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Abstract

Background and Objectives: Few data are available on the level and sources of stress among law students in the Middle East generally and in Egypt specifically. We conducted this study to identify the prevalence and predictors of perceived stress among law students in Mansoura University, Egypt.

Subjects and Methods: A cross-sectional study covered 426 law students selected through a stratified cluster sampling method. The questionnaire covered four categories, including 15 items on sources of stress (stressors). Perceived stress scale and Hospital anxiety and depression scale were used to measure stress, anxiety and depression.

Results: A high level of perceived stress, anxiety and depression were reported by 42.2%, 59.2% and 18.2%, respectively. On the scale for sources of stress, 80% experienced personal troubles and two thirds of the sample had relationship, academic and environmental problems.

Conclusions: It appears that the law students have a high level of perceived stress and majority of it is generated from personal factors and less from the academic or environmental factors. Additional studies are needed to improve our understanding of the causes and consequences of law students' stress.

Key Words: Law students, Stress, Anxiety, Depression

Introduction

A student's life is subjected to different kinds of stressors, such as the pressure of academics with an obligation of success, uncertain future, and difficulties envisaged for integration into the system. These students face social, emotional and physical and family problems which may affect their learning ability and academic performance (Fish & Nies, 1996; Chew-Graham, Rogers, & Yassin, 2003).

In recent years there is a growing appreciation of the stresses involved in legal training. Many students experienced stress as they pursue a law degree (Dammeyer & Nunez, 1999). Archer & Peter (1986) suggested that much of this excessive stress may have its origins in law school. The Socratic method of teaching, high expectations, competitive environment, heavy work load, final examinations, social isolation, and family tension have been identified as stressors, though they are not necessarily ranked in that order. There have been very few studies to assess the perception of stress among students, and still fewer are those done on law student population. The primary objective was to identify the sources of stress amongst the law students' community. We also wished to estimate the prevalence of perceived stress and to observe any association between the high level of stress, sources of stress, socio-demographic profile, psychiatric symptoms and year of study.

Population and Methods

Study design and participants: This is a cross sectional study among law students in Mansoura University, Egypt, conducted during October and December 2007 G. Filled questionnaires were collected one month before first term examination period so as to minimize the extra stress symptoms. The undergraduate law program is four years of theoretical and practical courses. Written approval was obtained from the college authority to conduct the survey in the setting. After obtaining this approval for data collection the researchers introduced themselves to the student in each grade and informed them about the aim of the study and about guarantees of anonymity and confidentiality and the need for verbal consent. The students were allowed to respond in their own time and privacy. The participation was entirely on voluntary basis in a multistage cluster sampling study. All students who agreed to participate were given questionnaires; all incomplete questionnaires were not included. A total of 434 students who provided complete questionnaire were involved in the study.

Data collection: The questionnaire (Amr, El-Gilany, El-Sayed, & El-Sheshtawy, 2007) provided information on demographic details, sources of stress during the past year. They were 15 items divided into 4 categories of potential sources of stress: 3 items representing relationship sources of stress, 5 representing personal sources of stress, 5 representing academic sources of stress, and 2 representing environmental sources of stress.

Relationship issues result from interactions with other people, such as trouble with course mates; personal troubles result from internal sources such as personal injury or illness or death of a family member. Academic pressures arise from college related activities such as

relationship with the instructor. Environmental problems result from problems in the environment outside the academics such as accommodation problems.

Sample size was calculated using Epi info program version 6.02. According to students' affairs administration, the total number of registered law students in 2007 was 9405 students of both sexes in the four years. The pilot study on 40 students (10 from each year) revealed that 40% of students suffer high level of stress. With the worst acceptable level 35%, the sample needed for the study was estimated to be at least 355 students at a study power of 80% and 95% confidence level. To overcome the non response and the attrition due to cluster sampling 20% was added to the sample size with a final of 426 students.

Students were selected through stratified cluster sampling technique. First students were stratified into the different academic years (first to fourth). From each year a section or group (cluster) was randomly chosen. All students in the chosen clusters were included. A total of 605 students were registered in chosen clusters. The response rate was 71.7% (434/605), representing 4.6% of total students enrolled. None participation was due to lack of interest in the study, absence during the study period and incomplete questionnaires.

