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The Study of General Health Status in the Students of Shahid Sadoughi University of Medical Sciences in Yazd

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ABSTRACT

Introduction: Students are predisposed to loss of general health due to the special circumstances of the education period. Considering that they constitute a significant proportion of the population, their general health status can be considered as a good basis to plan for their general health. Therefore, the present study was conducted to investigate the general health status in students of Yazd University of Medical Sciences.

Methods: In this descriptive study, 272 students of Shahid Sadoughi University of Medical Sciences in 2016 were selected by stratified random sampling method. Data collection instrument was a three-section questionnaire including demographic characteristics, lifestyle-related habits, a standard health questionnaire, and a general health questionnaire (GHQ-28). After data collection was done, the data were analyzed using SPSS software version 16, descriptive and Independent T-test and one-way ANOVAs.

Results: Findings of the study showed that 54.4% of students had a non-favorable general health status. The general health status of the students was not significantly associated with gender, education level, parents' education level and residence status ($p > 0.05$). However, there was a significant difference in the variable of smoking ($p = 0.03$), and this difference was more pronounced in the areas related to depression ($p = 0.01$).

Conclusion: Regarding the negative effects of the students' depression and smoking on their general health status, it seems that the general health of the students can be improved by providing consulting services and designing and implementing preventive action.

Keywords: General Health, Depression,Anxiety,Students

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Introduction

Mental health is considered as one of the determinants of people's general health, which means to feel good and to be confident of self-efficacy, self-reliance, competitiveness, intergenerational belonging, and self-actualization of potential intellectual. Mental health plays an important role in ensuring the dynamism and efficiency of any society (1). Deprivation of mental health will cause many problems(2). Due to the population growth, development of urbanization and industrialization, mental illnesses are the leading cause of disability and early death, which their high prevalence has caused these problems to be considered as a health priority in all societies (3). University students, as the spiritual resources of the society and the future makers of the countries, are the most talented, creative, and diligent forces in any country. Paying attention to the educational status of the students is a step toward sustainable development, which has been focused on in recent years (4). Academic education can be a stressful period because of the presence of numerous factors. In other words, beginning to study at a university is a highly sensitive period in the life of active and efficient forces, and most often this period is also accompanied by major changes in the lives of individuals, especially in social and human relationships. Exposure to such situations is often associated with stress, concern, and excitement; therefore, the performance, efficiency and ultimately mental health of the individual are affected. Considering the increased stress levels in the university students, it can be expected that some of them, especially female students with higher level of vulnerability, are at the risk of developing certain mental illnesses (5-9). According to WHO report, about 500 million people in the world are infected to one of mental diorders which about 50% of them are infected to moral disorders such as depression, stress and anxiety (10). The results of a study in China showed that women suffer from stress more than men (11). In a study conducted on medical students in an Army Medical University in 2009 indicated general health disorders in the students (12). Furthermore, the results of a study on medical students in Kurdestan Medical University showed that 40.2% of the students were not mentally healthy (13). Students of medical sciences, in addition to problems similar to other university students, have their own special problems including mental and emotional stress of the environment, dealing with patients' issues and problems, the length of their education and lack of bright career future, so they seem to be at higher risk of developing mental health illnesses (14). Most studies done on the general health of the students of Yazd University of Medical Sciences, reviewed their overall health status and so far, no study has been done to examine the relationship between this variable and factors such as smoking, drinking coffee and listening to music before sleeping. In this study, the general health status of students including physical health, social functioning, depression, anxiety, and some related factors were studied to identify the factors related to mental and physical health in the students so that the means to promote the health of this subpopulation, who are the country's future assets and at a critical period in lifetime, will be provided by proper planning. Moreover, identifying the factors that might endanger the health of the students in different ways can prevent qualitative educational decline, which investigation is of particular importance.

Methods

In this cross-sectional descriptive study, 272 students of Yazd University of Medical Sciences in 2016 were selected by stratified random sampling method. Each faculty was considered as a category and proportion of the number of the students in each faculty, and the sampling was done randomly. Sample size was calculated at 300 individuals according to a similar study (12) using a sample size calculation formula with 95% confidence level, standard deviation of 11 and accuracy of 1.25.

All the students participated in the study with full consent. To observe research ethics, students

were assured that their information would be kept confidential, their names or IDs would not be associated with their responses, and the results of the research would be published as anonymous. Questionnaires were completed by the participants in the presence of the interviewer. The study protocol was approved by the Ethics Committee of Shahid Sadoughi University of Medical Sciences. Data gathering instrument was a questionnaire of demographic information, a questionnaire of lifestyle habits including smoking, coffee drinking every day, listening to music before bed, and general health questionnaire (GHQ)-28.

