

Stress and the Undergraduates

S M Ko, E H Kua, C S L Fones

ABSTRACT

Objectives: To assess the psychological health of undergraduates during their initial entry to the University, and to identify common sources of stress in their lives.

Method: All first year law and medical undergraduates were administered a series of questionnaires.

Results: Of the 135 medical and 128 law first year undergraduates surveyed using the General Health Questionnaire (GHQ) to measure psycho-emotional distress, 77 medical students (57%) and 69 law students (47.3%) scored above the traditional cut-off of 4/5 points. Law students had significantly lower ($p < 0.05$) Life-Events Scores (mean 40.62, SD 29.30) than medical students (mean 55.62, SD 31.70). There was no statistical significant difference between medical (mean 89.32, SD 18.36) and law (mean 93.39, SD \pm 19.76) students ($p = 0.88$) in Type A Behavioural Pattern (TAPB). Hostelites ($n = 67$) reported significantly higher ($p < 0.05$) LES (mean 56.22, SD \pm 28.17) than non-hostelites ($n = 196$, mean 45.40, SD \pm 32.04). The commonest life events experienced in the past twelve months by the students were: (1) Difficulty keeping up with reading (84.4%), (2) Increased amount of academic work (82.5%), (3) Difficulty in tutorials (66.5%), (4) Little time for personal activities (61.6%) and (5) Difficulties in lectures as well as (6) peer competition (each 46.8%). Law students cited more relationship problems, while medical students were more troubled by academic work. When faced with a problem, more than seven out of ten students would turn to friends and classmates for help. The other common avenues of support were the family, and religion. A substantial proportion of law (37.5%) and medical (31.1%) students preferred to keep their problems to themselves; significantly ($p < 0.00001$) more of them (72.2%) were high GHQ scorers than other students (high GHQ scorers 47.4%). Interestingly 27.8% of these students turn to religion for emotional support.

Conclusion: Health education programmes, mentorship and a reduction in information overload in the curriculum can be important strategies to enable undergraduates cope better with the demands of tertiary education.

Keywords: stress, undergraduates, coping, curriculum

INTRODUCTION

Tertiary education has always been regarded as highly stressful. Usually only the cream of the population in the society is eligible. Yet, a stressful environment can often exert a negative effect on the academic performance, physical health and psychological well-being of the undergraduates. A study among 69 third year medical students at the University of Mississippi School of Medicine, USA, reported that 23% ($n = 16$) had clinical levels of depression and 57% ($n = 39$) endorsed high levels of somatic distress⁽¹⁾. The avalanche of knowledge that students are expected to imbibe and master, the personal and social sacrifice they have to make in order to maintain good academic standing⁽²⁾, coupled with a highly achievement-oriented and competitive environment would certainly leave no conscientious undergraduate unperturbed. Singapore's quest to be the centre of excellence and regional hub for academic excellence may see many developing to their fullest intellectual potential, but also have others "breaking down". These psychological casualties are a waste of valuable human resource. What are the common sources of stress other than academic ones which our undergraduates are facing? Who are at risk of not "making it" and instead "breaking down"? These are some questions which the present study attempts to address.

METHODS AND MATERIALS

This is a descriptive study comparing law and medical undergraduates during the first two months of entry. Questionnaires administered included the 28-item General Health Questionnaire⁽³⁾ which identifies the psycho-emotional disturbances, the Type A Behavioural Pattern Questionnaire, as well as the modified version of the Life-Events Scale by Gary Cooper et al⁽⁴⁾. Basic information gathered included age, gender, place of residence (hostelites or non-hostelites) and nationality. A simple questionnaire on coping strategies employed during the past six months was also administered. Options were: (1) keeping problems to themselves; (2) sharing problems with family, friends/classmates or relatives; (3) resorting to religious support, or (4) consulting professionals like psychiatrists, psychologists and counsellors; each student was allowed to choose not more than three options. Information collected were analysed using the IBM 3081 KX2 main frame and data processing was executed through the SPSS.