Stress was measured by a previously validated 14-item perceived stress scale (PSS). Cronbach α coefficient of internal consistency was reported to be 0.85, and test-retest reliability during a short retest interval (several days) was 0.85 (Cohen, Kamarck & Mermelstein, 1983). The Arabic version was tested among a sample of US Arab immigrants (Jaber, Brown, Hammad, Zhu, & Herman, 2003). The PSS does not tie appraisal to particular situation; it is sensitive to the non-occurrence of events as well as to ongoing life circumstances. The stress score was stratified into no, mild, moderate (merged as low level) stress or severe (high level) stress according to first, second and third quartiles. The degree of anxiety and depressive symptoms were measured by Hospital Anxiety and Depression Scale (HAD), where a score of 12 or more for either the anxiety or the depression components denotes possible anxiety or depression (Zigmond & Snaith, 1983). This cut off point had sensitivity 0.89, specificity 0.75 (Olssøn, Mykletun, & Dahl, 2005). The Arabic version of the HAD scale was validated by El-Rufaie and Absood (1995). The overall Cronbach alpha measures of internal consistency were 0.7836 and 0.8760 for anxiety and depression, respectively.

Statistical analysis: Data was analyzed using SPSS (Statistical Package for Social Sciences) version 11. The relationship between outcome variables (high level of stress, different categories of stressors) and each of the explanatory variables was first tested by chi square; as appropriate. Explanatory variables with significant association in the univariate analysis were entered simultaneously into a multivariate logistic regression model using the stepwise Wald forward method. Logistic regression predicts the independent predictors of the specified outcome variable. These independent effects were measured by odds ratios and their 95% confidence intervals (Le, 2003). The explanatory variables were student's age in years (continuous), sex (male and female), year of study (first to fourth), family residence (rural and urban), family income (satisfactory and unsatisfactory with monthly income of 500 EP), family size (less than 5 and five or more persons), parental education (less than secondary,

secondary and above secondary), fathers work (farmers/manual workers, professional/semiprofessional, trades/business and others), and mothers work (housewives and working). $P \leq 0.05$ was considered statistically significant.

Results

Students were distributed in the four years (119, 103, 113, and 99 in first, second, third and fourth years, respectively). Their age ranged from 17-30 years with a mean of 18.9±1.9 years, 54.8 % of them are females, and 53.7% were from rural areas. Family income was reported to be unsatisfactory in 27.0% of students and a family size of less than 5 persons was reported by 51.8% of students. Only 18% and 12.2% of fathers and mothers were of above secondary education, respectively. The majority of fathers are working as non-professional (58.5%) and 69.8% of mothers were housewives (data not shown in tables).

Table 1 reveals that the number of stressors reported by students ranged from none to 13, with a mean of 4.6. Personal troubles were the commonest (80%) followed by environmental problems (60.4%), relationship issues (59.7%) and lastly academic pressures (58.8%). The most frequently reported items of stressors were especially anxiety and depression (65.9%), fear of social situation (46.8%), problems with opposite gender (42.4%) and congested class rooms (40.1%).

High level of stress was reported by 42.2% of students. Anxiety and depressive symptoms were reported by 59.2% and 18.2%, respectively (table 2).

Table 3 reveals that presence of anxiety symptom was the strongest independent predictor of high stress level (OR=4.3), relationship issues (OR=2.3), personal troubles (OR=4.1), academic pressures (OR=1.9) and environmental problems (OR=2.6). Rural family residence is an independent predictor of personal troubles (OR=1.8) and environmental problems (OR=3.1)

Discussion

The young student population has always been vulnerable to stressful life conditions especially in pursuit of higher professional education in a highly competitive environment (World Health Organization, 1994; Saipanis, 2003). A descriptive self administered questionnaire based study got a response rate of 71.1%, which provides an adequate sample size to fulfill the objectives of this study.

We found that personal and environmental sources of stress were the most common, with the most frequently reported stressors having anxiety and depression, fear of social situation, problems with opposite gender and being in congested class rooms. The year of study, gender and residence turn out to be a significant factor in stress reporting, the first year was more likely to report personal and academic sources of stress, students from rural areas and female gender had a significant association with reporting of personal and relationship problems respectively.

Most of the law students come from remote villages and towns outside Mansoura and study

for four years in that city. Thus for these students particularly in first year, living away from their families may cause more stress than for those who live in Mansoura. In addition, this data was collected during the first term when students are at the beginning of their courses, and are away from home, have difficulty of adjustment to a new environment and must take the responsibility of themselves.

There are more relationship problems in females as most of them are from rural conservative communities and facing a world of mixed values. Also, Female students face additional pressure to succeed in a male dominated field and thus often exhibit higher levels of stress than do men (Goring, 1995; McIntosh, Keywell, Reifman, & Ellsworth, 1994). They experience law school differently than men (Granfield, 1994) expressed stronger and more passionate feelings of alienation and outrage than the male students and described their first-year as a radical, painful, or repressive experience (Guinier, Fine, Balin, Bartow, and Stachel, 1994). Moreover, a study by McLean and Kalin (1994) found that although dominance was a trait associated with Canadian lawyers in general, only female law students saw themselves as slightly more dominant and less "affiliative" than the **mean**. These results indicate that their self perceptions were less warm and agreeable and more cold and quarrelsome than were those of other graduate students.