This questionnaire was developed by Goldberg and has four subscales. The items are rated on a 4-point Likert scale (0: never; 1: almost never; 2: sometimes; 3: often) and the maximum possible score on the questionnaire is 84. To differentiate the students with problem from those without problem, the cutoff point of 23 was used. A total score of over 23 on the questionnaire indicates mental disorders and a total score below 23 represents mental health. For each of the subscales of physical health, depression, anxiety, and social functioning, cut off score was considered to be 6. Scores above 6 represented the lack of health and scores below 6 represents as being healthy (15). The validity of this questionnaire has been investigated and approved in an Iranian community in Tehran (15, 16). Moreover, various studies in Iran have reported the reliability of this questionnaire to range between 88% and 96% (17, 18). The data were analyzed by the SPSS version 16 using the indices of central tendency (mean, standard deviation, percentage, and frequency), *t*-test, chi-square, and one-way ANOVA .Independent t-test was used to assess the variance of general health score based on gender, educational level, residence history in the dormitory, daily coffee consumption and listening to music before sleeping and in order to assess the mean difference of general health score by the age group, education and occupation of the parents, one-way ANOVA analysis was used. Chi-square test was used to determine the status and distribution of the level of general health of students.

Results

In this study, the mean (SD) of students' age was 21(2.7). 33.2% (n=90) of the students were male and the rest were female. 44.6% (n=121) of participants were undergraduate students and 54.3%(n=150) postgraduate and Ph.D students, and 56.1%(152) were living in the dormitory. Fathers' and mothers' education level in most students was academic 51.1% (n=140) and 36.4%(n=98), respectively. 31.4%(n=85) of the fathers have worked in the public sector and 33.2%(n=90) were self-employed. The majority 64.9% (n=176) of the mothers was housewives, and 4.1%(n=11) of students reported to be smokers.

Among the subjects studied, 53.9%(n=146) listened to music before sleeping and 39.9%(n=108) drank coffee or caffeine every day (Table 1). The mean (SD) of general health score of the students was 28.11 (1.24)., with over 50% of the students had a higher score on physical health and social functioning than the cutoff score (Table 2). Based on the results of the independent *t*-test, there was no significant difference in general health with respect to gender, education level, history of living in dormitory, daily coffee drinking, and listening to music before bed. The results of one way ANOVA also showed no significant difference in the general health among the students of different age groups and with different parental education levels and occupation ($p > 0.05$). However, there was a significant difference between smokers and non smokers ($p=0.036$), with the highest difference in symptoms of depression ($p = 0.013$). The mean and the standard deviation score on general health domains in smoker and non-smoker participants is shown in Table 3.

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Table 1. Students' general health status according to demographic characteristics

Variable		Mean	SD	P
Age	18-23	28.02		0.89
	24-29	29.12	13.31	
	30-37	27	11.91	
Gender	Male	27.47	12.27	0.56
	Female	28.43	12.56	
Education level	Undergraduate	26.61	12.18	0.09*
	Postgraduate and doctoral	29.29	12.57	
Father Education level	Illiterate	22	2.64	0.38
	Lower than high school diploma	25.75	10.60	
	high school diploma	28.57	12/85	
	University education	28.93	13.14	
Mother Education level	Illiterate	22.71	4.30	0.07
	Lower than high school diploma	12.36	12.36	
	high school diploma	30.78	13.68	
	University education	28.69	11.94	
Father employment	Employee	27.18	13.43	0.85
	Self- employed	28.78	12.94	
	Retired and on pension	28.20	11.85	
	Others	29.18	7.26	
Mother employment	Employee	29.61	12.40	0.62
	Self- employed	30.61	14.71	
	Retired and on pension	28.05	11.94	
	housewive	27.46	12.38	
Coffee Consumption during the Day	Yes	28.60	13.32	0.62
	No	27.80	11.88	
Listening to Music before Going to Sleep	Yes	28.52	13.72	0.58
	No	27.66	10.81	
Residence History in Dormitory	Yes	29.28	13.20	0.09
	No	26.60	11.28	

$p<0.05$

Table 2. Status and distribution the level of the general health of the students

Domains	Health status	Frequency	Percent	Mean	SD	General Condition
Physical Health	Unhealthy	138	50.7	7.40	4.54	Unhealthy
	Healthy	127	46.7			
Anxiety Symptoms	Unhealthy	114	41.8	6.19	4.39	Unhealthy
	Healthy	150	55.2			
Social Function	Unhealthy	249	91.6	11.78	3.10	Unhealthy
	Healthy	16	5.9			
Depression Symptoms	Unhealthy	60	20.5	3.56	4.43	Healthy
	Healthy	209	77.7			
General Health	Unhealthy	147	54.4	28.11	1.24	Unhealthy
	Healthy	103	30.8			