Department of
Psychological Medicine
National University Hospital
5 Lower Kent Ridge Road
Singapore 119074

S M Ko, MBBS, MMed (Psych),
FAMS
Associate Professor

E H Kua, PBM, MBBS,
FRCPsych, MD, FAMS
Professor and Head

C S L Fones, MBBS, MMed (Psych)
Assistant Professor

Correspondence to:
A/Prof S M Ko

RESULTS

Out of 148 medical students, 135 completed the questionnaires (response rate 91.2%). Their mean age was 19.36 years (SD = 0.97) with 102 (75.6%) males and 33 (24.4%) females. 93.3% were Singaporeans, 4.4% Malaysians and 2.2% Others. There were 127 Chinese, 4 Malays, 2 Indians and 1 Eurasian.

One hundred and twenty-eight of the 170 law students completed the questionnaires (response rate 75.3%). Their mean age was 19.75 years (SD = 0.98 years) with 53 (41.4%) males and 75 (58.6%) females. Like the medical students, most (89.8%) were Singaporeans, 7.8% Malaysians and 2.3% Others. One hundred and seventeen were Chinese, 6 Indians, 2 Eurasians and 3 Others. 31.3% of law students and 20.7% medical students resided in the University hostels.

Using the "traditional" cut-off of 4/5 points on the General Health Questionnaire (GHQ), 77 medical students (57%) and 69 law students (47.3%) were high scorers. However, this was not statistically significant ($p = 0.7$). Singaporean and non-Singaporean students also did not show significant difference in GHQ scores ($p < 0.1$).

A total of 67 students resided in the hostels. Their mean score in the Life-Events Scale (LES) was 56.22, SD \pm 28.17. In contrast, the 196 non-hostelites had mean LES of 45.40, SD 32.04. Between groups, this was statistically significant ($p < 0.05$). Moving into the hostels was cited as a stressful life event by 59 students. Law students had lower LES (mean 40.62, SD \pm 29.30) than medical students (mean 55.62, SD \pm 31.70) and this difference was also statistically significant ($p < 0.0001$). There was no significant difference between medical (mean 89.32, SD \pm 18.36) and law (mean 93.39, SD \pm 19.76) students ($p = 0.88$) in Type A Behavioural Pattern (TAPB).

The ten most common life events experienced in the past twelve months by the students are shown in Table I. For all students, the five most common were: (1) Difficulty keeping up with reading (84.4%); (2) Increased amount of academic work (82.5%); (3) Difficulty in tutorials (66.5%); (4) Little time for personal activities (61.6%), and (5) Difficulties in lectures as well as peer competition (each 46.8%).

When faced with a problem, more than seven out of ten students would turn to friends and classmates for help. The other common avenues of support were the family and religion (Table III). A substantial proportion of law (37.5%) and medical (31.1%) students preferred to keep their problems to themselves. Significantly ($p < 0.00001$) more of them (72.2%) were high GHQ scorers than other students (47.4%). Interestingly, 27.8% of these students turned to religion for emotional support. Those who kept their problems to themselves or turned to religious support, showed no significant difference between their genders.

DISCUSSION

Medicine and law have always been regarded as popular choices in tertiary education. There has always

been an excess of applicants over available places, with successful candidates having excellent academic attainment which makes it even more competitive and stressful for students who are accepted. The first year is particularly trying for many students, having to adjust quickly to a fast-paced and highly competitive environment, and to master a large amount of complex materials. A study of 128 first year students at the Louisiana State University School of Medicine, New Orleans, found that hassles at the beginning of the year were positively associated with health outcomes at the beginning and end of the year⁽⁵⁾ and underscores the importance of identifying types of stressors and individuals who are vulnerable at an early stage.