Mule & Barthel (1992) described the social changes in Egypt, where there has been an increase in women's participation in the work force and to some extent, political life. Furthermore, globalization and exposure to Western culture have presented in this traditionally Islamic country with alternative gender ideologies. The participation of women in Egypt's workforce has risen from 15.4 percent in 2001 to 23 percent in 2006 (CAPMAS, 2007), also, the number of women in decision-making positions in the private sector has increased in recent years. In 2003 President Mubārak, for the first time in Egypt's history, appointed a female judge to the Supreme Constitutional Court, and two other women became members of the panel of Commissioners of the same institution. Thirteen women are members of the Shura Council 20 and 774 women were elected in 2002 to local government councils (Alquézar, Panzica and Popova, 2009).

The results of this study indicate higher prevalence of stress in our undergraduate law students. Prevalence of high stress in this study is 42.2% which is similar to 47.3% reported by Ko, Kua, & Fones (1995) but higher than Michigan law students (15.67%) (Hengstler, 1993). It was found that law students reported significantly higher levels of academic stress and fear-of-failing stress than medical students (Heins, Fahey, & Henderson, 1983).

In college students, some stress is motivating, whereas too high a level interferes with teaching. Excessive stress can be harmful to a student's academic performance and students who perceive their stress as very high may often lead to depression, anxiety, attrition and serious health problems (Evans & Kelly, 2004).

In our study, anxiety and depressive symptoms were reported by 59.2% and 18.2%, respectively. Benjamin, Kazniak, Sales, & Shanfield, (1986) found that 17-40% of the group studied reported significantly elevated levels of depression, and 20-40% of the same group "reported other significantly elevated symptoms, including obsessive compulsive, interpersonal sensitivity, anxiety, hostility, paranoid ideation, and (psychoticism) social alienation and isolation, as compared to only 2.27% of the general population.

High perceived stress and anxiety scores in Mansoura law students could be accounted by the following:

First, the legal profession in Egypt has a long, illustrious history but the current education policy allows increasing number of admitted law students depending on the total marks alone, and this does not reflect the student's real desire to choose the field of specialization (Moustafa, 2004). This policy increases pressure on the limited resources of universities, reduces performance of faculty members and lowers the efficiency of the graduates. By then, they dispossessed of the means to make a success of their careers. The legal education program was of the traditional type and students lack the skills of the labor market as multi-language abilities, international law specialists and technological skills (Kenawy, 2006). So these students experienced more anxiety about their future and employment.

Second, the law students had a lower socio-economic state and belong to the low and middle classes. The study examined the family income, education and occupation of the parents as markers of socio-economic state. In contrast of our finding, Astin (1984) reported that law students do not mirror the socio-economic makeup of the society from which they come; instead, they come from an elite background of higher socioeconomic status than the general population. PSS scores generally increased as household income decreased, the number of people living in the respondent' household increased (Cohen & Willamson, 1988). This social disadvantage is associated with increased stress. One explanation for this pattern is that individuals lower down the socioeconomic status ladder have fewer psychological resources for meeting the stress of the increasingly more challenging environment that may negatively impact physical and psychological well-being (Grant et al., 2006).

Finally, many students succumb to first-year myths, an enduring set of irrational beliefs that corrode one’s quality of life (Lake, 2000). These include (a) I must study all the time, (b) I must be at the top of my class to be successful, and (c) I can’t have a social life in law school (Granfield, 1986). Such irrational beliefs are correlated with anxiety (Day & Maltby, 2003); their internalization by law students is a likely contributor to stress.

Several studies have explored the relationship between level of perceived stress and student anxiety (Dyrbye, Thomas, & Shanafelt, 2006). Perceptions of stress were found not only to correlated with depression and anxiety (Katz, Monnier, Libet, Shaw, & Beach, 2000; Mosley et al. 1994), but also predict future risk of depression (Rosal et al., 1997). Okasha, Kamel, Sadek, & Lotaif (1977) concluded that most cases of anxiety among Egyptian college students had been reactive to either maturational or environmental stresses rather than endogenous.

Although stress may cause physical and psychiatric (depression and anxiety) symptoms it is possible that elevated stress may cause these symptoms or a third factor for example socioeconomic status, influenced both stress and health (Cohen, Kamarck, & Mermelstein, 1983; Cho, 1988). Because of data in the present study were cross-sectional, the direction of any association between stress and different physical and mental predictors cannot be determined. Moreover, research by Misra and McKean (2000) investigated the interrelationship among independent predictors of stress in undergraduate university students. It was hypothesized that a student's academic stress would show a positive correlation with anxiety.

