



Analyzing The Sources of Academic Stress Among The Undergraduate Medical College Students

KEYWORDS

Academic stress, Demography, Anxiety, Adopting Strategies, Home Sickness

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ABSTRACT *Academic Stress among college students has been a topic of interest for ages. College students experience high level of stress due to various stressors. The cross-sectional research aims to determine the prevalence and the factors associated with stress among undergraduate medical students. A survey of randomly selected students of a Medical College in Nepal was conducted based on a questionnaire. The sample consisted of 150 students drawn through simple random sampling method. The questionnaire had items categorized under academic and non-academic issues. The overall stress mean level was found to be 2.89. Overall Stress level mean for female medical students was found to be slightly above that pertaining to the male students. The Results showed that among the academic sources of stress, fear of failure factor was found to be the major contributor to stress and limited time for recreation and home-sickness were found to be the major non academic sources of stress.*

Introduction & Background

Medical education is challenging and places heavy demands on the mental health of the students. Stress is a state of an individual that results from the interaction of the individual with the environment that is perceived as threatening to the well-being. It is an external constraint which directly upsets the individual both mentally and physically. Compared to other education medical education is evidenced by high prevalence of stress. Studies have shown that medical students experience a high level of stress during their undergraduate course. The academic stress faced by most students is attributed to poor study habits, such as poor time management (Macan, Shahani, Dipboye, & Phillips, 1990), studying for exams (Baldwin, Wilkinson, & Barkley, 2000), and coursework (Robotham, 2008), which may eventually lead to poor academic performance. In order to overcome the pressure from academic stress the students have to employ suitable coping strategies like in any other stressful situation (Smith & Renk, 2007). There are various coping strategies used by students when experiencing academic stress. Some resort to avoidant coping; alcohol/drug abuse, denial and behavioral disengagement; while others cope actively through acceptance, planning, and positive reframing and taking the necessary steps to overcome the academic stress (Sreeramareddy et al., 2007). Academic performance is mainly a function of students' study habits referring to the students' way of study is systematic, efficient or inefficient (Abid, 2006). The study habits that influence the academic performance of a student include: time management, setting realistic academic targets, setting rewards on completion of a task, revision, organization of materials, and notes-taking during lectures (Fontana, 1995; Good & Brophy, 1986). Hence, study habits are coping strategies used by students to overcome academic stress so that they can meet the demands imposed on them by the academic environment. This is reaffirmed by studies (Struthers, Perry & Menec, 2000; Aluja & Blanch, 2004) which show that study habits positively correlate with academic performance.

The academic performance of university students currently is explained in terms of success or failure of course units, number of courses failed or passed (Goldfinch & Hughes,

2007), and the quality of the grades obtained in terms of the Grade Point Average (GPA) or Cumulative Grade Point Average (CGPA) (Bernold, Spurlin, & Anson, 2007). Baker (2003) noted that the undergraduates are faced with many new interpersonal, social, and academic demands during the transition from secondary school life to university, which is stressful for many of them. The immediate challenges that students face are the decisions they have to make about the presented career paths in addition to developing and negotiating new relationships, getting novel ideas that challenge their past-learned views, and moving away from home (Lumley & Provenzano, 2003). Baker further noted that adjustment during the transition period is linked to the way the undergraduate copes with that stress which affects academic motivation and performance. De-Berard, Spielmans, and Julka (2004) emphasize that the potential buffer for stress during the transition into university life is social support from friends, peers, and religious peers that provide insulation from the harmful impact of stress. In the academic environment, high expectations, information overload, academic pressure, unrealistic ambitions, limited opportunities, and high competitiveness are some of the common sources of stress that create tension, fear, and anxiety in students (Sinha, Sharma, & Nepal, 2001). In a study by Dahlin, Joneborg, and Runeson (2005), undergraduate students indicated experiencing the highest degree of pressure from studies. Misra, Mckean, West, and Russo (2000) pointed out that students have found the requirement to meet assessment deadlines as a major source of stress. Students report experiencing academic stress with the greatest sources of academic stress coming from taking and studying for exams, grade competition, and the large amount of content to master in a small amount of time (Kohn & Frazer, 1986). Course load versus time available has also been cited to be a factor causing stress in the academic environment (Zeidner, 1992). Studies reveal that students perceive course load to be high in their first year of study, and that the perception of course load positively correlates with exam stress (Mani, 2010). In their study, Talib and Zai-ur-Rehman (2012, p. 129) found out that majority of the students (53%) claimed that course load is the source of their stress which in turn affected their GPA. Further students report that the prospect of having to sit for examinations is stressful because

