

Original Research Article

Psychological distress among final year medical undergraduates in a Sri Lankan university

Guwani Liyanage*

Department of Paediatrics, University of Sri Jayewardenepura, Sri Lanka

Received: 01 September 2017

Revised: 17 September 2017

Accepted: 18 September 2017

***Correspondence:**

Dr. Guwani Liyanage,

E-mail: guwanil@yahoo.co.uk

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Studying medicine is challenging since medical students undergo many stressors during their long course of studying. Moreover, their final year is probably more stressful with more clinical work and stringent assessments. Aim of this study was to assess the prevalence and sources of psychological distress among final year students in University of Sri Jayewardenepura in Sri Lanka with a well validated screening tool.

Methods: This is a cross sectional study of 151 medical students evaluating stress through general health questionnaire (GHQ) with 30 items. Comparison was made with another 257 non-medical undergraduates of the same university.

Results: More than half of students (59.6%) in our university had psychological distress. When compared medical students (62.9%) are more distressed than non-medical (56.4%) students. Major source of stress for medical students was academic pressure.

Conclusions: Final year medical students have significantly high psychological impairment and the main reason reported by students was academic pressure. It warrants implementation of stress management programs and curriculum based interventions to minimize stress.

Keywords: Psychological, Stress, Medical, Students, University, Sri Lanka

INTRODUCTION

Doctors and medical students have been identified as a group at high risk of poor mental health.^{1,2} Media reports have highlighted consistently high rates of suicide, depression, anxiety disorders and substance use among them. Poor mental health may affect their ability to deliver the best possible medical care to their patients. There are many researches exploring into psychological distress in medical students in literature. Most of these studies have used GHQ 12, a quick screening questionnaire. GHQ-30 is a well-validated screening that helps to detect caseness. There are two studies conducted in Sri Lanka with GHQ 30. In either study final year students are not described well. Generally, final year

students are having a greater workload in addition to the tough evaluation schemes. Therefore our main aim was describing psychological distress in final year students.

Previous research has identified a number of factors which may contribute to mental health problems in medical students and doctors.^{1,3} These include academic pressure, finances and non-academic demands. Age is a recognized factor and older the student higher is the stress. In Sri Lanka, generally age of graduation is 25 to 26 year's. However, in most of the other countries students are younger when they graduate. In the UK, average age of a student at graduation is 23 years. Moreover, waiting period after graduation, to enter the internship programme is, another year. A focus group

discussion with students who are planning start their advanced level course, revealed that strenuous work related to biology stream and work stress related to medical profession have made them to opt for other streams. Despite these challenges, prospects of future rewards being a doctor may drive a person to do medicine. It gives you a unique opportunity to help others through communication and commitment.

Therefore, we planned this study to have a better insight into the extent of psychological morbidity with a well-validated screening tool which helps to describe caseness and to investigate into sources of stress. This may help to intervene early and probably make adjustments to co-curriculum if required.

METHODS

This was a descriptive cross sectional study carried out during June 2015 to October 2015. All final year medical undergraduates of the University of Sri Jayewardenepura were invited for the study. Final year students from Applied Sciences and Management faculties were recruited for comparison and they will be called non-medical undergraduates, henceforth. Chronic physical illness or psychiatric illness was exclusion criteria.

Two self-administered questionnaires were used for data collection. One questionnaire (pre-tested) collected personal details and sources of stress. General health questionnaire (GHQ 30) screened for psychological impairment. It is a validated questionnaire which is available both in Sinhalese and English. Optimal cutoff level for prevalence was 6 for GHQ 30 with a sensitivity of 67.5% (95% CI: 59%–76%) and a specificity of 80% (95% CI: 75%–85%) and scoring had been done in a four point (0,0,1,1) Likert scale.⁴ Optimal cutoff levels do not change by sex, age and educational levels.

