

A Study about Stress, Depression and Anxiety among 3rd Year Imam Mohammed IBN Saud Islamic University Medical Students

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Abstract: *Introduction: 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. Among medical students, academic stressors include the volume of material to be learned, academic performance and evaluation (examination and continuous assessment). Academically less successful students reported somewhat higher levels of depressive ideation and symptomatology. 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. Students in extreme stress or depression need serious attention, otherwise inability to cope successfully with the enormous stress of education may lead to a cascade of consequences at both personal and professional levels. 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. Objectives: Included: To assess anxiety and depression levels among third year imam medical college students.*

1. Literature Review

1.A prospective analysis of stress and academic performance in the first two years of medical school. (Stewart SM, Lam TH, Betson CL, Wong CM, Wong AM). This study provides prospective, longitudinal data on the relationship between stress-related measures and academic performance during the first two years of medical school. As expected, pre-medical-school academic performance strongly predicted performance in medical school. Academic performance before and during medical school was negatively related to reported stress levels. On bivariate correlations, there were numerous significant relationships between stress reported at waves 1 and 2, and medical school academic performance assessed after these measures. In addition there were modest negative correlations between self-reported coping strategies of 'humor' and 'wishful thinking', and consequent academic performance. However, the predictive value of stress and its management on prospective academic performance was much decreased once pre-medical-school performance was statistically controlled.

2-(Stress and depression among medical students: a cross-sectional study).

Objective: To assess the exposure to different stressors and the prevalence of depression among medical students at different levels of education, taking gender differences into account. Design: Students were asked to complete a new stress inventory called the Higher Education Stress Inventory (HESI), the Major Depression Inventory (MDI), slightly modified, and questions on suicidal ideation developed by Meehan. Results: Year 1 students gave high ratings to the workload and lack of feedback stressors. Year 3 students gave high ratings to 'Worries about future endurance/competence' and 'Pedagogical shortcomings'. In Year 6, both the latter factors were rated highly, but Year 6 students also gave higher ratings than the 2 other groups to

'Non-supportive climate'. In all 3 cohorts students complained of lack of feedback. Female students gave higher ratings than males to 4 out of 7 factors. Several stress factors were identified as being associated with depression. The prevalence of depressive symptoms among students was 12.9%, significantly higher than in the general population, and was 16.1% among female students versus 8.1% among males. A total of 2.7% of students had made suicide attempts, but none during the previous year. Conclusion: Year 1 students indicated experiencing the highest degree of pressure from studies. A gender difference regarding stress levels was also seen, where women reported higher levels of stress than men. Medical students had higher depression rates than the general population, and women students had higher rates than men.

3- Stress, debt and undergraduate medical student performance.

(Ross S, Cleland J, Macleod MJ).

Keywords: Stress, depression, anxiety, Saudi Arabia, medical student, Imam University

Introduction

Against the background of current debate over university funding and widening access, we aimed to examine the relationships between student debt, mental health and academic performance.

Results

The median total outstanding debt was pound 7300 (interquartile range 2000-14 762.50). Students from lower socioeconomic backgrounds and postgraduate students had higher debts. There was no direct correlation between debt, class ranking or General Health Questionnaire (GHQ) score;

however, a subgroup of 125 students (37.7%), who said that worrying about money affected their studies, did have higher debt and were ranked lower in their classes. Some of these students were also cases on the GHQ-12. Overall, however, cases on the GHQ had lower levels of debt and lower class ranking, suggesting that financial worries are only 1 cause of mental health difficulties.

Discussion

Students' perceptions of their own levels of debt rather than level of debt per se relates to performance. Students who worry about money have higher debts and perform less well than their peers in degree examinations. Some students in this subgroup were also identified by the GHQ and may have mental health problems. The relationships between debt, mental health and performance in undergraduate medical students are complex but need to be appreciated by medical education policy makers.

4- Psychological stress among undergraduate medical students.

(Sherina MS, Rampal L, Kaneson N.)

The aim of this study was to determine the prevalence of psychological stress among medical students and to identify its symptoms and association with depression. A cross-sectional study design was used. Three-hundred and ninety-six medical students at a university in Malaysia were included in the study. Tools similar to the General Health Questionnaire (GHQ-12) and Beck Depression Inventory (BDI) were used to screen for psychological stress and depression, respectively. 41.9% of the medical students were found to have psychological stress, which was significantly associated with depression ($\chi^2=4.636$, $df=1$, $p<0.05$). Psychological stress is common among medical students and is associated with depression.

5- Factors in medical school that predict postgraduate mental health problems in need of treatment. A nationwide and longitudinal study.

(Tyssen R, Vaglum P, Grønvold NT, Ekeberg O.)

Context:

Physicians show an increased prevalence of mental health problems, the first postgraduate years being particularly stressful.

Objectives:

To study the prevalence of mental health problems during the fourth postgraduate year, and to investigate whether it is already possible to predict such problems at medical school.

Subjects:

A cohort of medical students ($n=396$) from all Norwegian universities, who were approached in their graduating semester (baseline) and in their fourth postgraduate year.