of the pressure to review all the learned material within a given period of time (Mani, 2010). Mani explains that it is not the examination itself that induces stress but the fact that the possibility of failing or passing the exam can shape the course of one's academic career and professional life. Besides the course load and exam preparation, there are course demands that may induce academic stress depending on the nature of the course that the student is undertaking (Bernold, Spurlin, & Anson, 2007; Kuhn, Kranz, Koo, Cossio, & Lund, 2005). Research conducted to explore factors that lead to like variable hour shift for clinical rotations, sleep deprivation in addition to the curriculum overload (Kuhn, et al., 2005). Psychology students reported that stress emanating from the supervisory process while in field placement was due to the individual differences between the trainee and the supervisor (Dodds, 1986). Further research by Talib and Zai-ur-Rehman (2012) showed that there was a significant difference in the perceived stress between engineering students and management science students. The engineering students had a higher mean academic stress score than the management science students. Academic stress among students have long been researched on, and researchers have identified stressors as too many assignments, competitions with other students, failures and poor relationships with other students or lecturers (Fairbrother & Warn, 2003). Past research has determined that the stressors involved include: academics, social relationships, finances, daily hassles, and familial relationships (Brougham, Zail, Mendoza & Miller, 2009). In recent years, considerable research has been conducted on nursing students (Freeburn and Sinclair, 2009) and medical students to understand the nature of this stress (Dyrbye, Thomas & Shanafelt, 2006). The stress of medical training stems from academic pressure, perfectionist standards and demanding nature of medical practice which involves the most personal or emotionally draining aspects of life (human suffering, death, fear, and medico legal issues) (Lu, 1994). Medical education is highly challenging and often places heavy demands on the mental resources of its students; stretching their psychological distress and making them vulnerable to high levels of negative affective states. Several studies have revealed that the incidence of stress and stress related illness such as anxiety and depression among the medical profession are increasing day by day. Educational process exerts an inadvertent negative effect on student's mental health with a high frequency of depression, anxiety and stress among medical students. Studies carried out by Rosal et al. (1997) & Dahlim and Jone Borg & Runseson (2005) show gender differences while others do not (Tyssen et. al. (2001); Gulthrie et.al (1998). The studies conducted by Chenet et al. (2013) shows that that females suffer from higher levels of distress among medical college students. Other studies show that female students had higher level academic stress compared to their male counterparts from (Lloyd & Gartrell 1981). Higher anxiety in female students could be explained by specific psychosocial profiles and warrant further investigation (Hojat et al. 1999). Knowing the causes of stress among students and methods students use to deal with it will help lecturers, career-counseling centres, and university administrators to monitor and control these factors in order to reduce stress experienced by students. This study is an attempt to identify stress causing situations in the life of a medical student. Most studies have been geographically focused on countries in North America and Europe. This study is aimed to determine the prevalence and the factors associated with stress among undergraduate medical students & gender variations in one of the premier medical colleges in Nepal.

METHODOLOGY

An academic stress scale was designed and developed by Kin (1970). The scale was adapted to Indian conditions by Rajendran and Kaliappan (1990). The data used in the present study was collected from the students of a Medical College in Nepal from December 2015 to January 2016 through a self-administered, pre-designed, & pre-tested questionnaire. Academic Stress Questionnaire developed by Rajendran (1990) was used to measure the academic stress among the students. This is a cross-sectional survey. The questionnaire was distributed to 200 respondents. But due to some limitations like absenteeism of some students, and some of them being reluctant to participate in the study the response rate was only 75% (150 respondents).

The academic stress scale comprised 40 items. Each item had five alternatives varying from the response 'No Stress' to 'Extreme Stress'. Each response carries a score of '1', '2', '3', '4' and '5' respectively. The items are classified into five areas containing 8 items each.

- a. Personal Inadequacy
- b. Fear of Failure
- c. Interpersonal difficulties with teachers
- d. Teacher pupil relationship / Teaching methods
- e. Inadequate study facilities

Thus, the total scores obtained from the respondents on all the variables were computed. The data was analyzed using relevant statistical techniques

RESULTS AND DISCUSSION

Of the 150 students who completed the questionnaire 29.7% were Female and 70.3% were Male. Of the respondents 17.9% are from rural and 82.1% are from urban background. Statistical analysis was done by Mann-Whitney U test and Kruskal Wallis test with the help of statistical software IBM SPSS version 21. The P value < 0.05 was considered to be significant. Microsoft Excel and word were used to generate tables and graphs. Table 1 shows the comparison of stress between male and female students. The statistical test used was Mann-Whitney U Test. It compares the mean rank of two grouping variables and the mean rank of female is more than male. The p value associates with Mann-Whitney U of 3660 are < 0.020 means the difference is significant and females experience more stress than males. Urban students had a significantly lower distress rate than those residing in a rural area.

