

MEDICAL STUDENTS BEARING MENTAL STRESS DUE TO THEIR ACADEMIC SCHEDULE

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ABSTRACT

Medical education is inherently stressful and demanding. Overwhelming burden of information leaves a minimal opportunity to relax and recreate and sometimes leads to serious sleep deprivation. Environmental and social circumstances play a major role in the onset of stress-related diseases. Developing countries share the heavy burden of social and economic challenges. A number of factors—including academic pressure, workload, financial concerns, sleep deprivation, exposure to patients' suffering and deaths, student abuse and a —hidden curriculuml of cynicism have been hypothesized to contribute to this decline in students' mental health. This study determines the rate of anxiety and depression, and the associated social and environmental factors in undergraduate medical students. This study was divided into two measures theoretical problems and academic factors. Randomly data was collected by means of structured close ended questionnaire of 121 students from Fatima Jinnah Dental College(23 boys, 98 girls). Data was analyzed using SPSS 20.0 Factors causing stress in undergraduate medical students was a vast syllabus which makes it difficult for their time management, there was a direct and positive relationship for lack of time for assignments and fear of catching up after a leave.

KEYWORDS

Anxiety, depression, undergraduates medical students, workload, sleep deprivation

INTRODUCTION

The target of medical education is to grasp knowledgeable, competent, and professional physicians equipped to care for the nation's illness, advance the science of medicine, and to encourage public health, depending on these particular characteristics, one may anticipate medical school would be a time of personal growth, demand, and well-being despite its challenging situation.

Several studies have demonstrated the correlation among stress perception and several factors such as gender, marital status, living environment and academic year (Hendricks, S., et al.1949, Garbee, W et al 1980, Tedesco, L.A., 1986a, Tedesco, L.A et al 1987, Bradley, I et al 1989, Grandy, T. et al 1989, Westerman, G et al 1993, Newton, J.T. et al 1994, Yap, A et al 1996, Heath, J.R et al 1999, Sanders, A et al 1999, Rajab, L., 2001, Acharya, S.H., 2003, Polychronopoulou, A.&Divaris, K., 2005.). These studies have been repeated in several countries to provewhether different socio-cultural factors affect students' levels of perceived problems.

Unfortunately, studies suggest the modern educational process may have an inadvertent opposing effect on students' mental health, with a high frequency of depression, anxiety, and stress among medical students.(Guthrie EA et al 1995, Moffat KJ 2004, Aktekin M, et al 2001, Guthrie E et al 1998, Givens JL &Tjia J. 2002, Clark DC &Zeldow PB. 1988, Rosal MC, et al 1997, Mosley TH Jr 1994, Roberts LW et al 2001, Vitaliano PP et al 1988, Raj SR et al 2000, Ball S, Bax A. 2002, Tyssen R et al 2001, Parkerson GR Broadhead WE &Tse CK. 1990, Carson AJ, Dias S, Johnston A, et al. 2000, Shanafelt TD et al 2004) It has also been stated that burnout, a measure of distress common among residents and physicians in practice,(Thomas N, Gelfand DV et al 2004, Wolf TM et al 1989) has its origin in medical school.(Krakowski A. 1982, Tedesco, L.A., 1986b)

Over the past decade, dental educators have given rising debate for investigation of stress among dental students within the academic environment. Many authors have endeavor to evaluate the factors perceived as stressful among dental students, while others attempted

to document stress symptoms via psychological testing (Tedesco, L.A et al 1987, Bradley, I et al 1989, Grandy, T et al 1989, Tedesco, L.A., 1986a). However many of these studies have followed a strict separation between the assessment of environmental factors involved in the examination of stress and subsequent results (i.e. the so called distress response) the clear distinction between an environmental stressor and distress response is difficult (Miri MR and AkbariBourang M. 2007,Tedesco LA 1986). Furthermore, the initial reaction (response) to an event often serves as new stimuli to elicit further unrest (Tedesco LA 1987).Academic stress is defined as that generated by the proper convenient applications in an academic context along with an individual perception about spending sufficient time to achieve that situation. (Misra R et al 2000, Fernández-Berrocal P et al 2005, Stewart SM et al 1999) Some authors have postulated that psychological distress among students may adversely influence their academic performance,(Spiegel DA 1986, Hojat M 1993, Newbury2001) contribute to academic dishonesty, corruption and misleading.(Fernández-Berrocal P et al. 2005, Stewart SM 1999, Spiegel DA 1986) and play a role in alcohol and substance abuse.(Clark D 1987,Croen LG 1997, Baldwin DC Hughes PH, 1991,Sheehan H 1990,Ball S 2002)

The huge majority of research supporting a correlation among stress and depressive episodes has been based on episodic stressors (discrete events that have a beginning and ending) that have negative or undesirable content. In general, can affect both workers' experience of stress and their psychological and physical health. However, there are some studies which directly create the hazard-stress-harm pathway.