Methods:

A nationwide and longitudinal postal questionnaire survey, including measures of perceived mental health problems in need of treatment, personality, perceived stress and skills,

and ways of coping. Data were analyzed using logistic regression.

Results:

Mental health problems in need of treatment during the fourth postgraduate year were reported by 17.2% ($n=66$), with no gender difference, possibly because of a higher prevalence among the men compared with the general population. A majority had not sought help. Univariate medical school predictors of mental health problems included: previous mental health problems; not being married/cohabitant; the personality traits 'vulnerability' (or neuroticism) and 'reality weakness'; perceived medical school stress, and lack of perceived diagnostic skills. In addition, the coping variables avoidance, blamed self and wishful thinking were univariate predictors. Multivariate analysis identified the following adjusted predictors: previous mental health problems; 'intensity' (extraversion); perceived medical school stress, and wishful thinking. Medical school variables were inadequate for predicting which individual students would experience postgraduate mental health deterioration. However, the perceived medical school stress instrument may be used for selecting a subgroup of students suitable for group-oriented interventions.

6- Perceived stress among male medical students in Egypt and Saudi Arabia: effect of sociodemographic factors.

(El-Gilany AH, Amr M, Hammad S).

Background and Objectives

In Arab countries, epidemiological data about psychological morbidity among medical undergraduate students are scarce. This study sought to determine whether there was a difference in perceived stress levels of male medical students at Mansoura University, Egypt, compared with male medical students at King Faisal University, Saudi Arabia.

Methods

The sample consisted of 304 male medical students in Egypt and 284 male medical students in Saudi Arabia. The self-reported questionnaire covered four categories, including 15 items, on sources of stress (stressors). The perceived stress scale and hospital anxiety and depression scale were used to measure stress, anxiety and depression.

Results

There was no significant difference between the two groups in number of stressors. However, Egyptian students were more likely to cite relationship, academic and environmental problems than Saudis. The prevalence of high stress was nearly equal in both groups. However, anxiety and depression were significantly higher among Egyptian than Saudi students. A logistic regression analysis of independent predictors of severe stress among both groups combined revealed that a satisfactory family income and university-graduated father were independent protective factors. The independent risk predictors were anxiety and number of stressors.

Conclusions:

Stress, anxiety and depression are frequent among medical students. Counseling and preventive mental health services should be an integral part of the routine clinical facilities caring for medical students.

7- Medical students' distress--quality, continuity and gender differences during a six-year medical programme. (Niemi PM, Vainiomäki PT).

Research observations suggest an increase in distress during the course of medical education, but it is not known whether this distress is chronic and persistent or episodic because follow-ups covering the whole training programme are lacking. We explored stress symptoms among undergraduate medical students (n = 110) at five points during the six-year medical training programme. The quality and continuity of symptoms and gender differences in stress reports were analyzed. Questionnaire and interviews were used to assess stress symptoms, perceived health and severity of distress. Stress symptoms, such as fatigue, sleeping problems, anxiety, irritability and depression, were common. No significant gender differences were seen, but there was a consistent increase of stress reports throughout the medical programme in both sexes. Those who were most distressed at the beginning of training also reported more stress later. To conclude, we need interventions that help students to cope with stress, to make a smooth transition from school to medical school, and also to adjust to different learning environments during the different phases of medical education.

8- Title: Prevalence of anxiety and depression among medical students of private university.
Author's name(s): Inam SN, Saqib A, Alam E.
Department of Community Health Sciences, Ziauddin Medical University, Karachi.

Abstract

Objective:

To assess anxiety and depression levels among medical students of a private university by using a self-administered anxiety and depression questionnaire.

Methodology:

A cross sectional study was done on the students of Ziauddin Medical University, who had spent more than six months in the medical school. A self-administered questionnaire was given to the students, present in the class and willing to participate in the study. During the survey students of 5th year were not available. The instrument used to assess the anxiety and depression levels was the, Aga Khan University Anxiety and Depression Scale (AKUADS). Additional questions regarding socioeconomic variables were also included in the survey instrument, such as student's birth order, monthly income, number of siblings, and monthly expenditure on education.

Results:

There were 252 students in 4th year MBBS to 1st year MBBS. Of these 189 were present during the survey. Using anxiety and depression scale it was found out that 113 (60%)

students had anxiety and depression. Prevalence of anxiety and depression in students of 4th year, 3rd year, 2nd year and 1st year was 49%, 47%, 73% and 66% respectively. It was significantly higher in 1st year and 2nd year, as compared to 3rd and 4th year ($p < 0.05$). It was seen that birth order, monthly income, number of siblings and monthly expenditure on education did not affect the prevalence of anxiety and depression.

Conclusion:

This study suggests that medical students experience anxiety and depression, the finding is consistent with other western studies, however there is no local data available to support our findings. The study finding highlights the need of psychiatric counseling and support services available to vulnerable students. These findings should be further explored in longitudinal studies to identify the stressors leading to these outcomes and appropriate interventions.