Based on the results, it appeared that the major source of stress experienced by the students was related to fear of failure. The stress is very high due to frequent examination, progress reports being sent to parents, biased attitude of the teacher and lack of communication between teachers and students. Overall, the mean stress level ranged between 1.58 to 4.53. This shows that the stress level among students ranged between mild and very high. This result demonstrated that stress was mostly contributed by the academic requirements as perceived by the students.

Table 1. Academic Stress Factors and Overall Mean

Factors	Items	Mean	Overall Mean
Inadequate study facilities	Lack of concentration during study hours.	2.68	2.72
	Conflict with friends/college authorities.	2.57	
	Inadequate space or room for study at home.	3.08	
	Lack of assertiveness (confidence) in the class.	2.19	
	Lack of opportunity to meet teachers.	3.05	
	Lack of mutual help among classmates.	2.99	
	Incomplete and confusing study material.	2.18	
	Inadequate lab and library facilities.	2.97	
Fear of Failure	Progress reports to parents	4.53	3.37
	Worrying about the examinations.	3.78	
	Teachers give more punishment in the class.	2.61	
	Worry about results after examinations.	3.10	
	Exam papers are tough and not valued well.	2.23	
	Unable to complete the assignment in time.	3.93	
	Unable to discuss Academic failures with parents.	2.99	
	Not able to grasp the subject matter.	3.77	
Interpersonal difficulties with teachers	The teacher is not humors towards us.	2.18	2.96
	The teachers do not listen to our ideas.	3.09	
	Biased attitude of the teacher.	3.99	
	Not knowing how to prepare for the examinations.	2.28	
	Lack of communication between teachers and students.	3.96	
	Not enough discussion in the class.	1.66	
	Teachers lacking interest in students.	3.84	
	Inadequate subject knowledge of the teacher.	2.69	
Personal Inadequacy	Difficulty in remembering all that is studied.	2.73	2.81
	Lack of self-confidence.	3.44	
	Hesitate to ask the teacher for detailed explanation.	3.29	
	Lack of fluency while speaking the language other than the mother tongue.	2.04	
	Difficulty in public speaking.	2.94	
	Feeling of inferiority.	1.67	
	Eleventh hour preparation for the examinations.	2.96	
Teacher pupil relationship / Teaching methods	Difficulty in adjusting with opposite gender.	3.40	2.60
	Teachers make too many extra demands on students.	3.10	
	Poor interest in some subjects.	3.57	
	Teacher shows socio-economic status on students.	2.99	
	Slow in getting along with the curriculum.	1.58	
	Monotonous (boring or tedious) teaching style by the teacher.	2.17	
	The teacher is fast and does not use blackboard legibly.	2.02	
	Examination syllabus is too heavy in some subjects.	3.10	
Importance of the subject matter.	2.24		
Overall Stress		2.89	

There is no significant difference between gender and academic stress, but female students show more fear of failure than male students. Although male and female are equally likely to report academic stress, females are significantly more likely to endorse the fear of failure factor than males (Ozer, Demir & Ferrari, 2009; Sharma & Kaur, 2011). Overall Stress level mean for female medical students is slightly above the male students that prevailed among. This cross-sectional study was based on self-reported information provided by students. Therefore, there is some potential for reporting bias which may have occurred because of the respondents' interpretation of the questions or desire to report their emotions in a certain way or simply because of inaccuracies of responses.

Table2. Academic Stress level and Gender difference

Factors	Mean	
	Male	Female
Inadequate study facilities	2.6974	2.7586
Fear of Failure	3.3395	3.4410
Interpersonal difficulties with teachers	2.9616	2.9671
Personal Inadequacy	2.7676	2.9135
Teacher pupil relationship / Teaching methods	2.5803	2.6371
Overall	2.8697	2.9432

Conclusion

The research revealed the prevalence of stress among medical students is quite high and it was found to be around 77.3%. With respect to the academic sources of stress, frequent examinations and information overload were found to be the greatest sources of stress. The fear for failure was found to be one of the major factors for inducing academic stress in medical college students. Among the non academic sources, factors like limited time for recreation and home-sickness were found to be the greatest sources of stress. It was concluded that the academic problems comprised far greater sources of stress in medical students as compared to non-academic problems. The study provided scope for adopting strategies intended to reduce students' stress and improve their mental well being. This research has paved the way for further studies, particularly in the form of longitudinal follow-up in order to help the students and the institutions in building a better coordinated and healthy program of studies.

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