

Gender Difference in Perceived Mental Stress Among First Year Medical Students

Ayesha Siddique,¹ Saba Iqbal,¹ Mahwish Arooj¹ and Saima Chaudhry²

¹Department of Physiology, University College of Medicine & Dentistry, the University of Lahore

²Department of Oral Health Sciences, Shaikh Zayed Hospital, Lahore.

ABSTRACT

Background: The undergraduate medical students have been reported to experience stress during their years in college and this stress has been shown to vary between clinical years and different ethnicities. As stress can lead to deterioration of performance and loss of self-esteem therefore the present study was conducted to evaluate the perceived level of stress in the first year medical students to identify psychological issues in the beginning of the year. **Methods:** Self administered General Health Questionnaire with 12 items (GHQ-12) was circulated after informed consent among the students present on the day of the study. The data was coded and entered in SPSS version 16. GHQ score was reported as frequencies and mean \pm SD. Independent sample t-test was applied to compute relationship between gender and GHQ scores. **Results:** Total number of questionnaires completed was 101. The mean average GHQ-12 score of all the students was 11.52 \pm 5.36, with a range of 01 to 28. Twelve students were found to be distressed while 7 students were experiencing psychological distress. The mean score of female students was significantly ($p=0.02$) higher than males. **Conclusion:** The first year medical students at UCMD perceive their mental health to be good. However there are some students who need special attention to perform well in their studies.

Key words: General Health Questionnaire, University College of Medicine & Dentistry, Pakistan

INTRUDUCTION

The General Health Questionnaire (GHQ) is a tool to assess present mental health of an individual and has been widely used in different settings and different cultures to evaluate stress levels, the most widely used being GHQ-12, as it contains 12 questions related to stress¹. Increased stress has been reported in students as compared to general population as they are put under pressures of succeeding and doing well after graduating. These social and emotional pressures can have a detrimental effect on students' academic performance. Increased stress have been shown for many years now to lead to psychological problems resulting in reduction of self-confidence especially in medical students². In addition to teaching medicine to students it is also the duty of the medical institutions to take into account the psychological pressures faced by a student and its

effects on quality of life of the students during training years³.

Higher stress levels have been reported in medical students in clinical years from Pakistan⁴, however no local study has evaluated the mental stress of the students at the start of their medical career. The present study therefore was conducted to evaluate the levels of stress in first year medical students with the help of GHQ-12 questionnaire.

MATERIALS AND METHODS

This cross sectional study was conducted at University College of Medicine & Dentistry, The University of Lahore Pakistan, in 2012. General health questionnaire (GHQ-12) was used to screen for symptoms of psychological stress in the students. The GHQ-12 is a measure of current mental health. It focuses on two major areas; the inability to carry out normal functions and the

appearance of new and distressing experiences. The questionnaire comprises of 12 questions. Each question has four responses which were scored as 0-3. The total score of 4 and above are considered to be positive for psychological stress. Scores of >15 signify evidence of distress while scores of >20 suggest severe problems and psychological distress.

After Ethical clearance from Institutional Review Board and taking informed consent from the students, GHQ12 questionnaire were distributed among the first year medical students. The students were explained the questionnaire beforehand and 5-8 minutes were given for completion of the questionnaires. All the students present in the class on the day of the study and gave consent were included.

Data analyzed was performed using SPSS-16 software and the comparison was made between male and female gender using T-test. *p* value of ≤ 0.05 was considered significant with a confidence level of 95%.

RESULTS

Out of class of 150 medical students, 110 students participated in the survey out of which 101 students completed the questionnaires. Male to female ratio was 1:2.

Mean GHQ-12 score of the first year medical students was 11.52 ± 5.36 , with a range of 1 to 28. The GHQ score of most of the students was below or equal to 15. Twelve students were found to be distressed while approximately 7% of students were experiencing psychological distress as shown in Table 1.

Table 1.- General health scores of first year medical students.

GHQ Score	Description	Frequency	Percentage
0-15	Normal	82	81.2%
More than 15	Distress	12	11.9%
More than 20	Severe distress	07	06.9%
Total		101	100%

GHQ scores were computed separately for each gender, females were found to be more

distressed as compared to males as shown in Figure 1.

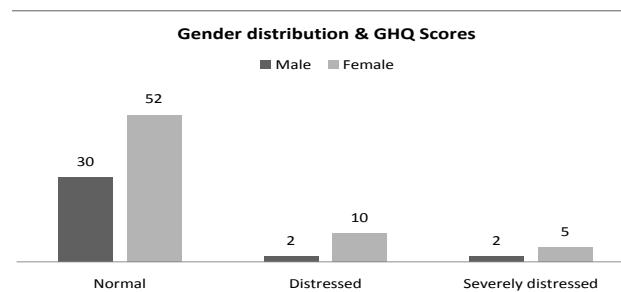


Fig. 2: Frequency of General health scores of male and female medical students.

Independent sample t-test was applied to compare mean score of male and female students. The mean scores of females were higher than that of males and the difference was statistically significant (Table 2).

Table2: Comparison between mean GHQ scores of male and female medical students.

Gender	GHQ score (Mean \pm SD)	t-test Significance
Male	09.82 \pm 05.39	<i>p</i> value = 0.02
Female	12.38 \pm 05.18	

DISCUSSION

Stress is a term used for any mental symptom or feeling that can affect a person's performance both socially and academically. The levels of stress vary at different stages of life and students' especially undergraduate medical students are shown to experience more stress than others. The psychological morbidity in medical students is reported to vary. The percentage of population with distress in the present study was 18.8% which is lower than developed countries^{5,6} but similar to a study from Nepal where researchers found the percentage to be 20.9%³. Similar results were also found in a longitudinal study by Guthrie et al in 1998⁷. However still seven of the students required psychological support.

The gender difference observed in the present study in mean GHQ-12 scores was statistically significant ($p=0.02$) with females showing more signs of distress than males. These results are difference from most of the studies reporting similar psychological stress in males and females³ however they are similar to study from Belgrade where researchers found more females to consider themselves distressed as compared to males⁸. Females have been known to perceive stress more than males, which is the case in the present study as well.

The number of students requiring actual psychological support is only 7%, which is manageable and should be given proper consideration to help the students achieve standards of excellence required to become a successful medical practitioners.

CONCLUSION

Most of the first year medical students at University College of Medicine & Dentistry, The University of Lahore are under very mild stress and few experience psychological distress. However this is a problem for approximately 18% of students in whom 7 students require formal psychological support.

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The Authors:

Ayesha Siddique.
Assistant Professor,
Department of Physiology,
University College of Medicine & Dentistry, The
University of Lahore, Lahore

Saba Iqbal,
Assistant Professor,
Department of Physiology,
University College of Medicine & Dentistry,
The University of Lahore,
Lahore

Mahwish Arooj.
Assistant Professor,
Department of Physiology,
University College of Medicine & Dentistry,
The University of Lahore,
Lahore

Saima Chaudhry
Post Doctorate Scholar
Department of Oral Health Sciences,
Shaikh Zayed Hospital,
Lahore.

Corresponding Author:

Dr. Ayesha Siddique
Assistant Professor
Department of Physiology
University Medical and Dental College
The University of Lahore
1-KM off Bhobtian Chowk, Defence Road, Lahore,
Pakistan
Email: drayeshasiddique@hotmail.com
Mobile Number: 0323-8481282.