A Study on Psychological Health of First Year University Students in Iran

Mohammad Hassan Lotfi, PhD •* , Amir Houssain Aminian, Msc ** ,
Aghdasea Ghomizadea, Msc ** , Forough Noorani, MD **
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Objective: Psychological status of university students has an important role in their academic performance. The present study was planned to evaluate the psychological view of new entrance students of Shaheed Sadoughi University of Medical Sciences.

Methods: General Health Questionnaire (GHQ-28) was used to collect data from 1689 students who visited the Advisory and Guidance Center of the University.

Results: Subjects consisted of 512 (30.3%) males and 1174 (69.7%) females. Overall, 35.7% of students showed a GHQ score of ≥23, of those 8.1% had GHQ>40. More female students showed a GHQ score above the cutoff point of 23 (p=0.003). The highest and lowest GHQ scores were seen in nursing students (40.8%) and students of health faculties (32.2%) (p=0.03).

Conclusion: More than one-third of freshmen had GHQ score of ≥23. Female students and students of nursing and midwifery faculty were particularly at higher risk of developing mental health problems.

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Introduction

Psychological status of university freshmen has an important role in their learning ability and academic performance. It seems that, fierce competitions in the general entrance exam and an obligation to succeed especially for high-ranking specialist programs along with family expectation may continuously affect the psychological status of high school students before and after admission to universities (1-3). Too much stress can cause physical and mental health problems, reduce students' self-esteem and may affect students academic achievement (3,4). In recent years, there is a growing appreciation of the stresses involved in medical training. Studies have classified the sources of stress into three main areas: academic pressure, social issues, and financial problems (3,5). In a 5-year prospective longitudinal cohort study by Guthrie et al, (1998) students were assessed in years 1, 4, and 5 of their medical undergraduate training by means of the GHQ-12. One hundred and seventy two (84.3%), 157 (77.0%) and 155 (75.9%) students out of an original group of 204 completed assessments in years 1, 4, and 5, respectively. Eighteen students were above threshold point of GHQ-12 in all three occasions, 25 in two occasions and 43 in one occasion; 69 students were never a 'case'. Students who were suffering from disorder in two or higher occasions gave history of a stressful first year of medical education (6). Blanco and his colleagues, who have studied mental health of college students, concluded that "urgent action" is needed to improve detection and early treatment in this group (7).

Authors' affiliations : * Department of Biostatistics and Epidemiology, Shaheed Sadoughi University of Medical Sciences, ** Shaheed Sadoughi University of Medical Sciences.

•**Corresponding author** : Mohammad Hassan Lotfi, Assistant Professor of Biostatistics, Epidemiology department, Health Faculty, Shaheed Sadoughi University of Medical Sciences, Daneshju Blv. Yazd, Islamic Republic of Iran.
Tel: +98 351 6245853
E-mail: m_h_lotfi@yahoo.com

The present study was planned to evaluate the psychological view of new entrance students of Shaheed Sadoughi University of Medical Sciences using cumulated data for three years. It is expected that recognizing students with high scores of GHQ, and relevant correlations can prepare directors of advisory and guidance center of university to run a prevention strategy to decrease the incidence of severe psychological problems such as depression, anxiety, obsessive disorders, etc. amongst the students.

Materials and Methods

In a cross-sectional study, researchers collected data from all freshmen of Shaheed Sadoughi University of Medical science by administering General Health Questionnaire-28 (GHQ-28) for three years (2005-2008) (n=1689). All freshmen, who had started the University program in the last month, were invited to the Advisory Center and completed the GHQ-28 after an interview. GHQ-28 includes 28 items, which assesses somatic symptoms, anxiety and insomnia, social dysfunction, and severe depression. Each item is accompanied by four possible responses, typically being 'not at all', 'no more than usual', 'rather more than usual', and 'much more than usual', scoring from 0 to 3, respectively. Total possible score on the GHQ-28 ranges from 0 to 84 and allows for means and distributions to be calculated, both for the global scale, as well as for the four sub-scales. A sensitivity of 89.5%, a specificity of 82% and a repeatability of 84% for the Persian version of the test have also been reported (8,9). A cutoff point of ≥23 was considered for doubtful abnormality of psychology where those having score of higher than 23 were followed for more screening and surveillance programs. Data were analyzed by SPSS software using descriptive statistics such as frequency tables, means (±SD), median and non-parametric statistical testes such as chi-square, Mann Whitney and Kruskall Wallis tests. A significance level of 5% was considered for statistical analysis.

Results

A total of 1686 respondents completed the GHQ-28 in the survey. Subjects were 512 (30.3%) males and 1174 (69.7%) female with median age of 19 years. About seven and half percent of them were married. Overall, 35.7% of students showed a GHQ score of ≥23, of those 8.1% scored above 40. Twenty nine point six percent of males and 38.4% of females obtained the different levels of GHQ scores (≥23) with a statistically significant difference (p=0.003). More discrepancy between males and females was observed at the level of GHQ>40, where number of female students was approximately twice of males (9.1% vs. 5.7%) (Table1). Higher GHQ scores were observed in students who had come from other cities and counties rather than from locality (p=0.02).

Table 1. Frequency distribution of GHQ-28 levels in students according to sex*

sex	Male	Female	Total
GHQ score			
<23	360(70. 3)	722 (61.5)	1082 (64.3)
23-30	70 (13.6)	204 (17.4)	274 (16.2)
31-40	53 (10.3)	141 (12)	194 (11.5)
>40	29(5.8)	107 (9.1)	136 (8)
total	512 (100)	1174 (100)	1686 (100)

*p.value =0.003

According to table 2, married and unmarried students showed no significant difference in various levels of GHQ score (p>0.05), but comparison of mean score of anxiety and sleeping disorders showed that, married students had significantly higher scores than unmarried ones (p=0.003).

