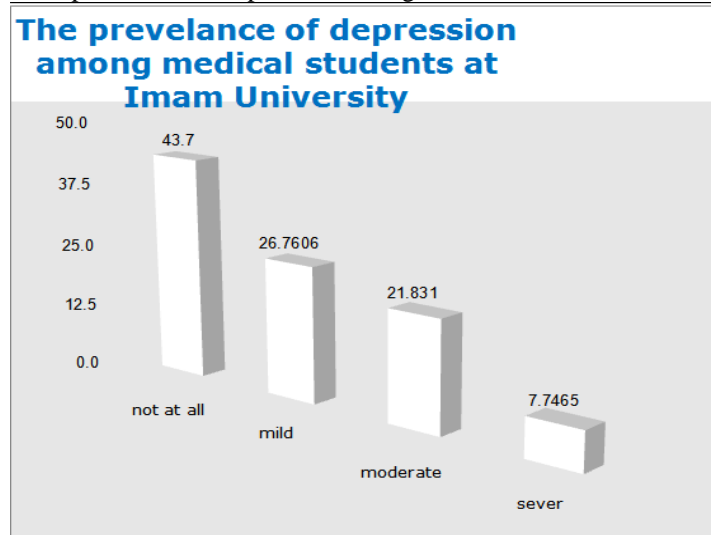
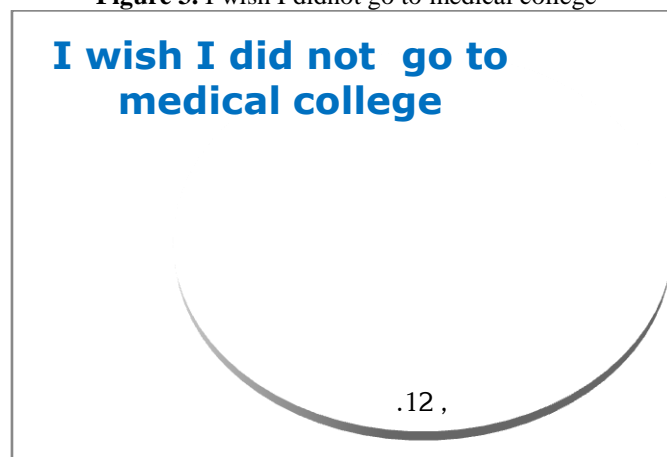


Table 3 .do you feel that the exams are too hard					
	Cumulative Percent	Valid Percent	Percent	Frequency	Valid
	4.9	4.9	4.9	7	not at all
	23.2	18.3	18.3	26	just alittle
	50.0	26.8	26.8	38	somewhat
	74.6	24.6	24.6	35	moderately
	93.0	18.3	18.3	26	quite alot
	100.0	7.0	7.0	10	very much
		100.0	100.0	142	Total

Table 4. I wish I did not go to medical college					
	Cumulative Percent	Valid Percent	Percent	Frequency	Valid
	12.0	12.0	12.0	17	yes
	78.2	66.2	66.2	94	no
	100.0	21.8	21.8	31	maybe
		100.0	100.0	142	Total

Figure 3. I wish I didnot go to medical college



**Table5 .year \* depression Cross tabulation**

		No depression	On the verge of depression	Mild	Moderate depression	Sever depression	Total	
year	first	Count	1	6	16	13	4	40
		% within year	2.5%	15.0%	40.0%	32.5%	10.0%	100.0%
		% within	5.6%	13.6%	42.1%	41.9%	36.4%	28.2%
		% of Total	.7%	4.2%	11.3%	9.2%	2.8%	28.2%
	second	Count	11	14	7	12	4	48
		% within year	22.9%	29.2%	14.6%	25.0%	8.3%	100.0%
		% within	61.1%	31.8%	18.4%	38.7%	36.4%	33.8%
		% of Total	7.7%	9.9%	4.9%	8.5%	2.8%	33.8%
	third	Count	6	24	15	6	3	54
		% within year	11.1%	44.4%	27.8%	11.1%	5.6%	100.0%
		% within	33.3%	54.5%	39.5%	19.4%	27.3%	38.0%
		% of Total	4.2%	16.9%	10.6%	4.2%	2.1%	38.0%
Total		Count	18	44	38	31	11	142
		% within year	12.7%	31.0%	26.8%	21.8%	7.7%	100.0%
		% within	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	12.7%	31.0%	26.8%	21.8%	7.7%	100.0%

#### IV. Discussion

Depression is a disorder that affects a large portion of the population. Medical students experience depression and other mental diseases and at a higher rate than the general population [9]. Medical school has long been recognized as involving numerous stressors that can affect the well-being of students [24]. Students who are depressed are less likely to learn than their non-depressed peers as depression affects the productivity and interest of individuals [33]. In our study, the overall depression rate is 56.3%. It is seen that newly entered students had a higher prevalence of depression (1st and 2nd year students) as compared to 3rd year students. That could be due to stress of new study environment [21]. One of the factors that might be associated is that medical students in Saudi Arabia are obligated to learn medical subjects in English which is not their native language [34]. Some students drive long distances as their houses are far away from the college facilities. Some students regret going to medical school in the first place and that might explain their depressive symptoms. Other factors found in literature include; lack of leisure time, and pressures of material overload, worries about future competency and career choices [24]. A major stressor for first-year medical students is the amount and complexity of material to be learned. Students also feel academic pressure due to frequent academic examinations in a competitive environment [24]. Fatigue is often cited as a stressor at the end of first year and during second year [24]. Depression has a very high cost to individual and society. Some studies reported higher suicidality rates in medical students as compared to the general population [32].

#### V. Literature Review

In the new research, investigators reveal the extent of the problem and provide a detailed analysis of the symptoms and sufferers. Sergio Baldassin, from the ABC Regional Medical School, Brazil, led a team of researchers who carried out a study on 481 medical students in the private medical school near the São Paulo state capital. He said, "We used cluster analyses to better describe the characteristics of depressive symptoms — affective, cognitive, and somatic. This is the first study to directly evaluate, in a cross-sectional design, the characteristics of depressive symptoms by applying such clusters." Affective symptoms represent the core symptoms of a depressive mood, based on students' reported levels of sadness, dissatisfaction, episodes of crying, irritability and social withdrawal. The cognitive cluster assessed pessimism, sense of failure or guilt, expectation of punishment, dislike of self, suicidal ideation, indecisiveness and change in body image. Finally, the somatic cluster assessed the presence of slowness, insomnia, fatigue, loss of weight and loss of sexual interest. "There was a high prevalence towards depressive symptoms among medical students, particularly females, mainly involving the somatic and affective clusters. Of the students in our study, 38% had at least 10 of a possible 63 symptoms of depression," Baldassin noted. The authors' cluster analysis found that the reasons for most students' depression scores were in the affective cluster, and that the problem was at its worst in the internship years. Cognitive cluster symptoms were also highest in this year, probably due to feelings of fear and insecurity about entry into the hospital environment. According to Baldassin, "Frequently pre-internship students fear they 'know nothing', and are insecure about the physical examination of other people." Likewise, somatic cluster scores were highest during internship, reflecting sleepless nights on call, devoid of friend and family support. Having a parent who is a doctor was found to reduce the depression risk. The authors conclude, "The increased depression scores during the internship period of medical school are associated with a decrease in student health, and this is probably the period when professors and educators should try to be most aware of suicidal thoughts and risk in their students." The findings are published in the open access journal *BMC Medical Education*.