

A SURVEY OF DEPRESSION AMONG IRANIAN MEDICAL STUDENTS AND ITS CORRELATION WITH SOCIAL SUPPORT AND SATISFACTION

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ABSTRACT

Objective: To investigate the correlation between depression and level of social support and satisfaction in Iranian medical students.

Design: Descriptive-analytic and cross-sectional study

Place and duration of study: The study was carried out on the students of Mashhad University of Medical Sciences in 2004 and 2005.

Subjects and Method: Self administered questionnaires about socio-demographic information (age, gender, marital status, educational level) and satisfaction (satisfaction with the educational staff, university employees and environmental facilities), Beck Depression Inventory (BDI) and Cassidy social support scale were given to students who were selected by multi stage randomized sampling. The data were analyzed by SPSS version 14 using especially the χ^2 -test.

Results: 796 students answered the questionnaires anonymously (88.84% response rate). A total of 53% of participants had depression (38.3% mild, 10.2% moderate and 4.5% severe type). No associations were found between depression and gender and marital status. Results showed that 8.4%, 32% and 59.6% of participants reported low, moderate and high levels of social support respectively. 46.50% and 47.92% of the students were somewhat satisfied with the educational staff and university employees respectively but 42.05% were strongly dissatisfied with environmental facilities.

Conclusions: Depression is more frequent in Iranian medical students than general population. A negative correlation was seen between depression and the level of social support in students and the prevalence of depression had a significant relation with their satisfaction with the educational staff, university employees and their attitude and environmental facilities.

Keywords: Depression, Medical students, Iran, Satisfaction, Social support.

INTRODUCTION

Depression, one of the oldest common mental disorders of all decades¹, has become a frequent universal health problem which makes severe changes in mood, behavior and thought and is accompanied by many physical complaints^{2, 3}. It has also been identified as the most significant clinical risk factor for suicide⁴⁻⁶. In addition

to its high lifetime prevalence, depression is known to be disabling, recurrent and in some cases chronic⁶. Depression interferes with interpersonal relationships between the patient and his/her family members and also has effects on the everyday activities of the patient⁷.

Although depression happens in all ages and social classes, in numerous cases its first episode occurs during adolescence and early adulthood^{2, 6}. It is more common among women^{8, 9}.

According to the raised attention to occupational stress and knowing that human stressful experiences in the first years of their adult life leads to the presence of depression¹⁰ and the great influence depression has on one's attitude towards profession, the concern about depression in college students is fundamental². Also, students are prone to have more psychiatric problems including depression^{11, 12} because of their interpersonal and emotional conflicts as well as economical and academic problems^{8, 13-15}.

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Nowadays there is a great concern about the quality of social relationships and its predictive power for general health and mortality. As social support could mediate emotional adjustment to stresses¹⁶⁻¹⁸, many studies suggest a negative relationship between the risk for major depression and level of social support¹⁹⁻²¹. Higher levels of family support were shown to be associated with lower levels of depression and even suicide ideation^{22, 23}.

Satisfaction has been used as a healthcare quality indicator²⁴. Job satisfaction is an individual's emotional response to his or her current job condition. Dissatisfaction with career choice has a strong relation with depression and one's career satisfaction is inversely correlated with burnout and depression^{25, 26}.

Early detection and management of depression can lead to improvement in the field of general healthcare²⁷ especially when target groups are students who are responsible for the healthcare of society themselves. As level of social support and satisfaction are considered to have great roles in the onset and continuation of depression, the purpose of the current study, besides studying demographic items of depression, was to investigate the correlation between depression and level of social support and satisfaction in Iranian medical students.

SUBJECTS AND METHODS

Sample: The present study is a descriptive-analytic and cross-sectional research, carried out in Mashhad, the second largest city in Iran with a population of over 3 million in 2004 and 2005. The target population was the students of Mashhad University of Medical Sciences. A total of 896 individuals aged 18 years or older, representative of the student population were asked to complete the questionnaires. The response rate was 88.84%. Subjects with any chronic medical illnesses or disabilities, or major stresses in 6 months prior to research and females with premenstrual dysphoric disorder were not included.

Procedures: In the first stage, the number of samples was calculated on the basis of other surveys on depression done in similar populations with 95% confidence intervals, 5% error and 3% precision. A self-administered questionnaire was randomly given out to students who were selected by multi-stage randomized sampling proportionally to the population size of each college and with respect to both age and gender of respondents to maintain a sample representative of these two parameters. In the second stage, the goals of the study were explained to potential participants. Subjects who gave up after completing the questionnaires were classified as refusals.

The data were analyzed by SPSS version 14 using especially the χ^2 -test. Reported differences were significant at the 0.05 level or less.

Instrument: To obtain information, everyone completed questionnaires about socio-demographic information (age, gender, marital status, educational level) and satisfaction, Beck Depression Inventory (BDI) and Cassidy social support scale.

The job satisfaction questions were about three different aspects including satisfaction with the educational staff, with university employees and their attitude and with environmental facilities. Each item was scored by five-point Likert scales. Likert scale is used as a semantic differential. A statement is given, and the endpoints correspond to agree strongly and disagree strongly. Five-point Likert scales are perhaps the most commonly used. With a five-point scale the points can be labeled: agree strongly, agree somewhat, neutral, disagree somewhat and disagree strongly²⁸.