Table 2. Frequency Distribution of GHQ-28 Levels in Students According to Marital Status*

Marital Status	Unmarried	Married	Total
GHQ-28			
<23	992 (64.2)	90 (64.4)	1082 (64.3)
23-30	237 (15.3)	21`(15)	258 (16.2)
31-40	169 (11)	17(12)	186 (11.5)
>40	148 (9.5)	12 (8.6)	160 (8.1)
Total	1546 (100)	140 (100)	1686 (100)

*P.Value >0.05

Although there was no statistically significant correlation between different levels of GHQ score and various academic programs, MSc and MD students, compared to other students, had higher GHQ scores (31-40 and >40) (Table 3). The high GHQ score was generally found to be associated with significantly higher mean score of social dysfunction (p=0.009).

Discussion

Mental disorders have been found to be common all over the world. According to a WHO report, about 50 million individuals are suffering from psychological disorders with a higher proportion in the developing countries (10). Prevalence of mental health problems in Iran is between 11.7%-43.2% (10).

Table 3. Frequency distribution of GHQ-28 levels in students according to educational course*

Level	MSc and MD	Bachelor	High Diploma	Total
GHQ-28				
<23	183 (61.6)	381(63.5)	518 (65.6)	1082 (64.1)
23-30	48 (16.2)	109(18.2)	116 (14.6)	273 (16.2)
31-40	40 (13.5)	65(10.8)	88 (11.1)	193 (11.4)
>40	26 (8.8)	44(7.3)	68 (8.6)	138 (8.2)
Total	297 (100)	599 (100)	790 (100)	1686 (100)

*p.value >0 .05

A significant association between field of study and GHQ score was seen, where the highest percentage of GHQ scores of ≥23 belonged to nursing and midwifery students (40.7%) and the lowest one was related to health-care students (32.3%) (p=0.03). Moreover, it was noted that higher percentages of GHQ scores of >40 was observed in students of medicine and dentistry (Table 4). More analysis showed that compared to others, students of nursing and midwifery, medicine and dentistry had significantly higher mean scores of somatic symptoms and social dysfunction respectively (p=0.001 and p=0.001, respectively).

In present study, authors found that 35.7% of freshmen showed evidence of mental health problems. This is different from what has been seen in simlar studies carried out in other parts of Iran. Prevalence of mental disorders in freshmen of Bam, Gonabad, and Tehran medical schools were 25.1%, 41%, and 16.5% respectively (11-13). These figures, in two other studies in Shaheed Beheshti University (in Tehran) were 12.5% (2000) and 30.4 % (2001) (14). Being under stress to pass National University entrance examination, entering a new environment, living far away from family and therefore lack of emotional support and undesirable dormitory conditions can increase GHQ-28 score at the beginning of students academic life (8,15,16). Research has also shown that completing GHQ individually in comparison to answering it within a group

Table 4. Frequency distribution of GHQ-28 levels in students according to university fields*

Course	Medicine and Dentistry n (%)	Nursing and Midwifery n (%)	Paramedical n (%)	Health n (%)	Total n (%)
GHQ-28					
<23	183 (61.6)	167 (59.2)	225 (62.6)	507 (67.8)	1082 (64.1)
23-30	48 (16.2)	50 (17.7)	65 (18.2)	109 (14.6)	272 (16.1)
31-40	40 (13.5)	44 (15.6)	39 (10.8)	71 (9.5)	194 (11.5)
>40	26 (8.8)	21 (7.4)	30 (8.4)	61 (8.1)	138 (8.2)
Total	297 (100)	282 (100)	359 (100)	748 (100)	1686 (100)

*p.value= 0.03

and the site of completing the GHQ (classroom or consultation room) could affect the GHQ-28 score (17,18).

In our study, a significant association between sex and high GHQ score was seen, where the proportion of female students suspected to have mental disorder (%38.4) was considerably higher than male students (%29.5). This is similar to the findings of other studies (19-21).

No significant relationship between marital status and GHQ levels was seen, but mean score of anxiety and sleeping disorder showed that, married students were significantly at higher risk. In two separate studies carried out by Tavakolizadeh and Yaghoobi *et al*, it was identified that, mental health of married students was better than single students (12,21). We can only hypothesize that in our study population marriage and accompanying economical or relationship problems at such a young age could have been a risk factor for developing anxiety and sleep disorders.

In our study, similar to Bagheri *et al*'s study (13), and contrary to Kafee *et al*'s study (19), the rate of mental disorder was lower in local students. Entering a new environment, lack of family support, exposure to a different culture, and financial difficulties are possibly the main stressors (13,17,22). Our results also showed high GHQ psychological and somatic scores in nursing and midwifery students in comparison to GHO scores in students of other programs. This was higher in females than males possibly because of their disappointment of not being accepted to study medicine (23). Students of medicine and dentistry had higher GHQ scores (>40) and a significantly higher mean score of social dysfunction probably because they experienced high level of stress to be able to pass a highly competitive entrance examination.

In conclusion, our study revealed that the rate of mental health problems was higher among female students, non-locals and students of nursing and midwifery as well as medicine and dentistry. These results call for development of prophylactic measures, early detection and management of common mental health problems among students to improve their quality of life and academic performance.

Recommendations:

The authors, therefore, ask for an expansion of consultation centers and development of welfare and cultural facilities for freshmen especially for those who live in dormitories and away from their families. Preparing students, well before starting University, especially in the colleges and high schools through input from an educational psychologist will also help them to develop appropriate social skills to be able to cope better against various stressors and fit well into their new role.

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