It appears that the law students have a high level of perceived stress and majority of it generates from persona factors and less from the academic or environmental factors. Due to the major impact that perceived stress levels may have on law students, it is important that the problem be identified and dealt with effectively. Stress management skills should be an integral part of the routine clinical facilities caring for university students to help them to make smooth transitions between different learning environments with changing learning

demands and a growing burden. Studies of the effects of stress on practicing members of the legal profession are needed to further explore the possible effects of law school stress in the subsequent career years and to examine the specific effects of excessive stress on practicing attorneys.

Study limitations

1) The findings of this study are based on self reported information provided by students and some potential for reporting bias may have occurred because of respondents' interpretation of the questions tutors explained the study and the scales used to the students or desire to report their emotions in a certain way or simply because of inaccuracies of responses.
2) The study toke place at one university which will affect the generalizability to other institutions. Consequently, the results will only be applicable to similar institutions in similar settings.
3) The study toke place at one point in time which will limit the ability to generalize the findings to other time periods, this is referred to as a threat to temporal validity.
4) The study did not account faculty characteristics or teaching styles which could have an effect on the student's perceived stress levels.

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Table 1: Stressful factors and circumstances reported by the students

	N (%)
Number of stressors **Min - Max** **X± SD**	 0-13 4.6±2.7
Relationship issues	**259(59.7)**
Relationship problems with parents	120(27.6)
Problems with the opposite gender	184(42.4)
Trouble with course mates	90(20.7)
Personal troubles	**347(80.0)**
Personal illness or injury	57(13.4)
Death of a family member	65(15.0)
Change of a family member's health	107(24.7)
Financial problems	127(29.3)
Anxiety or depression	286(65.9)
Academic pressures	**255(58.8)**
Congested classrooms	174(40.1)
Coping with course of study	113(26.0)
Inconsiderate and insensitive instructors.	57(13.1)
Fear of social situation	203(46.8)
Environmental problems	**262(60.4)**
Accommodation problems**	151(34.8)
Close contact with serious diseases and illness	159(36.6)
Time limitation for sports and hobbies	16(2.8)

*****Categories are not mutually exclusive
**e.g. over-crowded accommodation, noisy living environment, transportation problems

Table 2: Overall prevalence of high stress, anxiety and depression amongst law students

	Number (%)
High stress	183(42.2)
Anxiety	257(59.2)
Depression	79(18.2)

Table 3: Logistic regression analysis of significant independent predictors of high level of stress and sources of stress amongst law students

Predictor	β	P	OR (95% CI)
High stress level			
2nd year (1st year is the reference group)	-0.8	0.02	0.5(0.3-0.9)
Satisfactory family income	-0.9	<0.001	0.4(0.3-0.6)
Anxiety	1.5	<0.001	4.3(2.7-6.7)
Constant Model χ^2 % correctly predicted	-0.4 χ^2=73.5,P<0.001 67.7		
Relationship issues			
Female sex	0.6	0.006	1.2(1.2-2.7)
Mothers working outside home	-0.6	0.008	0.5(0.3-0.9)
Anxiety	1.1	<0.001	2.3(1.2-3.5)
Constant Model χ^2 % correctly predicted	1.03 χ^2=41.5,P<0.001 64.7		
Personal troubles			
Rural family residence	0.6	0.024	1.8(1.1-3.1)
Satisfactory family income	-1.1	0.003	0.3(0.2-0.7)
3rd year 4th year	-1.4 -1.1	0.001 0.01	0.3(0.1-0.6) 0.3(0.2-0.8)
Anxiety	1.4	<0.001	4.1(2.4-6.9)
Constant Model χ^2 % correctly predicted	2.1 χ^2=65.5,P<0.001 81.1		
Academic pressures			
Mother education above secondary	-0.8	0.2	0.5(0.2-0.9)
2nd year 3rd year	-0.8 -0.7	0.005 0.01	0.4(0.3-0.8) 0.5(0.3-1.3)
Anxiety	0.6	0.002	1.9()1.3-2.9
Constant Model χ^2 % correctly predicted	0.5 χ^2=29.3,P<0.001 64.5		
Environmental problems			
Rural family residence	1.1	<0.001	3.1(2.1-4.7)
Anxiety	0.9	<0.001	2.6(1.7-3.9)
Constant Model χ^2 % correctly predicted	-0.7 χ^2=49.6,P<0.001 67.3		