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Table 3. General health domains in smoker and non-smoker students

domains	Smoking				p
	Yes		No		
	Mean	SD	Mean	SD	
Physical Health	9.90	5.30	4.49	7.29	0.06
Anxiety Symptoms	8.45	5.75	6.09	4.32	0.08
Social Function	11.63	2.41	11.78	3.13	0.87
Depression Symptoms	6.66	5.69	3.42	4.32	0.01
General health	35.81	15.73	27.76	12.20	0.03

Discussion

The aim of this study was to investigate the general health status of the students of Yazd University of Medical Sciences and related factors. The results of the present study showed that more than half of the students had general health disorders. This proportion is higher than the proportions obtained in similar research (19-21), which could be due to socioeconomic differences and the difference in welfare facilities (22). Regarding the depression, nearly one-fifth of the students had depressive disorder symptom. According to studies carried out on the students, inside or outside of the country, the rate of depression was reported between 9.1% and 44.1 %.(23,24) The ratio of the patients in this study is in line with this expression. The average score on physical health, anxiety symptoms, and social function showed the presence of the disorder in these three domains. Contrary to the present study, the results of the research done by Adham et al. in Ardabil showed that the majority of medical students were healthy and only 2% of students had severe depression (25). Namazi et al. (2015) observed that the majority of midwifery and nursing students were totally healthy, and in terms of the physical symptoms dimension, anxiety symptoms and sleep disorder, the majority of students were truly healthy and very few students suffered from severe depression, which is consistent with the result of our study (26). Moreover, in the present study, no significant differences in general health status, physical health, depression, anxiety and social functioning were observed among male and female students. In the study of Solgi et al. (2009), the severity of mental anomalies in men and women was similar (27) which is consistent with the present study. In the study of Niknam (2004), on the fear of success and mental satisfaction, the difference between girls and boys in univariate analysis was not significant (28). In the study of the general health status of nursing students of AJA Medical University, there was no significant difference in general health among boys and girls (29). This result is also consistent with the result of the current study. According to the researchers, the difference in the prevalence of mental disorders in various studies can be attributed to several factors such as the differences in the participants and the data collection instruments. In the present study, the mean general health score was significantly higher in smokers in comparison with non-smokers. In other words, smokers had lower general health. In this regard, the greatest difference between smokers and non smokers was related to depression. According to the Mental Health Institute in London, there are twice as many depressed smokers as non-depressed smokers (30), which is in line with the results of our study. Similarly, Horn et al. found that young smokers were more likely to experience psychological problems, including depression and anxiety (31). Therefore, it can be argued that the two variables of smoking and general health disorder are likely to reinforce each other in a vicious circle. Therefore, relevant interventions in this field can discontinue this adverse reinforcement chain through stopping the smoking factor, and creating a health-promoting environment, especially for students. It will pave the way for improving mental health among students, especially smokers. However, according to the study of Ratschen et al. that confirmed the impact of smoking on increased

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use of antidepressants in students and reported the occurrence of psychological problems in a high proportion of smokers, the above argument regarding the provision of interventions appropriate for smoking cessation, depression and antidepressants taking can be approved and emphasized further(32). There was no significant relationship between the mean of general health score with the student's age, and the educational level and their parent's educational level. Regarding the relationship between the age and educational level of students with general health score, the results of this study are consistent with the results of the studies carried out by Yousefi and Baratali (33), Golami et al. (34), Yousefi and Mohamadkhni (35). In the study of Zareipour et al. (36) which was done on pre-university students, only mother's education had a significant relationship with mental health.The reason of this contradiction is the difference in the population studied.

Another finding of the present study was the lack of association between general health and certain habits such as daily coffee drinking and listening to music before bed. In a study done at an elementary school, a significant relationship was observed between general health and coffee drinking, so that high coffee drinking was a predictor of anxiety (37). In several studies conducted on adults, there was a significant difference in the general health among the people who drink coffee and those who do not (38, 39). These inconsistencies in the results may be due to the difference in the studied populations and the education levels of the participants in the above-cited studies and our study.

Regarding the relationship between listening to music before bed and the general health in some studies in which the effects of music on stress reduction were studied in various demographic groups, including students, the elderly and patients, music was used to reduce stress (40, 41). These differences will probably be described by cultural differences and the tools used in the studies.The limitations of this study include its cross-sectional design and the self-report data that can influence discovering contributing factors and data credibility, respectively. Besides, designing mixed studies on students' general health seems to be particularly effective in explaining and elucidating the students' general health status and effective factors on their condition. It is also necessary to suggest ways to improve their general health.

Conclusion

Considering the significant proportion of students with general health disorder and their undesirable health status, especially depression in smokers, it seems essential to plan for counseling and providing preventive services to improve the health of the significant proportion of students. Since the students of different medical sciences in the future are responsible for maintaining and improving the health of the community, doing efforts to improve their general health status will be of great importance.

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Conflict of Interest

There are no conflicts of interest to declare.

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