We compared psychological distress between faculties. For this, mean GHQ was compared and scoring was done in a four (0,1,2,3) point Likert scale. Chi-square test were used for the statistical analysis and p<0.05 was taken as the level of significance.

RESULTS

We analysed data of 151 final year medical students and 257 non-medical students. Response rate was 89%. Baselines characteristics of the study sample are given in Table 1. There was female predominance in both groups.

Table 1: Baseline characteristics of the study sample.

	Medical (%)	Non-medical (%)
Gender		
Male	53 (35)	87 (34)
Female	98 (65)	170 (66)
Age (mean)	25	23
Living away from home		
No	50 (33)	112 (46)
Yes	101 (67)	145 (54)

(%) unless otherwise stated.

Table 2: GHQ score.

Faculty	Number of students	Mean GHQ score (SD)	Prevalence of psychological impairment (%)
Medical sciences	151	37.92 (10.5)	62.9
Non-medical	257	30.87 (16.0)	56.4

Table 3: Sources of stress.

Risk factor	Medical		Non- medical	
	OR	P value	OR	P value
Relationship with consultants/academic staff	2.308 (1.02- 5.17)	0.04	1.195 (0.608-2.34)	0.606
Relationship with colleagues	1.18 (0.59-2.37)	0.625	1.66 (0.78-3.52)	0.17
Tutorial/practical sessions	0.78 (0.35-1.48)	0.36	1.34 (0.68- 2.63)	0.38
History taking/examination of patients/case presentations	2.89 (1.40-5.97)	0.004	-	-
Continuous assessments	0.39 (0.17-0.90)	0.02	2.46 (1.22- 4.94)	0.01
Finding transport and meals	0.97 (0.49-1.90)	0.931	2.94 (1.47- 5.89)	0.002
High living cost, expenses on study material	0.99 (0.48-2.03)	0.98	3.331 (1.66-6.68)	0.001

Higher percentage (62.9%) of students from Medical faculty had psychological distress. For Non-medical students prevalence was 56.4% (Table 2). Mean GHQ score was higher in medical students and difference was significant ($p=0.00$) when compared with students from other faculties. Among students in medical faculty, family income ($p=0.38$) or whether they are living away from home ($p=0.09$) did not have an impact on the psychological wellbeing. Gender difference did not have an impact on stress.

For medical undergraduates, clinical appointments, relationship with consultants and assignments were most stressful. In contrast, for non-medical undergraduates, non-academic stress factors such as meals, transport,

effects of studies on personal life were predominant sources of stressors (Table 3).

DISCUSSION

Findings of our study have shown that more than half of medical and non-medical undergraduates experience high mean levels of distress. Response rate in this study is high. This increases the validity of the study since some other studies have shown that non responders are more distressed than responders.⁵ Compared to the findings of Nakandalge and Kurupparachchi et al, in our study final year students have higher prevalence of psychological distress.^{6,7} Further, Kurupparachchi et al has shown that university students (39.4%) have more distress than general population (25.7%).

Table 4: Comparison of prevalence of psychological distress in selected studies from Sri Lanka.

	Nakandalage et al ⁵	Kurupparachchi et al ⁶	Present study
Description of the sample and sample size (n)			
Medical	39**	151##	
Non-medical [#]	117	257	
Total	156	408	261*
Prevalence of distress (%)			
Medical	48	62.9	
Non-medical ^a	49	56.4	
Total	48.7	59.6	39.8

#Law, arts and science, ^aScience and management studies, *students from 5 universities, faculties not specified, **1st year students, ##final year students.

In a Malaysian study, overall prevalence of stress among medical students was 29.6% with GHQ 12 item assessment.⁸ Madhyastha has reported 49.5% of moderate and severe stress in an Indian study.⁹ These differences may be due to various curricula and methods of teaching, different tools employed to assess stress and different years of study.

The general health questionnaire which is the screening tool used in this study provides clues to psychiatric morbidity. Any mild distress indicated may well be short lasting. However, even with short term distress, adverse effects could be substantial since it may lead to poor academic performance and vice versa.