9-Title:Depression among medical students

Author's name(s):Mark Zoccolillo

George E. Murphy, Richard D. Wetzel

Department of Psychiatry, Washington University School of Medicine, U.S.A

Abstract:

304 first- and second-year medical students were prospectively assessed for depression with a monthly Beck Depression Inventory (BDI). Students scoring above nine on the BDI and a control group were then interviewed with the NIMH Diagnostic Interview Schedule. The incidence of major depression or probable major depression by DSM-III criteria during the first two years of medical school was 12%. The lifetime prevalence was 15%, three times greater than the rate in the general population. An episode of depression prior to medical school was much more common among the depressed students (69 vs. 8%, $P < 0.001$) as was a family history of treated depression (46 vs. 21%, $P < 0.025$). The elevated rate of depression during medical school does not appear to be a result of the medical school experience alone. Rather, it suggests a positive bias of unknown nature in the selection of students predisposed to depression.

10-Title: Anxiety, depression and stressful life events among medical students: a prospective study in Antalya, Turkey

Author's name(s): Mehmet Aktekin, Taha Karaman, Yesim Yigit Senol, Sukru Erdem, Hakan Erengin, Mustafa Akaydin

Objective

To assess psychological changes in medical students in Antalya, Turkey during their undergraduate education. The first-year follow-up outcomes are presented in this article.

Design

All first-year undergraduate students were given a detailed, self-report questionnaire and another in the second year. They were asked to complete the General Health Questionnaire (GHQ), the Spielberger State-Trait Anxiety Inventory (STAI) and the Beck Depression Inventory (BDI).

Participants

All first-year undergraduate students in the Faculties of Medicine, Economics and PE who were registered in 1996.

Results

The findings showed that psychological test scores on the GHQ, the STAI and the BDI rose significantly in medical students between the first and second years. Using the GHQ, with different cut-off scores, the percentage of students scoring above the thresholds was higher in medical students in year 2, compared with economics and PE students. In addition, the scores for some stressful life events of medical students showed a significant rise from year 1 to year 2. Multiple regression analyses indicated that some stressful life events related to social activities were associated with the psychological test scores for medical students.

Conclusion

The results indicate that there is a decrease in the psychological health of first-year medical students. Some inadequacies in the social activities of the students might play a role in this type of disturbance

2. Relationship between our Subject and the Existing Literature Review:

The existing literature confirms that stress, depression and anxiety are common among medical students, as for students elsewhere. Little is known about the contribution of different curricula approaches to perceived stress and what coping strategies institutions and students apply to help alleviate stress. Large, prospective, multicenter, multi-method studies are needed to identify personal and curricula features that influence stress, depression, anxiety and coping strategies among medical students.

Material and Methods

A cross sectional study was done on the 3rd year imam university college of medicine students in Riyadh city on 2013. A questionnaire was given to 50 students, present in the class.

3. Questionnaire and Assessment

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: _____ DATE: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems?
 (use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself in some way	0	1	2	3
add columns:	+	+	+	+
<small>(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card).</small>	TOTAL: _____			

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____
 Somewhat difficult _____
 Very difficult _____
 Extremely difficult _____

For initial diagnosis:

- 1) Patient completes PHQ-9 Quick Depression Assessment.
- 2) If there are at least 4 \checkmark s in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

Consider Major Depressive Disorder

- if there are at least 5 \checkmark s in the shaded section (one of which corresponds to Question #1 or #2)

Consider Other Depressive Disorder

- if there are 2-4 \checkmark s in the shaded section (one of which corresponds to Question #1 or #2)

Note: Since the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient.

Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

To monitor severity over time for newly diagnosed patients or patients in current treatment for depression:

- 1) Patients may complete questionnaires at baseline and at regular intervals (eg, every 2 weeks) at home and bring them in at their next appointment for scoring or they may complete the questionnaire during each scheduled appointment.
- 2) Add up \checkmark s by column. For every \checkmark : Several days = 1
More than half the days = 2 Nearly every day = 3
- 3) Add together column scores to get a TOTAL score.
- 4) Refer to the accompanying PHQ-9 Scoring Box to interpret the TOTAL score.
- 5) Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

Scoring: add up all checked boxes on PHQ-9

For every \checkmark Not at all = 0; Several days = 1;

More than half the days = 2; Nearly every day = 3

Interpretation of Total Score

Total Score Depression Severity

1-4 Minimal depression

5-9 Mild depression

10-14 Moderate depression

15-19 Moderately severe depression

20-27 Severe depression

4. Result

- 1) 24% of students with minimal depression
- 2) 18% of students with mild depression
- 3) 8% of student with moderate depression
- 4) 2% of student with moderately severe depression
- 5) 0% of student with severe depression

	Frequency	Percent	Valid Percent	Cumulative Percent
Minimal depression	12	24	24	24
mild	9	18	18	18
moderate	4	8	8	8
moderately severe	1	2	2	2
Total	50	100	100	

5. Conclusion

The study confirms that Depression and anxiety are common among medical students. Little is known about the contribution of different curricula approaches to perceived stress and what coping strategies institutions and students apply to help alleviate stress. Large, prospective, multicenter, multi-method studies are needed to identify personal and curricula features that influence stress, depression, anxiety and coping strategies among medical students.