Using the "traditional" cut-off of 4/5 on the GHQ as a measure of psychoemotional symptoms, high scorers (GHQ \geq 5) are often considered at risk for minor psychiatric morbidity while lower scorers are most likely in normal psychological health⁽⁶⁾. Minor psychiatric morbidity often manifests as anxiety disorders, adjustment disorders and depressive disorders. On the whole, about one in two students were high GHQ scorers with no statistically significant differences between medical and law students, local and foreign undergraduates. Due to the already cramped curriculum and heavy academic load of the students, we were unable to proceed with a second stage study to further assess for possible psychological disorders among each individual high scorer. That in itself would require substantial time from about 150 students.

Hostelites reported higher life events scores than non-hostelites ($p < 0.05$). Having to move into the hostels, living away from families, adjusting to a different living environment in a community of undergraduates, and having to participate in common activities (eg. freshman orientation programmes) could be some of the reasons why nine out of ten hostelites reported residing in the hostels as significantly stressful initially. Otherwise, both hostelites and non-hostelites shared similar stressful life events viz. keeping up with readings, increased academic workload, little time for personal activities, etc.

Medical students as a group reported much higher life events scores than law students ($p < 0.0001$). From Table I, at least seven out of every ten medical students had major life events which were related to academic pursuits (eg. difficulty in keeping up with readings, increased academic workload, etc.) It is noteworthy that academic stress and its related matters ranked top eight among the ten most common life events for all students. This is understandable as the main concerns at this point of their lives are related to academic work.

Comparing the types of life events for medical and law students, we found that the latter seemed to cite more relationship problems while the former were more troubled by academic work (Table II). The long hours, as well as difficulty in lectures and tutorials among medical students could be due to information overload. For instance, the traditional teaching of

Table I – Life events and undergraduates

Life events	All students n = 263	Rank	Medical n = 135	Rank	Law n = 128	Rank
Difficulty in keeping up with readings	222 (84.4%)	1	119 (88.1%)	2	103 (80.5%)	1
Increased amount of academic work	217 (82.5%)	2	124 (91.9%)	1	93 (72.7%)	2
Difficulty in tutorials	175 (66.5%)	3	100 (74.1%)	3	75 (58.6%)	3
Little time for personal activities	162 (61.6%)	4	87 (64.4%)	7	75 (58.6%)	3
Difficulty in lectures	123 (46.8%)	5	95 (69.6%)	5	28 (21.9%)	12
Peer competition	123 (46.8%)	6	73 (54.1%)	8	50 (39.1%)	5
Long hours in lectures/tutorials	106 (40.3%)	7	96 (71.1%)	4	10 (7.8%)	23
Uncertainty over choice of undergraduate course/subjects	95 (36.1%)	8	51 (37.8%)	9	44 (34.4%)	7
Boy-girl relationship problem	93 (35.4%)	9	47 (34.8%)	9	46 (36.0%)	6
Moving into hostel	78 (29.7%)	10	36 (26.7%)	12	42 (32.8%)	8

Table II – Life events which showed significant differences

Life events	Medical n = 135	Law n = 128	p value
End of relationship	12	22	0.05
Difficult relationship with parents	20	34	0.01
Problems with friends	26	41	0.01
Increased amount of academic work	124	93	0.0001
Long hours in lectures/tutorials	96	10	0.00001
Difficulty in lectures	95	28	0.00001
Difficulty in tutorials	100	75	0.01
Failing tests/assignments	43	9	0.00001
Peer competition	73	50	0.01

Anatomy, Physiology and Biochemistry requires medical students to absorb new and factual information, and then reproduce them during tutorials. Therefore, when they failed to perform adequately during tests or assignments, they seemed more affected ($p < 0.001$) than the law students. Perhaps in the study of law, more emphasis is made on how the students argue out their cases, rather than a mere case of right or wrong facts.

The curricula in tertiary education have always come under strong criticism for being grossly overcrowded with information. Much of this large body of factual knowledge is acquired largely through passive learning model by the students⁽⁷⁾. With the advent of information technology, much information can now be accessed by electronic means. It is thus timely that the University begun embarking on reducing information overload in its curricula, and instead attempt to inculcate in its students self-learning and critical thinking skills, to enable them to deal more effectively with dramatic, and sometimes unpredictable changes in their professional lifetime.