The Cassidy social support scale consists of 7 questions and is answered "yes/not sure/no". Each question has 0 to 2 scores and the total score is ranged between 0 – 14; which signifies low (0-4), moderate (5-9) and high social support (10-14). The validity of this scale was confirmed by Cassidy in 1989^{29, 30}. Its validity was confirmed by Korke Abadi (R=0.89) in Iran³¹.

Beck Depression Inventory is still one of the most common and valid depression scales³². It is applicable to all social levels and environments and is neither age nor culture-based³³. It has a high content validity and an acceptable sensitivity in differentiating depressed and non-depressed patients³⁴. In this scale, scores 0-9 signify normality, 10-19 mild depression, 20-29 moderate depression and 30+ severe depression³⁵.

RESULTS

Of the initial pool of 896 students, 796 answered the anonymous questionnaire (88.84% response rate), 330 of responders were male and 466 were female. Demographic variables are shown in Table 1. A total of 53% of participants had depression (38.3% mild, 10.2% moderate and 4.5% severe). It was shown that some degrees of depression was present in 249 (53%) of females and 173 (52.4%) of males. 102 of the samples were married. 370 (53.3%) of single students and 52 (51%) of married ones reported depression respectively.

The results could not prove any association between depression and gender or marital status.

Age was the only demographic variable associated with depression. Depression was more experienced in the under-20-year-old category and was less reported in the over-30-year-old category.

Results showed that 8.4% of participants reported low levels of social support, 32% reported moderate levels and 59.6% reported high levels and a negative correlation was seen between depression and the level of social support. (Table 2)

Table 1
Frequency of demographic variables and depression among the students of Mashhad University of Medical Sciences

Variable		Non depressed		Depressed						Total		Result
				Mild		Moderate		Severe				
		No.	%	No.	%	No.	%	No.	%	No.	%	
Gender	Male	157	47.6	119	36.1	29	8.9	25	7.6	330	41.5	P=0.082 X ² =6.69 d=3
	Female	217	46.7	186	39.9	52	11.2	11	2.4	466	58.5	
Marital status	Single	324	46.7	267	38.5	72	10.4	31	4.5	694	87.2	P=0.082 X ² =5.12 df=9
	Married	50	4.9	38	37.3	9	8.8	5	4.9	102	12.8	
Age	< 20 years	39	40.2	45	46.4	12	12.4	1	1	97	12.2	P=0.00 X ² =33.62 df=9
	20-24 years	301	47.4	243	38.3	65	10.2	26	4.1	635	79.8	
	25-29 years	25	46.3	17	31.5	3	5.6	9	16.7	54	6.8	
	> 30 years	9	9.0	0	0	1	10	0	0	10	13	

Table 2
Frequency of depression and social support and their correlation among the students of Mashhad University of Medical Sciences

Variable		Non depressed		Depressed						Total		Result
				Mild		Moderate		Severe				
		No.	%	No.	%	No.	%	No.	%	No.	%	
Social support score	Low	24	35.8	19	28.4	13	19.4	11	16.4	67	8.4	P=0.00 X ² =54.15 d=6
	Moderate	104	40.8	98	38.4	37	14.5	16	6.3	255	32	
	High	246	51.9	188	39.7	31	6.5	9	1.9	474	59.6	
Total No. of depressed students		374	47	305	38.3	81	10.2	36	4.5	796	100	

The findings of this study showed that 4.4% of the students were strongly satisfied with the educational staffs; 48% were somewhat satisfied; 10.1% were neutral; while 29.8% were somewhat dissatisfied and 7.8% were strongly dissatisfied. The prevalence of depression in students had a significant relation with their satisfaction with the educational staffs. 7.2% of the students were strongly satisfied with university employees and their attitude; 48.4% of the students were somewhat satisfied and 12.8% were neutral; while 22.7% were somewhat dissatisfied and 8.9% were strongly dissatisfied. The prevalence of depression in students had a significant relation with their satisfaction with the employees and their attitude. 3.52% of the students were strongly satisfied with environmental facilities; 5.28% of the students were somewhat satisfied; 10.68% were neutral;

while 38.44% were somewhat dissatisfied and 42.08% were strongly dissatisfied. The prevalence of depression in students had a significant relation with their satisfaction with environmental facilities. (Table 3)

DISCUSSION AND CONCLUSION

The self-reported mild, moderate and severe depression rates among students of Mashhad University of Medical Science were 38.3%, 10.2% and 4.5% respectively. Women reported depression as frequently as men; and so did single and married students. 47% of students did not report any depression. Observed high rates of depression were comparable to previously published studies over the last 20 years on Iranian medical students³⁶. High rates of depressive symptoms were re-

Table 3
Frequency of depression and satisfaction and their correlation among the students of Mashhad University of Medical Sciences