Academic pressures are felt as the most stressful aspects of medical training in our study. Talking to patients, doing case presentation, continuous assessments and clinical evaluations were some of the mentioned academic pressures. Relationship with consultants was a significant source of stress. Similarly, some studies have shown that academic pressures such as achieving good grades and clinical practice evaluations are very stressful for medical undergraduates.^{10,11} Similar to the report by Kurupparachchi et al in our sample of students who are living away from home in university hostels or private boarding houses are more distressed than the students who are travelling from home.⁷

On the whole, being a final year medical student, the pressure of academic work is invariably high. In contrast, non-medical students had more non-academic stress such as, effect of the course on their personal life, high expenditure and finding meals than academic stress.

Possible reasons for this difference could be high expectations in terms of academic performance, long hours of training and longer duration of the course compared to non-medical undergraduates.

There were few limitations in this study. We did not explore into coping strategies employed by these students. That would have been useful in planning interventions to maximize psychological wellbeing. Further, assessment of academic performance would have given more information. Finally, this study cannot be generalized among all medical students in the country since it was confined to one university.

However, during the first and second year, these medical students participate in stress management programs under the personal professional development (PPD) stream. With a busy schedule packed with clinical appointments, tutorials and lectures, allocating time for regular stress management programs is neglected during the final year.

CONCLUSION

High prevalence of psychological distress among final year medical students is evident. Since mostly stress in medical students is related to academic stress, it warrants implementation of stress management programs and curriculum based interventions to minimize stress. Future research should include longitudinal studies assessing stress and coping strategies from first to final year.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. National Mental Health Survey of Doctors and Medical Students, 2013.
2. Tyssen R, Vaglum P. Mental health problems among young doctors: an updated review of prospective studies. *Harv Rev Psychiatry*. 2002;10(3):154–65.
3. Factors that impact on medical student wellbeing. Perspectives of risks Individual Support Programme. School of Medicine Cardiff University. Available at: http://www.gmc/Factors_that_impact_on_medical_student_wellbeing_Perspectives_of_risks_53959480.pdf. Accessed on 3 June 2017.
4. Abeysena C, Jayawardana P, Peiris U. Asian J Psychiatr. Factor structure and reliability of the 30-item Sinhala version of General Health Questionnaire (GHQ). 2012;5(2):150-3.
5. Lloyd C, Gartrell NK. Psychiatric symptoms in medical students. *Compr Psychiatr*. 1984;25:552-65.
6. Nakandalage HA, Kuruppuarachchi KAJM, Madurapperuma BD. Balancing beams of psychological distress amongst first year medical students at university of Colombo. *Indian Journal of Research in Management, Business Social Sci*. 2014;2:27-33.
7. Kuruppuarachchi KALA, Kuruppuarachchi KAJM, Wijerathne S, Williams SS. Psychological distress among students from five universities in Sri Lanka. 2002;47:13-5.
8. Yusoff MSB, Rahim AFA, Yaacob MJ. Prevalence and Sources of Stress among Universiti Sains Malaysia Medical Students. *Malays J Med Sci*. 2010;17(1):30–7.
9. Madhyastha S, Latha KS, Kamath A. Stress and coping among final year medical students. *AP J Psychol Med*. 2014;15(1):74-80.
10. Firth J. Levels and sources of stress in medical students. *Br Med J*. 1986;292:1177-80.
11. Deka N, Jangid RK, Deka K, Choudhary PK, Kalita B, Buragohain M. Psychological distress and quality of life amongst medical students of Assam Medical College, Dibrugarh, Assam. *Delhi Psychaitry J*. 2014;17:317-22.

Cite this article as: Liyanage G. Psychological distress among final year medical undergraduates in a Sri Lankan university. *Int J Community Med Public Health* 2017;4:3952-5.