About a third of the students (medical 34.8% and law 36.0%) had problems in their boy-girl relationships. Certainly the subjects are of the age when heterosexual and social relationships become

increasingly important. Most of these students were able to cope with them, either by sharing with their peers or else seeking advice from their families. It is thus not surprising that when faced with a problem, many medical and law students would turn to their friends and classmates for assistance. A system of mentoring fresh undergraduates by older students may provide the former with invaluable support. This can also be particularly beneficial for foreign students, and can easily be done for those who reside in the hostels.

It is a healthy sign that family (parents and siblings) remain an important source of support; the parents are a source of financial support while siblings serve as confidantes for emotional problems. What is perhaps worrying is that a substantial proportion of law (37.5%) and medical (31.1%) students preferred to keep their problems to themselves. 72.2% of them were high GHQ scorers compared with other students (high GHQ scorers 47.4%, $p < 0.00001$). Even though 27.8% of these students turned to religion for emotional support (and that was still lower than the overall average – Table III), the high GHQ score signifies psychoemotional distress. It is this group of students who probably needs help more than others, and other alternative ways of coping will be beneficial. Coombs & Fawzy⁽⁸⁾ found that the presence of a spouse helped offset the daily hassles of medical education as an

Table III – Sources of help during past six months

Sources	Medical (%)	Law (%)
Parents	41.5	44.5
Siblings	28.9	23.4
Relatives	3.0	2.3
Friends/classmates	73.3	79.7
Religion	34.1	30.5
No one – kept to myself	31.1	37.5
Professional	1.5	1.6
Others	1.5	3.9

effective support system. Though culturally marriage is rare amongst our undergraduates, encouragement to enhance social support may be a good substitute. Religious support may be another possible option.

About one in three students turned to religion for help. In a pragmatic and materialistic society like ours, it is important that religion continues to play an important role in providing counsel and to positively influence the value systems of our youths. In this way, the product of tertiary education may not be just one with a good brain, but also one with a good heart.

Other major life events as listed in the Cooper's LES like financial difficulty, physical sickness of self or loved ones, relationship problems (other than boy-girl relationships) and legal problems ranked lower down during this phase of the undergraduates' lives.

While many students start their medical education with a sense of commitment, enthusiasm, optimism, altruism and idealism, and graduate doctors are expected to be caring, humanistic, compassionate and dedicated to their patients⁽⁹⁾, no less can be said of law students and lawyers. Indeed, the first year in the university is particularly a trying time for most students – new and competitive environment, new curricula, the expectation to master a large amount of complex materials, and for some, being away from home in another country. Lifestyle changes are made as many students are willing to make personal sacrifices in order to maintain a good academic standing⁽²⁾.

When examining the stress of medical education, the General Professional Education of Physician (GPEP) Report, Association of American Medical Colleges, suggested enhancing the personal development of each student, establishing mentor relationships and placing a greater emphasis on health programmes including stress management, in order to help students cope with the stress of tertiary education. Students who are prepared with more realistic expectation in their academic pursuits, together with a more manageable curriculum, coupled with stress management techniques and good social support would have an advantage in coping⁽¹⁰⁾. In this respect, the Medical Faculty has introduced a

Foundation Course in the first week of term for new students. It provides an overview of what to expect in medical school, as well as lectures on study techniques and stress and time management. And to offer a more balanced medical education, talks on what life is like in the faculty, medical history, and the science and art of medicine are also given. The ultimate aim is to help students understand what is required of them and to adapt as quickly as possible. As most students prefer to turn to their peers for support, there is a system where senior medical students mentor first year students and help them to adjust as best as possible with the University education. In addition, the Student Mentorship Scheme offers consultation to students who may need assistance by academic staff volunteers.

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