As in previous UK studies there wasn't any discrimination in gender between students on any of the psychological distress questionnaires(Firth J. 1986, Miller PMcC and Surtees PG. 1991). It is clear, however, that later in postgraduate training; female doctors address higher rates of psychological distress than males(Borrill CS 1996). Surtees and Miller (Miller PMcC and Surtees PG. 1991) observed via their study that medical students in their first year of medical training at Edinburgh and found that half disclosed high

levels of neurotic symptoms at the beginning of the academic year, one-third reporting symptoms at follow-up six months later. Guthrie et al. (Guthrie EA 1995) found strikingly similar rates of psychological morbidity in medical students at Manchester University, with one-third showing evidence of psychiatric morbidity midway through the first year. The Edinburgh study indicated that a small number of students (n=15, 8.6%) were continuously symptomatic throughout the first year of their training⁴, and Firth-Cozens found that 22% of 302 fourth-year students had psychological symptoms both as students and as house officers, when they were followed up 2 years later⁵.

Medical schools are demanding: the academic, preclinical and clinical requirements extend students' working hours into nights and weekends (Gabree et al. 1980 and Rajab, L., 2001.). Typical sources of stress for dental students include frequent examinations, examination phobia, reduced leisure time, demanding curricula, requirements to perform specified types and numbers of procedures, anxious patients, time limits, complicated treatments, possible conflicts with patients, fellow students, staff and faculty, lack of self-confidence, and the differences between the students expectations and reality (Newton, J.T 1994, Heath 1999)

METHODOLOGY AND SUBJECTS

A cross sectional study was conducted on the undergraduate medical students of Fatima Jinnah dental college and Dow university of health Sciences to get a snapshot view of the prevalence of stress in medical and dental students, and to assess the different perceptions, reasons and coping methods of stress. A total of 121 students participated in the study (The study sample was stratified according to sex, residence (living with parents/ in hostel), and year of study and status of

financial assistance from the college. After an in-depth literature review, a semi-structured dental environmental stressquestionnaire (DES) was designed as a tool for data collection. Data collection took one month before their midterms. Data was entered and analyzed with SPSS 0.20

RESULTS

Questionnaire was distributed to 121 students, 23 were males and 98 were females with mean age of 19.16 and standard deviation of ± 2.017 . 100 students were living with their parents and 21 were living in hostel or with their relatives living in Karachi.

For the overall problem score, female students had a higher overall mean problem score compared to male students. The students' place of residence showed a statistically significant relationship with the overall problem score; students living with their family reported higher problem levels than other students with different living arrangements. The result of this study shows that students are overburdened with their vast syllabus and assignments with standard deviation of ± 0.331 and ± 0.491 and having difficulty grabbing their course after a leave with standard deviation of ± 0.487 as shown in table number 1

Students with the lowest GPA showed significantly higher overall problem score than those with the highest GPA. The differences in perceived problems among different schools were investigated. Students reported difficulty in getting study materials and fear of parents after failures, time management is being an important stressor amongst them with mean of 1.21. It was observed via results students lack positive feedback from their parents and institution and having fear of unemployment after their studies.

Descriptive Statistics

	N	Sum	Mean		Std. Deviation
	Statistic	Statistic	Statistic	Std. Error	Statistic
Syllabus overloaded	121	136	1.12	.030	.331
Time management	121	146	1.21	.037	.407
Burden of assignments	121	169	1.40	.045	.491
Difficulty to grab after leave	121	167	1.38	.044	.487
Consecutive Lecture	121	168	1.39	.044	.489
Valid N (listwise)	121				

Table# 1: showing academic and theoretical stressors

DISCUSSION

The inexperienced student community has always been susceptible to stressful life conditions especially in pursuit of higher professional education in a highly competitive environment (World Health Organization, 1994; Saipanis, 2003). A large majority complains itself stressed in the college at one time or another. Medical schools are known to be highly demanding, challenging and stressful learning environments (Polychronopoulou, A.&Divaris, K., 2005). Contemporary dental curricula require students to attain diverse proficiencies including acquisition of theoretical knowledge, clinical competencies and interpersonal skills (Garbee, W et al 1980, Rajab, L., 2001 and Polychronopoulou, A.&Divaris, K., 2005).