Variable		Non depressed		Depressed						Total		Result
				Mild		Moderate		Severe				
		No.	%	No.	%	No.	%	No.	%	No.	%	
Satisfaction with educational staff	Strongly dissatisfied	22	35.5	28	45.2	6	9.7	6	9.7	62	7.8	P=0.001 X ² =47.07 df=15
	Somewhat dissatisfied	102	43	98	41.4	22	9.3	15	6.3	237	29.8	
	Neutral	21	26.3	40	50	16	20	3	3.8	80	10.1	
	Somewhat satisfied	215	56.3	124	32.5	34	8.9	9	2.4	382	48	
	Strongly satisfied	14	40	15	42.9	3	8.6	3	8.6	35	4.4	
Satisfaction with environmental facilities	Strongly dissatisfied	45	13.43	76	22.69	53	15.82	161	48.06	335	42.08	P=001 X ² =24.66 df=12
	Somewhat dissatisfied	40	13.07	73	23.86	76	24.84	117	38.24	306	38.44	
	Neutral	19	22.35	22	25.88	15	17.65	29	34.12	85	10.68	
	Somewhat satisfied	9	21.43	11	26.19	5	11.9	17	40.48	42	5.28	
	Strongly satisfied	19	67.86	7	25	1	3.57	1	3.57	28	3.52	
Satisfaction with University employees and their attitude	Strongly dissatisfied	22	31	31	43.7	9	12.7	9	12.7	71	8.9	P=001 X ² =35.68 df=15
	Somewhat dissatisfied	87	48.1	62	34.3	24	13.3	8	4.4	181	22.7	
	Neutral	45	44.1	38	37.3	11	10.8	8	7.8	102	12.8	
	Somewhat satisfied	193	50.1	146	37.9	36	9.4	10	2.6	385	48.4	
	Strongly satisfied	27	47.4	28	49.1	1	1.8	1	1.8	57	7.2	

ported by 55% and 50.1% of nursing students in Rockville and Thailand respectively^{12,37}. But according to publications, prevalence of depression in general population is 15-25% which is lower than the rates of our study³⁸. However, students' self-reported higher symptom levels in comparison to general population norms cannot be assumed to indicate higher levels of more serious mental health conditions. Yet, this is not to deny the genuine distress and severe problems that some students experience¹¹.

Mild depression was reported 8 times more prevalent than severe depression in this study. As the impact of perceived social efficacy was mediated through low level of depression and perceived self-regulatory efficacy was related to academic achievement, special attention to even mild depression is necessary³⁹.

Our study revealed that the incidence of depression was slightly higher in women without any statistical significance. The findings of this study were similar to

other reports which found no gender difference at baseline; however, some of them discovered that women experienced higher depression levels than men during their educational years⁸. There are other studies which have shown higher incidences of major depressive disorder in women, although the differences have no statistical significance^{40, 41}.

There was no significant difference in depression rates between single and married students. This finding is of the same order with those reported by previous surveys^{42, 43}. Findings failed to support ideas of marriage being protective (through social support), or detrimental (through family roles) against psychological distress⁴⁴.

Age was associated with depression. Depression was more prevalent in the under-20-year-old category although severe depression was more prevalent in students who were not in the first year of education. Mild depression was more frequent than severe depression. In medical students of the Lodz Medical University, 28.8% of the 2nd year students and 14% of the 4th year medical students were diagnosed with depressive symptoms which show a decrease in self-reported depressive symptoms during their educational years⁴⁵. It could be demonstrated by significant changes in student's health habits like decreases in exercise and socialization. The changes in health habits were predictive of both emotional and academic adjustment, with students who had less positive health habits, particularly socialization, being more depressed at their final examinations⁴⁶.

As mentioned before, all satisfaction items had significant correlations with depression. 37.6% of students were dissatisfied with their educational staff, 31.6% were dissatisfied with university employees and their attitude and 80.52% were dissatisfied with the environmental facilities and a negative correlation was found between student's depression and each satisfaction item. Impairment of mental health influences the level of job satisfaction⁴⁷. There was also a positive and significant relationship between job satisfaction and mental hygiene⁴⁸ and a negative correlation between the depressive symptom intensity and a feeling of satisfaction shown in medical students of Lodz Medical University, Poland⁴⁵.

8.4% of participants reported low levels of social support and moderate and high levels were reported in 32% and 59.6% respectively. Multivariate analysis demonstrated that family and peer connections were protective against depression⁴⁰. Emotional support by the family members can improve mental health by reducing anxiety, stress and depression^{12, 49, 50}. Behaviors such as substance abuse or burnout symptoms in depressives were related to a lack of social support and external attribution style³⁷.

Students reported the greatest perceived negative academic impact related to experiencing interpersonal concerns (concerns about troubled friends or family members, death of a friend or family member, and rela-

tionship difficulty) and mental health concerns (depression, anxiety, seasonal affective disorder and stress)⁵¹. Our research produced similar results. This study demonstrates the importance of health education and health promotion programs for students attending the medical schools which include prevention of initiation as well as treatment. These interventions demonstrated promising effects on changing the patterns of specific challenges associated with acute adjustment as well as long-term stressors. Therefore, counseling services should be provided in medical schools to assist students to handle issues that constitute a source of stress in their psychosocial environment⁵².

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