Identification of potential problems is important in dental education programs as it might give students, faculty and administrators an opportunity to take precautionary measures to prevent dental stress (Yap, A et al 1996). It is assumed that higher levels of perceived student problems lead to more stress (Bradley, I et al 1989). This may indicate that most of the dental students are not well adjusted to the

dental school educational environment and to the pressure imposed to fulfill the school requirements.

A recent report, (Lloyd C, Gartrell NK. 1984) confirming earlier studies, (Hunter RCA) (Saslow G. 1956) described particularly high levels of psychiatric distress in medical students in a university in the United States compared with the general population, with 15-20% of the students meeting criteria for a diagnosis of psychiatric illness. Most studies report a higher prevalence in women than men. (Lloyd C, Gartrell NK, Davidson V. 1978)

Students from different medical schools surveyed in this study, showed differences in their perceived problem levels. Students who have completed their pre-graduation with 'A' level showed less academic problems as compare to students coming from intermediates.

Studies in the United States suggested that the practice of medicine entails certain risks to the mental health of both qualified physicians (Vaillant G et al 1972, Vincent MO. 1983, McCue JD. 1982) and students, (Pitts FN et al, Lloyd C, Gartrell NK. 1983) and links

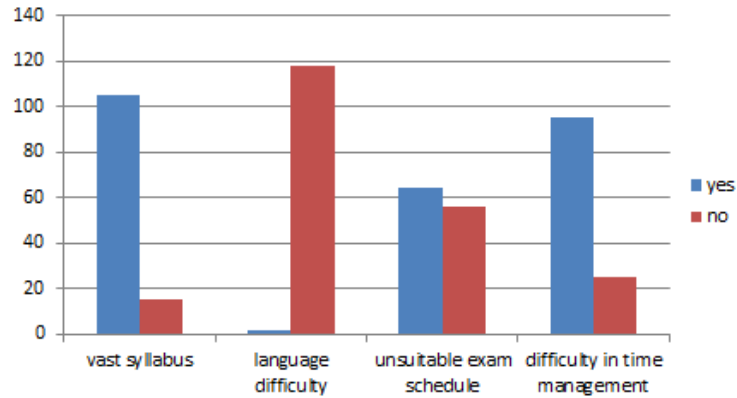
between the training and later problems of mental health have been suggested. (Reibord SP. 1983)

by less satisfaction with the education environment (Pimparyon, P., et al 2000, Mayya, S.S.&, Roff, S., 2004).

In this study, only students with the lowest GPA experienced marginally statistically significant more perceived problems than students with the highest GPA in overall problem score and the theoretical problem score. This is consistent with the finding of other studies which showed that low academic achievement is characterized

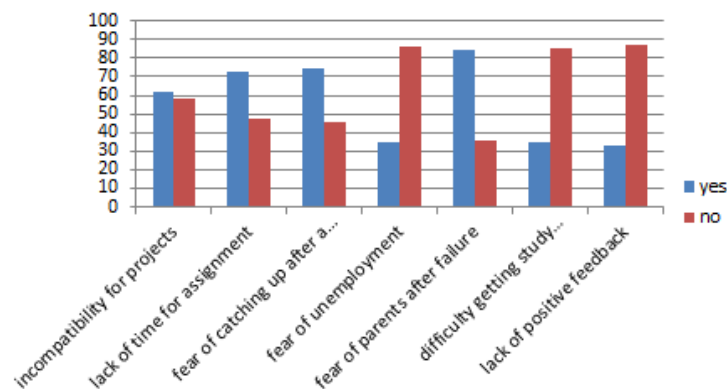
Students living with their families had higher overall problem scores, and higher problem scores for the categories of personal and administrative issues and clinical training. These findings may be explained by lack of time and the increased demands of social activities that may limit time in general and lead to a feeling of being overloaded.

Theoretical problems



Graph# 1 showing theoretical stressors

Academic factors



Graph#2 showing academic stressors

CONCLUSION

Clinical training was seen to be the highest source of problems. The availability of suitable patients, their compliance with the treatment

and student–faculty relationships were the students’ main concerns related to their clinical training. This suggested that enhancing and adjusting systems of patient screening and distributing them to different clinical courses, may contribute to possible reduction in the

perceived problems by the students. The results of the present study showed that the demands and challenges of the profession related to both quality and quantity of academic and practical performance are potent sources of stress.

Both academic and non-academic sources of stress should be considered in curriculum planning and the working environment for dental education. The educational system should deal with the potential stressors for students by stress management programs. Effective assistance from teaching staff, faculty administrators, and families is essential.

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